

13-721

HOBBS OCD

OCT 23 2013

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		5. Lease Serial No. SHL: NM001917; NM002889	
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator Cimarex Energy Co.		7. If Unit or CA Agreement, Name and No.	
3a. Address 600 N. Marienfeld St. Ste. 600 Midland Tx 79701		8. Lease Name and Well No. <40192> Dos Equis 11 Federal Com 4 H	
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30-025- 41472	
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 Horizontal Bone Spring test		10. Field and Pool, or Exploratory Wildcat Bone Spring <46603>	
14. Distance in miles and direction from nearest town or post office* Approximately 25 mile W of Malaga NM		11. Sec., T. R. M. or Blk. and Survey or Area 11, 24S, 32E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 330'		12. County or Parish Lea	
16. No of acres in lease NM0002889=680 acres NM0001917=800 acres		13. State NM	
17. Spacing Unit dedicated to this well 160		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1320' to #3	
19. Proposed Depth 15,500' MD 11,050' TVD		20. BLM/BIA Bond No. on File NM2575; NMB000835	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3631' GR		22. Approximate date work will start* 08.15.13	
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 Hope Knauls	Name (Printed/Typed) Hope Knauls	Date 04.23.13
Regulatory Compliance		
Approved By (Signature) /s/ James Stovall	Name (Printed/Typed)	Date
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	OCT 21 2013

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 AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

OCT 31 2013

Application to Drill
Dos Equis 11 Federal Com 4
 Cimarex Energy Co. of Colorado
 UL: D, Sec. 11, 24S, 32E
 Lea Co., NM

n 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: 3631' 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: 15,500' MD 11,050' TVD
- 6 Estimated tops of geological markers:

Formation	Est. Top	Bearing
Rustler	1150	NA
Top of Salt	1470	NA
Castille	3430	NA
Base last Salt	4650	NA
Delaware Sands	4950	Hydrocarbons
Basal Brushy Canyon	8625	Hydrocarbons
Bone Spring	8850	N/A
Avolan Shale	9300	Hydrocarbons
1st Bone Spring Ss	10050	Hydrocarbons
2nd Bone Spring Ss	10675	Hydrocarbons
3rd Bone Spring Carbonate	11300	N/A

- 7 Possible mineral bearing formation:

Shown above

7A OSE Ground Water estimated depth: 275'

- 8 Casing Program:

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	SI Surface Pressure & BHP (psig)	Mud Weight (ppg)	Collapse SF (1.125)	Burst SF (1.125)	Cumulative Air Weight (lbs)	Tension SF (1.6)
Surface														
0'	1175'	1175'	17 1/2	13 3/8	48	H-40	ST&C	New	529	8.4	1.44	3.3	56400	5.7
Intermediate														
0'	4900'	4900'	12 1/4	9 5/8	40	N-80	LT&C	New	2205	10	1.21	2.6	196000	3.8
Production														
0'	10575'	10575'	8 3/4	5 1/2	17	P-110	LT&C	New	2541.5	8.4	1.62	4.2	187850	2.4
10575'	15500'	11050'	8 3/4	5 1/2	17	P-110	BT&C	New	4973	8.4	1.55	2.1	8075	67.6

Casing Design Criteria and Casing Loading Assumptions:

Surface, Intermediate and Production Casing:

Tension: A 1.6 design factor without effects of buoyancy.

Collapse: A 1.125 design factor with full internal evacuation.

Burst: A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.

Drilling Plan
Dos Equis 11 Federal Com 4
Cimarex Energy Co. of Colorado
UL: D, Sec. 11, 24S, 32E
Lea Co., NM

9 Cementing Program:

Surface	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	750	1.75	13.5	1306	Class C + Bentonite + Calcium Chloride + LCM
Tail	160	1.34	14.8	204	Class C + LCM

TOC: 0' 85% Excess Centralizers per Onshore Order 2.III.B.1f

Intermediate	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	1110	1.88	12.9	2075	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
Tail	300	1.34	14.8	392	Class C + retarder + LCM

TOC: 0' 80% Excess

Production	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	976	2.4	11.9	2343	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder
Tail	1401	1.24	14.5	1737	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder

Cement volumes will be adjusted depending on hole size.

TOC: 2000' 25% 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.

10 Pressure Control Equipment:

Exhibit "E-1". A 13 3/4" 5000 PSI working pressure BOP, tested to 3000 psi on the surface casing and 5000 psi on the intermediate; consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be installed and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

BOPS will be tested by an independent service company to 250 psi low and 3000 psi high on the surface casing and 250 psi low and 5000 psi high on the intermediate. Hydril will be tested to 250 psi low and 2500 psi high on the surface and intermediate casings.

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
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11 Proposed Mud Circulating System:

Depth		Mud Wt	Visc	Fluid Loss	Type Mud
0'	to 1175'	8.4	28	NC	FW Spud Mud
1175'	to 4900'	10	30-32	NC	Brine water
4900'	to 15500'	8.4	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 Proposed Drilling Plan

Pilot Hole TD: No Pilot Hole

KOP: 10,575'

EOC: 11050'

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

13 Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 4900 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

14 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

4973 psi

Estimated BHT

170°

15 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.

16 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from TD over possible pay intervals.

Bone Spring pay will be perforated and stimulated.

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

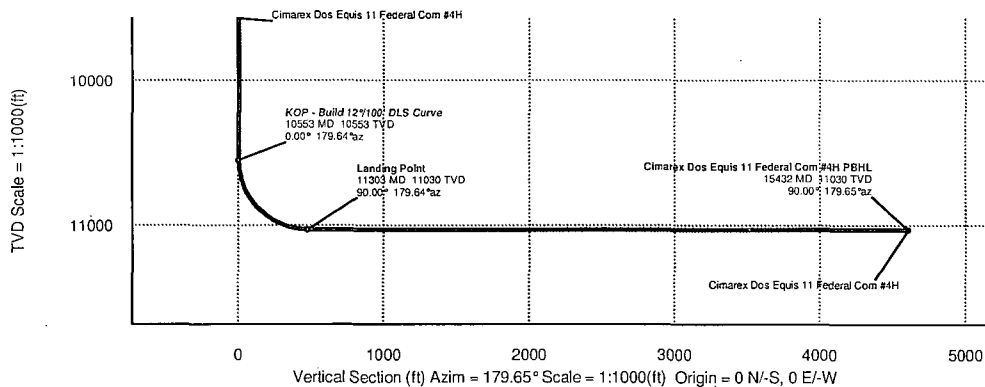
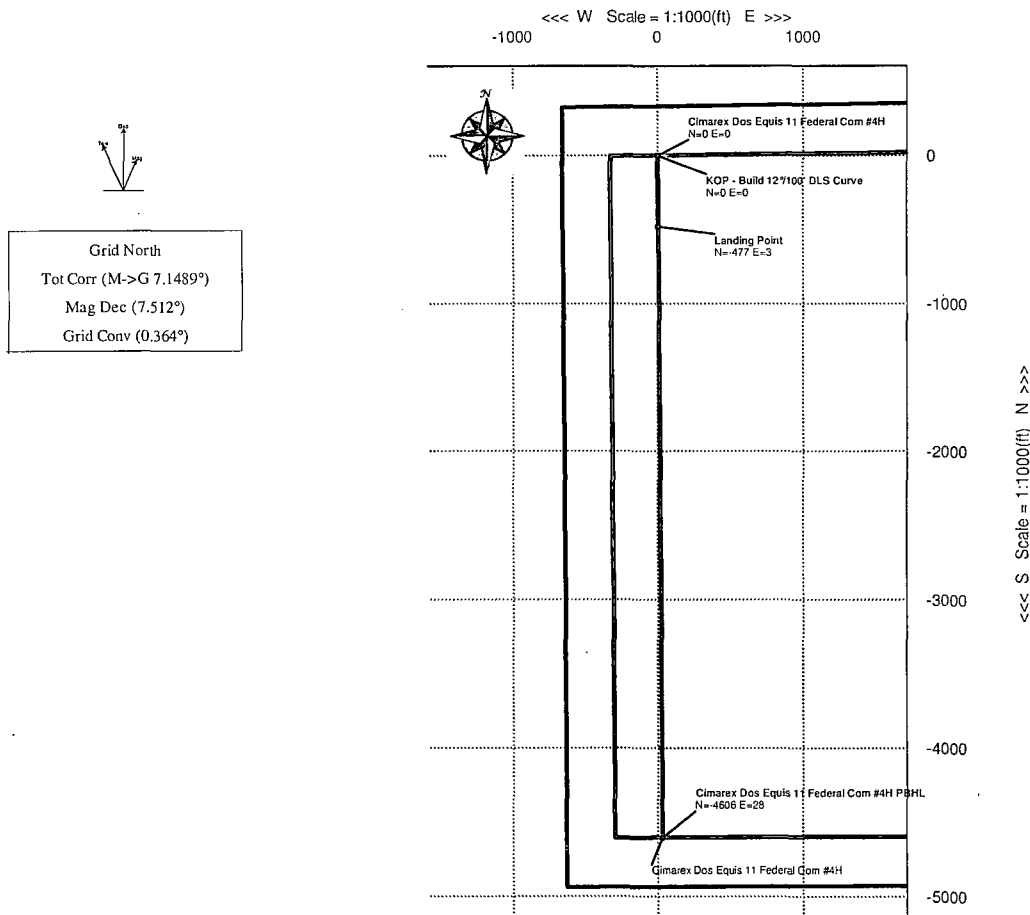


Cimarex

PATHFINDER
A Schlumberger Company

WELL	FIELD	STRUCTURE
Dos Equis 11 Fed Com #4H	NM Lea County	Dos Equis 11 Fed Com #4H

Mapsheet Parameters Mapset: SGGV 2012 Date: 09/10/12 Mag Dec: 7.512°	Field Location Lat: N 32 14 18.823 Long: W 102 29 45.498	Mapsheet Parameters Mapset: Dos Equis 11 Fed Com #4H Date: 09/10/12 Mag Dec: 7.512°
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Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Cimarex Dos Equis 11 Federal Com #4H	0.00	0.00	179.65	0.00	0.00	0.00	0.00	
KOP - Build 12°/100' DLS Curve	10552.50	0.00	179.65	10552.50	0.00	0.00	0.00	0.00
Landing Point	11302.56	90.00	179.65	11030.00	477.50	-477.49	2.96	12.00
Cimarex Dos Equis 11 Federal Com #4H PBHL	15431.64	90.00	179.65	11030.00	4606.58	-4606.49	28.40	0.00



Cimarex Dos Equis 11 Federal Com #4H Proposal Report

(Non-Def Plan)



Report Date:	March 19, 2013 - 02:12 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex	Vertical Section Azimuth:	179.647 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Dos Equis 11 Federal Com #4H / Cimarex Dos Equis 11 Federal Com #4H	TVD Reference Datum:	Ground Level
Well:	Cimarex Dos Equis 11 Federal Com #4H	TVD Reference Elevation:	3631.000 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3631.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	7.512 °
Survey Name:	Cimarex Dos Equis 11 Federal Com #4H	Total Gravity Field Strength:	998.4667mgn (9.80665 Based)
Survey Date:	March 19, 2013	Total Magnetic Field Strength:	48416.020 nT
Tort / AHD / DDI / ERD Ratio:	90.004 ° / 4606.581 ft / 5.763 / 0.418	Magnetic Dip Angle:	60.100 °
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Declination Date:	March 19, 2013
Location Lat / Long:	N 32° 14' 18.60290", W 103° 39' 6.49574"	Magnetic Declination Model:	BGGM 2012
Location Grid N/E Y/X:	N 451168.700 ftUS, E 752056.800 ftUS	North Reference:	Grid North
CRS Grid Convergence Angle:	0.3636 °	Grid Convergence Used:	0.3636 °
Grid Scale Factor:	0.99995995	Total Corr Mag North->Grid North:	7.1489 °
		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 ("/100ft)
Cimarex Dos Equis 11 Federal Com #4H	0.00	0.00	179.65	0.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	N/A
	100.00	0.00	179.65	100.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	200.00	0.00	179.65	200.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	300.00	0.00	179.65	300.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	400.00	0.00	179.65	400.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	500.00	0.00	179.65	500.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	600.00	0.00	179.65	600.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	700.00	0.00	179.65	700.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	800.00	0.00	179.65	800.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	900.00	0.00	179.65	900.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1000.00	0.00	179.65	1000.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1100.00	0.00	179.65	1100.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1200.00	0.00	179.65	1200.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1300.00	0.00	179.65	1300.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1400.00	0.00	179.65	1400.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1500.00	0.00	179.65	1500.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1600.00	0.00	179.65	1600.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1700.00	0.00	179.65	1700.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1800.00	0.00	179.65	1800.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	1900.00	0.00	179.65	1900.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2000.00	0.00	179.65	2000.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2100.00	0.00	179.65	2100.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2200.00	0.00	179.65	2200.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2300.00	0.00	179.65	2300.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2400.00	0.00	179.65	2400.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2500.00	0.00	179.65	2500.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2600.00	0.00	179.65	2600.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2700.00	0.00	179.65	2700.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2800.00	0.00	179.65	2800.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	2900.00	0.00	179.65	2900.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	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)
	8500.00	0.00	179.65	8500.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	8600.00	0.00	179.65	8600.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	8700.00	0.00	179.65	8700.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	8800.00	0.00	179.65	8800.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	8900.00	0.00	179.65	8900.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9000.00	0.00	179.65	9000.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9100.00	0.00	179.65	9100.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9200.00	0.00	179.65	9200.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9300.00	0.00	179.65	9300.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9400.00	0.00	179.65	9400.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9500.00	0.00	179.65	9500.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9600.00	0.00	179.65	9600.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9700.00	0.00	179.65	9700.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9800.00	0.00	179.65	9800.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	9900.00	0.00	179.65	9900.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10000.00	0.00	179.65	10000.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10100.00	0.00	179.65	10100.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10200.00	0.00	179.65	10200.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10300.00	0.00	179.65	10300.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10400.00	0.00	179.65	10400.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
KOP - Build 12"/100' DLS Curve	10500.00	0.00	179.65	10500.00	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10552.50	0.00	179.65	10552.50	0.00	0.00	0.00	451168.70	752056.80	N 32 14 18.60	W 103 39 6.50	0.00	0.00	0.00
	10600.00	5.70	179.65	10599.92	2.36	-2.36	0.01	451166.34	752056.81	N 32 14 18.58	W 103 39 6.50	2.36	179.65	12.00
	10700.00	17.70	179.65	10697.67	22.60	-22.60	0.14	451146.10	752056.94	N 32 14 18.38	W 103 39 6.50	22.60	179.65	12.00
	10800.00	29.70	179.65	10789.07	62.72	-62.72	0.39	451105.98	752057.19	N 32 14 17.98	W 103 39 6.50	62.72	179.65	12.00
	10900.00	41.70	179.65	10870.13	120.96	-120.96	0.75	451047.74	752057.55	N 32 14 17.41	W 103 39 6.50	120.96	179.65	12.00
	11000.00	53.70	179.65	10937.31	194.79	-194.78	1.21	450973.92	752058.01	N 32 14 16.68	W 103 39 6.50	194.79	179.65	12.00
	11100.00	65.70	179.65	10987.68	280.97	-280.96	1.74	450887.75	752058.54	N 32 14 15.82	W 103 39 6.50	280.97	179.65	12.00
	11200.00	77.69	179.65	11019.03	375.73	-375.72	2.33	450792.99	752059.13	N 32 14 14.88	W 103 39 6.50	375.73	179.65	12.00
	11300.00	89.69	179.65	11029.99	474.94	-474.94	2.94	450693.78	752059.74	N 32 14 13.90	W 103 39 6.50	474.94	179.65	12.00
Landing Point	11302.56	90.00	179.65	11030.00	477.50	-477.49	2.96	450691.23	752059.76	N 32 14 13.88	W 103 39 6.50	477.50	179.65	12.00
	11400.00	90.00	179.65	11030.00	574.94	-574.93	3.56	450593.79	752060.36	N 32 14 12.91	W 103 39 6.50	574.94	179.65	0.00
	11500.00	90.00	179.65	11030.00	674.94	-674.93	4.18	450493.80	752060.98	N 32 14 11.92	W 103 39 6.50	674.94	179.65	0.00
	11600.00	90.00	179.65	11030.00	774.94	-774.93	4.80	450393.80	752061.60	N 32 14 10.93	W 103 39 6.50	774.94	179.65	0.00
	11700.00	90.00	179.65	11030.00	874.94	-874.93	5.42	450293.81	752062.22	N 32 14 9.95	W 103 39 6.50	874.94	179.65	0.00
	11800.00	90.00	179.65	11030.00	974.94	-974.93	6.04	450193.81	752062.84	N 32 14 8.96	W 103 39 6.50	974.94	179.65	0.00
	11900.00	90.00	179.65	11030.00	1074.94	-1074.92	6.66	450093.82	752063.46	N 32 14 7.97	W 103 39 6.50	1074.94	179.65	0.00
	12000.00	90.00	179.65	11030.00	1174.94	-1174.92	7.28	449993.83	752064.08	N 32 14 6.98	W 103 39 6.50	1174.94	179.65	0.00
	12100.00	90.00	179.65	11030.00	1274.94	-1274.92	7.89	449893.83	752064.69	N 32 14 5.99	W 103 39 6.50	1274.94	179.65	0.00
	12200.00	90.00	179.65	11030.00	1374.94	-1374.92	8.51	449793.84	752065.31	N 32 14 5.00	W 103 39 6.50	1374.94	179.65	0.00
	12300.00	90.00	179.65	11030.00	1474.94	-1474.92	9.13	449693.85	752065.93	N 32 14 4.01	W 103 39 6.50	1474.94	179.65	0.00
	12400.00	90.00	179.65	11030.00	1574.94	-1574.91	9.75	449593.85	752066.55	N 32 14 3.02	W 103 39 6.50	1574.94	179.65	0.00
	12500.00	90.00	179.65	11030.00	1674.94	-1674.91	10.37	449493.86	752067.17	N 32 14 2.03	W 103 39 6.50	1674.94	179.65	0.00
	12600.00	90.00	179.65	11030.00	1774.94	-1774.91	10.98	449393.86	752067.78	N 32 14 1.04	W 103 39 6.50	1774.94	179.65	0.00
	12700.00	90.00	179.65	11030.00	1874.94	-1874.91	11.60	449293.87	752068.40	N 32 14 0.05	W 103 39 6.50	1874.94	179.65	0.00
	12800.00	90.00	179.65	11030.00	1974.94	-1974.91	12.22	449193.88	752069.02	N 32 13 59.06	W 103 39 6.50	1974.94	179.65	0.00
	12900.00	90.00	179.65	11030.00	2074.94	-2074.91	12.84	449093.88	752069.63	N 32 13 58.07	W 103 39 6.50	2074.94	179.65	0.00
	13000.00	90.00	179.65	11030.00	2174.94	-2174.90	13.45	448993.89	752070.25	N 32 13 57.08	W 103 39 6.50	2174.94	179.65	0.00
	13100.00	90.00	179.65	11030.00	2274.94	-2274.90	14.07	448893.89	752070.87	N 32 13 56.09	W 103 39 6.50	2274.94	179.65	0.00
	13200.00	90.00	179.65	11030.00	2374.94	-2374.90	14.69	448793.90	752071.48	N 32 13 55.10	W 103 39 6.50	2374.94	179.65	0.00
	13300.00	90.00	179.65	11030.00	2474.94	-2474.90	15.30	448693.91	752072.10	N 32 13 54.11	W 103 39 6.50	2474.94	179.65	0.00
	13400.00	90.00	179.65	11030.00	2574.94	-2574.90	15.92	448593.91	752072.72	N 32 13 53.12	W 103 39 6.50	2574.94	179.65	0.00
	13500.00	90.00	179.65	11030.00	2674.94	-2674.89	16.53	448493.92	752073.33	N 32 13 52.13	W 103 39 6.50	2674.94	179.65	0.00
	13600.00	90.00	179.65	11030.00	2774.94	-2774.89	17.15	448393.92	752073.95	N 32 13 51.14	W 103 39 6.50	2774.94	179.65	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)
	13700.00	90.00	179.65	11030.00	2874.94	-2874.89	17.77	448293.93	752074.56	N 32 13 50.15	W 103 39 6.50	2874.94	179.65	0.00
	13800.00	90.00	179.65	11030.00	2974.94	-2974.89	18.38	448193.94	752075.18	N 32 13 49.17	W 103 39 6.50	2974.94	179.65	0.00
	13900.00	90.00	179.65	11030.00	3074.94	-3074.89	19.00	448093.94	752075.80	N 32 13 48.18	W 103 39 6.50	3074.94	179.65	0.00
	14000.00	90.00	179.65	11030.00	3174.94	-3174.88	19.61	447993.95	752076.41	N 32 13 47.19	W 103 39 6.50	3174.94	179.65	0.00
	14100.00	90.00	179.65	11030.00	3274.94	-3274.88	20.23	447893.96	752077.03	N 32 13 46.20	W 103 39 6.50	3274.94	179.65	0.00
	14200.00	90.00	179.65	11030.00	3374.94	-3374.88	20.84	447793.96	752077.64	N 32 13 45.21	W 103 39 6.50	3374.94	179.65	0.00
	14300.00	90.00	179.65	11030.00	3474.94	-3474.88	21.46	447693.97	752078.26	N 32 13 44.22	W 103 39 6.50	3474.94	179.65	0.00
	14400.00	90.00	179.65	11030.00	3574.94	-3574.88	22.07	447593.97	752078.87	N 32 13 43.23	W 103 39 6.50	3574.94	179.65	0.00
	14500.00	90.00	179.65	11030.00	3674.94	-3674.87	22.69	447493.98	752079.48	N 32 13 42.24	W 103 39 6.50	3674.94	179.65	0.00
	14600.00	90.00	179.65	11030.00	3774.94	-3774.87	23.30	447393.99	752080.10	N 32 13 41.25	W 103 39 6.50	3774.94	179.65	0.00
	14700.00	90.00	179.65	11030.00	3874.94	-3874.87	23.91	447293.99	752080.71	N 32 13 40.26	W 103 39 6.50	3874.94	179.65	0.00
	14800.00	90.00	179.65	11030.00	3974.94	-3974.87	24.53	447194.00	752081.33	N 32 13 39.27	W 103 39 6.50	3974.94	179.65	0.00
	14900.00	90.00	179.65	11030.00	4074.94	-4074.87	25.14	447094.00	752081.94	N 32 13 38.28	W 103 39 6.50	4074.94	179.65	0.00
	15000.00	90.00	179.65	11030.00	4174.94	-4174.87	25.75	446994.01	752082.55	N 32 13 37.29	W 103 39 6.50	4174.94	179.65	0.00
	15100.00	90.00	179.65	11030.00	4274.94	-4274.86	26.37	446894.02	752083.17	N 32 13 36.30	W 103 39 6.50	4274.94	179.65	0.00
	15200.00	90.00	179.65	11030.00	4374.94	-4374.86	26.98	446794.02	752083.78	N 32 13 35.31	W 103 39 6.50	4374.94	179.65	0.00
	15300.00	90.00	179.65	11030.00	4474.94	-4474.86	27.59	446694.03	752084.39	N 32 13 34.32	W 103 39 6.51	4474.94	179.65	0.00
	15400.00	90.00	179.65	11030.00	4574.94	-4574.86	28.21	446594.03	752085.01	N 32 13 33.33	W 103 39 6.51	4574.94	179.65	0.00
Cimarex Dos Equis 11 Federal Com #4H PBHL	15431.64	90.00	179.65	11030.00	4606.58	-4606.49	28.40	446562.40	752085.20	N 32 13 33.02	W 103 39 6.51	4606.58	179.65	0.00

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	15431.637	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Dos Equis 11 Federal Com #4H

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

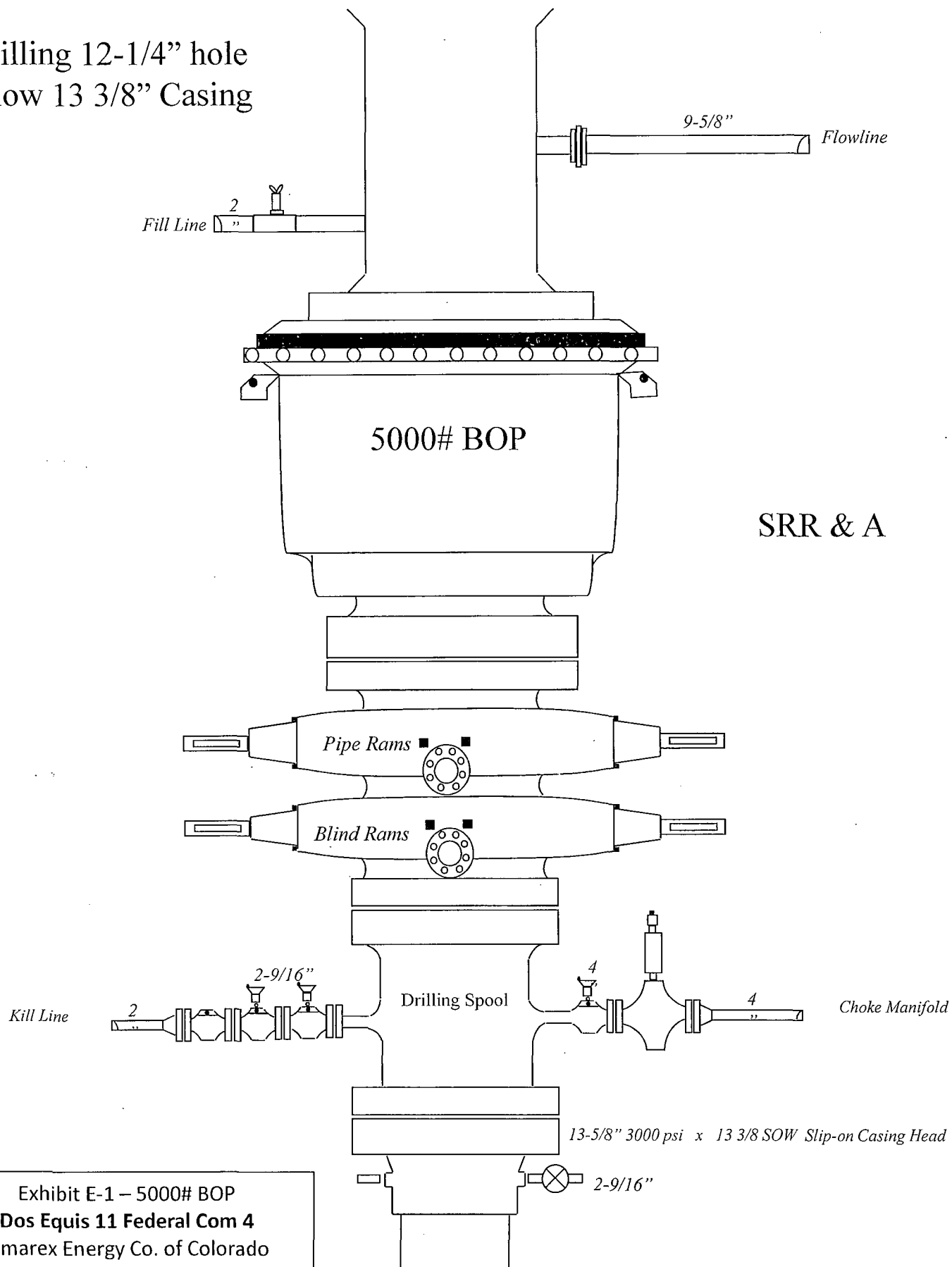


Exhibit E-1 – 5000# BOP
Dos Equis 11 Federal Com 4
Cimarex Energy Co. of Colorado
11-24S-32E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM

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

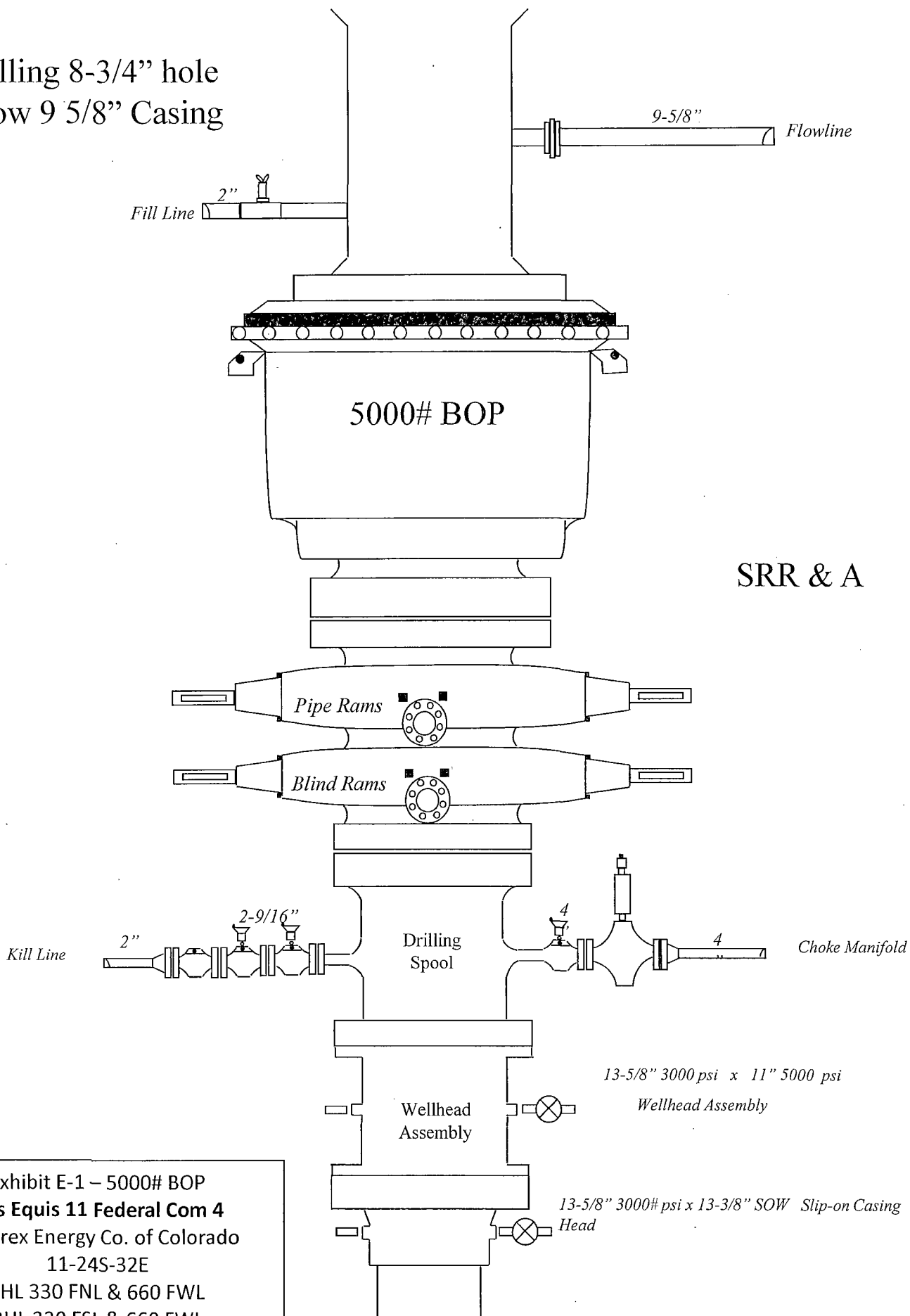


Exhibit E-1 – 5000# BOP
Dos Equis 11 Federal Com 4
 Cimarex Energy Co. of Colorado
 11-24S-32E
 SHL 330 FNL & 660 FWL
 BHL 330 FSL & 660 FWL
 Lea County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

Dos Equis 11 Federal Com 4H

Cimarex Energy Co. of Colorado

11-24S-32E

SHL 330 FNL & 660 FWL

BHL 330 FSL & 660 FWL

Lea County, NM

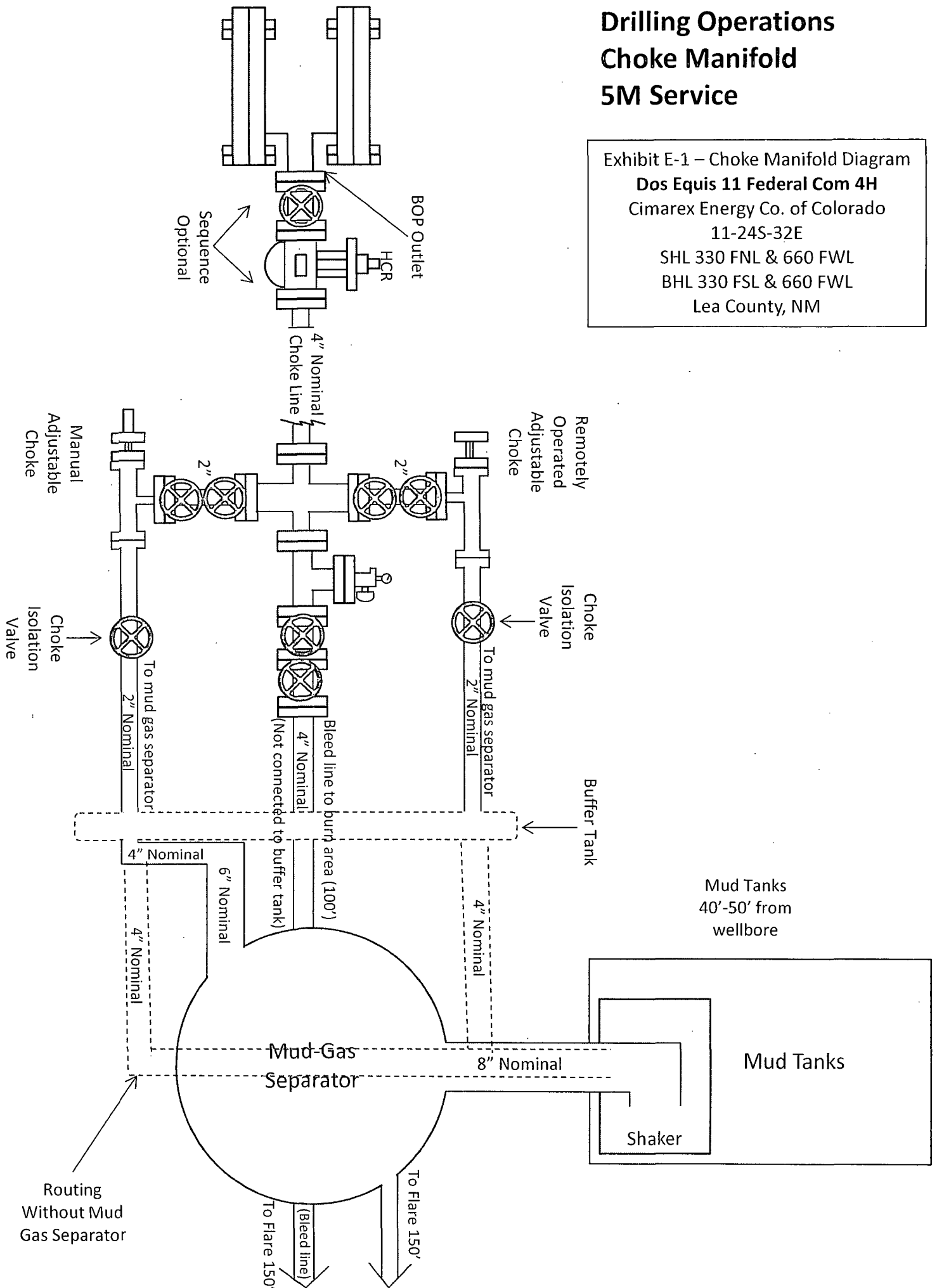


Exhibit F – Co-Flex Hose
Dos Equis 11 Federal Com 4
Cimarex Energy Co. of Colorado
11-24S-32E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM

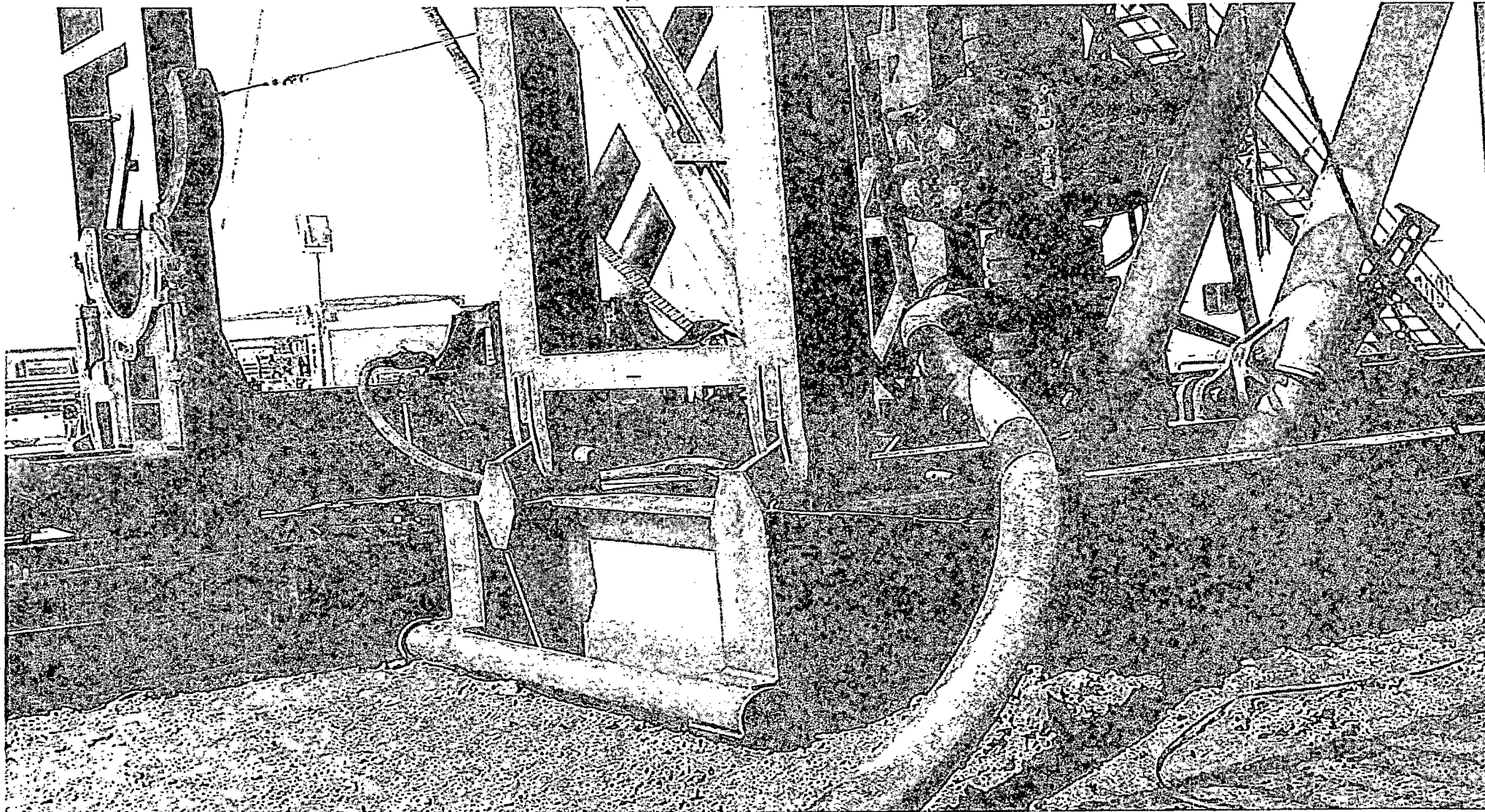


Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Dos Equis 11 Federal Com 4
 Cimarex Energy Co. of Colorado
 11-24S-32E

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			
<i>Hose assembly pressure tested with water at ambient temperature.</i>			
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>CA. James Jones</i>		Approved: <i>David Hef</i>

Exhibit F-1 – Co-Flex Hose Hydrostatic Test
Dos Equis 11 Federal Com 4
Cimarex Energy Co. of Colorado
11-24S-32E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM



**Midwest Hose
& Specialty, Inc.**

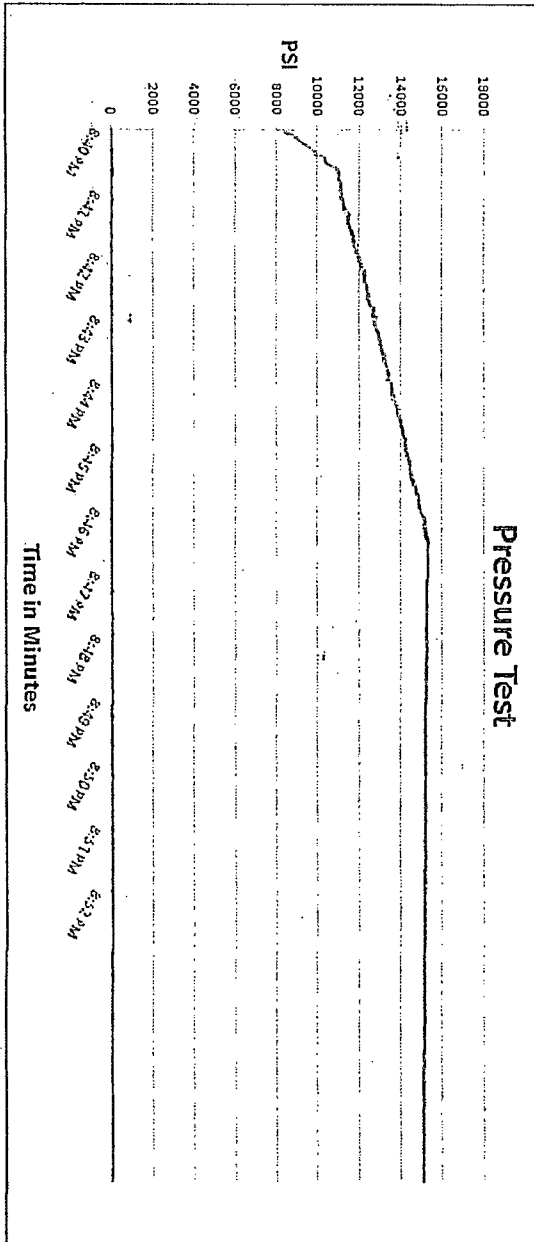
Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

March 3, 2011

Hose Specifications		Verification	
Hose Type	Length	Type of Fittings	Caulding Method
C&K	45'	41/16 10K	Swage
I.D.	O.D.	Die Size	Final O.D.
4"	6.09"	6.38"	6.25"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #
10000 PSI	Standards Safety Multiplier Applies	5544	79793



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

Tested By: *Zac McConnell*

Approved By: *Kim Thomas*

Test Pressure
15000 PSI

Time Held at Test Pressure
11 Minutes

Actual Burst Pressure

Peak Pressure
15483 PSI

Exhibit F-2 – Co-Flex Hose
Dos Equis 11 Federal Com 4
Cimarex Energy Co. of Colorado
11-24S-32E

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

SPECIFICATIONS

Sales Order

79793

Dated:

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:

David Garcia

Date:

3/8/2011

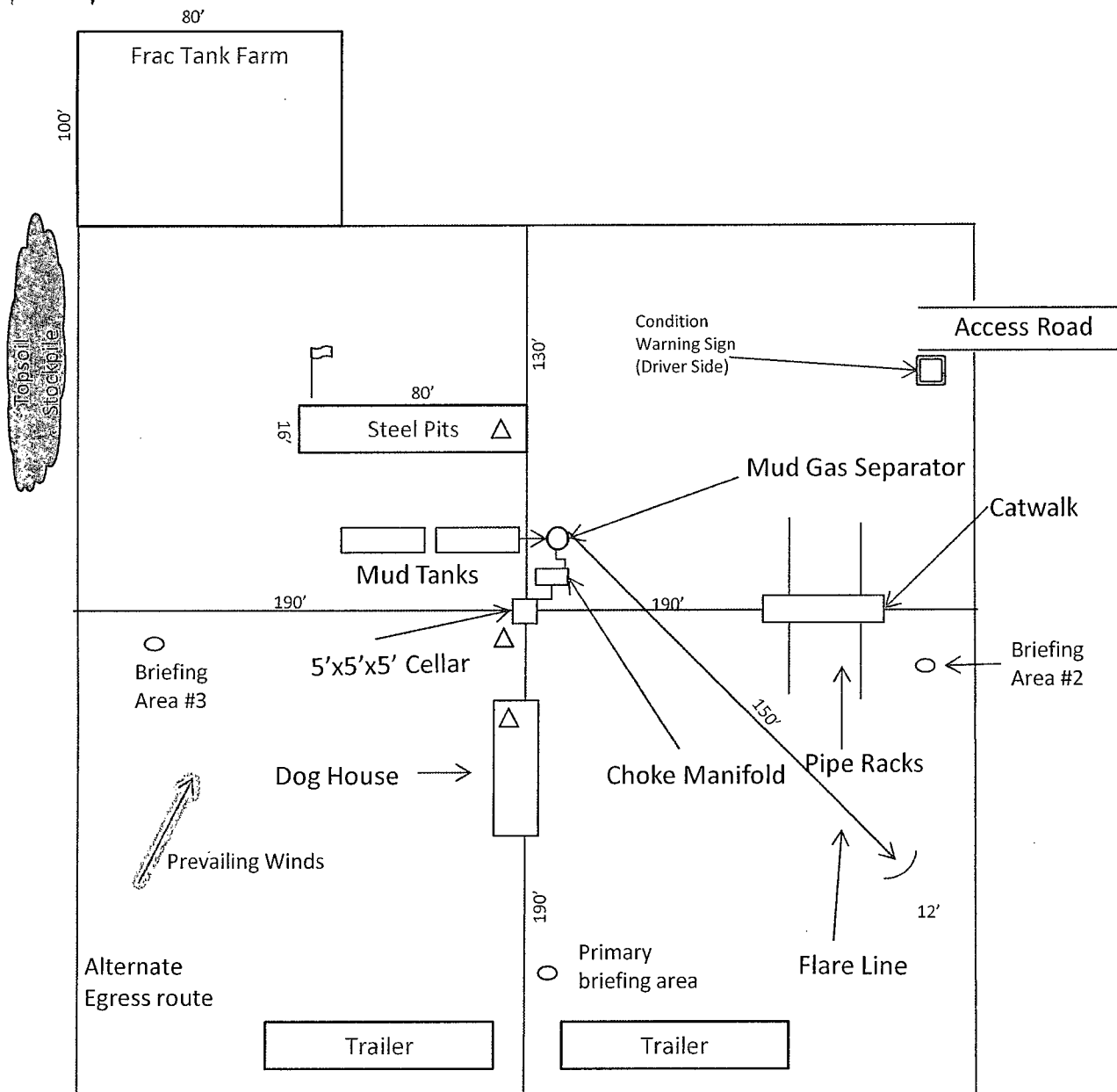


Exhibit F -3- Co-Flex Hose
Dos Equis 11 Federal Com 4
Cimarex Energy Co. of Colorado
11-24S-32E
SHL 330 FNL & 660 FWL
BHL 330 FSL & 660 FWL
Lea County, NM

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets. 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)



Wind Direction Indicators
(wind sock or streamers)



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



Briefing Areas

N



Exhibit D – Rig Diagram
Dos Equis 11 Federal Com 4
 Cimarex Energy Co. of Colorado
 11-24S-32E
 SHL 330 FNL & 660 FWL
 BHL 330 FSL & 660 FWL
 Lea County, NM