

ATS-14-272

Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs
HOBBS OCD

JUL 14 2014

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. SHL: NMNM057285; BHL: NMNM0056376; Other: NMNM056263
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. <215099>		7. If Unit or CA Agreement, Name and No.
3a. Address 202 S. Cheyenne Ave., Ste 1000, Tulsa, OK 74103	3b. Phone No. (include area code) 918-585-1100	8. Lease Name and Well No. Cordoniz 28 Fed Com 6H <313196>
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At Surface 330 FSL & 1980 FWL (N) At proposed prod. Zone 330 FNL & 1980 FWL (C) Bone Spring		9. API Well No. 30-025-41964
14. Distance in miles and direction from nearest town or post office* Hobbs, NM is 25 miles to the northeast of location.		10. Field and Pool, or Exploratory QUAL RIDGE; B5, SOUTH
		11. Sec. T. R. M. or Blk. and Survey and Area 28, 19S, 34E
		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 NMNM057285=1280.00 acres NMNM0056376=1282.00 acres NMNM056263=320.00 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. 1080' to the #5H	19. Proposed Depth Pilot Hole TD: N/A 15,217 MD 10,770 TVD	20. BLM/BIA Bond No. on File NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3691 GR	22. Approximate date work will start* 1/20/14	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 	Name (Printed/Typed) Terri Stathem	Date 12/4/13
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Title Regular Compliance Steve Caffey		Name (Printed/Typed) Office: CARLSBAD FIELD OFFICE		Date JUN - 9 2014
Approved By (Signature) FIELD MANAGER				

Application approval does not warrant or certify conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.S. Section 1001 and Title 43 U. States any false, fictitious, or fraudulent state

(Continued on page 2)

Capitan Controlled Water.

E-PERMITTING -- New Well **PM**
Comp _____ P&A _____ TA _____
CSNG _____ Loc CHG _____
ReComp _____ Add New Pool _____
Cancel Well _____ Create Pool _____

subject lease which would entitle the applicant to

APPROVAL FOR TWO YEARS

ully to make to any department or agency of the United

K2
07/14/14

*(Instructions on page 2)

CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

JUL 15 2014

SEE ATTACHED FOR

Operator Certification Statement

Cordoniz 28 Fed Com 6H

Cimarex Energy Co.

UL: N, Sec. 28, 19S, 34E

Lea Co., NM

HOBBS OCD

JUL 14 2014

RECEIVED

Operator's Representative

Cimarex Energy Co. of Colorado

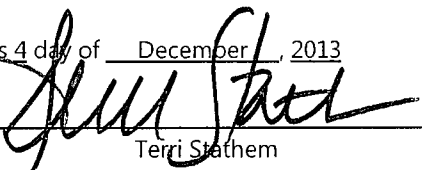
600 N. Marienfeld St., Ste. 600

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 4 day of December, 2013

NAME: 

Terri Stathem

TITLE: Regulatory Compliance

ADDRESS: 202 S. Cheyenne Ave., Ste 1000, Tulsa, OK 74103

TELEPHONE: 918-585-1100

EMAIL: TStathem@cimarex.com

Field Representative: Same as above

Application to Drill
Cordoniz 28 Fed Com 6H
 Cimarex Energy Co.
 UL: N, Sec. 28, 19S, 34E
 Lea Co., NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1. **Location:** SHL 330 FSL & 1980 FWL
 BHL 330 FNL & 1980 FWL
2. **Elevation Above Sea Level:** 3,691' 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:** 15,217 MD 10,770 TVD Pilot Hole TD: N/A
6. **Estimated Tops of Geological Markers:**

Formation	Est Top	Bearing
Rustler	1630	N/A
Top Salt	1700	N/A
Tansill	3260	N/A
Delaware	5480	N/A
Brushy Canyon	6716	N/A
Bone Spring	8250	Hydrocarbons
1st BSS	9480	Hydrocarbons
2nd BSS	10000	Hydrocarbons
3rd BSS	10570	Hydrocarbons
Wolfcamp	10870	Hydrocarbons

Bell/Cherry ?? Delaware is group

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

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

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	1660	1660	17 1/2	13-3/8"	54.50	J-55	ST&C	New	716	8.3	1.58		3.82	90,470	79,006	6.51
Intermediate	0	5450	5450	12 1/4	9-5/8"	40.00	J-55	LT&C	New	2834	10.0		1.38	1.39	218,000	184,718	2.82
Production	0	10333	10333	8 3/4	5-1/2"	17.00	L-80	LT&C	New	4835	9.0	1.30		1.60	183,090	157,933	2.14
Production	10333	15217	10770	8 3/4	5-1/2"	17.00	L-80	BT&C	New	5040	9.0	1.25		1.54	7,429	6,408	61.95

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
Cordoniz 28 Fed Com 6H
 Cimarex Energy Co.
 UL: N, Sec. 28, 19S, 34E
 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	1055	1.75	13.50	1845	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	215	1.34	14.80	288	Class C + LCM, 6.32 gps water
	TOC: 0	85% Excess		Centralizers per Onshore Order 2.III.B.1f		
Intermediate	Lead	1207	1.88	12.90	2268	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	81% Excess				
Production	Lead	598	2.40	11.90	1435	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1371	1.24	14.50	1700	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 5250	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.		

Cement volumes will be adjusted depending on hole size

9a. Proposed Drilling Plan:

Pilot Hole TD: No Pilot KOP: 10,333' EOC: 11,087'

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.

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
Cordoniz 28 Fed Com 6H
Cimarex Energy Co.
UL: N, Sec. 28, 19S, 34E
Lea Co., NM

See COA

11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1730'		8.30, 28	NC	FW Spud Mud
1660' to 5450'	10.00	30-32	NC	Brine Water
5450' to 15217'	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.

See COA

Estimated BHP: 4847 psi

Estimated BHT: 166°

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 pay will be perforated and stimulated.

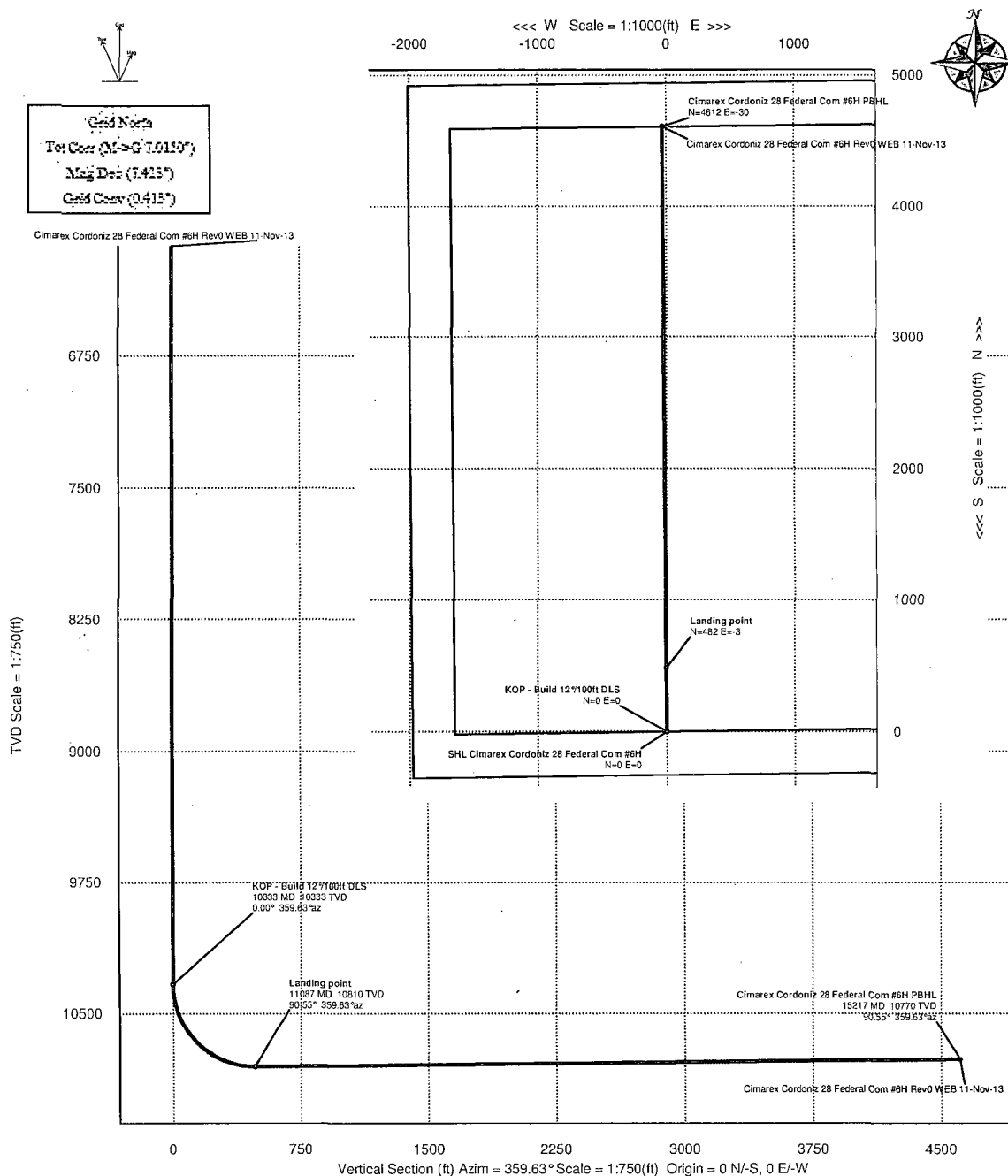
The proposed well will be tested and potentialized as **Oil**



Cimarex

PATHFINDER
A Schlumberger Company

WELL	Cordoniz 28 Federal Com #6H			FIELD	NM Lea County			STRUCTURE	TBD
Magnetic Parameters				Surface Location			Miscellaneous		
Model:	BGM 2613	Dip:	60.489°	Date:	November 11, 2013	Lat:	N 32 37 29.616	Skt:	Cortex, Cordoniz 28 Federal #6H
		Mag Dec:	7.428°	PS:	48922.4mT	Long:	W 103 34 2.678	Plan:	Ground Lev(2013) is above MSL
				NAD83 New Mexico State Plane, Eastern Zone, US Feet			Rev:		
				Northing: 591916.80 MSL			Srv Date:		
				Easting: 777143.90 MSL			Ground Lev:		
				Grid Conv: 0.413°			38916 above MSL		
				Scale Fac: 0.99970377					



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL Cimarex Cordoniz 28 Federal Com #6H	0.00	0.00	359.63	0.00	0.00	0.00	0.00	
KOP - Build 12°/100ft DLS	10332.50	0.00	359.63	10332.50	0.00	0.00	0.00	0.00
Landing point	11087.22	90.55	359.63	10810.00	482.15	482.14	-3.08	12.00
Cimarex Cordoniz 28 Federal Com #6H PBHL	15217.09	90.55	359.63	10770.00	4611.83	4611.73	-29.50	0.00



Cimarex Cordoniz 28 Federal Com #6H Rev0 WEB 11-Nov-13 Proposal
Report 100' Interpolated
(Non-Def Plan)



Report Date: November 11, 2013 - 05:38 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: TBD / Cimarex Cordoniz 28 Federal Com #6H
Well: Cimarex Cordoniz 28 Federal Com #6H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Cordoniz 28 Federal Com #6H Rev0 WEB 11-Nov-13
Survey Date: November 11, 2013
Tort / AHD / DDI / ERD Ratio: 90.556 ° / 4611.829 ft / 5.769 / 0.427
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 37' 29.61610", W 103° 34' 2.67799"
Location Grid N/E Y/X: N 591916.800 ftUS, E 777143.000 ftUS
CRS Grid Convergence Angle: 0.4130 °
Grid Scale Factor: 0.99997277

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 359.633 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground level
TVD Reference Elevation: 3691.000 ft above MSL
Seabed / Ground Elevation: 3691.000 ft above MSL
Magnetic Declination: 7.428 °
Total Gravity Field Strength: 998.4932mgn (9.80665 Based)
Total Magnetic Field Strength: 48602.414 nT
Magnetic Dip Angle: 60.489 °
Declination Date: November 11, 2013
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.4130 °
Total Corr Mag North->Grid North: 7.0150 °
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)
SHL Cimarex Cordoniz 28 Federal Com #6H	0.00	0.00	359.63	0.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	N/A
	100.00	0.00	359.63	100.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	200.00	0.00	359.63	200.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	300.00	0.00	359.63	300.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	400.00	0.00	359.63	400.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	500.00	0.00	359.63	500.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	600.00	0.00	359.63	600.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	700.00	0.00	359.63	700.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	800.00	0.00	359.63	800.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	900.00	0.00	359.63	900.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1000.00	0.00	359.63	1000.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1100.00	0.00	359.63	1100.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1200.00	0.00	359.63	1200.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1300.00	0.00	359.63	1300.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1400.00	0.00	359.63	1400.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1500.00	0.00	359.63	1500.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1600.00	0.00	359.63	1600.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1700.00	0.00	359.63	1700.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1800.00	0.00	359.63	1800.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	1900.00	0.00	359.63	1900.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2000.00	0.00	359.63	2000.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2100.00	0.00	359.63	2100.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2200.00	0.00	359.63	2200.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2300.00	0.00	359.63	2300.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2400.00	0.00	359.63	2400.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2500.00	0.00	359.63	2500.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2600.00	0.00	359.63	2600.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	2700.00	0.00	359.63	2700.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	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)
	8300.00	0.00	359.63	8300.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	8400.00	0.00	359.63	8400.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	8500.00	0.00	359.63	8500.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	8600.00	0.00	359.63	8600.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	8700.00	0.00	359.63	8700.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	8800.00	0.00	359.63	8800.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	8900.00	0.00	359.63	8900.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9000.00	0.00	359.63	9000.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9100.00	0.00	359.63	9100.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9200.00	0.00	359.63	9200.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9300.00	0.00	359.63	9300.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9400.00	0.00	359.63	9400.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9500.00	0.00	359.63	9500.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9600.00	0.00	359.63	9600.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9700.00	0.00	359.63	9700.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9800.00	0.00	359.63	9800.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	9900.00	0.00	359.63	9900.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	10000.00	0.00	359.63	10000.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	10100.00	0.00	359.63	10100.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	10200.00	0.00	359.63	10200.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	10300.00	0.00	359.63	10300.00	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
KOP - Build 12"/100ft DLS	10332.50	0.00	359.63	10332.50	0.00	0.00	0.00	591916.80	777143.00	N 32 37 29.62	W 103 34 2.68	0.00	0.00	0.00
	10400.00	8.10	359.63	10399.78	4.76	4.76	-0.03	591921.56	777142.97	N 32 37 29.66	W 103 34 2.68	4.76	359.63	12.00
	10500.00	20.10	359.63	10496.59	29.08	29.08	-0.19	591945.88	777142.81	N 32 37 29.90	W 103 34 2.68	29.08	359.63	12.00
	10600.00	32.10	359.63	10586.23	72.99	72.98	-0.47	591989.78	777142.53	N 32 37 30.34	W 103 34 2.68	72.99	359.63	12.00
	10700.00	44.09	359.63	10664.78	134.57	134.57	-0.86	592051.36	777142.14	N 32 37 30.95	W 103 34 2.68	134.57	359.63	12.00
	10800.00	56.09	359.63	10728.82	211.14	211.14	-1.35	592127.93	777141.65	N 32 37 31.71	W 103 34 2.68	211.14	359.63	12.00
	10900.00	68.09	359.63	10775.54	299.35	299.34	-1.91	592216.13	777141.09	N 32 37 32.58	W 103 34 2.68	299.35	359.63	12.00
	11000.00	80.09	359.63	10802.90	395.34	395.34	-2.53	592312.12	777140.47	N 32 37 33.53	W 103 34 2.67	395.34	359.63	12.00
	11087.22	90.55	359.63	10810.00	482.15	482.14	-3.08	592398.92	777139.92	N 32 37 34.39	W 103 34 2.67	482.15	359.63	12.00
	11100.00	90.55	359.63	10809.88	494.93	494.92	-3.16	592411.71	777139.84	N 32 37 34.51	W 103 34 2.67	494.93	359.63	0.00
	11200.00	90.55	359.63	10808.91	594.93	594.91	-3.80	592511.70	777139.20	N 32 37 35.50	W 103 34 2.67	594.93	359.63	0.00
	11300.00	90.55	359.63	10807.94	694.92	694.91	-4.44	592611.69	777138.56	N 32 37 36.49	W 103 34 2.67	694.92	359.63	0.00
	11400.00	90.55	359.63	10806.97	794.92	794.90	-5.08	592711.68	777137.92	N 32 37 37.48	W 103 34 2.67	794.92	359.63	0.00
	11500.00	90.55	359.63	10806.00	894.91	894.89	-5.72	592811.67	777137.28	N 32 37 38.47	W 103 34 2.67	894.91	359.63	0.00
	11600.00	90.55	359.63	10805.03	994.91	994.89	-6.36	592911.66	777136.64	N 32 37 39.46	W 103 34 2.67	994.91	359.63	0.00
	11700.00	90.55	359.63	10804.07	1094.90	1094.88	-6.99	593011.65	777136.01	N 32 37 40.45	W 103 34 2.67	1094.90	359.63	0.00
	11800.00	90.55	359.63	10803.10	1194.90	1194.87	-7.63	593111.64	777135.37	N 32 37 41.44	W 103 34 2.67	1194.90	359.63	0.00
	11900.00	90.55	359.63	10802.13	1294.89	1294.87	-8.27	593211.63	777134.73	N 32 37 42.43	W 103 34 2.67	1294.89	359.63	0.00
	12000.00	90.55	359.63	10801.16	1394.89	1394.86	-8.91	593311.62	777134.09	N 32 37 43.42	W 103 34 2.66	1394.89	359.63	0.00
	12100.00	90.55	359.63	10800.19	1494.88	1494.85	-9.55	593411.61	777133.45	N 32 37 44.41	W 103 34 2.66	1494.88	359.63	0.00
	12200.00	90.55	359.63	10799.22	1594.88	1594.85	-10.19	593511.60	777132.81	N 32 37 45.40	W 103 34 2.66	1594.88	359.63	0.00
	12300.00	90.55	359.63	10798.25	1694.88	1694.84	-10.83	593611.59	777132.17	N 32 37 46.39	W 103 34 2.66	1694.88	359.63	0.00
	12400.00	90.55	359.63	10797.29	1794.87	1794.83	-11.47	593711.58	777131.53	N 32 37 47.38	W 103 34 2.66	1794.87	359.63	0.00
	12500.00	90.55	359.63	10796.32	1894.87	1894.83	-12.11	593811.57	777130.89	N 32 37 48.36	W 103 34 2.66	1894.87	359.63	0.00
	12600.00	90.55	359.63	10795.35	1994.86	1994.82	-12.75	593911.56	777130.25	N 32 37 49.35	W 103 34 2.66	1994.86	359.63	0.00
	12700.00	90.55	359.63	10794.38	2094.86	2094.81	-13.39	594011.55	777129.61	N 32 37 50.34	W 103 34 2.66	2094.86	359.63	0.00
	12800.00	90.55	359.63	10793.41	2194.85	2194.81	-14.03	594111.54	777128.97	N 32 37 51.33	W 103 34 2.66	2194.85	359.63	0.00
	12900.00	90.55	359.63	10792.44	2294.85	2294.80	-14.67	594211.53	777128.33	N 32 37 52.32	W 103 34 2.66	2294.85	359.63	0.00
	13000.00	90.55	359.63	10791.47	2394.84	2394.79	-15.31	594311.52	777127.69	N 32 37 53.31	W 103 34 2.66	2394.84	359.63	0.00
	13100.00	90.55	359.63	10790.51	2494.84	2494.79	-15.95	594411.51	777127.05	N 32 37 54.30	W 103 34 2.65	2494.84	359.63	0.00
	13200.00	90.55	359.63	10789.54	2594.83	2594.78	-16.59	594511.50	777126.41	N 32 37 55.29	W 103 34 2.65	2594.83	359.63	0.00
	13300.00	90.55	359.63	10788.57	2694.83	2694.77	-17.23	594611.49	777125.77	N 32 37 56.28	W 103 34 2.65	2694.83	359.63	0.00
	13400.00	90.55	359.63	10787.60	2794.82	2794.77	-17.87	594711.48	777125.13	N 32 37 57.27	W 103 34 2.65	2794.82	359.63	0.00

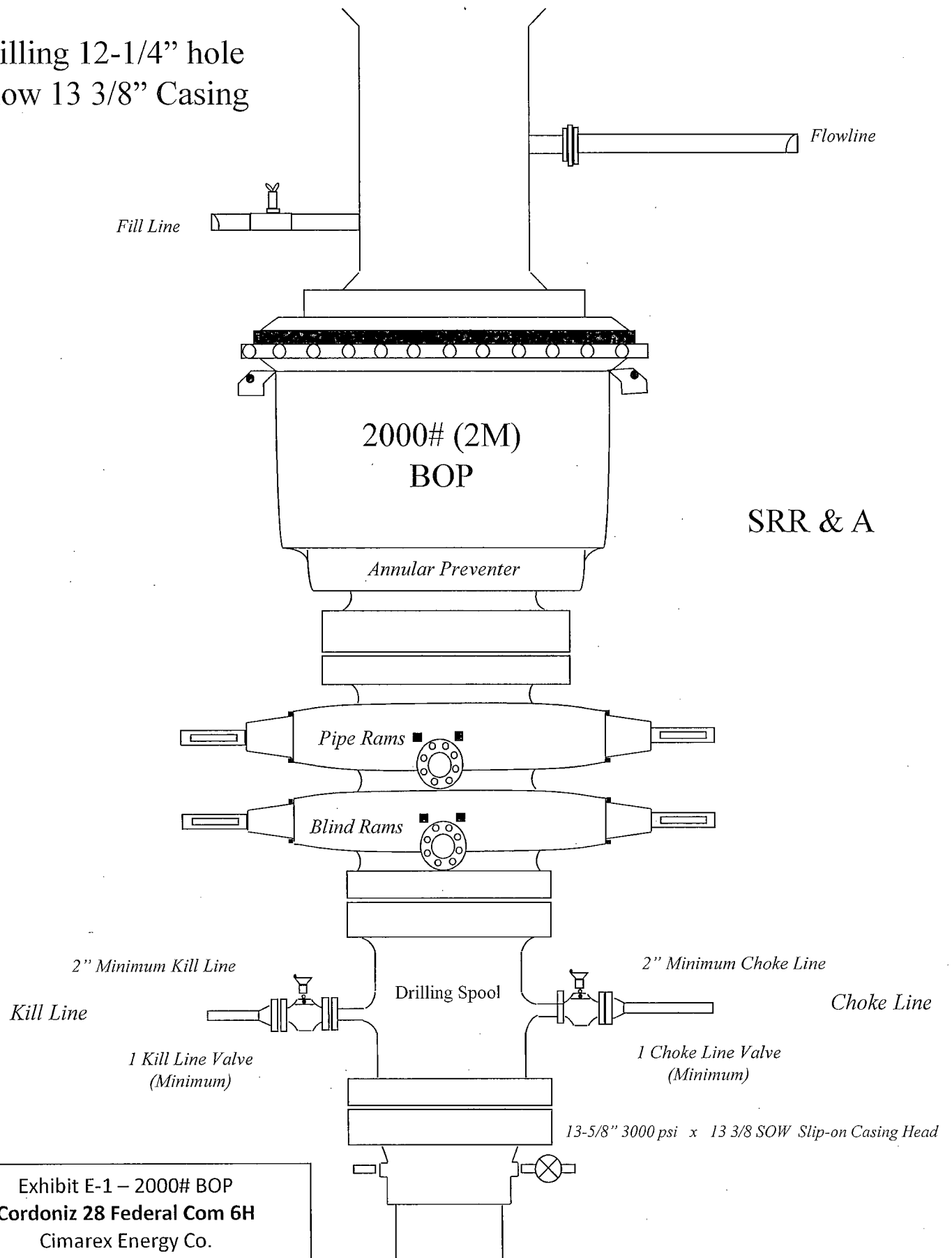
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS ("/100ft)
	13500.00	90.55	359.63	10786.63	2894.82	2894.76	-18.51	594811.47	777124.49	N 32 37 58.26	W 103 34 2.65	2894.82	359.63	0.00
	13600.00	90.55	359.63	10785.66	2994.81	2994.75	-19.15	594911.47	777123.85	N 32 37 59.25	W 103 34 2.65	2994.81	359.63	0.00
	13700.00	90.55	359.63	10784.69	3094.81	3094.75	-19.79	595011.46	777123.21	N 32 38 0.24	W 103 34 2.65	3094.81	359.63	0.00
	13800.00	90.55	359.63	10783.73	3194.80	3194.74	-20.43	595111.45	777122.57	N 32 38 1.23	W 103 34 2.65	3194.80	359.63	0.00
	13900.00	90.55	359.63	10782.76	3294.80	3294.73	-21.07	595211.44	777121.93	N 32 38 2.22	W 103 34 2.65	3294.80	359.63	0.00
	14000.00	90.55	359.63	10781.79	3394.80	3394.73	-21.71	595311.43	777121.29	N 32 38 3.21	W 103 34 2.65	3394.80	359.63	0.00
	14100.00	90.55	359.63	10780.82	3494.79	3494.72	-22.35	595411.42	777120.65	N 32 38 4.20	W 103 34 2.64	3494.79	359.63	0.00
	14200.00	90.55	359.63	10779.85	3594.79	3594.71	-22.99	595511.41	777120.01	N 32 38 5.18	W 103 34 2.64	3594.79	359.63	0.00
	14300.00	90.55	359.63	10778.88	3694.78	3694.71	-23.63	595611.40	777119.37	N 32 38 6.17	W 103 34 2.64	3694.78	359.63	0.00
	14400.00	90.55	359.63	10777.91	3794.78	3794.70	-24.27	595711.39	777118.73	N 32 38 7.16	W 103 34 2.64	3794.78	359.63	0.00
	14500.00	90.55	359.63	10776.95	3894.77	3894.69	-24.91	595811.38	777118.09	N 32 38 8.15	W 103 34 2.64	3894.77	359.63	0.00
	14600.00	90.55	359.63	10775.98	3994.77	3994.69	-25.55	595911.37	777117.45	N 32 38 9.14	W 103 34 2.64	3994.77	359.63	0.00
	14700.00	90.55	359.63	10775.01	4094.76	4094.68	-26.19	596011.36	777116.81	N 32 38 10.13	W 103 34 2.64	4094.76	359.63	0.00
	14800.00	90.55	359.63	10774.04	4194.76	4194.67	-26.83	596111.35	777116.17	N 32 38 11.12	W 103 34 2.64	4194.76	359.63	0.00
	14900.00	90.55	359.63	10773.07	4294.75	4294.67	-27.47	596211.34	777115.53	N 32 38 12.11	W 103 34 2.64	4294.75	359.63	0.00
	15000.00	90.55	359.63	10772.10	4394.75	4394.66	-28.11	596311.33	777114.89	N 32 38 13.10	W 103 34 2.64	4394.75	359.63	0.00
	15100.00	90.55	359.63	10771.13	4494.74	4494.65	-28.75	596411.32	777114.25	N 32 38 14.09	W 103 34 2.64	4494.74	359.63	0.00
	15200.00	90.55	359.63	10770.17	4594.74	4594.64	-29.39	596511.31	777113.61	N 32 38 15.08	W 103 34 2.63	4594.74	359.63	0.00
Cimarex Cordoniz 28 Federal Com #6H PBHL	15217.09	90.55	359.63	10770.00	4611.83	4611.73	-29.50	596528.40	777113.50	N 32 38 15.25	W 103 34 2.63	4611.83	359.63	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	10332.500	1/100.000	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Cordoniz 28 Federal Com #6H
	10332.500	15217.091	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Cordoniz 28 Federal Com #6H

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



SRR & A

Exhibit E-1 – 2000# BOP
Cordoniz 28 Federal Com 6H
Cimarex Energy Co.
28-19S-34E
SHL 330 FSL & 1980 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

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

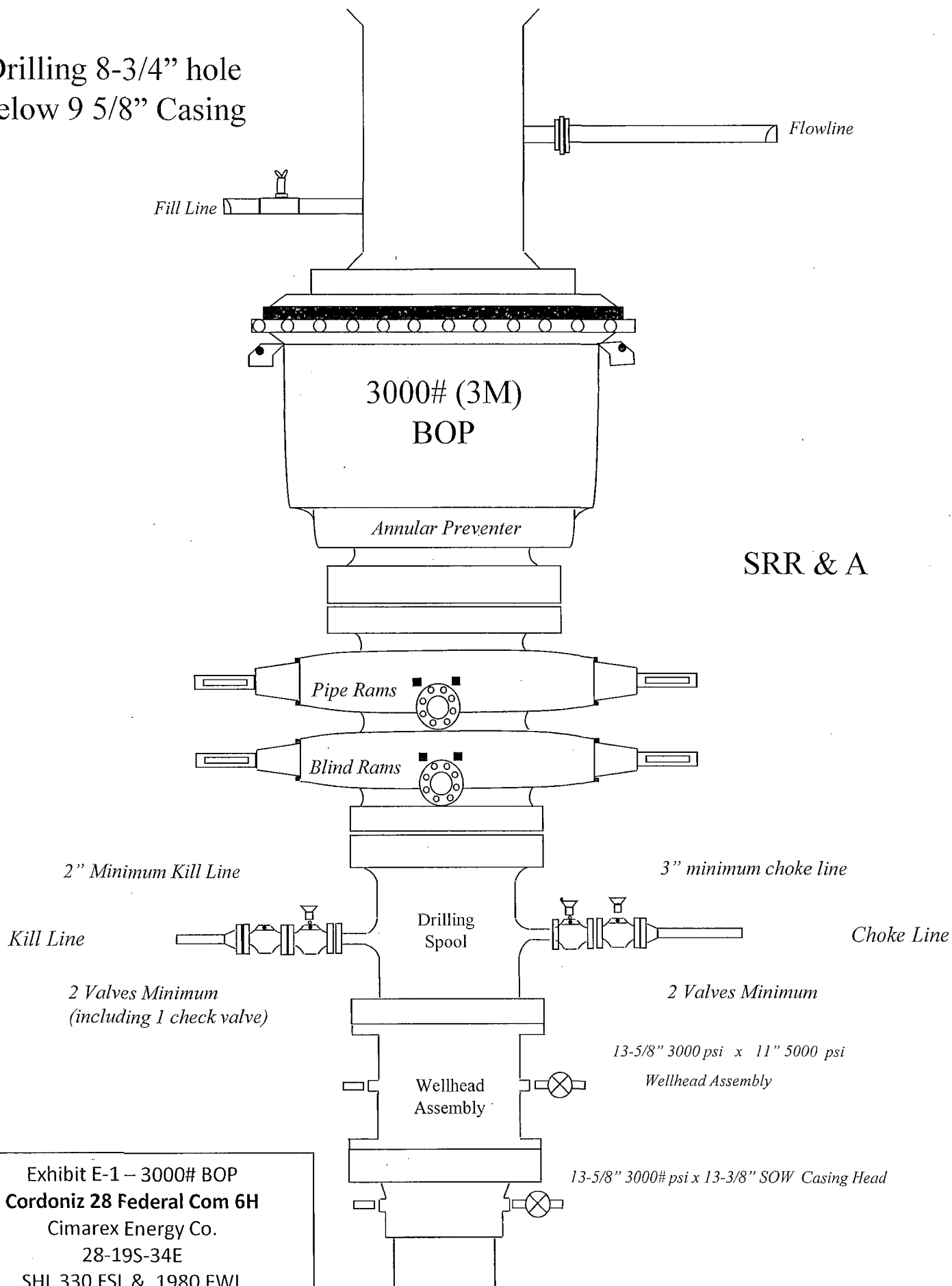
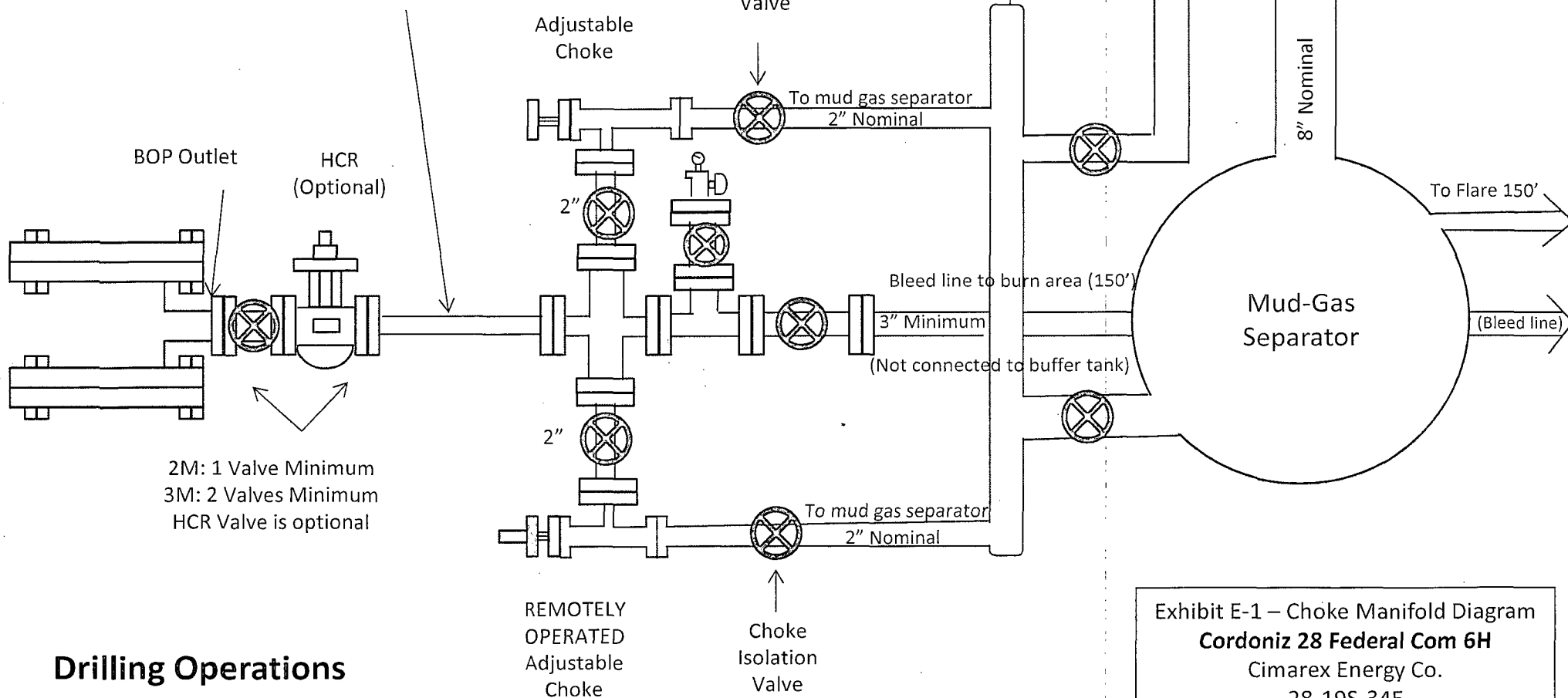


Exhibit E-1 – 3000# BOP
Cordoniz 28 Federal Com 6H
Cimarex Energy Co.
28-19S-34E
SHL 330 FSL & 1980 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

Choke Line:
 2M System: 2" Minimum
 3M System: 3" Minimum
 OPTIONAL: 4" Flex Hose may be
 used if approved in APD



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Cordoniz 28 Federal Com 6H
 Cimarex Energy Co.
 28-19S-34E
 SHL 330 FSL & 1980 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Cordoniz 28 Federal Com 6H

Cimarex Energy Co.

28-19S-34E

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		
<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>A. Jaime Garcia</i>	Approved: <i>[Signature]</i>



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

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

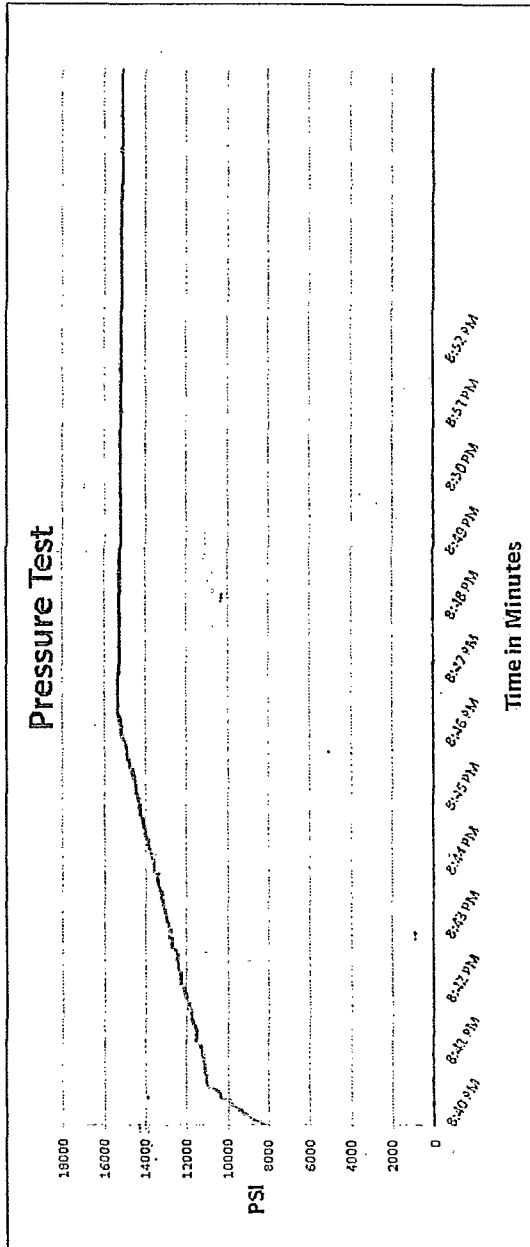
Die Size
6.38"

Hose Serial #
5544

Coupling Method
Swage

Final O.D.
6.25"

Hose Assembly Serial #
79793



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: *Zoe McConnell*

Approved By: *Kim Thomas*



Midwest Hose
& Specialty, Inc.

Exhibit F -3- Co-Flex Hose
Cordoniz 28 Federal Com 6H
Cimarex Energy Co.
28-19S-34E
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-2 – Co-Flex Hose
Cordoniz 28 Federal Com 6H

Cimarex Energy Co.

28-19S-34E

SHL 330 FSL & 1980 FWL

BHL 330 FNL & 1980 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:

Samuel Garcia

Date:

3/8/2011

Exhibit F – Co-Flex Hose
Cordoniz 28 Federal Com 6H

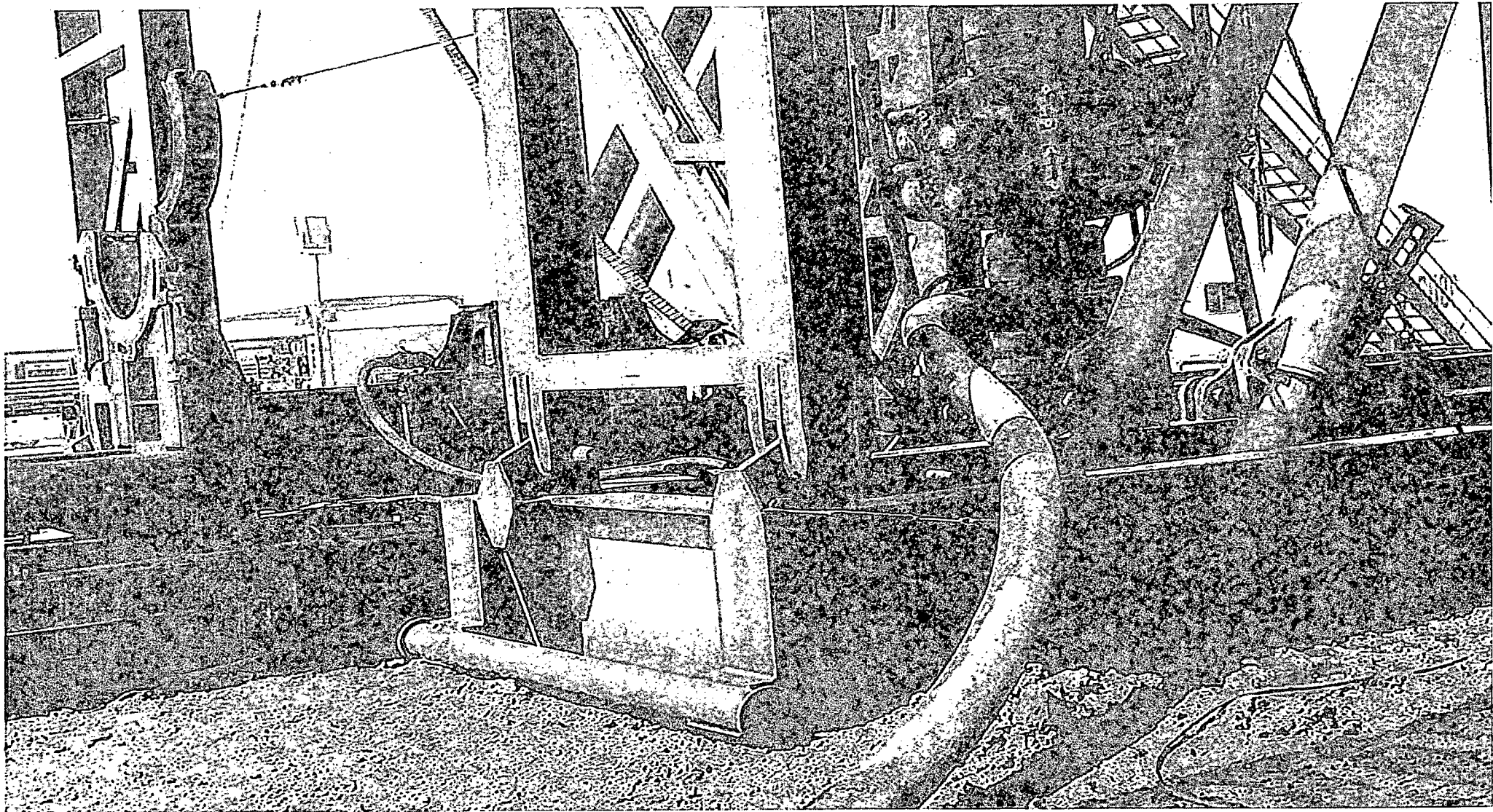
Cimarex Energy Co.

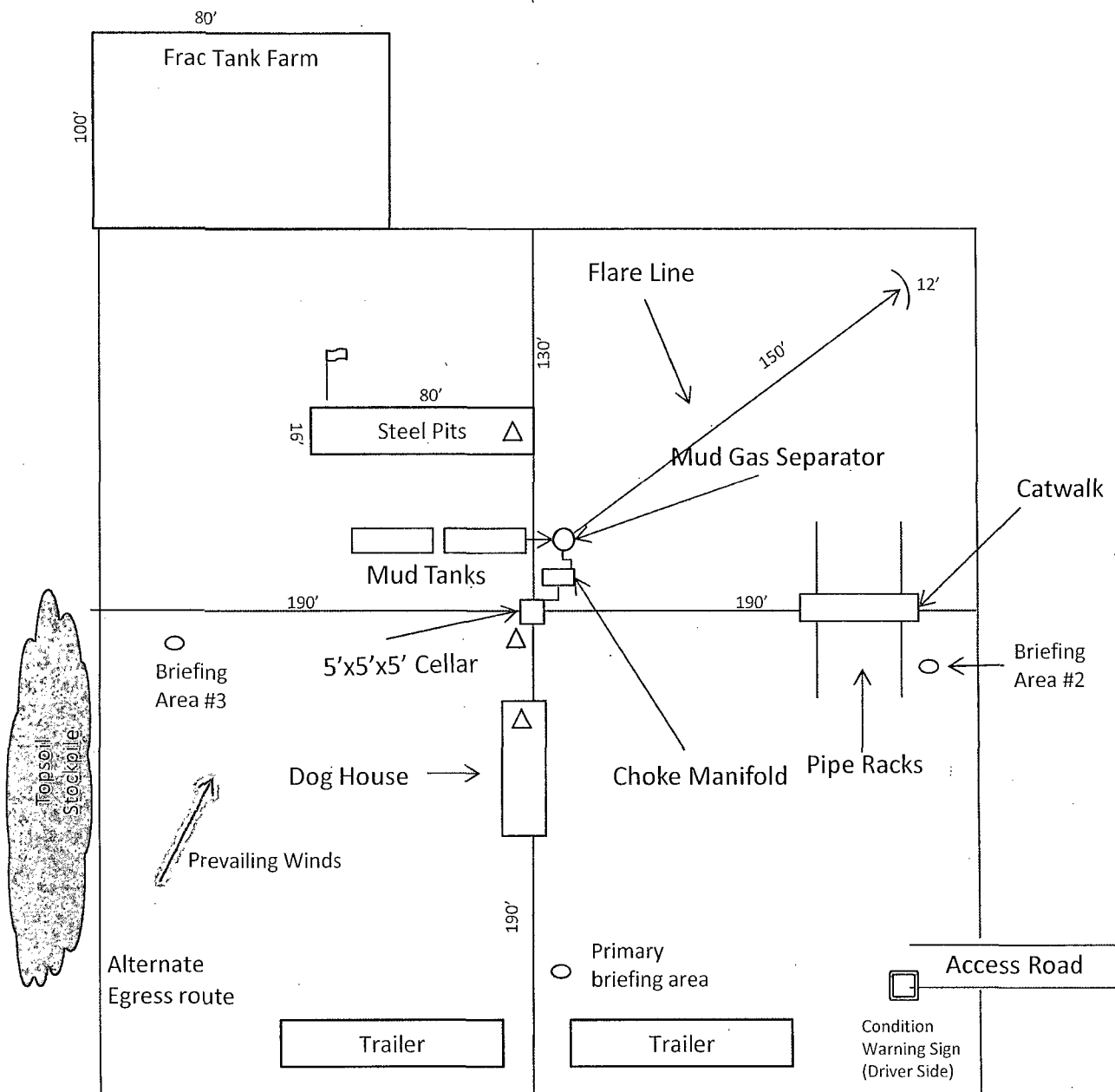
28-19S-34E

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
Cordoniz 28 Federal Com 6H
 Cimarex Energy Co.
 28-19S-34E
 SHL 330 FSL & 1980 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM