

HOBBS OCD

MAY 19 2014

OCD Hobbs

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		8. Lease Name and Well No. Chaparral 33 Federal Com 6	
2. Name of Operator Cimarex Energy Co. OF COLORADO <162683>		9. API Well No. 30025 41881	
3a. Address 600 N. Marienfield St. Ste. 600 Midland Tx 79071		10. Field and Pool, or Exploratory QUAIL RIDGE; B3, SOUTH <50461>	
3b. Phone No. (include area code) 432-571-7800		11. Sec., T. R. M. or Blk. and Survey and Area 33, 19S, 34E	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FNL 660 FWL At proposed prod. Zone 330 FSL 660 FWL		12. County or Parish Lea	
14. Distance in miles and direction from nearest town or post office* Approximately 26 miles WSW of Hobbs, NM		13. State NM	

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 NM097156=80 acres NM060789=200 acres	17. Spacing Unit dedicated to this well 160
18. Distance from proposed* location to nearest well, drilling, completed, applied for, on this lease, ft. 330'	19. Proposed Depth Pilot Hole TD: N/A 15,303 MD 10,820 TVD	20. BLM/BIA Bond No. on File NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3682 GR	22. Approximate date work will start* 2/1/14	23. Estimated duration 35 days

24. Attachments

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

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

25. Signature <i>Paula Brunson</i>	Name (Printed/Typed) Paula Brunson	Date 9/13/13
---------------------------------------	---------------------------------------	-----------------

Title

Regulatory Compliance

Approved By (Signature) FIELD MANAGER	Name (Printed/Typed) CARLSBAD FIELD OFFICE	Date
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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.

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.

(Continued on page 2)

EE ATTACHED FOR Capitan Controlled Water Basin
CONDITIONS OF APPROVAL

Km 09/10/14

(Instructions on page 2)
Approval Subject to General Requirements
& Special Stipulations Attached

JUN 02 2014

Km

Operator Certification Statement

Chaparral 33 Federal Com 6

Cimarex Energy Co.

UL: D, Sec. 33, 19S, 34E

Lea Co., NM

Operator's Representative

Cimarex Energy Co. of Colorado

600 N. Marienfeld St., Ste. 600

Midland, TX 79701

Office Phone: (432) 571-7800

CERTIFICATION: I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 13 day of September, 2013

NAME: Paula Brunson

Paula Brunson

TITLE: Regulatory Compliance

ADDRESS: 600 N. Marienfeld St. Ste. 600 Midland Tx 79071

TELEPHONE: 432-571-7800

EMAIL: pbrunson@cimarex.com

Field Representative: Same as above

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Application to Drill
Chaparral 33 Federal Com 6
 Cimarex Energy Co.
 UL: D, Sec. 33, 19S, 34E
 Lea Co., 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 660 FWL
 BHL 330 FSL 660 FWL
2. **Elevation Above Sea Level:** 3,682' 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:** 15,303 MD 10,820 TVD Pilot Hole TD: N/A
6. **Estimated Tops of Geological Markers:**

Formation	Est Top	Bearing
Rustler	1630	N/A
Salado (Top Salt)	1700	N/A
Castille (Base Salt)	3260	N/A
Delaware	5480	Hydrocarbons
Bone Spring	8250	N/A
1st Bone Spring	9480	N/A
2nd Bone Spring	10000	N/A
3rd Bone Spring	10570	Hydrocarbons
Wolfcamp	10870	N/A

7. **Possible Mineral Bearing Formation:** Shown above

7A. **OSE Ground Water Estimated Depth:** 175'

8. **Casing Program:**

See COA

Name	Casing Depth From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	BHP (psig)	Anticipated Mud Weight (ppg)	Collapse SF at Full Evacuation (1.125)	Collapse SF at 1/3 Evacuation (1.125)	Burst SF (1.125)	Cumulative Air Weight	Cumulative Bouyed Weight (lbs)	Bouyant Tension SF (1.8)
Surface	0	1680	1680	17 1/2	13-3/8"	54.50	J-55	ST&C	New	725	8.3	1.56		3.78	91,560	79,958	6.43
Intermediate	0	5450	5450	12 1/4	9-5/8"	40.00	N-80	LT&C	New	2834	10.0		1.65	2.03	218,000	184,718	3.99
Production	0	10514	10514	8 3/4	5-1/2"	17.00	P-110	LT&C	New	4920	9.0	1.52		2.16	183,940	158,666	2.80
Production	10514	15303	10820	8 3/4	5-1/2"	17.00	P-110	BT&C	New	5063	9.0	1.48		2.10	5,202	4,487	121.68

Note: Operator may drill a 8-1/2" OH from end of curve to TD of the well. This is to reduce the need to ream the conventionally drilled curve to run a RSS assembly into the lateral.

Application to Drill
Chaparral 33 Federal Com 6
 Cimarex Energy Co.
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 Lea Co., NM

8A. Casing Design and Casing Loading Assumptions:

Surface	Tension	A 1.8 design factor with effects of buoyancy: 8.30 ppg.
	Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to a 8.30 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.
Intermediate	Tension	A 1.8 design factor with effects of buoyancy: 10.00 ppg.
	Collapse	A 1.125 design factor evacuated 1/3 TVD of next casing string with a collapse force equal to a 10.00 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.
Production and/or Production Completion System	Tension	A 1.8 design factor with effects of buoyancy: 9.00 ppg.
	Collapse	A 1.125 design factor with full internal evacuation of next casing string with a collapse force equal to a 9.00 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.

9. Cementing Program:

Casing Type	Type	Sacks	Yield	Weight	Cubic Feet	Cement Blend
Surface	Lead	800	1.75	13.50	1400	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	218	1.34	14.80	291	Class C + LCM, 6.32 gps water
	TOC: 0		45% Excess			Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	973	1.88	12.90	1828	35:65 (poz/C) + Salt + Bentonite + LCM + retarder, 9.65 gps water
	Tail	292	1.34	14.80	391	Class C + retarder + LCM, 6.32 gps water
	TOC: 0		44% Excess			
Production	Lead	654	2.40	11.90	1568	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1186	1.24	14.50	1470	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 4980		17% Excess			No centralizers planned in the lateral section. 1 every jt from EOC to KOP. 1 every 4th joint from KOP to 500' inside previous casing.

Cement volumes will be adjusted depending on hole size

9a. Proposed Drilling Plan:

Pilot Hole TD: No Pilot KOP: 10,514' EOC: 10,962'

Set Surface and Intermediate casing strings. Drill production hole to KOP. Continue drilling lateral through the curve to TD. Run prod casing & cement.

10. Pressure Control Equipment:

Exhibit "E-1". A BOP consisting of two rams with blind rams and pipe rams, and one annular preventer. Below the surface casing, a 2M system will be used. Below the intermediate casing, a 3M system will be used. See attachments for BOP and choke manifold diagrams. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A Rotating head may be installed 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.

BOP and associated equipment will be installed, used, maintained, and tested in a manner necessary to assure well control and shall be in place and operational prior to drilling the surface casing shoe. The Annular Preventer shall be functioned at least weekly. The pipe and blind rams will be operated each trip. No abnormal pressure or temperature is expected while drilling.

BOPS will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high.

The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 low and 1500 high on the intermediate casing.

See COA
 Cimarex Energy Co. of Colorado requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

Application to Drill
Chaparral 33 Federal Com 6
Cimarex Energy Co.
UL: D, Sec. 33, 19S, 34E
Lea Co., NM

see COA
11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1680'	7.80 - 8.30	28	NC	FW Spud Mud
1680' to 5450' <i>5600'</i>	9.50 - 10.00	30-32	NC	Brine Water
5450' to 15303'	8.50 - 9.00	30-32	NC	FW/Cut Brine

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.

The Mud Monitoring System is an electronic Pason System satisfying requirements of Onshore Order 1.

12. Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 5450 to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / GR -- Inter. Csg to TD
CNL / GR -- Surf to Inter. Csg
- C. No DSTs or cores are planned at this time
- D. CBL w/ CCL from as far as gravity will let it fall to TOC

13. Potential Hazards: *See COA*

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: 4869 psi

Estimated BHT: 167°

14. Construction and Drilling:

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

Drilling expected to take: 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:

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

3rd Bone Spring pay will be perforated and stimulated.

The proposed well will be tested and potentialized as **Oil**



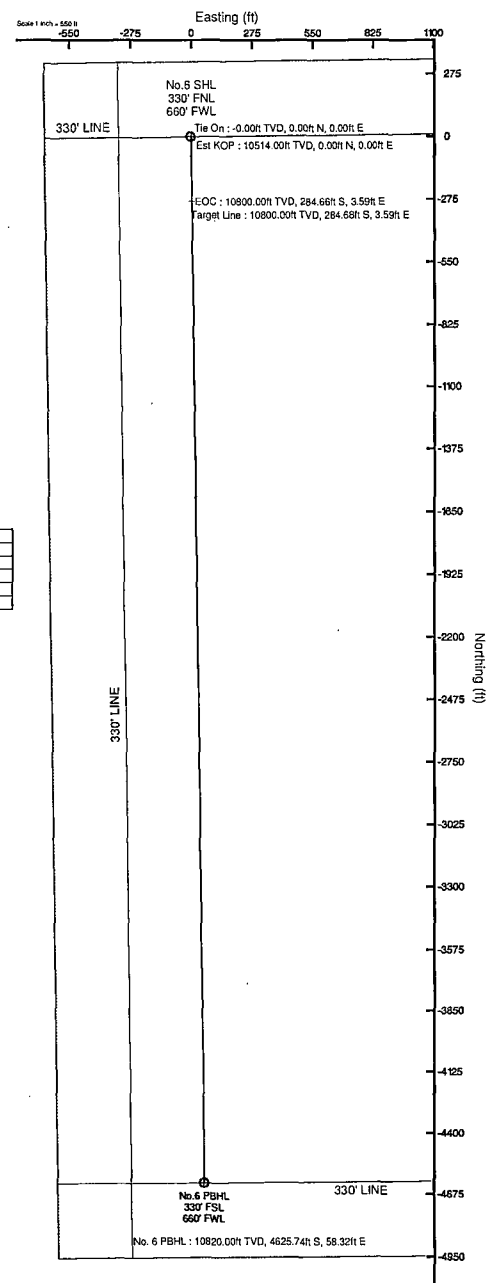
Cimarex Energy Co. of Colorado

Location: Lea County, NM
Field: (Chaparral) Sec 33, T19S, R34E
Facility: Chaparral 33 Fed Cam No.6

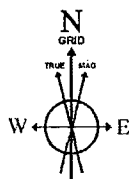
Slot: No.6 SHL
Well: No.6
Wellbore: No.6 PWB



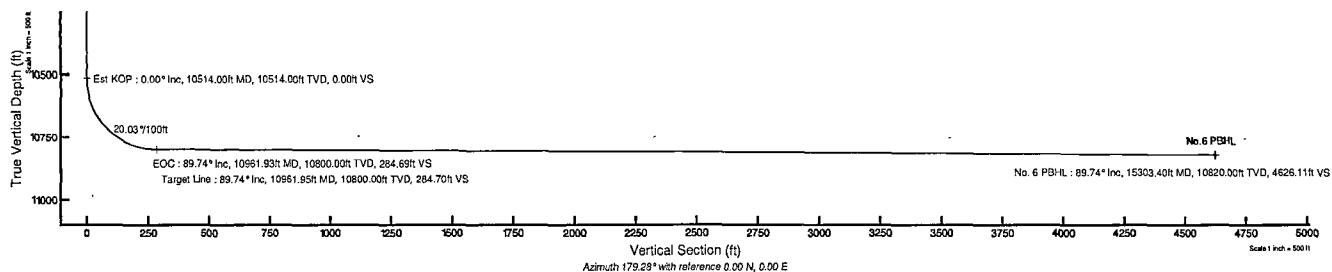
Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	0.00	0.000	179.278	0.00	0.00	0.00	0.00
Est KOP	10514.00	0.000	179.278	10514.00	0.00	0.00	0.00
EOC	10961.93	89.736	179.278	10800.00	-284.66	3.59	284.69
Target Line	10961.95	89.736	179.278	10800.00	-284.68	3.59	284.70
No. 6 PBL	15303.40	89.736	179.278	10820.00	-4625.74	58.32	4626.11



Plot reference wellpath is Prelim. 1	
True vertical depths are referenced to Rig on No.6 SHL (RT)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (2001), US feet
Measured depths are referenced to Rig on No.6 SHL (RT)	North Reference: Grid north
Rig on No.6 SHL (RT) to Mean Sea Level: 3682 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No.6 SHL): -3682 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gertjary on 2/28/2012



BGGM (1945.0 to 2013.0) Dip: 60.51° Field: 48794.1 nT
Magnetic North is 7.61 degrees East of True North (at 2/28/2012)
Grid North is 0.41 degrees East of True North
To correct azimuth from True to Grid subtract 0.41 degrees
To correct azimuth from Magnetic to Grid add 7.20 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.20 = 97.20





Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No.6 SHL
Area	Lea County, NM	Well	No.6
Field	(Chaparral) Sec 33, T19S, R34E	Wellbore	No.6 PWB
Facility	Chaparral 33 Fed Com No.6		

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	0.999972	Report Generated	2/28/2012 at 10:03:58 AM
Convergence at slot	0.41° East	Database/Source file	WA Midland/No.6_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	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W
Facility Reference Pt			775828.80	591241.60	32°37'23.029"N	103°34'18.101"W
Field Reference Pt			775828.80	591241.60	32°37'23.029"N	103°34'18.101"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.6 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No.6 SHL (RT) to Mean Sea Level	3682.00ft
Vertical Reference Pt	Rig on No.6 SHL (RT)	Rig on No.6 SHL (RT) to Mud Line at Slot (No.6 SHL)	0.00ft
MD Reference Pt	Rig on No.6 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.28°



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No.6 SHL
Area	Lea County, NM	Well	No.6
Field	(Chaparral) Sec 33, T19S, R34E	Wellbore	No.6 PWB
Facility	Chaparral 33 Fed Com No.6		

WELLPATH DATA (163 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	179.278	0.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	Tie On
100.00†	0.000	179.278	100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
200.00†	0.000	179.278	200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
300.00†	0.000	179.278	300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
400.00†	0.000	179.278	400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
500.00†	0.000	179.278	500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
600.00†	0.000	179.278	600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
700.00†	0.000	179.278	700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
800.00†	0.000	179.278	800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
900.00†	0.000	179.278	900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1000.00†	0.000	179.278	1000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1100.00†	0.000	179.278	1100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1200.00†	0.000	179.278	1200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1300.00†	0.000	179.278	1300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1400.00†	0.000	179.278	1400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1500.00†	0.000	179.278	1500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1600.00†	0.000	179.278	1600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1700.00†	0.000	179.278	1700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1800.00†	0.000	179.278	1800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
1900.00†	0.000	179.278	1900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2000.00†	0.000	179.278	2000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2100.00†	0.000	179.278	2100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2200.00†	0.000	179.278	2200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2300.00†	0.000	179.278	2300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2400.00†	0.000	179.278	2400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2500.00†	0.000	179.278	2500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2600.00†	0.000	179.278	2600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2700.00†	0.000	179.278	2700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2800.00†	0.000	179.278	2800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
2900.00†	0.000	179.278	2900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3000.00†	0.000	179.278	3000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3100.00†	0.000	179.278	3100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3200.00†	0.000	179.278	3200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3300.00†	0.000	179.278	3300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3400.00†	0.000	179.278	3400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3500.00†	0.000	179.278	3500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3600.00†	0.000	179.278	3600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3700.00†	0.000	179.278	3700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3800.00†	0.000	179.278	3800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
3900.00†	0.000	179.278	3900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4000.00†	0.000	179.278	4000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4100.00†	0.000	179.278	4100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4200.00†	0.000	179.278	4200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4300.00†	0.000	179.278	4300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4400.00†	0.000	179.278	4400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No.6 SHL
Area	Lea County, NM	Well	No.6
Field	(Chaparral) Sec 33, T19S, R34E	Wellbore	No.6 PWB
Facility	Chaparral 33 Fed Com No.6		

WELLPATH DATA (163 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	179.278	4500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4600.00†	0.000	179.278	4600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4700.00†	0.000	179.278	4700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4800.00†	0.000	179.278	4800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
4900.00†	0.000	179.278	4900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5000.00†	0.000	179.278	5000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5100.00†	0.000	179.278	5100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5200.00†	0.000	179.278	5200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5300.00†	0.000	179.278	5300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5400.00†	0.000	179.278	5400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5500.00†	0.000	179.278	5500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5600.00†	0.000	179.278	5600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5630.00†	0.000	179.278	5630.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	Cherry Canyon
5700.00†	0.000	179.278	5700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5800.00†	0.000	179.278	5800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
5900.00†	0.000	179.278	5900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6000.00†	0.000	179.278	6000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6100.00†	0.000	179.278	6100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6200.00†	0.000	179.278	6200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6300.00†	0.000	179.278	6300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6400.00†	0.000	179.278	6400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6500.00†	0.000	179.278	6500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6600.00†	0.000	179.278	6600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6700.00†	0.000	179.278	6700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6800.00†	0.000	179.278	6800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
6900.00†	0.000	179.278	6900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7000.00†	0.000	179.278	7000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7100.00†	0.000	179.278	7100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7200.00†	0.000	179.278	7200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7300.00†	0.000	179.278	7300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7400.00†	0.000	179.278	7400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7500.00†	0.000	179.278	7500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7600.00†	0.000	179.278	7600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7700.00†	0.000	179.278	7700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7800.00†	0.000	179.278	7800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
7900.00†	0.000	179.278	7900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8000.00†	0.000	179.278	8000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8100.00†	0.000	179.278	8100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8200.00†	0.000	179.278	8200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8220.00†	0.000	179.278	8220.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	Bone Spring
8300.00†	0.000	179.278	8300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8400.00†	0.000	179.278	8400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8500.00†	0.000	179.278	8500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8600.00†	0.000	179.278	8600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8700.00†	0.000	179.278	8700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.6 SHL
Area	Lea County, NM	Well	No.6
Field	(Chaparral) Sec 33, T19S, R34E	Wellbore	No.6 PWB
Facility	Chaparral 33 Fed Com No.6		

WELLPATH DATA (163 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	179.278	8800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
8900.00†	0.000	179.278	8900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9000.00†	0.000	179.278	9000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9100.00†	0.000	179.278	9100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9200.00†	0.000	179.278	9200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9300.00†	0.000	179.278	9300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9400.00†	0.000	179.278	9400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9410.00†	0.000	179.278	9410.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	1st BSS
9500.00†	0.000	179.278	9500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9600.00†	0.000	179.278	9600.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9700.00†	0.000	179.278	9700.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9800.00†	0.000	179.278	9800.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9900.00†	0.000	179.278	9900.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
9920.00†	0.000	179.278	9920.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	2nd BSS
10000.00†	0.000	179.278	10000.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
10100.00†	0.000	179.278	10100.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
10200.00†	0.000	179.278	10200.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
10300.00†	0.000	179.278	10300.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
10400.00†	0.000	179.278	10400.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
10500.00†	0.000	179.278	10500.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	
10514.00	0.000	179.278	10514.00	0.00	0.00	0.00	775828.80	591241.60	32°37'23.029"N	103°34'18.101"W	0.00	Est KOP
10540.04†	5.216	179.278	10540.00	1.18	-1.18	0.01	775828.81	591240.42	32°37'23.017"N	103°34'18.101"W	20.03	3rd BSS
10600.00†	17.229	179.278	10598.71	12.83	-12.83	0.16	775828.96	591228.77	32°37'22.902"N	103°34'18.100"W	20.03	
10700.00†	37.262	179.278	10687.16	58.38	-58.38	0.74	775829.54	591183.23	32°37'22.451"N	103°34'18.097"W	20.03	
10800.00†	57.295	179.278	10754.66	131.47	-131.46	1.66	775830.46	591110.14	32°37'21.728"N	103°34'18.092"W	20.03	
10900.00†	77.328	179.278	10793.04	223.26	-223.25	2.81	775831.61	591018.36	32°37'20.820"N	103°34'18.086"W	20.03	
10961.93	89.736	179.278	10800.00	284.69	-284.66	3.59	775832.39	590956.95	32°37'20.212"N	103°34'18.083"W	20.03	EOC
10961.95	89.736	179.278	10800.00	284.70	-284.68	3.59	775832.39	590956.93	32°37'20.212"N	103°34'18.083"W	2.00	Target Line
11000.00†	89.736	179.278	10800.18	322.75	-322.72	4.07	775832.87	590918.89	32°37'19.835"N	103°34'18.080"W	0.00	
11100.00†	89.736	179.278	10800.64	422.75	-422.72	5.33	775834.13	590818.90	32°37'18.846"N	103°34'18.074"W	0.00	
11200.00†	89.736	179.278	10801.10	522.75	-522.71	6.59	775835.39	590718.91	32°37'17.856"N	103°34'18.067"W	0.00	
11300.00†	89.736	179.278	10801.56	622.75	-622.70	7.85	775836.65	590618.92	32°37'16.867"N	103°34'18.061"W	0.00	
11400.00†	89.736	179.278	10802.02	722.75	-722.69	9.11	775837.91	590518.93	32°37'15.878"N	103°34'18.055"W	0.00	
11500.00†	89.736	179.278	10802.48	822.74	-822.68	10.37	775839.17	590418.95	32°37'14.888"N	103°34'18.048"W	0.00	
11600.00†	89.736	179.278	10802.94	922.74	-922.67	11.63	775840.43	590318.96	32°37'13.899"N	103°34'18.042"W	0.00	
11700.00†	89.736	179.278	10803.40	1022.74	-1022.66	12.89	775841.69	590218.97	32°37'12.909"N	103°34'18.036"W	0.00	
11800.00†	89.736	179.278	10803.86	1122.74	-1122.65	14.15	775842.95	590118.98	32°37'11.920"N	103°34'18.029"W	0.00	
11900.00†	89.736	179.278	10804.32	1222.74	-1222.64	15.41	775844.21	590018.99	32°37'10.931"N	103°34'18.023"W	0.00	
12000.00†	89.736	179.278	10804.78	1322.74	-1322.63	16.67	775845.47	589919.01	32°37'09.941"N	103°34'18.016"W	0.00	
12100.00†	89.736	179.278	10805.24	1422.74	-1422.63	17.94	775846.73	589819.02	32°37'08.952"N	103°34'18.010"W	0.00	
12200.00†	89.736	179.278	10805.70	1522.74	-1522.62	19.20	775848.00	589719.03	32°37'07.962"N	103°34'18.004"W	0.00	
12300.00†	89.736	179.278	10806.16	1622.74	-1622.61	20.46	775849.26	589619.04	32°37'06.973"N	103°34'17.997"W	0.00	
12400.00†	89.736	179.278	10806.62	1722.74	-1722.60	21.72	775850.52	589519.05	32°37'05.983"N	103°34'17.991"W	0.00	
12500.00†	89.736	179.278	10807.09	1822.73	-1822.59	22.98	775851.78	589419.07	32°37'04.994"N	103°34'17.985"W	0.00	
12600.00†	89.736	179.278	10807.55	1922.73	-1922.58	24.24	775853.04	589319.08	32°37'04.005"N	103°34'17.978"W	0.00	



Planned Wellpath Report

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REFERENCE WELL PATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.6 SHL
Area	Lea County, NM	Well	No.6
Field	(Chaparral) Sec 33, T19S, R34E	Wellbore	No.6 PWB
Facility	Chaparral 33 Fed Com No.6		

WELLPATH DATA (163 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
12700.00†	89.736	179.278	10808.01	2022.73	-2022.57	25.50	775854.30	589219.09	32°37'03.015"N	103°34'17.972"W	0.00	
12800.00†	89.736	179.278	10808.47	2122.73	-2122.56	26.76	775855.56	589119.10	32°37'02.026"N	103°34'17.966"W	0.00	
12900.00†	89.736	179.278	10808.93	2222.73	-2222.55	28.02	775856.82	589019.11	32°37'01.036"N	103°34'17.959"W	0.00	
13000.00†	89.736	179.278	10809.39	2322.73	-2322.54	29.28	775858.08	588919.13	32°37'00.047"N	103°34'17.953"W	0.00	
13100.00†	89.736	179.278	10809.85	2422.73	-2422.54	30.54	775859.34	588819.14	32°36'59.057"N	103°34'17.946"W	0.00	
13200.00†	89.736	179.278	10810.31	2522.73	-2522.53	31.80	775860.60	588719.15	32°36'58.068"N	103°34'17.940"W	0.00	
13300.00†	89.736	179.278	10810.77	2622.73	-2622.52	33.06	775861.86	588619.16	32°36'57.079"N	103°34'17.934"W	0.00	
13400.00†	89.736	179.278	10811.23	2722.72	-2722.51	34.32	775863.12	588519.17	32°36'56.089"N	103°34'17.927"W	0.00	
13500.00†	89.736	179.278	10811.69	2822.72	-2822.50	35.59	775864.38	588419.19	32°36'55.100"N	103°34'17.921"W	0.00	
13600.00†	89.736	179.278	10812.15	2922.72	-2922.49	36.85	775865.65	588319.20	32°36'54.110"N	103°34'17.915"W	0.00	
13700.00†	89.736	179.278	10812.61	3022.72	-3022.48	38.11	775866.91	588219.21	32°36'53.121"N	103°34'17.908"W	0.00	
13800.00†	89.736	179.278	10813.07	3122.72	-3122.47	39.37	775868.17	588119.22	32°36'52.131"N	103°34'17.902"W	0.00	
13900.00†	89.736	179.278	10813.53	3222.72	-3222.46	40.63	775869.43	588019.23	32°36'51.142"N	103°34'17.896"W	0.00	
14000.00†	89.736	179.278	10814.00	3322.72	-3322.45	41.89	775870.69	587919.25	32°36'50.153"N	103°34'17.889"W	0.00	
14100.00†	89.736	179.278	10814.46	3422.72	-3422.45	43.15	775871.95	587819.26	32°36'49.163"N	103°34'17.883"W	0.00	
14200.00†	89.736	179.278	10814.92	3522.72	-3522.44	44.41	775873.21	587719.27	32°36'48.174"N	103°34'17.877"W	0.00	
14300.00†	89.736	179.278	10815.38	3622.72	-3622.43	45.67	775874.47	587619.28	32°36'47.184"N	103°34'17.870"W	0.00	
14400.00†	89.736	179.278	10815.84	3722.71	-3722.42	46.93	775875.73	587519.29	32°36'46.195"N	103°34'17.864"W	0.00	
14500.00†	89.736	179.278	10816.30	3822.71	-3822.41	48.19	775876.99	587419.31	32°36'45.205"N	103°34'17.857"W	0.00	
14600.00†	89.736	179.278	10816.76	3922.71	-3922.40	49.45	775878.25	587319.32	32°36'44.216"N	103°34'17.851"W	0.00	
14700.00†	89.736	179.278	10817.22	4022.71	-4022.39	50.71	775879.51	587219.33	32°36'43.227"N	103°34'17.845"W	0.00	
14800.00†	89.736	179.278	10817.68	4122.71	-4122.38	51.98	775880.77	587119.34	32°36'42.237"N	103°34'17.838"W	0.00	
14900.00†	89.736	179.278	10818.14	4222.71	-4222.37	53.24	775882.03	587019.35	32°36'41.248"N	103°34'17.832"W	0.00	
15000.00†	89.736	179.278	10818.60	4322.71	-4322.36	54.50	775883.30	586919.37	32°36'40.258"N	103°34'17.826"W	0.00	
15100.00†	89.736	179.278	10819.06	4422.71	-4422.36	55.76	775884.56	586819.38	32°36'39.269"N	103°34'17.819"W	0.00	
15200.00†	89.736	179.278	10819.52	4522.71	-4522.35	57.02	775885.82	586719.39	32°36'38.279"N	103°34'17.813"W	0.00	
15300.00†	89.736	179.278	10819.98	4622.70	-4622.34	58.28	775887.08	586619.40	32°36'37.290"N	103°34'17.807"W	0.00	
15303.40	89.736	179.278	10820.00†	4626.11	-4625.74	58.32	775887.12	586616.00	32°36'37.256"N	103°34'17.806"W	0.00	No. 6 PBHL



Planned Wellpath Report

Prelim_1

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.6 SHL
Area	Lea County, NM	Well	No.6
Field	(Chaparral) Sec 33, T19S, R34E	Wellbore	No.6 PWB
Facility	Chaparral 33 Fed Com No.6		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.6 PBHL	15303.40	10820.00	-4625.74	58.32	775887.12	586616.00	32°36'37.256"N	103°34'17.806"W	point

SURVEY PROGRAM - Ref Wellbore: No.6 PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15303.40	NaviTrak (Standard)		No.6 PWB

Drilling 12-1/4" hole
below 13 3/8" Casing

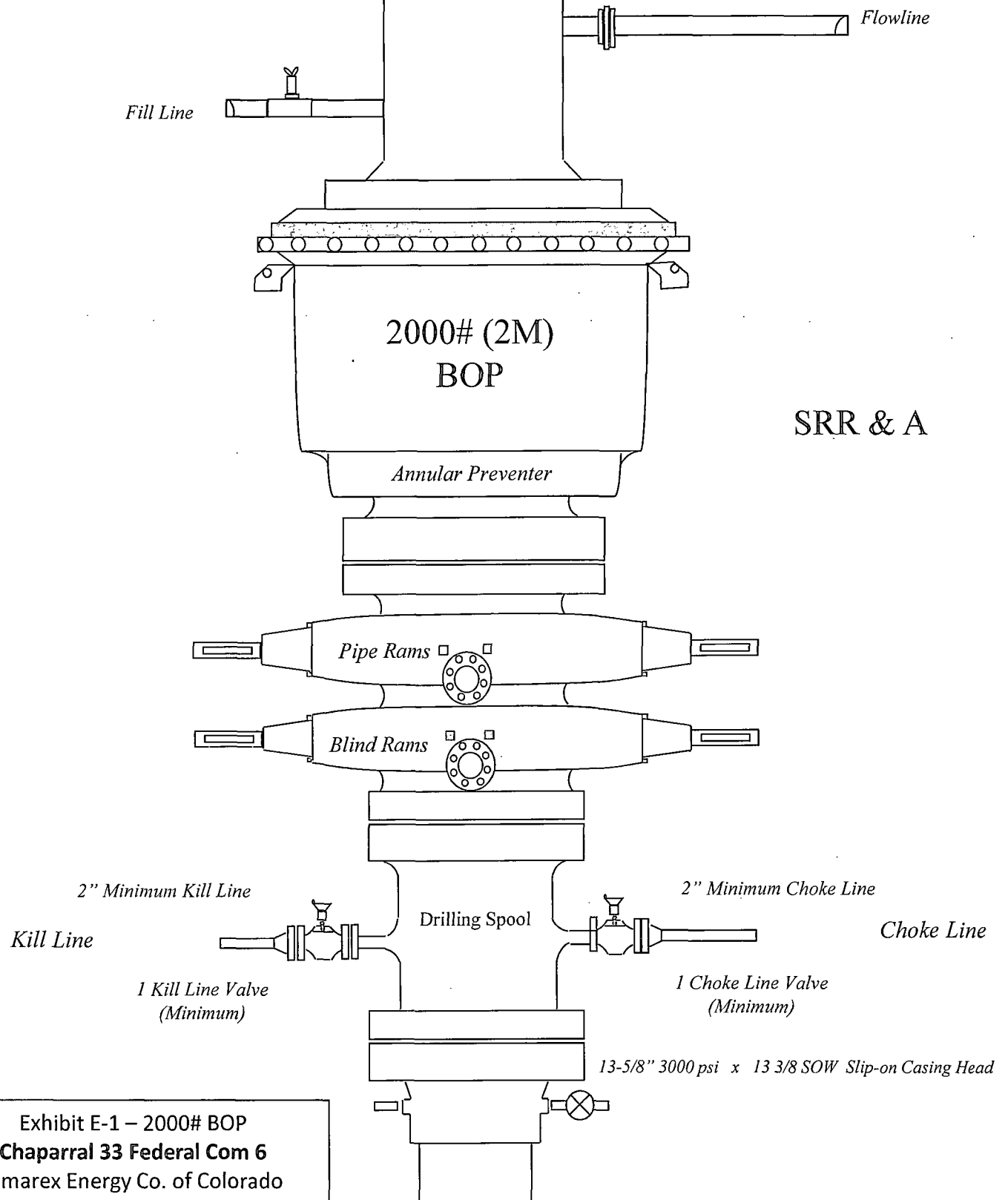


Exhibit E-1 – 2000# BOP
Chaparral 33 Federal Com 6
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM

Drilling 8-3/4" hole
below 9 5/8" Casing

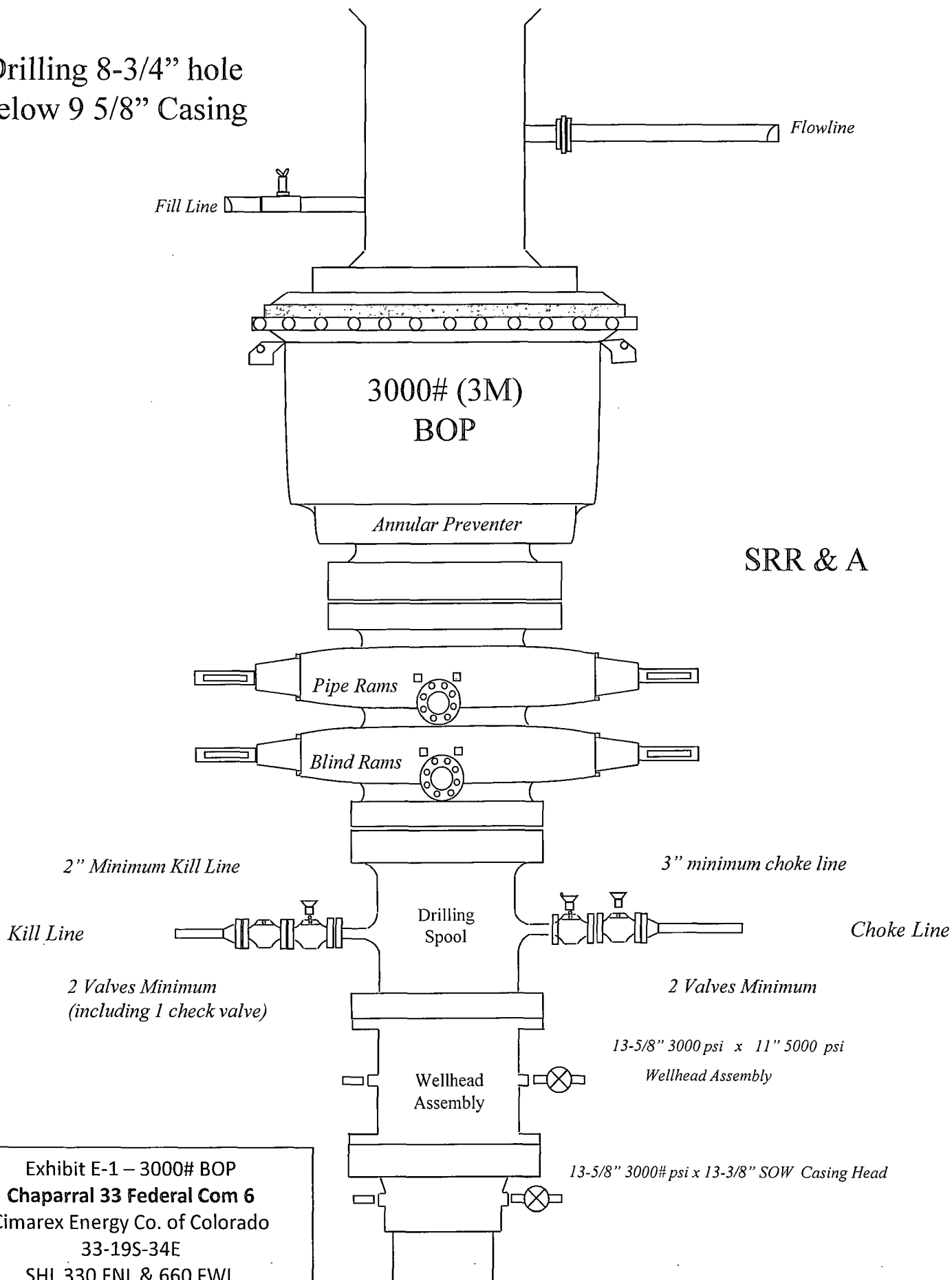


Exhibit E-1 – 3000# BOP
Chaparral 33 Federal Com 6
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Chaparral 33 Federal Com 6
Cimarex Energy Co. of Colorado
33-19S-34E

SHL 330 FNL & 660 FWL

BHL 330 FSL & 660 FWL

Lea County, NM



Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer: Oderco Inc		P.O. Number: odyd-271	
HOSE SPECIFICATIONS			
Type: Stainless Steel Armor Choke & Kill Hose		Hose Length: 45'ft.	
I.D. 4 INCHES		O.D. 9 INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE 0 PSI	
COUPLINGS			
Stem Part No. OKC OKC		Ferrule No. OKC OKC	
Type of Coupling: Swage-It			
PROCEDURE			
<u>Hose assembly pressure tested with water at ambient temperature.</u>			
TIME HELD AT TEST PRESSURE 15 MIN.		ACTUAL BURST PRESSURE: 0 PSI	
Hose Assembly Serial Number: 79793		Hose Serial Number: OKC	
Comments:			
Date: 3/8/2011	Tested: <i>A. Jaime Sosa</i>	Approved: <i>[Signature]</i>	



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

March 3, 2011

Hose Specifications

Hose Type
C & K

I.D.
4"

Working Pressure
10000 PSI

Length
43'

O.D.
6.09"

Burst Pressure
Standard Safety Multiplier Applies

Verification

Type of Fittings
4 1/16 10K

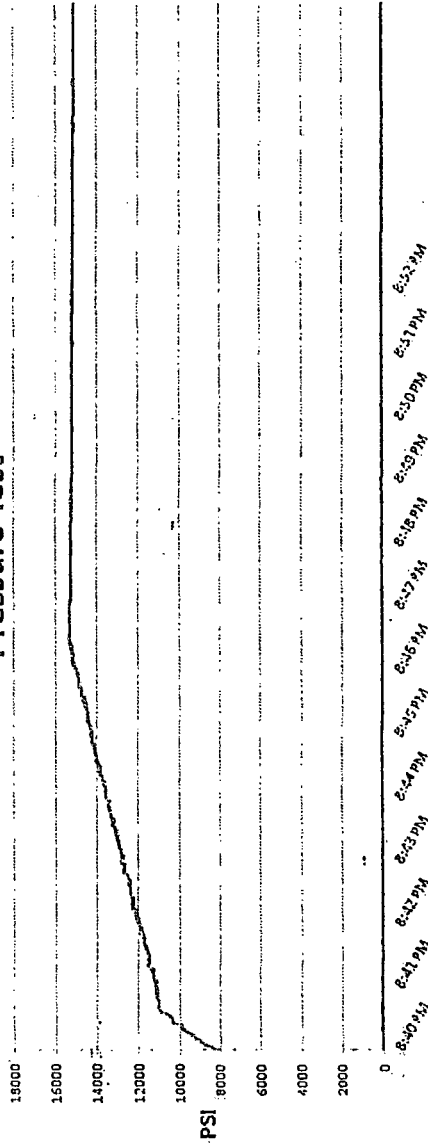
Swage

Final O.D.
6.38"

Hose Serial #
5544

Hose Assembly Serial #
79793

Pressure Test



Test Pressure
15000 PSI

Time Held at Test Pressure
11 Minutes

Actual Burst Pressure

Peak Pressure
15489 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac McConell

Approved By: Kim Thomas

[Signature]

[Signature]

Exhibit F-2 – Co-Flex Hose
Chaparral 33 Federal Com 6
Cimarex Energy Co. of Colorado
33-19S-34E

SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM



Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: DEM	PO ODYD-271
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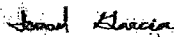
SPECIFICATIONS

Sales Order 79793	Dated: 3/8/2011
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We hereby certify that the material supplied
for the referenced purchase order to be true
according to the requirements of the purchase
order and current industry standards

Supplier:
Midwest Hose & Specialty, Inc.
10640 Tanner Road
Houston, Texas 77041

Comments:

Approved: 	Date: 3/8/2011
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Midwest Hose
& Specialty, Inc.

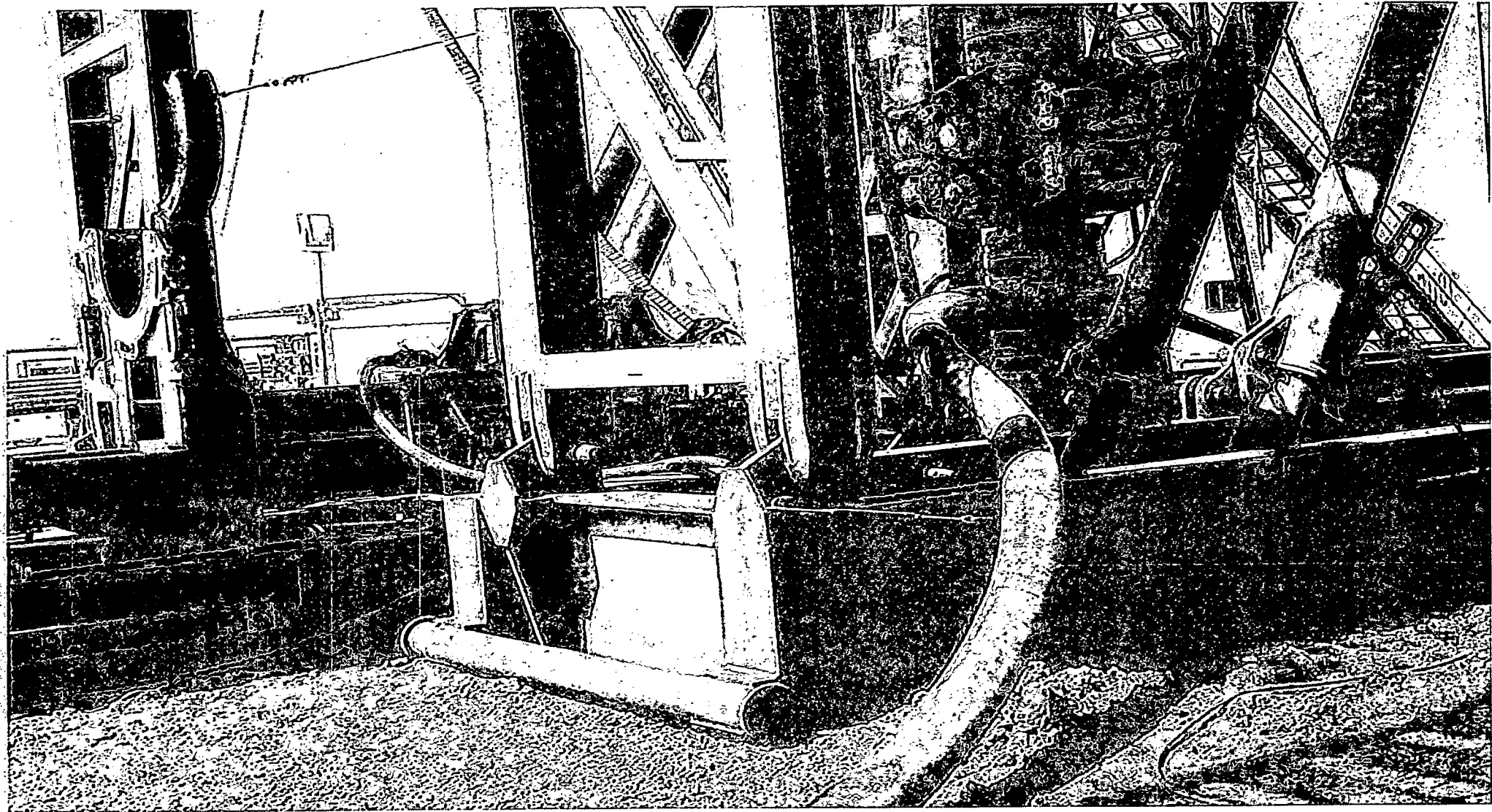
Exhibit F -3- Co-Flex Hose
Chaparral 33 Federal Com 6
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM

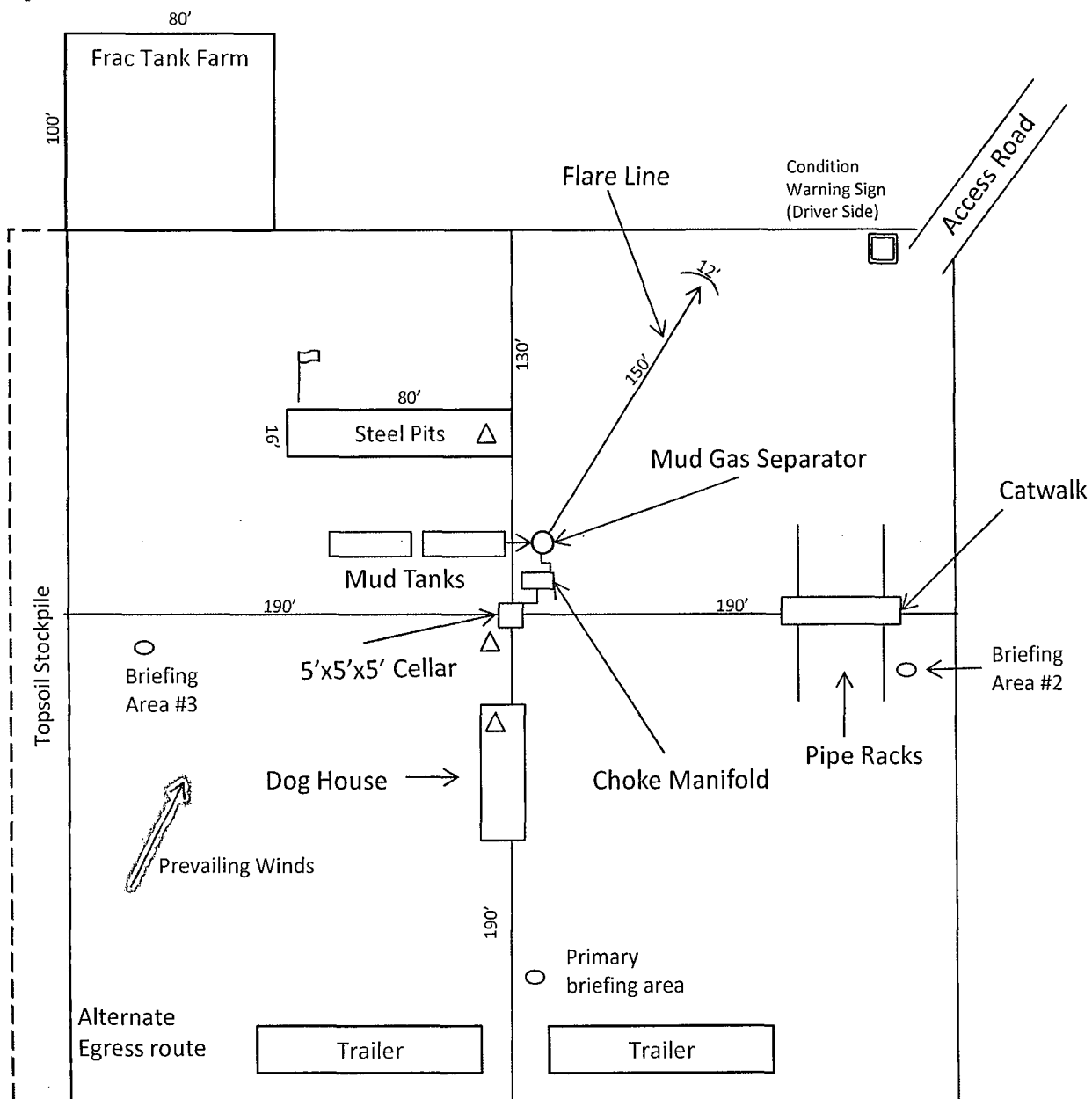
Specification Sheet Choke & Kill Hose

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)

Exhibit F – Co-Flex Hose
Chaparral 33 Federal Com 6
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM





Wind Direction Indicators
(wind sock or streamers)



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



Briefing Areas

N



Exhibit D – Rig Diagram
Chaparral 33 Federal Com 6
 Cimarex Energy Co. of Colorado
 33-19S-34E
 SHL 330 FNL & 660 FWL
 BHL 330 FSL & 660 FWL
 Lea County, NM