

13-1143

UNORTHODOX LOCATION

R-111-POTASH

Form 3160-3
(March 2012)

HOBBS OGD
Hobbs

JAN 15 2014

Split Estate

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

RECEIVED

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

5. Lease Serial No.
SHL: NMNM124662; BHL: NMNM0000082

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
Perry 22 Federal Com #3H

40338

9. API Well No.

30-025-41607

10. Field and Pool, or Exploratory

Bone Spring, Wildcat SOUTH

37580

11. Sec., T. R. M. or Blk. and Survey and Area

22, 20S, 34E

12. County or Parish

Lea

13. State

NM

1a. Type of Work

☒ DRILL

☐ REENTER

1b. Type of Well

☒ Oil Well

☐ Gas Well

☐ Other

☒ Single Zone

☐ Multiple Zone

2. Name of Operator

Cimarex Energy Co.

3a. Address

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

3b. Phone No. (include area code)

918-585-1100

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At Surface 208 FNL & 1980 FWL

At proposed prod. Zone 330 FSL & 1980 FWL

Bone Spring

14. Distance in miles and direction from nearest town or post office*

Eunice NM is 24 miles to the east of location.

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any)

208'

16. No of acres in lease

NMNM124662=440 acres
NMNM0000082=600 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.

918' to the #4

19. Proposed Depth
Pilot Hole TD: N/A

15,616 MD 10,900 TVD

20. BLM/BIA Bond No. on File

NM2575; NMB000835

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3648 GR

22. Approximate date work will start*

1/15/14

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

2. A Drilling Plan

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).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator Certification

6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Name (Printed/Typed)

Date

Terri Stathem

8/20/13

Title

Regulatory Compliance

Approved By (Signature)

/s/ Aden L. Seidlitz

Name (Printed/Typed)

Date

JAN - 6 2014

Title

STATE DIRECTOR

Office

NM STATE 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.C. 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

JAN 21 2014

P-M

Application to Drill
Perry 22 Federal Com #3H
 Cimarex Energy Co.
 UL: C, Sec. 22, 20S, 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 208 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
2. **Elevation Above Sea Level:** 3,648' 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:** 15,616 MD 10,900 TVD Pilot Hole TD: N/A
6. **Estimated Tops of Geological Markers:**

Formation	Est Top	Bearing
Rustler	1650	N/A
Salt	1800	N/A
Tansill	3400	N/A
Yates	3600	N/A
Capitan Reef	3970	N/A
Cherry Canyon	5700	N/A
Brushy Canyon	8080	N/A
Bone Spring	8400	Hydrocarbons
Avalon Shale	8900	Hydrocarbons
1st Bone Spring	9600	Hydrocarbons
2nd BS Carb	9860	N/A
2nd Bone Spring	10150	N/A
3rd Carbonate	10630	Hydrocarbons
3rd Bone Spring	10960	Hydrocarbons
3rd Bone Spring C SS	11060	Hydrocarbons
Wolfcamp	11114	Hydrocarbons

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

7A. **OSE Ground Water Estimated Depth:** 200'

8. **Casing Program:**

S&P COA

Name	Casing Depth From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	BHP (psig)	Anticipated Mud Weight (ppg)	Collapse SF at Full Evacuation(1.125)	Collapse SF at 1/3 Evacuation(1.125)	Burst SF (1.125)	Cumulative Air Weight	Cumulative Bouyed Weight (lbs)	Bouyant Tension SF (1.8)
Surface	0	1680	1680	17 1/2	13-3/8"	54.50	J-55	ST&C	New	725	8.3	1.56		3.78	91,560	79,958	6.43
Intermediate	0	5800	5800	12 1/4	9-5/8"	40.00	J-55	LT&C	New	2912	10.0		1.36	1.36	224,000	189,801	2.74
Production	0	10598	10598	8 3/4	5-1/2"	17.00	P-110	LT&C	New	4959	9.0	1.51		2.15	185,300	159,839	2.78
Production	10598	15616	10900	8 3/4	5-1/2"	17.00	P-110	BT&C	New	5101	9.0	1.47		2.09	5,134	4,429	123.29

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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 Production Liner	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	1067	1.75	13.50	1867	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		85% Excess			Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	1254	1.88	12.90	2356	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	613	2.40	11.90	1471	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1406	1.24	14.50	1743	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 5400		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: 10,598' EOC: 11,368'

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
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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'	5350'	8.30' 28	NC	FW Spud Mud
1680' to 5600'		10.00' 30-32	NC	Brine Water
5600' to 15616'		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 5600 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: 4905 psi

Estimated BHT: 168°

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.

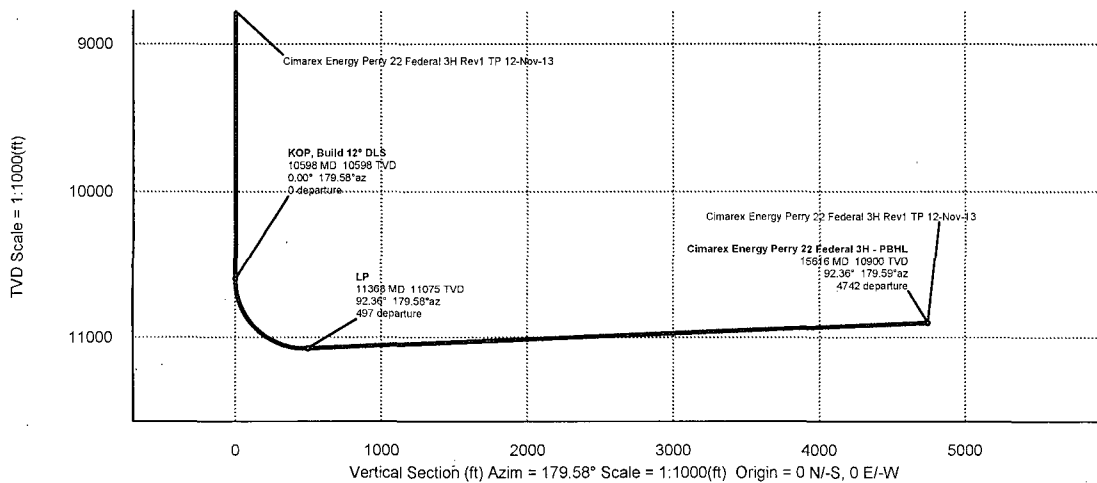
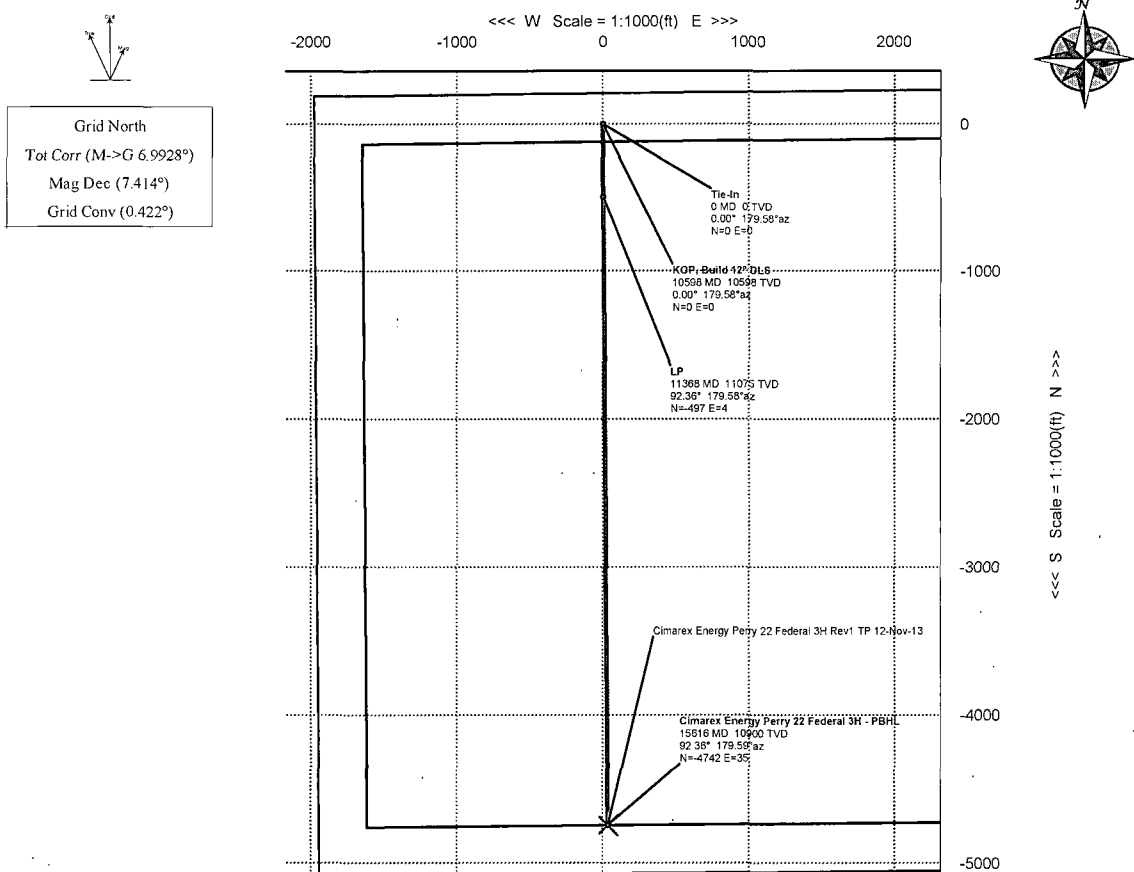
The proposed well will be tested and potential as **Oil**



Cimarex Energy

PATHFINDER
A Schlumberger Company

WELL				FIELD				STRUCTURE					
Perry 22 Federal 3H				NM Lea County (NAD 83)				Cimarex Perry 22 Federal 3H					
Magnetic Parameters				Surface Location				Miscellaneous					
Model	800M 2012	Dip	69.403°	Date	November 12, 2013	Lat	N 32 33 55.075	North	570273.80 ftUS	Grid	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Scale	0.9997375
Mag Dec	7.414°	PG	48547.2mT										
								Perry 22 Federal 3H					
								Cimarex Energy Perry 22 Federal 3H Rev12-Nov-13					



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Tie-In	0.00	0.00	179.58	0.00	0.00	0.00	0.00	
KOP, Build 12° DLS	10598.00	0.00	179.58	10598.00	0.00	0.00	0.00	0.00
LP	11367.57	92.36	179.58	11075.00	497.06	-497.05	3.64	12.00
Cimarex Energy Perry 22 Federal 3H - PBHL	15615.86	92.36	179.59	10900.00	4741.75	-4741.62	34.50	0.00

Cimarex Energy Perry 22 Federal 3H Rev1 TP 12-Nov-13 Proposal Report

(Def Plan)

Report Date: November 12, 2013 - 10:44 AM
Client: Cimarex Energy
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Perry 22 Federal 3H / Perry 22 Federal 3H
Well: Perry 22 Federal 3H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Energy Perry 22 Federal 3H Rev1 TP 12-Nov-13
Survey Date: July 11, 2013
Tort / AHD / DDI / ERD Ratio: 92.367 ° / 4741.750 ft / 5.791 / 0.428
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 33' 55.07533", W 103° 33' 0.85230"
Location Grid N/E Y/X: N 570273.800 ftUS, E 782590.100 ftUS
CRS Grid Convergence Angle: 0.4215 °
Grid Scale Factor: 0.99997575

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.583 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Level
TVD Reference Elevation: 3648.000 ft above MSL
Seabed / Ground Elevation: 3648.000 ft above MSL
Magnetic Declination: 7.414 °
Total Field Strength: 48542.346 nT
Magnetic Dip Angle: 60.403 °
Declination Date: November 12, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.4215 °
Total Corr Mag North->Grid North: 6.9928 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
Tie-In	0.00	0.00	179.58	0.00	0.00	0.00	0.00	0.00	0.00	N/A	179.58M
	100.00	0.00	179.58	100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	200.00	0.00	179.58	200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	300.00	0.00	179.58	300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	400.00	0.00	179.58	400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	500.00	0.00	179.58	500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	600.00	0.00	179.58	600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	700.00	0.00	179.58	700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	800.00	0.00	179.58	800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	900.00	0.00	179.58	900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1000.00	0.00	179.58	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1100.00	0.00	179.58	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1200.00	0.00	179.58	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1300.00	0.00	179.58	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1400.00	0.00	179.58	1400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1500.00	0.00	179.58	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1600.00	0.00	179.58	1600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1700.00	0.00	179.58	1700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1800.00	0.00	179.58	1800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	1900.00	0.00	179.58	1900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	2000.00	0.00	179.58	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2100.00	0.00	179.58	2100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2200.00	0.00	179.58	2200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2300.00	0.00	179.58	2300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2400.00	0.00	179.58	2400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2500.00	0.00	179.58	2500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2600.00	0.00	179.58	2600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2700.00	0.00	179.58	2700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2800.00	0.00	179.58	2800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	2900.00	0.00	179.58	2900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3000.00	0.00	179.58	3000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3100.00	0.00	179.58	3100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3200.00	0.00	179.58	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3300.00	0.00	179.58	3300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3400.00	0.00	179.58	3400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3500.00	0.00	179.58	3500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3600.00	0.00	179.58	3600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3700.00	0.00	179.58	3700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3800.00	0.00	179.58	3800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	3900.00	0.00	179.58	3900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4000.00	0.00	179.58	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4100.00	0.00	179.58	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4200.00	0.00	179.58	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4300.00	0.00	179.58	4300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4400.00	0.00	179.58	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4500.00	0.00	179.58	4500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4600.00	0.00	179.58	4600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4700.00	0.00	179.58	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4800.00	0.00	179.58	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	4900.00	0.00	179.58	4900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5000.00	0.00	179.58	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5100.00	0.00	179.58	5100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5200.00	0.00	179.58	5200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5300.00	0.00	179.58	5300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5400.00	0.00	179.58	5400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5500.00	0.00	179.58	5500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5600.00	0.00	179.58	5600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5700.00	0.00	179.58	5700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5800.00	0.00	179.58	5800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	5900.00	0.00	179.58	5900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6000.00	0.00	179.58	6000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6100.00	0.00	179.58	6100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6200.00	0.00	179.58	6200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6300.00	0.00	179.58	6300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6400.00	0.00	179.58	6400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	6500.00	0.00	179.58	6500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6600.00	0.00	179.58	6600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6700.00	0.00	179.58	6700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6800.00	0.00	179.58	6800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	6900.00	0.00	179.58	6900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7000.00	0.00	179.58	7000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7100.00	0.00	179.58	7100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7200.00	0.00	179.58	7200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7300.00	0.00	179.58	7300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7400.00	0.00	179.58	7400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7500.00	0.00	179.58	7500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7600.00	0.00	179.58	7600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7700.00	0.00	179.58	7700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7800.00	0.00	179.58	7800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	7900.00	0.00	179.58	7900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8000.00	0.00	179.58	8000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8100.00	0.00	179.58	8100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8200.00	0.00	179.58	8200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8300.00	0.00	179.58	8300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8400.00	0.00	179.58	8400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8500.00	0.00	179.58	8500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8600.00	0.00	179.58	8600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8700.00	0.00	179.58	8700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8800.00	0.00	179.58	8800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	8900.00	0.00	179.58	8900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9000.00	0.00	179.58	9000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9100.00	0.00	179.58	9100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9200.00	0.00	179.58	9200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9300.00	0.00	179.58	9300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9400.00	0.00	179.58	9400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9500.00	0.00	179.58	9500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9600.00	0.00	179.58	9600.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9700.00	0.00	179.58	9700.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9800.00	0.00	179.58	9800.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	9900.00	0.00	179.58	9900.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10000.00	0.00	179.58	10000.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10100.00	0.00	179.58	10100.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10200.00	0.00	179.58	10200.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10300.00	0.00	179.58	10300.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10400.00	0.00	179.58	10400.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10500.00	0.00	179.58	10500.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
KOP, Build 12° DLS	10598.00	0.00	179.58	10598.00	0.00	0.00	0.00	0.00	0.00	0.00	179.58M
	10600.00	0.24	179.58	10600.00	0.00	0.00	0.00	0.00	179.58	12.00	179.58M

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	10700.00	12.24	179.58	10699.23	10.86	-10.85	0.08	10.86	179.58	12.00	HS
	10800.00	24.24	179.58	10794.03	42.10	-42.10	0.31	42.10	179.58	12.00	HS
	10900.00	36.24	179.58	10880.26	92.38	-92.37	0.68	92.38	179.58	12.00	HS
	11000.00	48.25	179.58	10954.15	159.49	-159.48	1.17	159.49	179.58	12.00	HS
	11100.00	60.25	179.58	11012.47	240.49	-240.48	1.76	240.49	179.58	12.00	HS
	11200.00	72.25	179.58	11052.68	331.85	-331.84	2.43	331.85	179.58	12.00	HS
	11300.00	84.25	179.58	11073.00	429.58	-429.57	3.15	429.58	179.58	12.00	HS
LP	11367.57	92.36	179.58	11075.00	497.06	-497.05	3.64	497.06	179.58	12.00	HS
	11400.00	92.36	179.58	11073.66	529.47	-529.45	3.88	529.47	179.58	0.00	HS
	11500.00	92.36	179.58	11069.55	629.38	-629.36	4.61	629.38	179.58	0.00	HS
	11600.00	92.36	179.58	11065.43	729.30	-729.28	5.35	729.30	179.58	0.00	HS
	11700.00	92.36	179.58	11061.31	829.21	-829.19	6.08	829.21	179.58	0.00	HS
	11800.00	92.36	179.58	11057.19	929.13	-929.10	6.81	929.13	179.58	0.00	HS
	11900.00	92.36	179.58	11053.07	1029.04	-1029.01	7.54	1029.04	179.58	0.00	HS
	12000.00	92.36	179.58	11048.96	1128.96	-1128.93	8.27	1128.96	179.58	0.00	HS
	12100.00	92.36	179.58	11044.84	1228.87	-1228.84	9.00	1228.87	179.58	0.00	HS
	12200.00	92.36	179.58	11040.72	1328.79	-1328.75	9.73	1328.79	179.58	0.00	HS
	12300.00	92.36	179.58	11036.60	1428.70	-1428.66	10.46	1428.70	179.58	0.00	HS
	12400.00	92.36	179.58	11032.48	1528.62	-1528.58	11.19	1528.62	179.58	0.00	HS
	12500.00	92.36	179.58	11028.36	1628.53	-1628.49	11.92	1628.53	179.58	0.00	HS
	12600.00	92.36	179.58	11024.25	1728.45	-1728.40	12.65	1728.45	179.58	0.00	HS
	12700.00	92.36	179.58	11020.13	1828.36	-1828.31	13.38	1828.36	179.58	0.00	HS
	12800.00	92.36	179.58	11016.01	1928.28	-1928.23	14.11	1928.28	179.58	0.00	HS
	12900.00	92.36	179.58	11011.89	2028.19	-2028.14	14.83	2028.19	179.58	0.00	HS
	13000.00	92.36	179.58	11007.77	2128.11	-2128.05	15.56	2128.11	179.58	0.00	HS
	13100.00	92.36	179.58	11003.65	2228.02	-2227.96	16.29	2228.02	179.58	0.00	HS
	13200.00	92.36	179.58	10999.53	2327.94	-2327.88	17.02	2327.94	179.58	0.00	HS
	13300.00	92.36	179.58	10995.41	2427.85	-2427.79	17.74	2427.85	179.58	0.00	HS
	13400.00	92.36	179.58	10991.29	2527.77	-2527.70	18.47	2527.77	179.58	0.00	HS
	13500.00	92.36	179.58	10987.17	2627.68	-2627.61	19.20	2627.68	179.58	0.00	HS
	13600.00	92.36	179.58	10983.06	2727.60	-2727.53	19.92	2727.60	179.58	0.00	HS
	13700.00	92.36	179.58	10978.94	2827.51	-2827.44	20.65	2827.51	179.58	0.00	HS
	13800.00	92.36	179.58	10974.82	2927.43	-2927.35	21.37	2927.43	179.58	0.00	HS
	13900.00	92.36	179.58	10970.70	3027.34	-3027.26	22.10	3027.34	179.58	0.00	HS
	14000.00	92.36	179.58	10966.58	3127.26	-3127.18	22.82	3127.26	179.58	0.00	HS
	14100.00	92.36	179.58	10962.46	3227.17	-3227.09	23.55	3227.17	179.58	0.00	HS
	14200.00	92.36	179.58	10958.34	3327.09	-3327.00	24.27	3327.09	179.58	0.00	HS
	14300.00	92.36	179.58	10954.22	3427.00	-3426.91	25.00	3427.00	179.58	0.00	HS
	14400.00	92.36	179.58	10950.10	3526.92	-3526.83	25.72	3526.92	179.58	0.00	HS
	14500.00	92.36	179.59	10945.98	3626.84	-3626.74	26.45	3626.84	179.58	0.00	HS
	14600.00	92.36	179.59	10941.86	3726.75	-3726.65	27.17	3726.75	179.58	0.00	HS
	14700.00	92.36	179.59	10937.74	3826.67	-3826.56	27.89	3826.67	179.58	0.00	HS
	14800.00	92.36	179.59	10933.62	3926.58	-3926.48	28.61	3926.58	179.58	0.00	HS
	14900.00	92.36	179.59	10929.50	4026.50	-4026.39	29.34	4026.50	179.58	0.00	HS

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	TF (°)
	15000.00	92.36	179.59	10925.38	4126.41	-4126.30	30.06	4126.41	179.58	0.00	HS
	15100.00	92.36	179.59	10921.26	4226.33	-4226.21	30.78	4226.33	179.58	0.00	HS
	15200.00	92.36	179.59	10917.14	4326.24	-4326.13	31.50	4326.24	179.58	0.00	HS
	15300.00	92.36	179.59	10913.02	4426.16	-4426.04	32.22	4426.16	179.58	0.00	HS
	15400.00	92.36	179.59	10908.90	4526.07	-4525.95	32.95	4526.07	179.58	0.00	HS
	15500.00	92.36	179.59	10904.77	4625.99	-4625.86	33.67	4625.99	179.58	0.00	HS
	15600.00	92.36	179.59	10900.65	4725.90	-4725.78	34.39	4725.90	179.58	0.00	HS
Cimarex Energy Perry 22 Federal 3H - PBHL	15615.86	92.36	179.59	10900.00	4741.75	-4741.62	34.50	4741.75	179.58	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	10598.000	1/100.000	30.000	30.000	SLB_NSG+MSHOT	Original Borehole / Cimarex Energy Perry 22 Federal 3H Rev1
	10598.000	15528.696	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Energy Perry 22 Federal 3H Rev1

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

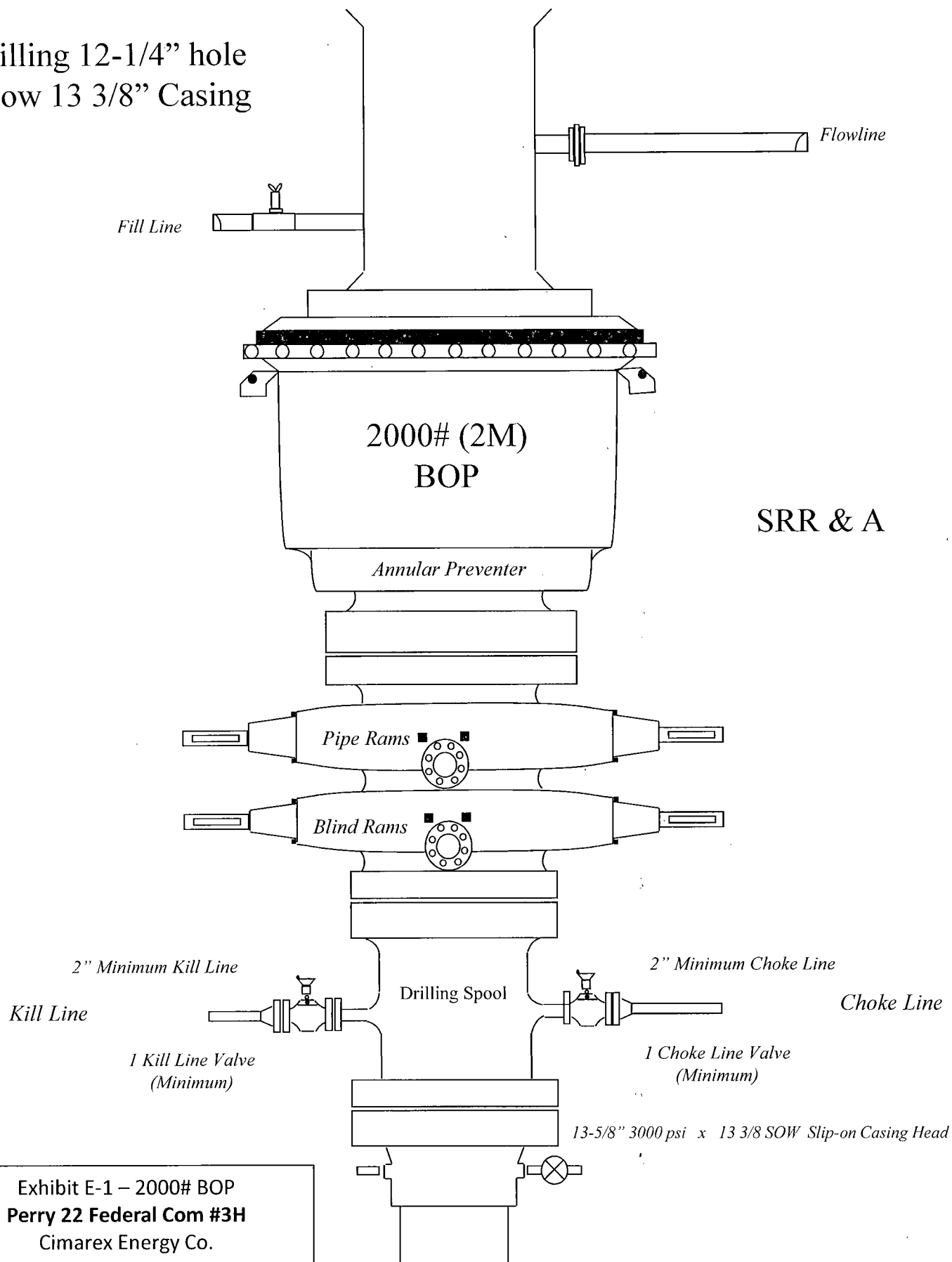


Exhibit E-1 – 2000# BOP
Perry 22 Federal Com #3H
Cimarex Energy Co.
22-20S-34E
SHL 208 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM

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

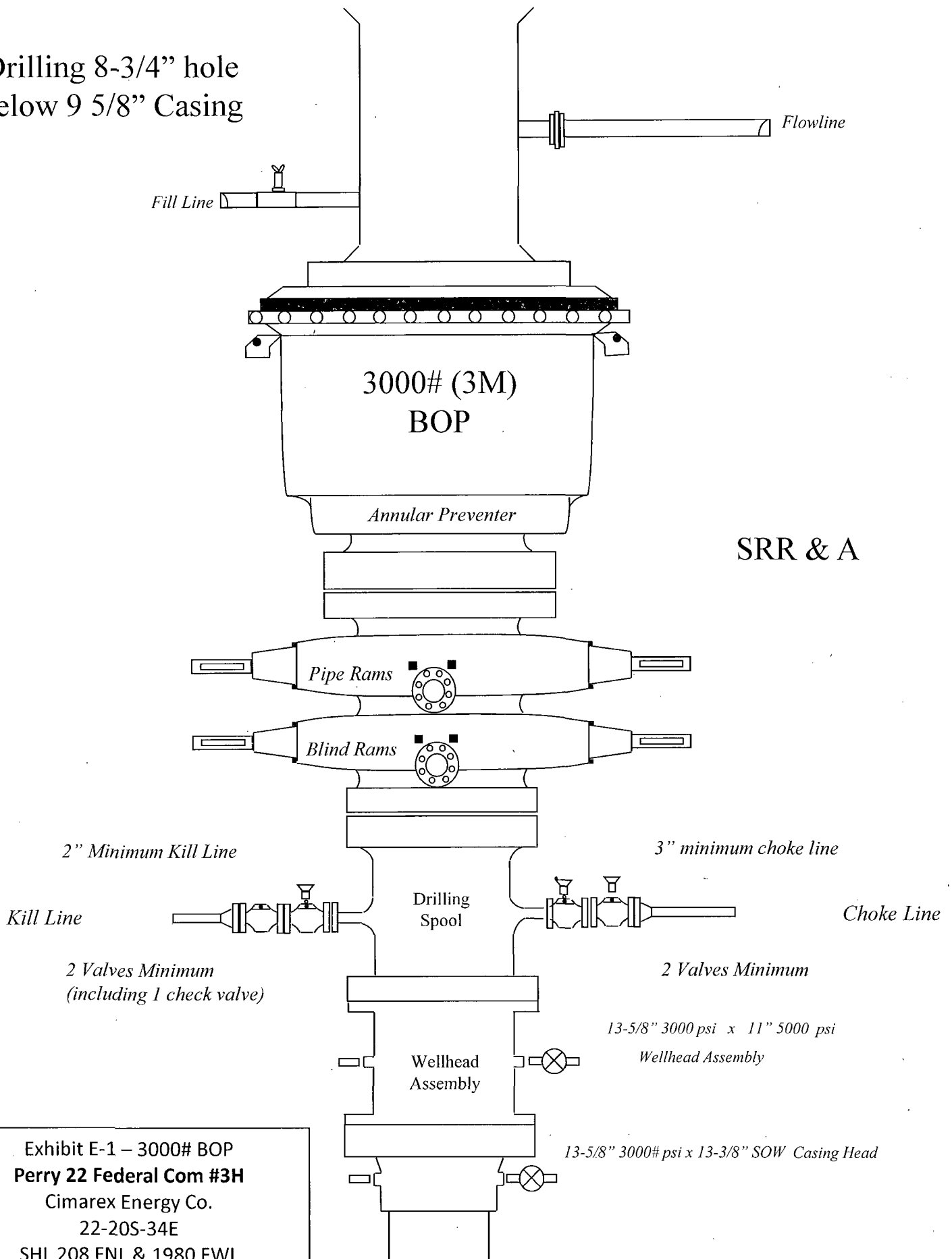
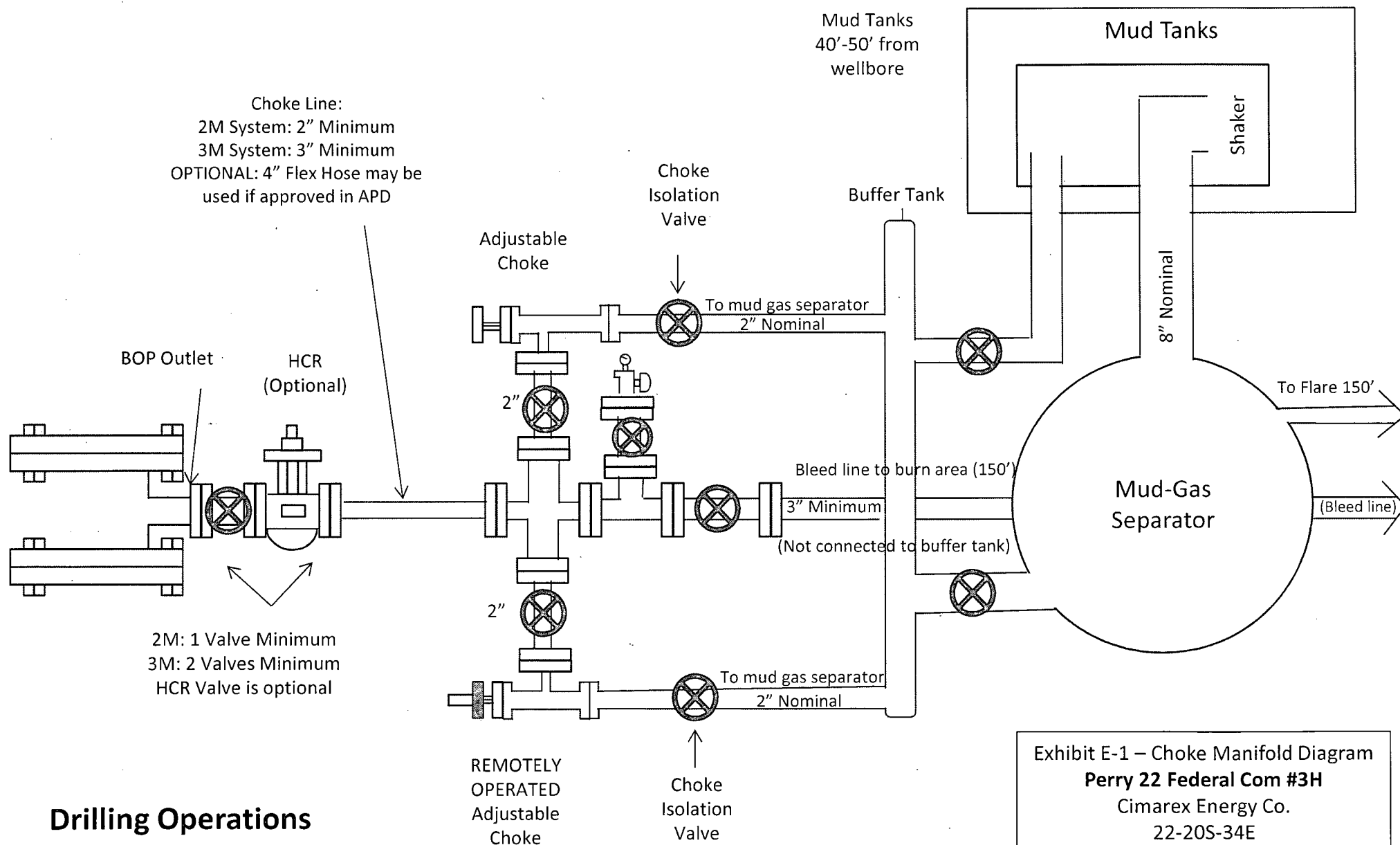


Exhibit E-1 – 3000# BOP
Perry 22 Federal Com #3H
Cimarex Energy Co.
22-20S-34E
SHL 208 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Perry 22 Federal Com #3H
 Cimarex Energy Co.
 22-20S-34E
 SHL 208 FNL & 1980 FWL
 BHL 330 FSL & 1980 FWL
 Lea County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Perry 22 Federal Com #3H

Cimarex Energy Co.

22-20S-34E

SHL 208 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		
<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. James Jones</i>	Approved: <i>Levitt</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 Fitting

41/1610K

Die Size

6.36"

Hose Serial #

5544

Cauling Method

Swage

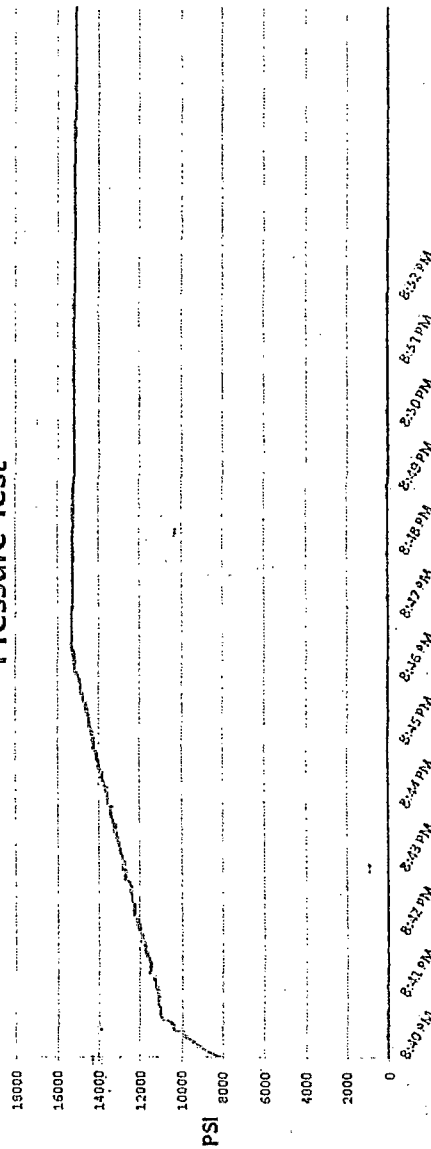
Final O.D.

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-1 – Co-Flex Hose Hydrostatic Test
Perry 22 Federal Com #3H
Cimarex Energy Co.
22-20S-34E
SHL 208 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM



Exhibit F -3- Co-Flex Hose
Perry 22 Federal Com #3H
Cimarex Energy Co.
22-20S-34E
SHL 208 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-2 – Co-Flex Hose
Perry 22 Federal Com #3H
Cimarex Energy Co.
22-20S-34E
SHL 208 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:
<i>Janet Garcia</i>		3/8/2011

Exhibit F – Co-Flex Hose
Perry 22 Federal Com #3H

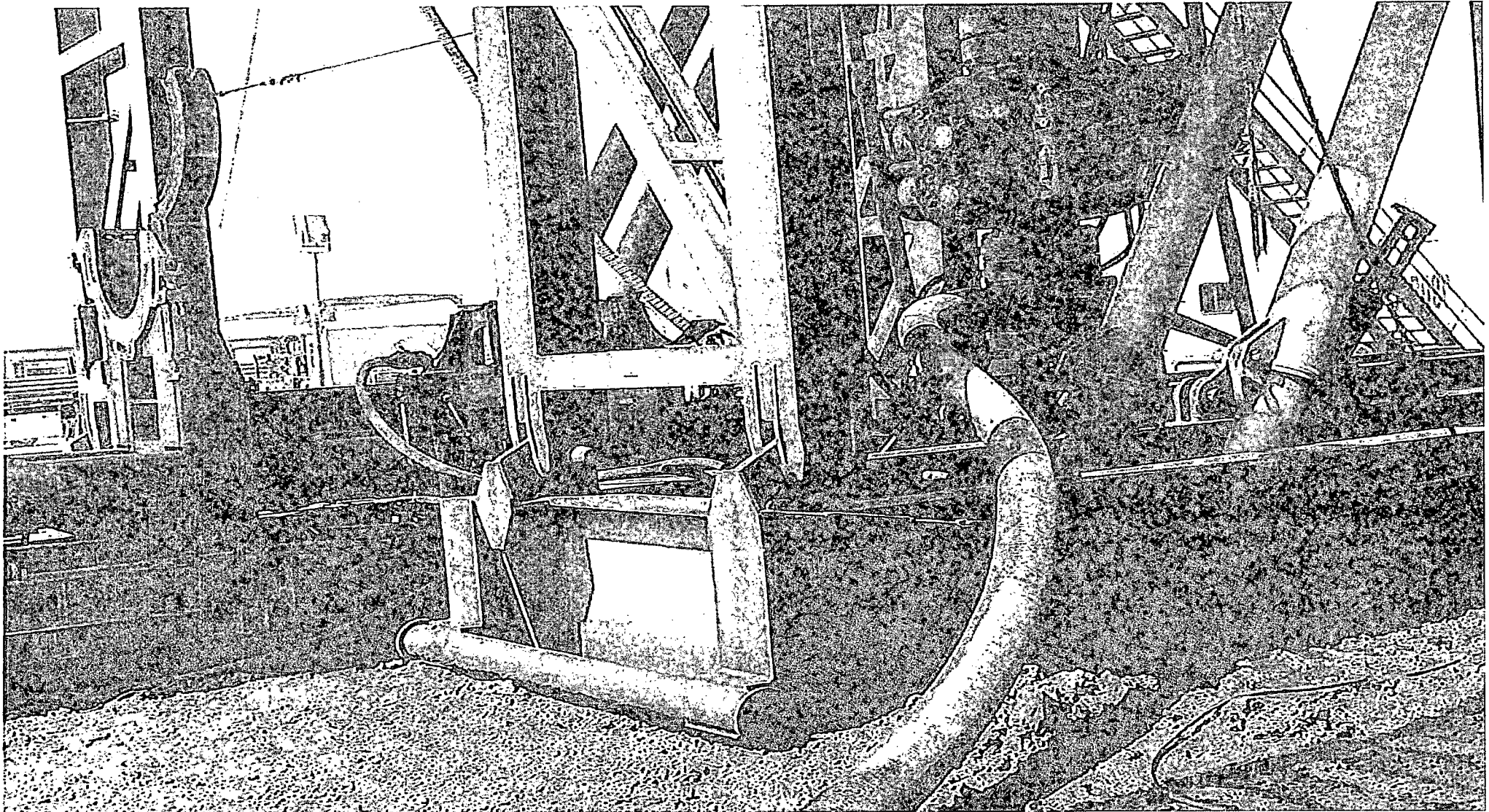
Cimarex Energy Co.

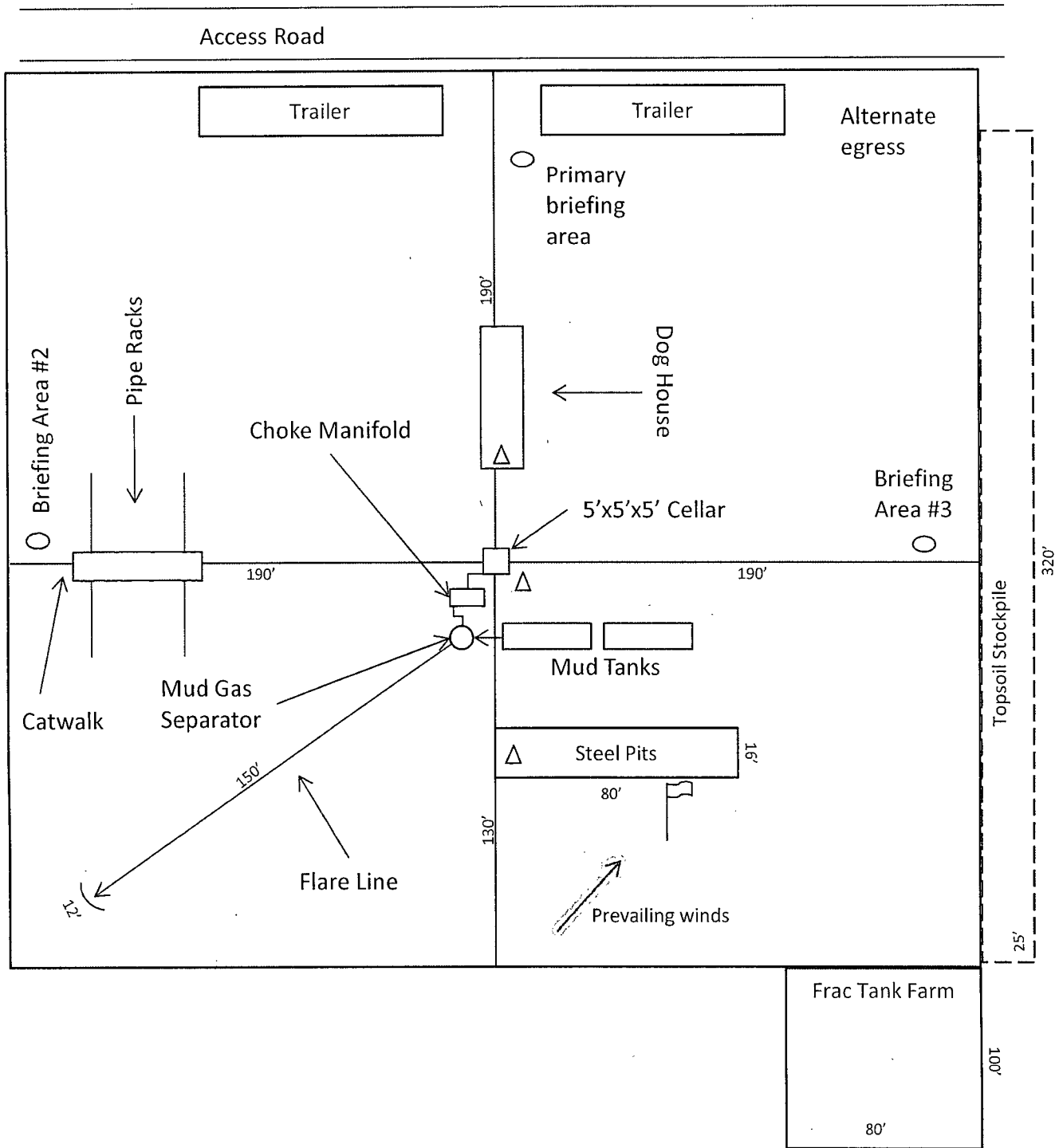
22-20S-34E

SHL 208 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 – Rig Diagram
Perry 22 Federal Com #3H
Cimarex Energy Co.
22-20S-34E
SHL 208 FNL & 1980 FWL
BHL 330 FSL & 1980 FWL
Lea County, NM