

Carlsbad Field Office OCD Hobbs

H

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD

DEC 03 2014

RECEIVED

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

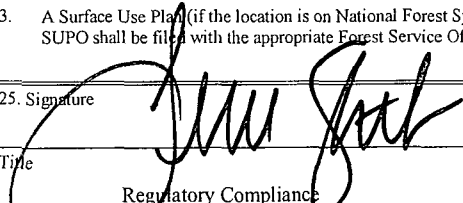
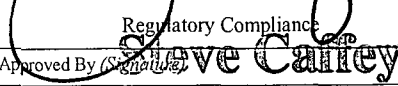
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. SHL: NMLC0071986; BHL: NMNM110835
1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimařex Energy Co. <215099>		7. If Unit or CA Agreement, Name and No.
3a. Address 600 N. Marienfield St. Ste. 600 Midland Tx 79071		8. Lease Name and Well No. <313929> Fuggles 11 Federal Com 2H
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30025 - 42301
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At Surface 330 FSL & 1980 FWL At proposed prod. Zone 330 FNL & 1980 FWL		10. Field and Pool, or Exploratory Wildcat Bone Spring 97784
14. Distance in miles and direction from nearest town or post office* Jal NM is 23 miles to the west of location.		11. Sec., T. R. M. or Blk. and Survey and Area 11, 25S, 32E
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 NMLC0071986=440.00 acres NMNM110835=1600.00 acres	17. Spacing Unit dedicated to this well 160.00
18. Distance from proposed* location to nearest well, drilling, completed, applied for, on this lease, ft. 1630' to #1H	19. Proposed Depth Pilot Hole TD: 10,000 13,899 MD 9,484 TVD	20. BLM/BIA Bond No. on File NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3470 GR	22. Approximate date work will start* 2/13/14	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:

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

25. Signature 	Name (Printed/Typed) Terri Stathem	Date 12/13/13
Approved By (Signature) 	Name (Printed/Typed) Steve Canley	Date NOV 20 2014
Title Regulatory Compliance FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

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

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)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

DEC 04 2014
SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Operator Certification Statement

Fuggles 11 Federal 2H

Cimarex Energy Co.

UL: N, Sec. 11, 25S, 32E

Lea Co., NM

HOBBS OOD

DEC 03 2014

RECEIVED

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 December, 2013

NAME:



Gloria Garza

TITLE: Regulatory Compliance

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

TELEPHONE: 432-571-7800

EMAIL: ggarza@cimarex.com

Field Representative: Same as above

Application to Drill
Fuggles 11 Federal Com 2H
 Cimarex Energy Co.
 UL: N, Sec. 11, 25S, 32E
 Lea Co., NM

HOBBS OCD

DEC 03 2014

RECEIVED

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 FSL & 1980 FWL
 BHL 330 FNL & 1980 FWL

2. Elevation Above Sea Level: 3,470' 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: 13,899 MD 9,484 TVD Pilot Hole TD: 10,000

6. Estimated Tops of Geological Markers:

Formation	Est Top	Bearing
Rustler	769	N/A
Top Salt	3164	N/A
Lamar	4554	N/A
Delaware	4704	N/A
Cherry Canyon	5849	N/A
Brushy Canyon Lower	8496	N/A
Bone Spring	8729	Hydrocarbons
Bone Spring "A" Shale	8849	Hydrocarbons
Bone Spring "B" Carb.	9165	Hydrocarbons
Bone Spring "C" Shale	9304	Hydrocarbons
HZ Target	9484	N/A
1st Bone Spring Ss	9759	Hydrocarbons

7. Possible Mineral Bearing Formation: Shown above

7A. OSE Ground Water Estimated Depth: 250'

8. Casing Program:

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	820	820	17 1/2	13-3/8"	48.00	H-40	ST&C	New	353	8.3	2.09		4.89	39,360	34,372	9.37
Intermediate	0	4680	4680	12 1/4	9-5/8"	36.00	J-55	LT&C	New	2433	10.0		1.17	1.45	168,480	142,758	3.17
Production	0	9007	9007	8 3/4	5-1/2"	17.00	L-80	LT&C	New	4215	9.0	1.49		1.84	161,228	139,074	2.43
Production	9007	13899	9484	8 3/4	5-1/2"	17.00	L-80	BT&C	New	4438	9.0	1.42		1.74	8,109	6,995	56.76

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
Fuggles 11 Federal Com 2H
 Cimarex Energy Co.
 UL: N, Sec. 11, 25S, 32E
 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	310	1.75	13.50		541 Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	195	1.34	14.80		260 Class C + LCM, 6.32 gps water
	TOC: 0		41% Excess			Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	868	1.88	12.90		1631 35:65 (poz/C) + Salt + Bentonite + LCM + retarder, 9.65 gps water
	Tail	274	1.34	14.80		366 Class C + retarder + LCM, 6.32 gps water
	TOC: 0		44% Excess			
Production	Lead	525	2.40	11.90		1259 35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1209	1.24	14.50		1499 50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 4480		16% 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: 10,000' KOP: 9,007' EOC: 9,757'

Set OH mechanical whipstock w/ 943 ft of 2.875 tubing and pump 30 bbls of Mudpush @ 12 ppg, followed by 441 sks Type H cement, dispersant 0.080 gals/sk, retarder 0.045 gals/sk @ 17.50 ppg, 0.94 cuft/sk, & 0% excess from pilot hole TD to KOP. KO lateral and drill through the curve to TD. Run production csg to TD and cement.

Application to Drill
Fuggles 11 Federal Com 2H
Cimarex Energy Co.
UL: N, Sec. 11, 25S, 32E
Lea Co., NM

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.

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.

11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 820'	7.80 - 8.30	28	NC	FW Spud Mud
820' to 4680'	9.50 - 10.00	30-32	NC	Brine Water
4680' to 13899'	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 4680 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:

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: 4500 psi

Estimated BHT: 156°

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.

Bone Spring "C" Shale pay will be perforated and stimulated.

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



		Critical Points						
<u>Critical Point</u>	<u>MD</u>	<u>INCL</u>	<u>AZIM</u>	<u>TVD</u>	<u>VSEC</u>	<u>N(+)/S(-)</u>	<u>E(+)/W(-)</u>	<u>DLS</u>
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP, Build 12° DLS	9006.50	0.00	0.00	9006.50	0.00	0.00	0.00	0.00
Landing Point	9756.56	90.00	0.00	9484.00	477.49	477.50	0.00	12.00
Cimarex Fuggles 11 Federal #2H - PBHL	13899.03	90.00	359.06	9484.00	4619.92	4619.79	-33.90	0.02

Cimarex Fuggles 11 Federal #2H Rev0 TP 9-Dec-13 Proposal Report
(Non-Def Plan)

Report Date:	December 09, 2013 - 01:34 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:		Vertical Section Azimuth:	359.580 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Fuggles 11 Federal #2H / Fuggles 11 Federal #2H	TVD Reference Datum:	Ground Level
Well:	Fuggles 11 Federal #2H	TVD Reference Elevation:	3470.000 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3470.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	7.418 °
Survey Name:	Cimarex Fuggles 11 Federal #2H Rev0 TP 9-Dec-13	Total Field Strength:	48264.226 nT
Survey Date:	December 09, 2013	Magnetic Dip Angle:	59.983 °
Tort / AHD / DDI / ERD Ratio:	90.938 ° / 4619.976 ft / 5.789 / 0.487	Declination Date:	December 09, 2013
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Declination Model:	BGGM 2012
Location Lat / Long:	N 32° 8' 19.28171", W 103° 38' 52.16917"	North Reference:	Grid North
Location Grid N/E Y/X:	N 414866.100 ftUS, E 753518.700 ftUS	Grid Convergence Used:	0.3647 °
CRS Grid Convergence Angle:	0.3647 °	Total Corr Mag North->Grid North:	7.0534 °
Grid Scale Factor:	0.99996085	Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (ft/100ft)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	N/A
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	400.00	0.00	0.00	400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	500.00	0.00	0.00	500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	600.00	0.00	0.00	600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	700.00	0.00	0.00	700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	800.00	0.00	0.00	800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	900.00	0.00	0.00	900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6400.00	0.00	0.00	6400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6500.00	0.00	0.00	6500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	6600.00	0.00	0.00	6600.00	0.00	0.00	0.00	414866.10	753518.70					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ° '")	Longitude (E/W ° ° '")	Closure (ft)	Closure Azimuth (°)	DLS (*/100ft)
	8000.00	0.00	0.00	8000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8100.00	0.00	0.00	8100.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8200.00	0.00	0.00	8200.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8300.00	0.00	0.00	8300.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8400.00	0.00	0.00	8400.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8500.00	0.00	0.00	8500.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8600.00	0.00	0.00	8600.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8700.00	0.00	0.00	8700.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8800.00	0.00	0.00	8800.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	8900.00	0.00	0.00	8900.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	9000.00	0.00	0.00	9000.00	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
KOP, Build 12" DLS	9006.50	0.00	0.00	9006.50	0.00	0.00	0.00	414866.10	753518.70	N 32 8 19.28	W 103 38 52.17	0.00	0.00	0.00
	9100.00	11.22	0.00	9099.40	9.12	9.12	0.00	414875.22	753518.70	N 32 8 19.37	W 103 38 52.17	9.12	0.00	12.00
	9200.00	23.22	0.00	9194.75	38.67	38.67	0.00	414904.77	753518.70	N 32 8 19.68	W 103 38 52.17	38.67	0.00	12.00
	9300.00	35.22	0.00	9281.86	87.39	87.40	0.00	414953.49	753518.70	N 32 8 20.15	W 103 38 52.16	87.40	0.00	12.00
	9400.00	47.22	0.00	9356.95	153.16	153.17	0.00	415019.26	753518.70	N 32 8 20.80	W 103 38 52.16	153.17	0.00	12.00
	9500.00	58.22	0.00	9416.72	233.11	233.11	0.00	415099.20	753518.70	N 32 8 21.59	W 103 38 52.15	233.11	0.00	12.00
	9600.00	71.21	0.00	9458.56	323.73	323.73	0.00	415189.82	753518.70	N 32 8 22.49	W 103 38 52.15	323.73	0.00	12.00
	9700.00	83.21	0.00	9480.65	421.07	421.08	0.00	415287.16	753518.70	N 32 8 23.45	W 103 38 52.14	421.08	0.00	12.00
Landing Point	9756.56	90.00	0.00	9484.00	477.49	477.50	0.00	415343.58	753518.70	N 32 8 24.01	W 103 38 52.13	477.50	0.00	12.00
	9800.00	90.00	359.99	9484.00	520.93	520.94	0.00	415387.02	753518.70	N 32 8 24.44	W 103 38 52.13	520.94	359.00	0.02
	9900.00	90.00	359.97	9484.00	620.93	620.94	-0.04	415487.02	753518.68	N 32 8 25.43	W 103 38 52.12	620.94	359.00	0.02
	10000.00	90.00	359.94	9484.00	720.93	720.94	-0.12	415587.01	753518.58	N 32 8 26.42	W 103 38 52.12	720.94	359.99	0.02
	10100.00	90.00	359.92	9484.00	820.92	820.94	-0.23	415687.01	753518.47	N 32 8 27.41	W 103 38 52.11	820.94	359.98	0.02
	10200.00	90.00	359.90	9484.00	920.92	920.94	-0.39	415787.01	753518.31	N 32 8 28.39	W 103 38 52.11	920.94	359.98	0.02
	10300.00	90.00	359.88	9484.00	1020.92	1020.94	-0.58	415887.00	753518.12	N 32 8 29.38	W 103 38 52.10	1020.94	359.97	0.02
	10400.00	90.00	359.85	9484.00	1120.92	1120.94	-0.82	415987.00	753517.88	N 32 8 30.37	W 103 38 52.10	1120.94	359.96	0.02
	10500.00	90.00	359.83	9484.00	1220.92	1220.94	-1.09	416086.99	753517.61	N 32 8 31.36	W 103 38 52.09	1220.94	359.95	0.02
	10600.00	90.00	359.81	9484.00	1320.92	1320.94	-1.41	416186.99	753517.29	N 32 8 32.35	W 103 38 52.09	1320.94	359.94	0.02
	10700.00	90.00	359.79	9484.00	1420.92	1420.94	-1.76	416286.98	753516.94	N 32 8 33.34	W 103 38 52.08	1420.94	359.93	0.02
	10800.00	90.00	359.76	9484.00	1520.92	1520.94	-2.15	416386.98	753516.55	N 32 8 34.33	W 103 38 52.08	1520.94	359.92	0.02
	10900.00	90.00	359.74	9484.00	1620.92	1620.94	-2.58	416486.97	753516.12	N 32 8 35.32	W 103 38 52.08	1620.94	359.91	0.02
	11000.00	90.00	359.72	9484.00	1720.92	1720.94	-3.05	416586.97	753515.65	N 32 8 36.31	W 103 38 52.08	1720.94	359.90	0.02
	11100.00	90.00	359.70	9484.00	1820.92	1820.94	-3.57	416686.96	753515.13	N 32 8 37.30	W 103 38 52.08	1820.94	359.89	0.02
	11200.00	90.00	359.67	9484.00	1920.92	1920.94	-4.12	416786.96	753514.58	N 32 8 38.29	W 103 38 52.07	1920.94	359.88	0.02
	11300.00	90.00	359.65	9484.00	2020.92	2020.94	-4.71	416886.95	753513.99	N 32 8 39.28	W 103 38 52.07	2020.94	359.87	0.02
	11400.00	90.00	359.63	9484.00	2120.92	2120.93	-5.34	416986.95	753513.36	N 32 8 40.27	W 103 38 52.07	2120.94	359.86	0.02
	11500.00	90.00	359.61	9484.00	2220.92	2220.93	-6.01	417086.94	753512.70	N 32 8 41.26	W 103 38 52.07	2220.94	359.85	0.02
	11600.00	90.00	359.58	9484.00	2320.92	2320.93	-6.71	417186.93	753511.99	N 32 8 42.25	W 103 38 52.06	2320.94	359.83	0.02
	11700.00	90.00	359.56	9484.00	2420.92	2420.93	-7.46	417286.93	753511.24	N 32 8 43.24	W 103 38 52.06	2420.94	359.82	0.02
	11800.00	90.00	359.54	9484.00	2520.92	2520.92	-8.25	417386.92	753510.45	N 32 8 44.23	W 103 38 52.06	2520.94	359.81	0.02
	11900.00	90.00	359.51	9484.00	2620.92	2620.92	-9.08	417486.91	753509.62	N 32 8 45.22	W 103 38 52.06	2620.93	359.80	0.02
	12000.00	90.00	359.49	9484.00	2720.92	2720.92	-9.94	417586.90	753508.76	N 32 8 46.21	W 103 38 52.06	2720.93	359.79	0.02
	12100.00	90.00	359.47	9484.00	2820.91	2820.91	-10.85	417686.89	753507.85	N 32 8 47.20	W 103 38 52.06	2820.93	359.78	0.02
	12200.00	90.00	359.45	9484.00	2920.91	2920.91	-11.80	417786.89	753506.91	N 32 8 48.19	W 103 38 52.06	2920.93	359.77	0.02
	12300.00	90.00	359.42	9484.00	3020.91	3020.90	-12.78	417886.88	753505.92	N 32 8 49.17	W 103 38 52.06	3020.93	359.76	0.02
	12400.00	90.00	359.40	9484.00	3120.91	3120.90	-13.81	417986.87	753504.90	N 32 8 50.16	W 103 38 52.10	3120.93	359.75	0.02
	12500.00	90.00	359.38	9484.00	3220.91	3220.89	-14.87	418086.86	753503.83	N 32 8 51.15	W 103 38 52.10	3220.93	359.74	0.02
	12600.00	90.00	359.36	9484.00	3320.91	3320.88	-15.97	418186.85	753502.73	N 32 8 52.14	W 103 38 52.11	3320.92	359.72	0.02
	12700.00	90.00	359.33	9484.00	3420.91	3420.86	-17.12	418286.84	753501.58	N 32 8 53.13	W 103 38 52.11	3420.92	359.71	0.02
	12800.00	90.00	359.31	9484.00	3520.91	3520.87	-18.30	418386.83	753500.40	N 32 8 54.12	W 103 38 52.12	3520.92	359.70	0.02
	12900.00	90.00	359.29	9484.00	3620.91	3620.86	-19.52	418486.81	753499.18	N 32 8 55.11	W 103 38 52.13	3620.92	359.69	0.02
	13000.00	90.00	359.27	9484.00	3720.91	3720.86	-20.78	418586.80	753497.92	N 32 8 56.10	W 103 38 52.14	3720.91	359.68	0.02
	13100.00	90.00	359.24	9484.00	3820.91	3820.85	-22.08	418686.79	753496.62	N 32 8 57.09	W 103 38 52.14	3820.91	359.67	0.02
	13200.00	90.00	359.22	9484.00	3920.90	3920.84	-23.43	418786.78	753495.28	N 32 8 58.08	W 103 38 52.15	3920.91	359.66	0.02
	13300.00	90.00	359.20	9484.00	4020.90	4020.83	-24.81	418886.76	753493.90	N 32 8 59.07	W 103 38 52.16	4020.91	359.65	0.02
	13400.00	90.00	359.18	9484.00	4120.90	4120.82	-26.23	418986.75	753492.48	N 32 9 0.06	W 103 38 52.17	4120.90	359.64	0.02
	13500.00	90.00	359.15	9484.00	4220.90	4220.81	-27.68	419086.73	753491.02	N 32 9 1.05	W 103 38 52.18	4220.90	359.62	0.02
	13600.00	90.00	359.13	9484.00	4320.89	4320.80	-29.18	419186.72	753489.52	N 32 9 2.04	W 103 38 52.19	4320.90	359.61	0.02
	13700.00	90.00	359.11	9484.00	4420.89	4420.79	-30.72	419286.70	753487.98	N 32 9 3.03	W 103 38 52.20	4420.89	359.60	0.02
	13800.00	90.00	359.08	9484.00	4520.89	4520.77	-32.30	419386.69	753486.40	N 32 9 4.02	W 103 38 52.21	4520.89	359.59	0.02
Cimarex Fuggles 11 Federal #2H - PBHL	13899.03	90.00	359.06	9484.00	4619.92	4619.79	-33.90	419485.70	753484.80	N 32 9 5.00	W 103 38 52.22	4619.92	359.58	0.02

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	13899.031	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Fuggles 11 Federal #2H Rev0 TP

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

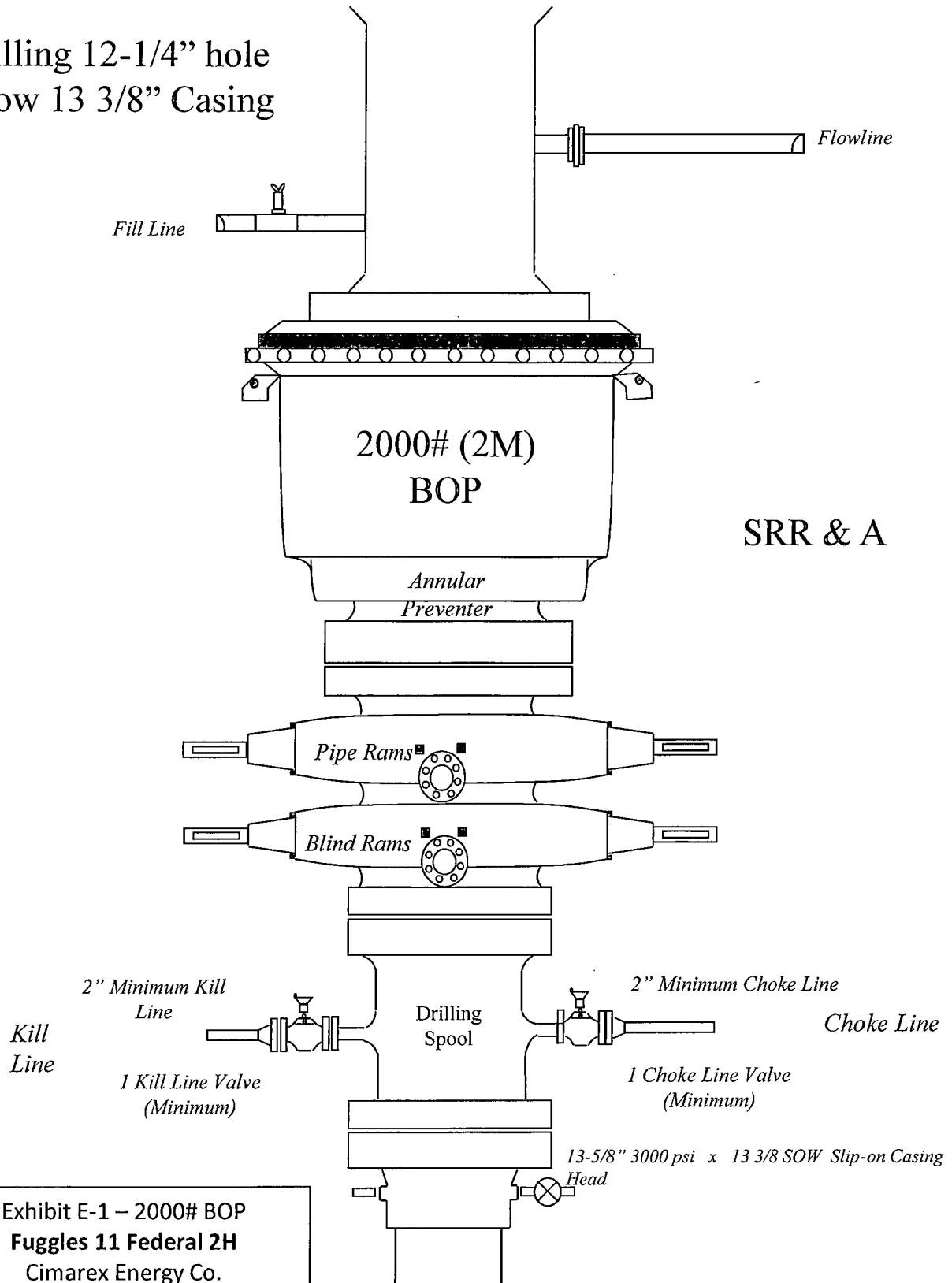


Exhibit E-1 – 2000# BOP

Fuggles 11 Federal 2H

Cimarex Energy Co.

11-25S-33E

SHL 330 FSL & 1980 FWL

BHL 330 FNL & 1980 FWL

Lea County, NM

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

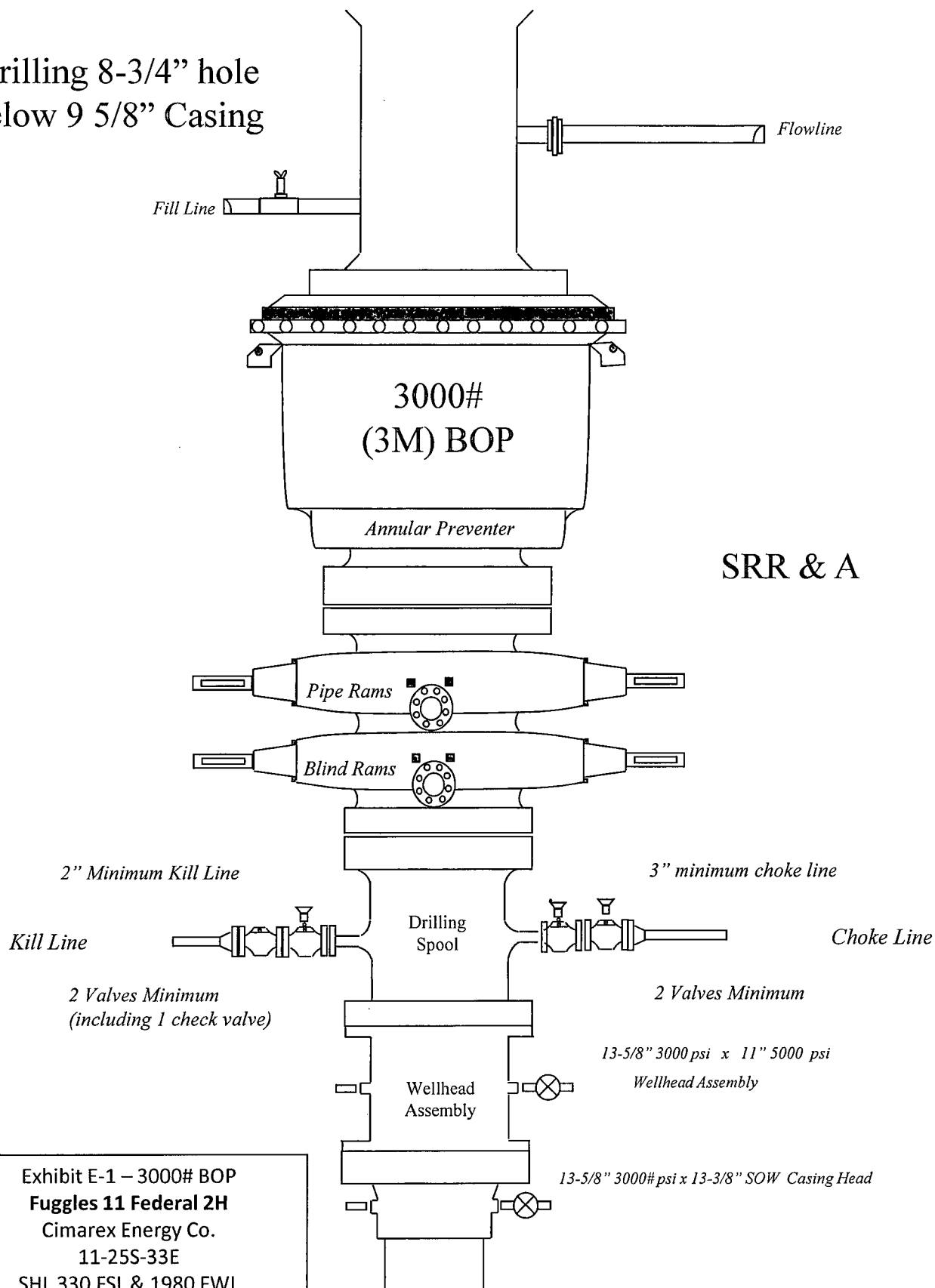
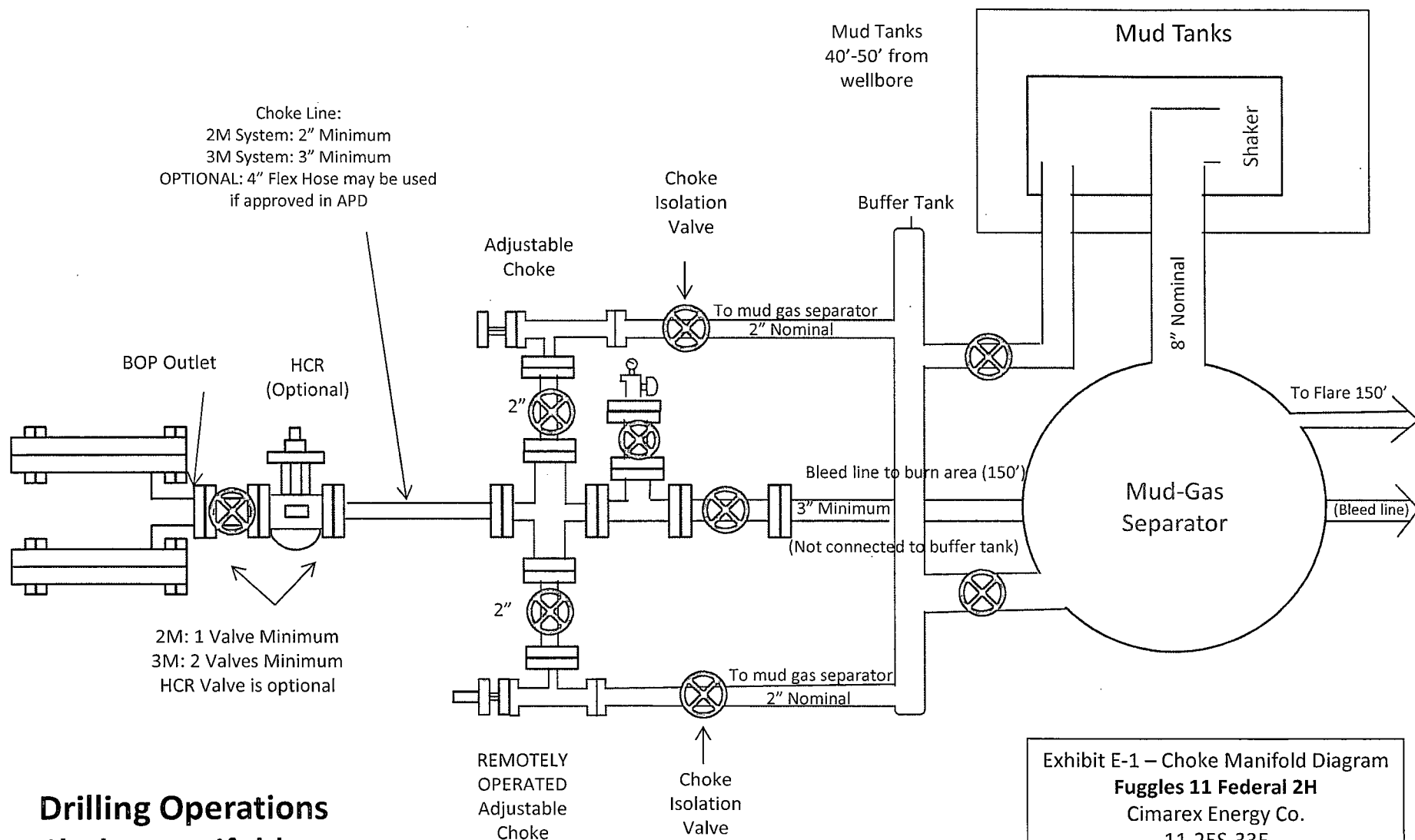


Exhibit E-1 – 3000# BOP
Fuggles 11 Federal 2H
Cimarex Energy Co.
11-25S-33E
SHL 330 FSL & 1980 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Fuggles 11 Federal 2H
 Cimarex Energy Co.
 11-25S-33E
 SHL 330 FSL & 1980 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Fuggles 11 Federal 2H

Cimarex Energy Co.

11-25S-33E

SHL 330 FSL & 1980 FWL

BHL 330 FNL & 1980 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 Gomez</i>		Approved: <i>[Signature]</i>



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

Pick Ticket #: 94260

Midwest Hose
& Specialty, Inc.

Hose Specifications

Hose Type

C&K

I.D.

4"

Working Pressure

10000 PSI

Length

45'

O.D.

6.09"

Burst Pressure

Standard Safety Multiplier Applies

Verification

Type of Fittings

41/16 10K

Die Size

6.38"

Hose Serial #

5344

Coupling Method

Swage

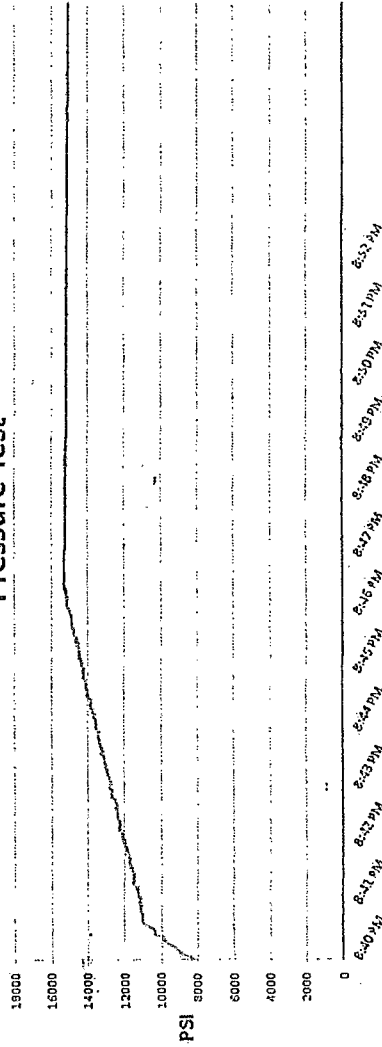
Final O.D.

6.25"

Hose Assembly Serial #

79793

Pressure Test



Test Pressure
15000 PSI

Time Held at Test Pressure
11 Minutes

Actual Burst Pressure

Peak Pressure
15463 PSI

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

Tested By: Zac McConnell

Approved By: Kim Thomas



Certificate of Conformity

ODYD-271

3/8/2011

3/8/2011.



Midwest Hose
& Specialty, Inc.

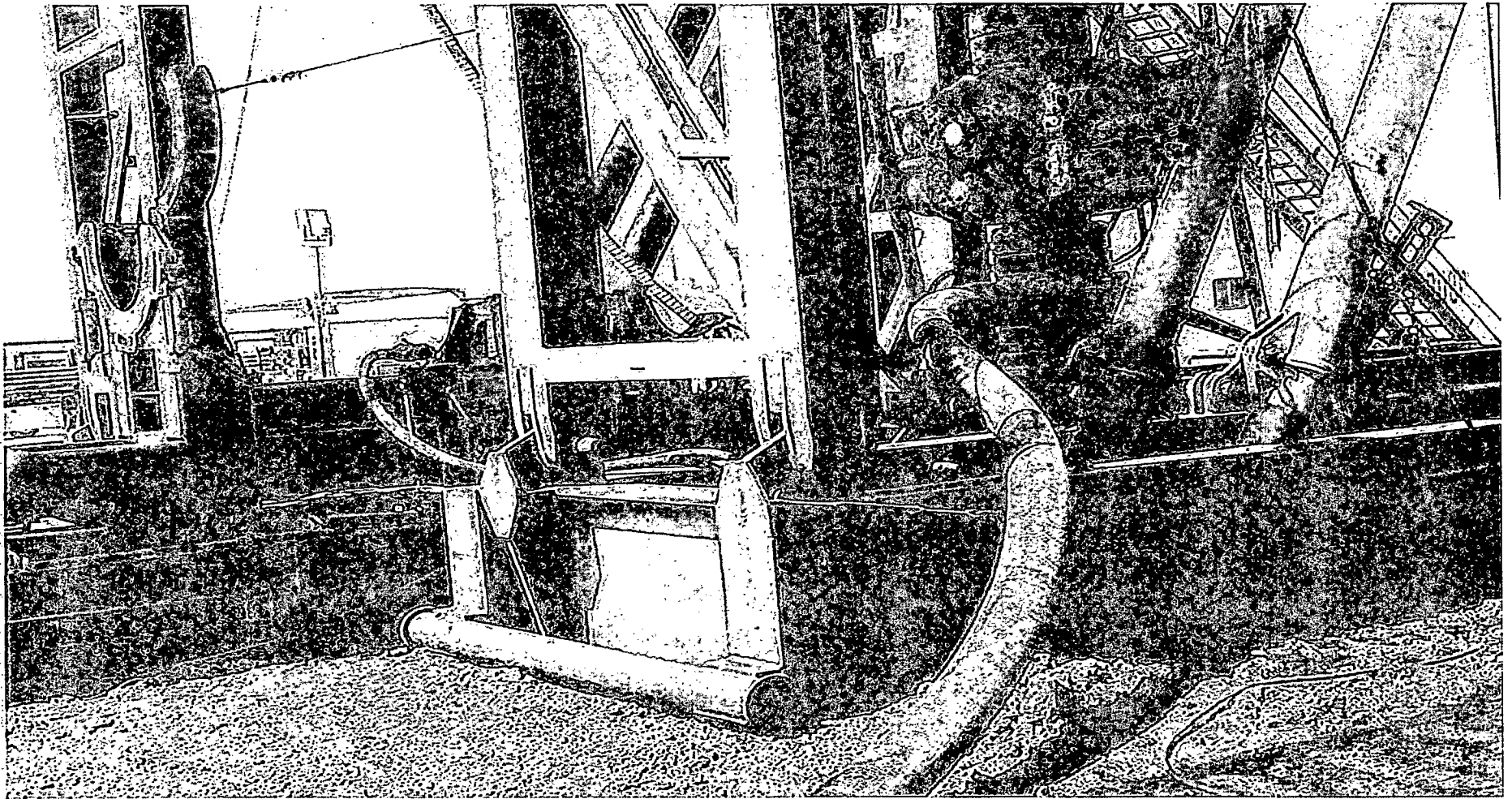
Exhibit F -3- Co-Flex Hose
Fuggles 11 Federal 2H
Cimarex Energy Co.
11-25S-33E
SHL 330 FSL & 1980 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

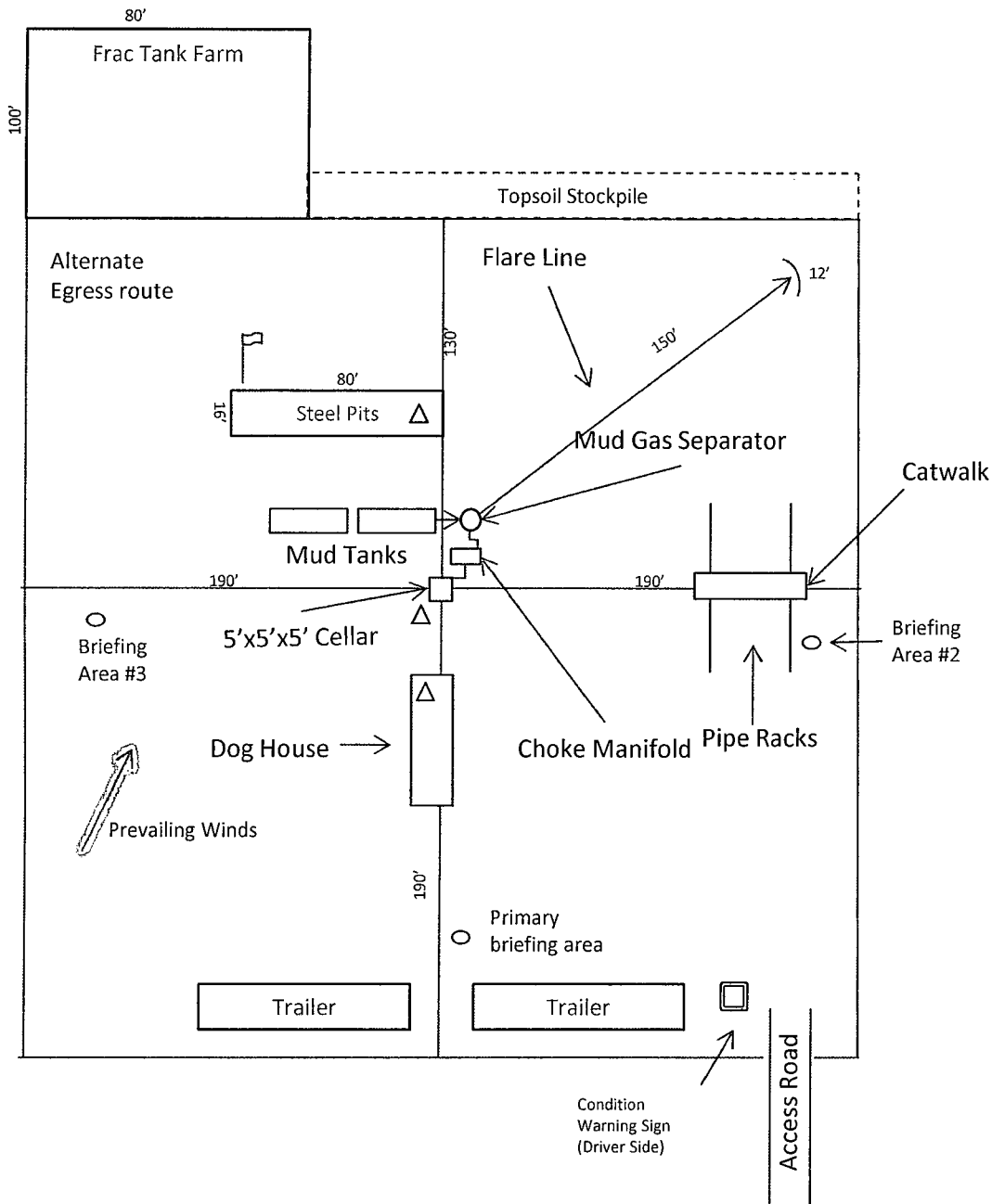
Specification Sheet Choke & Kill Hose

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
Fuggles 11 Federal 2H
Cimarex Energy Co.
11-25S-33E
SHL 330 FSL & 1980 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM





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



Exhibit D – Rig Diagram
Fuggles 11 Federal 2H
 Cimarex Energy Co.
 11-25S-33E
 SHL 330 FSL & 1980 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM