

HOBBS OCD

ATS-13-1214

MAY 19 2014

Form 3160-3
(March 2012)

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

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 5 H (38777)
2. Name of Operator Cimarex Energy Co. OF (162683)		9. API Well No. 30025 41879
3a. Address 600 N. Marienfield St. Ste. 600 Midland Tx 79071	3b. Phone No. (include area code) 432-571-7800	10. Field and Pool, or Exploratory QUAIL RIDGE; B5, SOUTH (50461)
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FNL & 1980 FWL At proposed prod. Zone 330 FSL & 1980 FWL		11. Sec., T. R. M. or Blk. and Survey and Area 33, 19S, 34E
14. Distance in miles and direction from nearest town or post office* Approximately 26 miles WSW of Hobbs, NM		12. County or Parish Lea
		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 NMNM060789=200 acres NMNM057285=1280 acres NMNM094622=120 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 15,225 MD 10,820 TVD	20. BLM/BIA Bond No. on File NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3686 GR	22. Approximate date work will start* 1/1/14	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
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Title Regulatory Compliance Steve Caffey		Date MAY - 9 2014
Title 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)

Capitan Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL
MAY 28 2014

Operator Certification Statement

Chaparral 33 Federal Com 5

Cimarex Energy Co.

UL: C, 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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 Cimarex Energy Co.
 UL: C, Sec. 33, 19S, 34E
 Lea Co., NM

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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 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 <i>See COA</i>	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 <i>See COA</i>	Lead	628	2.40	11.90	1507	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1212	1.24	14.50	1502	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 4050' <i>See COA</i>	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: 10,322' EOC: 11,070'

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.

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Lea Co., NM

See COA

11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc.	Fluid Loss	Type Mud
0' to 1680' ^{1690'}	7.80 - 8.30	28	NC	FW Spud Mud
1680' to 5450' ^{5600'}	9.50 - 10.00	30-32	NC	Brine Water
5450' to 15225'	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

See COA
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: 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.

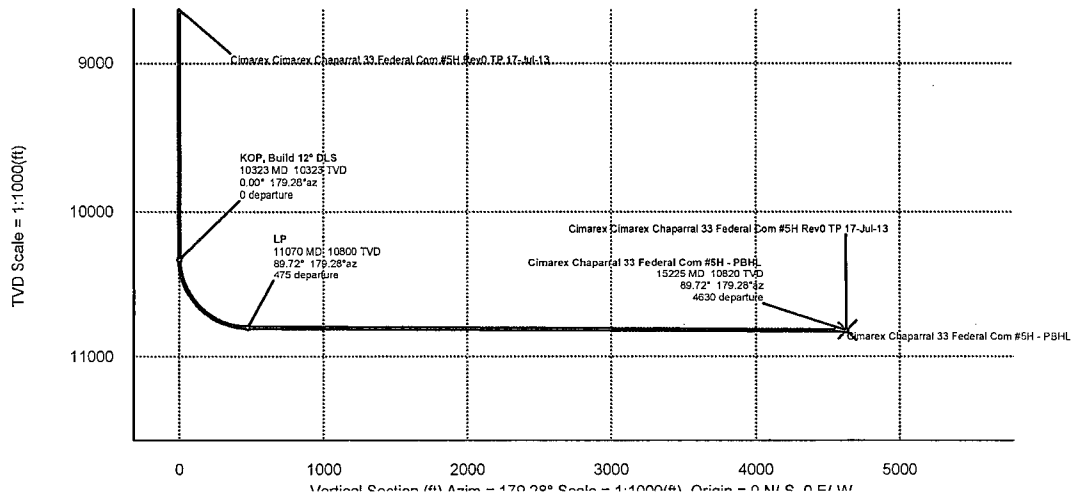
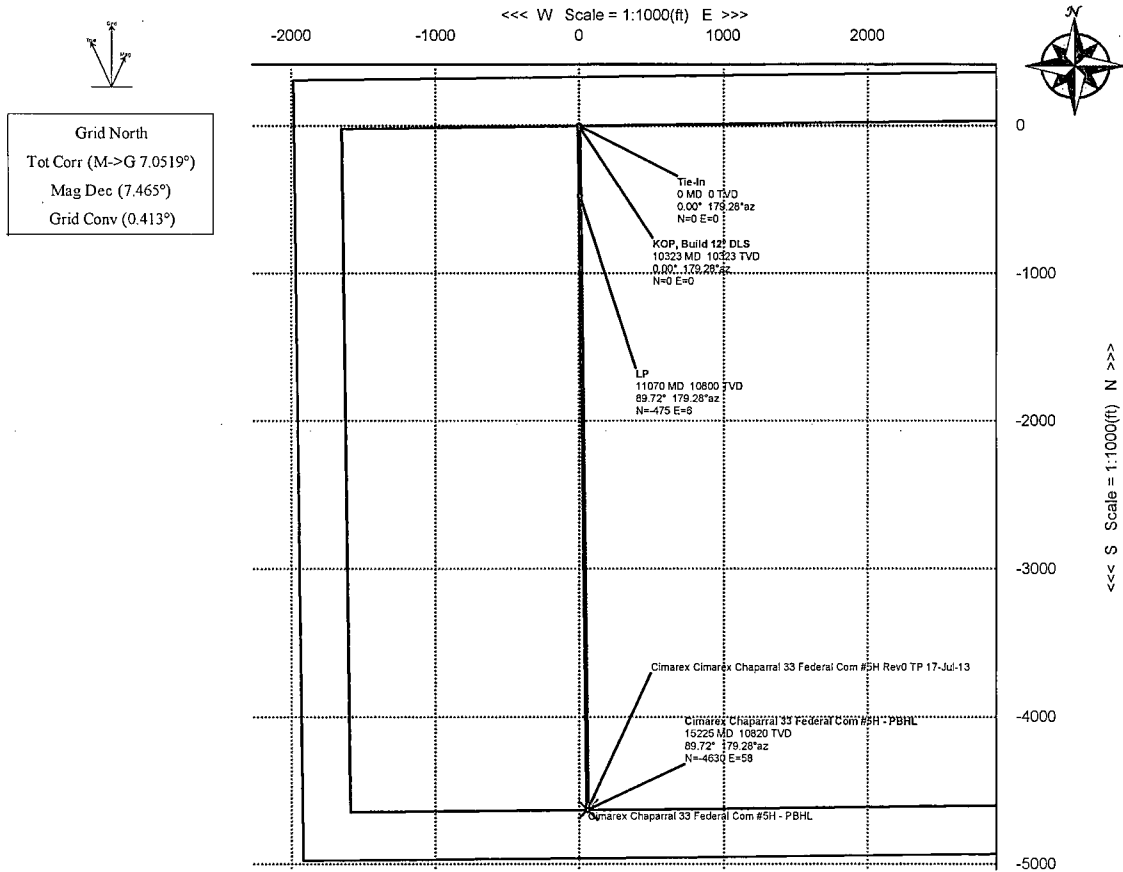
The proposed well will be tested and potentialized as Oil



Cimarex Energy

PATHFINDER
A Schlumberger Company

WELL	Chaparral 33 Federal Com #5H	FIELD	NM Lea County (NAD 83)	STRUCTURE	Cimarex Chaparral 33 Federal
Magnetic Parameters	Dip: 60.45° Model: BGGM 2012 Mag Dec: 7.465°	Date: July 17, 2013 FID: 48616-617	Surface Location Lat: N 32 37 23 085 Lon: W 103 34 2 668	NAD83 New Mexico State Plane, Eastern Zone, US Feet Northing: 991256.89 RJUS Easting: 771148.60 RJUS Grid Cont: 0.413° Scale Fact: 0.9997277	Miscellaneous Ref: Chaparral 33 Federal Com #5H/D Ref: Ground Level (3686ft above MSL) Plan: Cimarex Chaparral 33 Federal Com #5H/D Rev0 TP 17-Jul-13



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	179.28	0.00	0.00	0.00	0.00	
9 5/8 Casing Point	5480.00	0.00	179.28	5480.00	0.00	0.00	0.00	0.00
KOP, Build 12" DLS	10322.50	0.00	179.28	10322.50	0.00	0.00	0.00	0.00
LP	11070.26	89.72	179.28	10800.00	475.21	-475.17	5.97	12.00
Cimarex Chaparral 33 Federal Com #5H - PBHL	15225.20	89.72	179.28	10820.00	4630.09	-4629.73	58.21	0.00

Cimarex Cimarex Chaparral 33 Federal Com #5H Rev0 TP 17-Jul-13 Proposal Report (Def Plan)

Report Date: July 17, 2013 - 10:46 AM Client: Cimarex Energy Field: NM Lea County (NAD 83) Structure / Slot: Cimarex Chaparral 33 Federal Com #5H / Chaparral 33 Federal Com #5H Well: Chaparral 33 Federal Com #5H Borehole: Original Borehole UWI / API#: Unknown / Unknown Survey Name: Cimarex Cimarex Chaparral 33 Federal Com #5H Rev0 TP 17-Jul-13 Survey Date: July 17, 2013 Tort / AHD / DDI / ERD Ratio: 89.725 ° / 4630.091 ft / 5.767 / 0.428 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 37' 23.08530", W 103° 34' 2.66813" Location Grid N/E Y/X: N 591256.800 ftUS, E 777148.600 ftUS CRS Grid Convergence Angle: 0.4129 ° Grid Scale Factor: 0.99997277	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 179.280 ° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: Ground Level TVD Reference Elevation: 3686.000 ft above MSL Seabed / Ground Elevation: 3686.000 ft above MSL Magnetic Declination: 7.465 ° Total Field Strength: 48616.442 nT Magnetic Dip Angle: 60.465 ° Declination Date: July 17, 2013 Magnetic Declination Model: BGGM 2012 North Reference: Grid North Grid Convergence Used: 0.4129 ° Total Corr Mag North->Grid North: 7.0519 ° Local Coord Referenced To: Structure Reference Point	
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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 (°/100ft)
Tie-In	0.00	0.00	179.28	0.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	N/A
	100.00	0.00	179.28	100.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	200.00	0.00	179.28	200.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	300.00	0.00	179.28	300.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	400.00	0.00	179.28	400.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	500.00	0.00	179.28	500.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	600.00	0.00	179.28	600.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	700.00	0.00	179.28	700.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	800.00	0.00	179.28	800.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	900.00	0.00	179.28	900.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1000.00	0.00	179.28	1000.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1100.00	0.00	179.28	1100.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1200.00	0.00	179.28	1200.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1300.00	0.00	179.28	1300.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1400.00	0.00	179.28	1400.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1500.00	0.00	179.28	1500.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1600.00	0.00	179.28	1600.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1700.00	0.00	179.28	1700.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1800.00	0.00	179.28	1800.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	1900.00	0.00	179.28	1900.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2000.00	0.00	179.28	2000.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2100.00	0.00	179.28	2100.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2200.00	0.00	179.28	2200.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2300.00	0.00	179.28	2300.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2400.00	0.00	179.28	2400.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2500.00	0.00	179.28	2500.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2600.00	0.00	179.28	2600.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2700.00	0.00	179.28	2700.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2800.00	0.00	179.28	2800.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	2900.00	0.00	179.28	2900.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00

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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 ("/100ft)
	8400.00	0.00	179.28	8400.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	8500.00	0.00	179.28	8500.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	8600.00	0.00	179.28	8600.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	8700.00	0.00	179.28	8700.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	8800.00	0.00	179.28	8800.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	8900.00	0.00	179.28	8900.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9000.00	0.00	179.28	9000.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9100.00	0.00	179.28	9100.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9200.00	0.00	179.28	9200.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9300.00	0.00	179.28	9300.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9400.00	0.00	179.28	9400.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9500.00	0.00	179.28	9500.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9600.00	0.00	179.28	9600.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9700.00	0.00	179.28	9700.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9800.00	0.00	179.28	9800.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	9900.00	0.00	179.28	9900.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	10000.00	0.00	179.28	10000.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	10100.00	0.00	179.28	10100.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	10200.00	0.00	179.28	10200.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	10300.00	0.00	179.28	10300.00	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
KOP, Build 12" DLS	10322.50	0.00	179.28	10322.50	0.00	0.00	0.00	591256.80	777148.60	N 32 37 23.09	W 103 34 2.67	0.00	0.00	0.00
	10400.00	9.30	179.28	10399.66	6.28	-6.27	0.08	591250.53	777148.68	N 32 37 23.02	W 103 34 2.67	6.28	179.28	12.00
	10500.00	21.30	179.28	10495.94	32.61	-32.61	0.41	591224.19	777149.01	N 32 37 22.76	W 103 34 2.67	32.61	179.28	12.00
	10600.00	33.30	179.28	10584.64	78.39	-78.38	0.99	591178.42	777149.59	N 32 37 22.31	W 103 34 2.66	78.39	179.28	12.00
	10700.00	45.30	179.28	10661.89	141.61	-141.60	1.78	591115.21	777150.38	N 32 37 21.68	W 103 34 2.66	141.61	179.28	12.00
	10800.00	57.30	179.28	10724.30	219.50	-219.49	2.76	591037.32	777151.36	N 32 37 20.91	W 103 34 2.65	219.50	179.28	12.00
	10900.00	69.29	179.28	10769.16	308.67	-308.65	3.88	590948.16	777152.48	N 32 37 20.03	W 103 34 2.65	308.67	179.28	12.00
	11000.00	81.29	179.28	10794.50	405.22	-405.19	5.09	590851.62	777153.69	N 32 37 19.08	W 103 34 2.64	405.22	179.28	12.00
LP	11070.26	89.72	179.28	10800.00	475.21	-475.17	5.97	590781.65	777154.57	N 32 37 18.38	W 103 34 2.64	475.21	179.28	12.00
	11100.00	89.72	179.28	10800.14	504.94	-504.90	6.35	590751.91	777154.95	N 32 37 18.09	W 103 34 2.64	504.94	179.28	0.00
	11200.00	89.72	179.28	10800.62	604.94	-604.89	7.60	590651.93	777156.20	N 32 37 17.10	W 103 34 2.63	604.94	179.28	0.00
	11300.00	89.72	179.28	10801.11	704.94	-704.88	8.86	590551.94	777157.46	N 32 37 16.11	W 103 34 2.62	704.94	179.28	0.00
	11400.00	89.72	179.28	10801.59	804.94	-804.87	10.12	590451.95	777158.72	N 32 37 15.12	W 103 34 2.62	804.94	179.28	0.00
	11500.00	89.72	179.28	10802.07	904.94	-904.87	11.37	590351.96	777159.97	N 32 37 14.13	W 103 34 2.61	904.94	179.28	0.00
	11600.00	89.72	179.28	10802.55	1004.94	-1004.86	12.63	590251.97	777161.23	N 32 37 13.14	W 103 34 2.61	1004.94	179.28	0.00
	11700.00	89.72	179.28	10803.03	1104.93	-1104.85	13.89	590151.99	777162.49	N 32 37 12.15	W 103 34 2.60	1104.93	179.28	0.00
	11800.00	89.72	179.28	10803.51	1204.93	-1204.84	15.15	590052.00	777163.75	N 32 37 11.16	W 103 34 2.59	1204.93	179.28	0.00
	11900.00	89.72	179.28	10803.99	1304.93	-1304.83	16.40	589952.01	777165.00	N 32 37 10.17	W 103 34 2.59	1304.93	179.28	0.00
	12000.00	89.72	179.28	10804.48	1404.93	-1404.82	17.66	589852.02	777166.26	N 32 37 9.18	W 103 34 2.58	1404.93	179.28	0.00
	12100.00	89.72	179.28	10804.96	1504.93	-1504.81	18.92	589752.03	777167.52	N 32 37 8.19	W 103 34 2.57	1504.93	179.28	0.00
	12200.00	89.72	179.28	10805.44	1604.93	-1604.80	20.18	589652.05	777168.78	N 32 37 7.21	W 103 34 2.57	1604.93	179.28	0.00
	12300.00	89.72	179.28	10805.92	1704.93	-1704.79	21.43	589552.06	777170.03	N 32 37 6.22	W 103 34 2.56	1704.93	179.28	0.00
	12400.00	89.72	179.28	10806.40	1804.93	-1804.78	22.69	589452.07	777171.29	N 32 37 5.23	W 103 34 2.55	1804.93	179.28	0.00
	12500.00	89.72	179.28	10806.88	1904.93	-1904.77	23.95	589352.08	777172.55	N 32 37 4.24	W 103 34 2.55	1904.93	179.28	0.00
	12600.00	89.72	179.28	10807.36	2004.92	-2004.77	25.20	589252.09	777173.80	N 32 37 3.25	W 103 34 2.54	2004.92	179.28	0.00
	12700.00	89.72	179.28	10807.84	2104.92	-2104.76	26.46	589152.11	777175.06	N 32 37 2.26	W 103 34 2.54	2104.92	179.28	0.00
	12800.00	89.72	179.28	10808.33	2204.92	-2204.75	27.72	589052.12	777176.32	N 32 37 1.27	W 103 34 2.53	2204.92	179.28	0.00
	12900.00	89.72	179.28	10808.81	2304.92	-2304.74	28.98	588952.13	777177.58	N 32 37 0.28	W 103 34 2.52	2304.92	179.28	0.00
	13000.00	89.72	179.28	10809.29	2404.92	-2404.73	30.23	588852.14	777178.83	N 32 36 59.29	W 103 34 2.52	2404.92	179.28	0.00
	13100.00	89.72	179.28	10809.77	2504.92	-2504.72	31.49	588752.15	777180.09	N 32 36 58.30	W 103 34 2.51	2504.92	179.28	0.00
	13200.00	89.72	179.28	10810.25	2604.92	-2604.71	32.75	588652.17	777181.35	N 32 36 57.31	W 103 34 2.50	2604.92	179.28	0.00
	13300.00	89.72	179.28	10810.73	2704.92	-2704.70	34.01	588552.18	777182.61	N 32 36 56.32	W 103 34 2.50	2704.92	179.28	0.00
	13400.00	89.72	179.28	10811.21	2804.91	-2804.69	35.26	588452.19	777183.86	N 32 36 55.33	W 103 34 2.49	2804.91	179.28	0.00
	13500.00	89.72	179.28	10811.70	2904.91	-2904.68	36.52	588352.20	777185.12	N 32 36 54.34	W 103 34 2.49	2904.91	179.28	0.00

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 ("/100ft)
	13600.00	89.72	179.28	10812.18	3004.91	-3004.67	37.78	588252.21	777186.38	N 32 36 53.35	W 103 34 2.48	3004.91	179.28	0.00
	13700.00	89.72	179.28	10812.66	3104.91	-3104.67	39.04	588152.22	777187.63	N 32 36 52.36	W 103 34 2.47	3104.91	179.28	0.00
	13800.00	89.72	179.28	10813.14	3204.91	-3204.66	40.29	588052.24	777188.89	N 32 36 51.37	W 103 34 2.47	3204.91	179.28	0.00
	13900.00	89.72	179.28	10813.62	3304.91	-3304.65	41.55	587952.25	777190.15	N 32 36 50.39	W 103 34 2.46	3304.91	179.28	0.00
	14000.00	89.72	179.28	10814.10	3404.91	-3404.64	42.81	587852.26	777191.41	N 32 36 49.40	W 103 34 2.45	3404.91	179.28	0.00
	14100.00	89.72	179.28	10814.58	3504.91	-3504.63	44.06	587752.27	777192.66	N 32 36 48.41	W 103 34 2.45	3504.91	179.28	0.00
	14200.00	89.72	179.28	10815.07	3604.91	-3604.62	45.32	587652.28	777193.92	N 32 36 47.42	W 103 34 2.44	3604.91	179.28	0.00
	14300.00	89.72	179.28	10815.55	3704.90	-3704.61	46.58	587552.30	777195.18	N 32 36 46.43	W 103 34 2.44	3704.90	179.28	0.00
	14400.00	89.72	179.28	10816.03	3804.90	-3804.60	47.84	587452.31	777196.44	N 32 36 45.44	W 103 34 2.43	3804.90	179.28	0.00
	14500.00	89.72	179.28	10816.51	3904.90	-3904.59	49.09	587352.32	777197.69	N 32 36 44.45	W 103 34 2.42	3904.90	179.28	0.00
	14600.00	89.72	179.28	10816.99	4004.90	-4004.58	50.35	587252.33	777198.95	N 32 36 43.46	W 103 34 2.42	4004.90	179.28	0.00
	14700.00	89.72	179.28	10817.47	4104.90	-4104.58	51.61	587152.34	777200.21	N 32 36 42.47	W 103 34 2.41	4104.90	179.28	0.00
	14800.00	89.72	179.28	10817.95	4204.90	-4204.57	52.87	587052.36	777201.46	N 32 36 41.48	W 103 34 2.40	4204.90	179.28	0.00
	14900.00	89.72	179.28	10818.43	4304.90	-4304.56	54.12	586952.37	777202.72	N 32 36 40.49	W 103 34 2.40	4304.90	179.28	0.00
	15000.00	89.72	179.28	10818.92	4404.90	-4404.55	55.38	586852.38	777203.98	N 32 36 39.50	W 103 34 2.39	4404.90	179.28	0.00
	15100.00	89.72	179.28	10819.40	4504.89	-4504.54	56.64	586752.39	777205.24	N 32 36 38.51	W 103 34 2.39	4504.89	179.28	0.00
	15200.00	89.72	179.28	10819.88	4604.89	-4604.53	57.89	586652.40	777206.49	N 32 36 37.52	W 103 34 2.38	4604.89	179.28	0.00
Cimarex Chaparral 33 Federal Com #5H - PBHL	15225.20	89.72	179.28	10820.00	4630.09	-4629.73	58.21	586627.21	777206.81	N 32 36 37.27	W 103 34 2.38	4630.09	179.28	0.00

Survey Type: 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	10322.000	1/100.000	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Cimarex Chaparral 33 Federal
	10322.000	15225.198	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Cimarex Chaparral 33 Federal

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

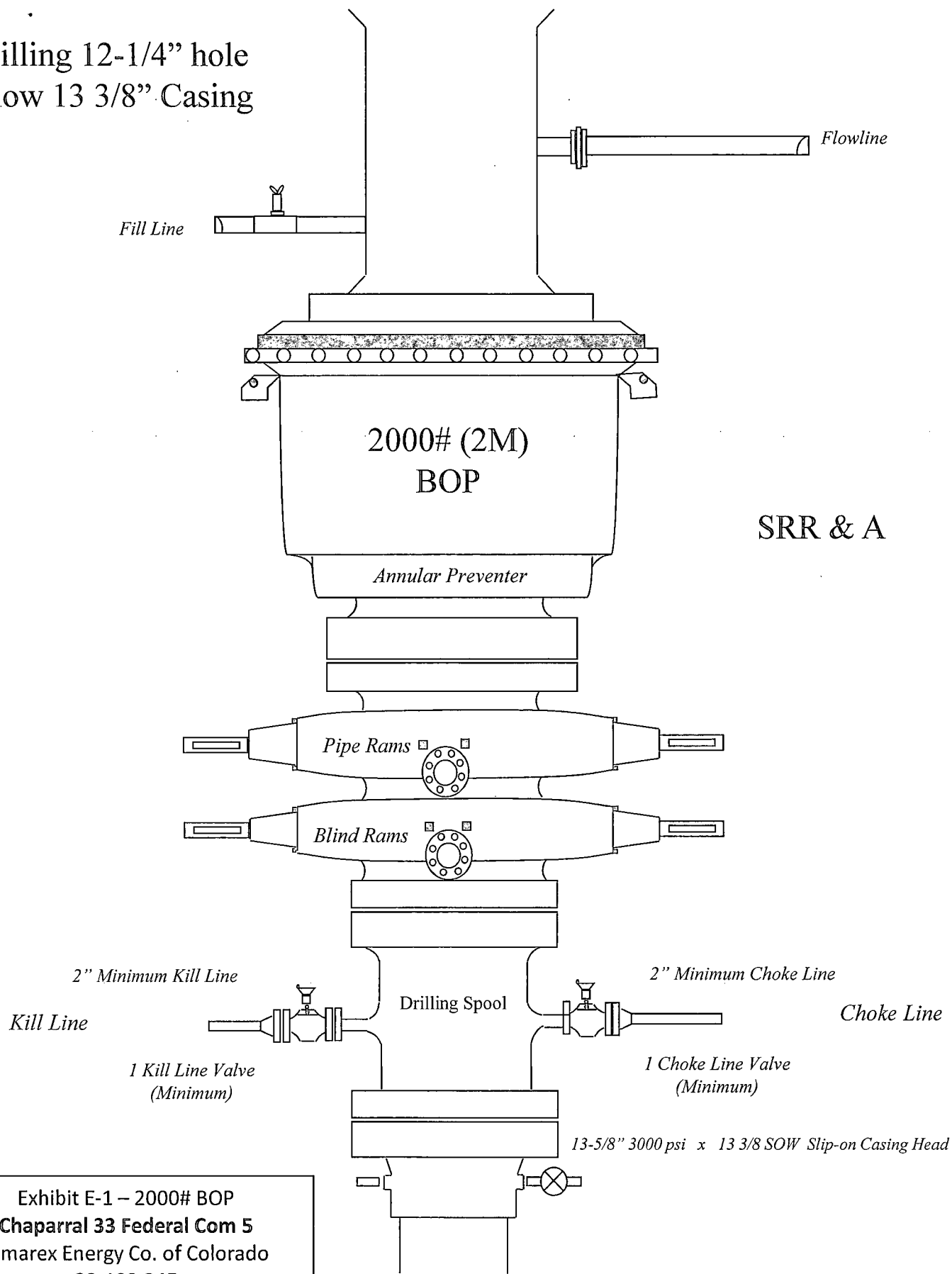


Exhibit E-1 – 2000# BOP
Chaparral 33 Federal Com 5
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM

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

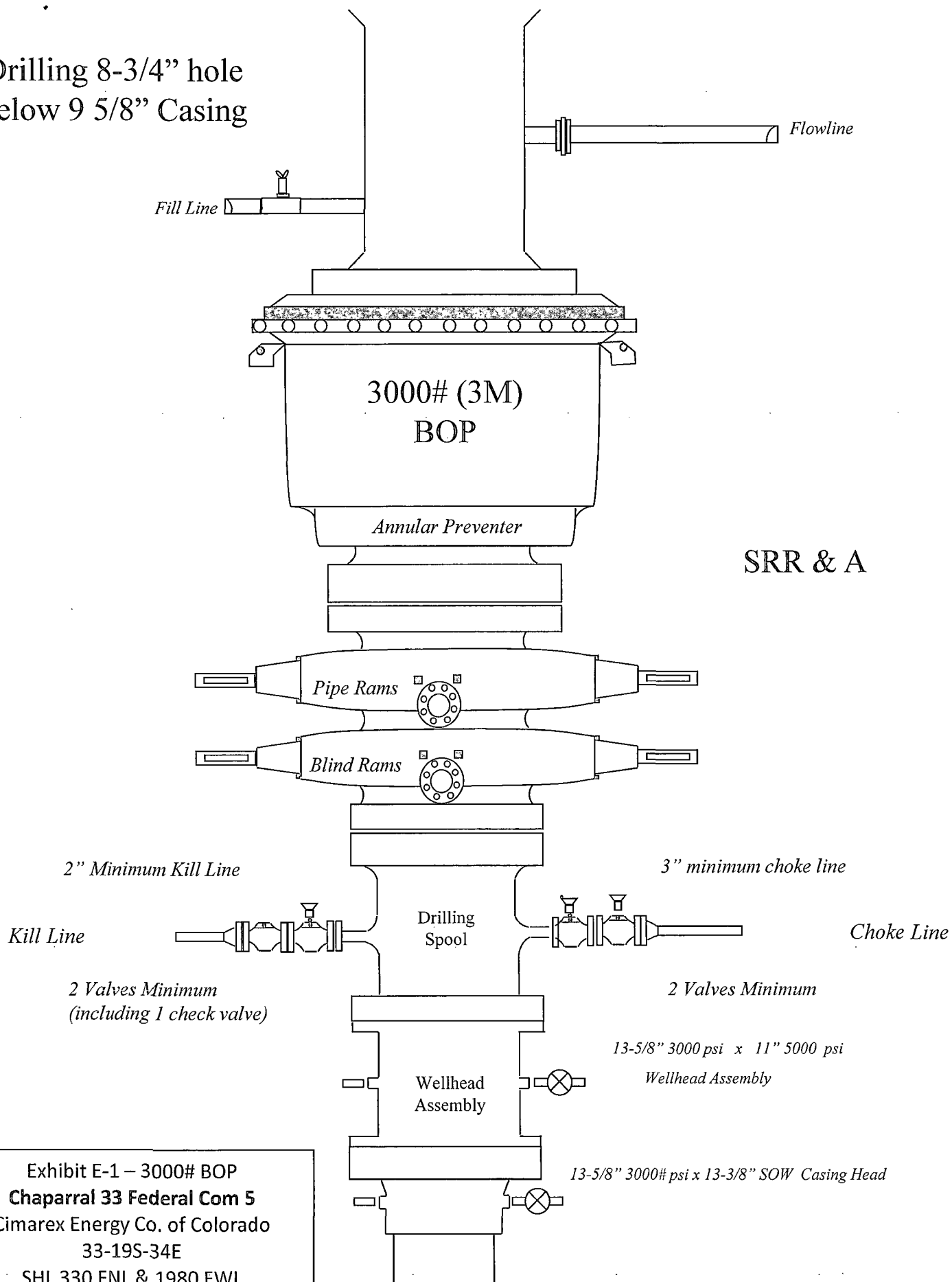
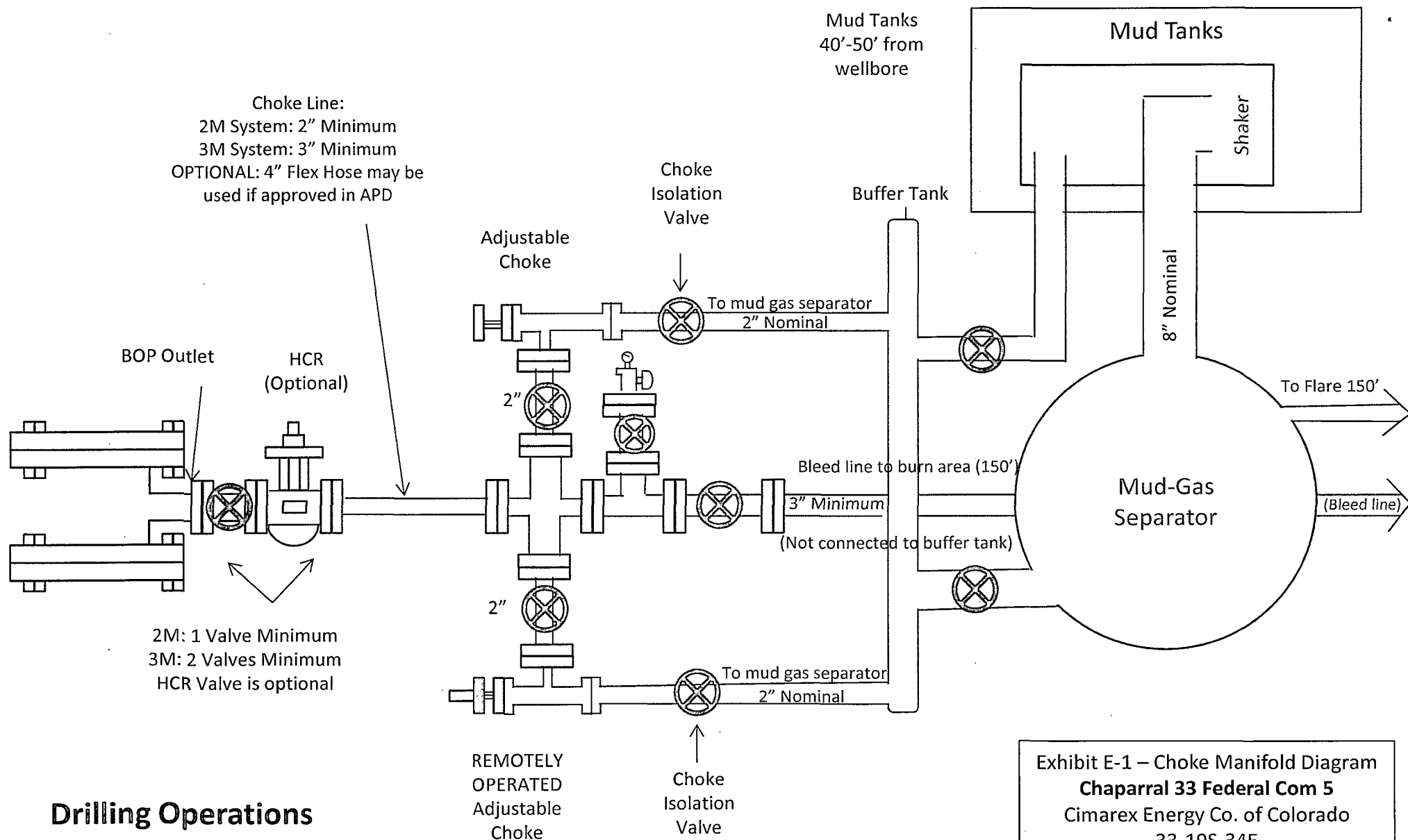


Exhibit E-1 – 3000# BOP
Chaparral 33 Federal Com 5
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Chaparral 33 Federal Com 5
 Cimarex Energy Co. of Colorado
 33-19S-34E
 SHL 330 FNL & 1980 FWL
 BHL 330 FSL & 1980 FWL
 Lea County, NM

Exhibit F-1 -- Co-Flex Hose Hydrostatic Test

Chaparral 33 Federal Com 5

Cimarex Energy Co. of Colorado

33-19S-34E

SHL 330 FNL & 1980 FWL

BHL 330 FSL & 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>Kevin Hef</i>	



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

Hose Specifications

Hose Type
C&K

12"

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"

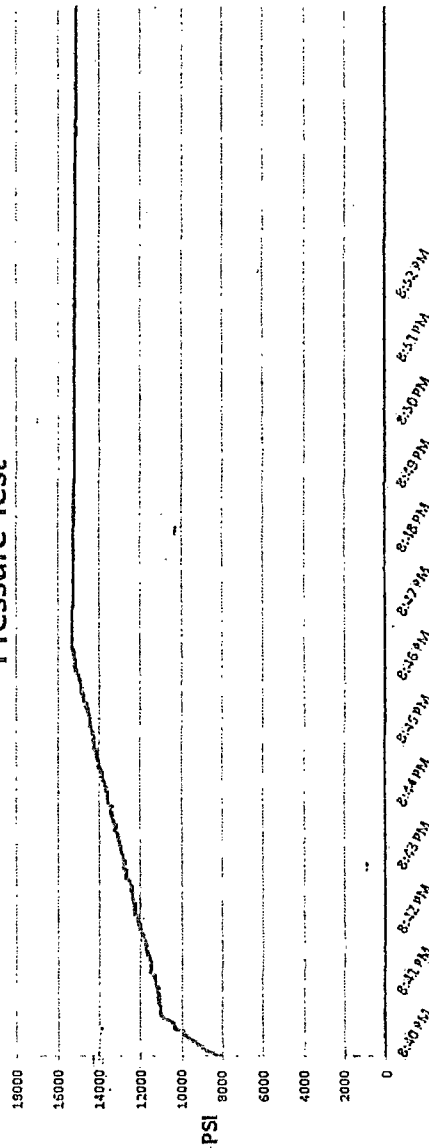
Hose Serial #
5544

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
15483 PSI

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

Tested By: Zac McConnell

Approved By: Kim Thomas

[Signature]

[Signature]

March 3, 2011

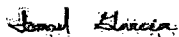
Exhibit F-2 - Co-Flex Hose
Chaparral 33 Federal Com 5
Cimarex Energy Co. of Colorado
33-19S-34E

SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM



Midwest Hose & Specialty, Inc.

Certificate of Conformity

Customer:		PO
DEM		ODYD-271
SPECIFICATIONS		
Sales Order	Dated:	
79793	3/8/2011	
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



Midwest Hose
& Specialty, Inc.

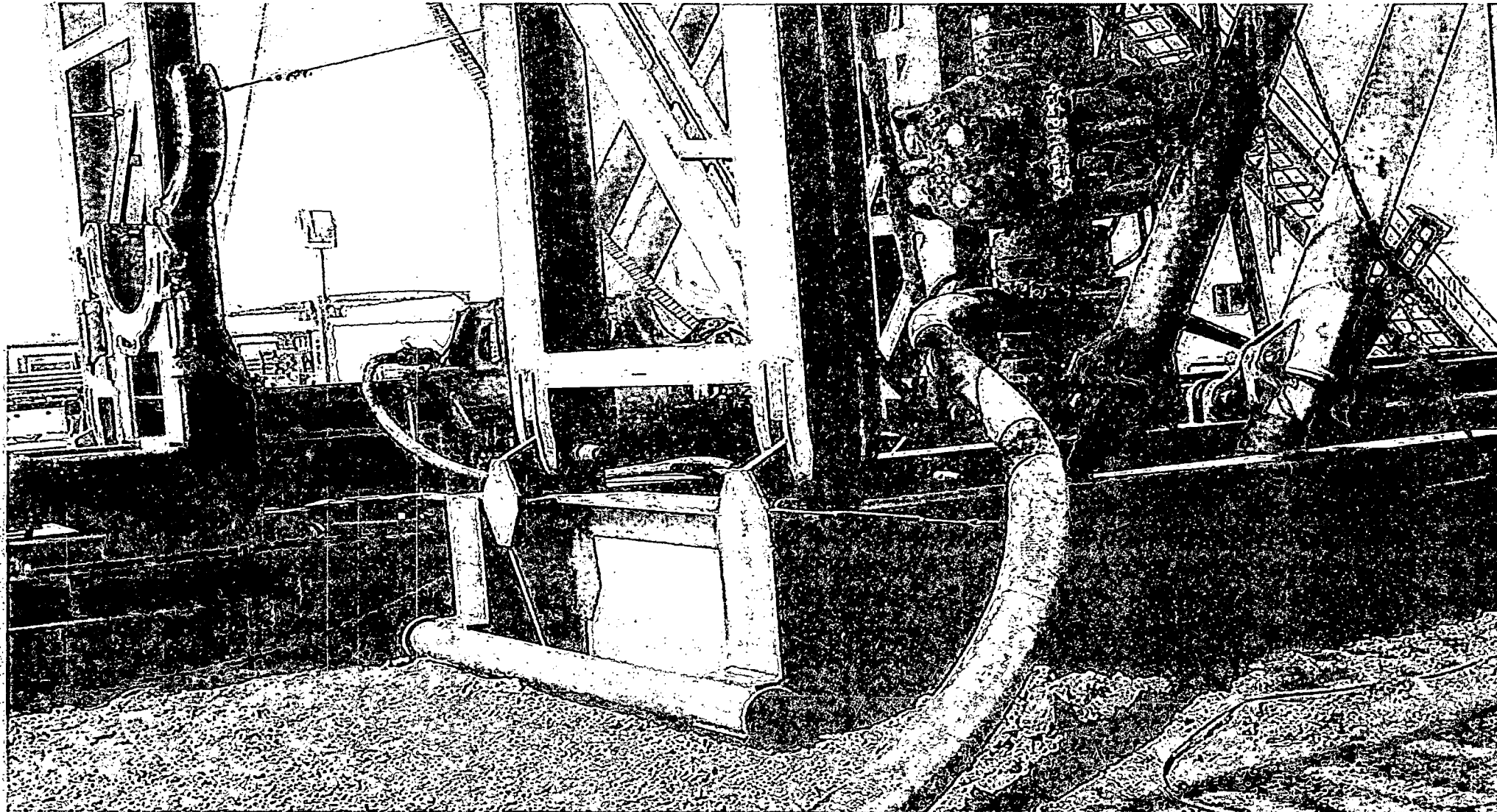
Exhibit F -3- Co-Flex Hose
Chaparral 33 Federal Com 5
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM

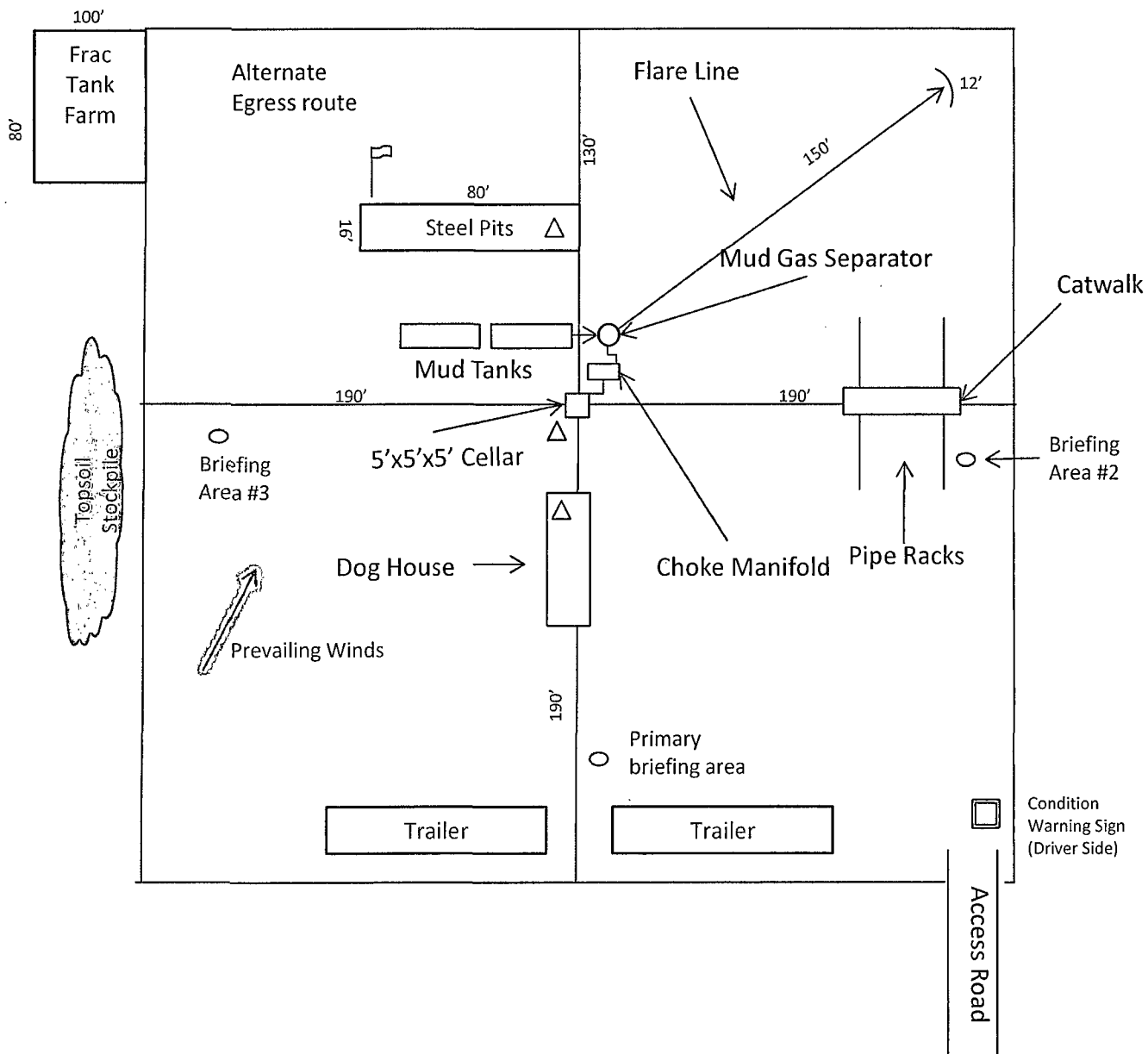
Specification Sheet Choke & Kill Hose

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
Chaparral 33 Federal Com 5
Cimarex Energy Co. of Colorado
33-19S-34E
SHL 330 FNL & 1980 FWL
BHL 330 FSL & 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-1 – Rig Diagram
Chaparral 33 Federal Com 5
 Cimarex Energy Co. of Colorado
 33-19S-34E
 SHL 330 FNL & 1980 FWL
 BHL 330 FSL & 1980 FWL
 Lea County, NM