

HOBBS OGD

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ATS-13-824

APR 18 2014

APR 18 2014

Form 3160-3
(March 2012)

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HOBBS OGD

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

Cimarex Energy Co.

3a. Address

600 N. Marienfeld St. Ste. 600 Midland Tx 79701

3b. Phone No. (include area code)

432-571-7800

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

At Surface

260' FSL & 2080' FWL

At proposed prod. Zone

330' FNL & 1980' FWL

Horizontal Bone Spring test

5. Lease Serial No.

SHL NMNM004452; BHL NMNM057285

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

Mallion 27 Federal Com 3

9. API Well No.

30-025-41808

10. Field and Pool, or Exploratory

Quail Ridge Bone Spring South

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

27-19S-34E

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

25 miles ESE of Hobbs, NM

12. County or Parish

Lea

13. State

NM

15 Distance from proposed*

location to nearest
property or lease line, ft.
(Also to nearest drig. unit line if
any)

260'

16. No of acres in lease

NMNM004452 -

NMNM057285 -

17. Spacing Unit dedicated to this well

160

18 Distance from proposed location*

to nearest well, drilling, completed,
applied for, on this lease, ft.

0'

P&A #2 well - 400'

19. Proposed Depth

11,100' Pilot Hole

15,386' MD 10,900' TVD

20. BLM/BIA Bond No. on File

NM2575; NMB000835

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

3709' GR

22. Approximate date work will start*

09.15.13

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:

- Well plat certified by a registered surveyor
- A Drilling Plan
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator Certification
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Paula Brunson

Name (Printed/Typed)

Paula Brunson

Date

05.23.13

Title

Regulatory Analyst

Approved By (Signature)

/S/ STEPHEN J. CAFFEY

Name (Printed/Typed)

Office

CARLSBAD FIELD OFFICE

Date

APR 16 2014

Title

FIELD MANAGER

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)

Kao 04/29/14 (Instructions on page 2)

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL

Capitan Controlled Water Basin

APR 28 2014

Kao

Operator Certification Statement

Mallon 27 Federal Com 3

Cimarex Energy Co.

UL: N, Sec 27-19S-34E

Lea County, NM

Operator's Representative

Cimarex Energy Co. of Colorado

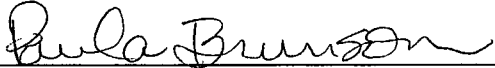
600 N. Marienfeld St., Ste. 600

Midland, TX 79701

Office Phone: (432) 571-7800

CERTIFICATION: I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 23rd day of May, 2013

NAME: 
Paula Brunson

TITLE: Regulatory Analyst

ADDRESS: 600 N. Marienfeld St., Ste. 600
Midland, TX 79701

TELEPHONE: 432-571-7848

EMAIL: pbrunson@cimarex.com

Field Representative: Same as above

Application to Drill
Mallon 27 Federal Com 3
 Cimarex Energy Co.
 UL: N, Sec 27-19S-34E
 Lea County, 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 260' FSL & 2080' FWL
 BHL 330' FNL & 1980' FWL
- 2 Elevation above sea level: 3709' 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: 15,386' MD 10,900' TVD 11,100' Pilot Hole
- 6 Estimated tops of geological markers:

Formation	Est. Top	Bearing
Rustler	1600	NA
T. Salt	1700	NA
B. Salt	3299	NA
Tansill	3334	NA
Yates	3522	NA
7 Rivers	3805	NA
Queen	4498	NA
Penrose	4894	NA
Grayburg	4962	NA
Cherry Canyon	5600	NA
San Andres	6014	NA
Bone Spring	8250	Hydrocarbons
TBSS	10570	Hydrocarbons
Wolfcamp	10870	Hydrocarbons

- 7 Possible mineral bearing formation:

Shown above

7A OSE Ground Water estimated depth: 150'

- 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	BHP (psig)	Anticipated Mud Weight (ppg)	Collapse SF (1.125)	Burst SF (1.125)	Cumulative Air Weight (lbs)	Cumulative Bouyed Weight (lbs)	Bouyant Tension SF (1.8)
Surface	1850'	1650'	17 1/2	13 3/8	54.5	J-55	ST&C	New	743	8.4	1.57	3.69	89,925	78,393	6.56
Intermediate	5500'	5500'	12 1/4	9 5/8	40	N-80	LT&C	New	2,475	10.2	1.60	2.32	220,000	185,740	3.97
Production	10422'	10422'	8 3/4	5 1/2	17	P-110	LT&C	New	2,597	9.2	1.50	4.10	185,300	159,273	2.79
	15386'	10900'	8 3/4	5 1/2	17	P-110	BT&C	New	4,995	9.2	1.43	2.13	8,126	6,985	78.17

Casing Design Criteria and Casing Loading Assumptions:

Surface

- Tension A 1.8 design factor with effects of buoyancy. 8.4 ppg
- Collapse A 1.125 design factor with full internal evacuation and a collapse force equal to a 8.4 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. 10.2 ppg
- Collapse A 1.125 design factor evacuated 1/3 TVD of next casing string with a collapse force equal to a 10.2 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

- Tension A 1.8 design factor with effects of buoyancy. 9.2 ppg
- Collapse A 1.125 design factor with full internal evacuation and a collapse force equal to a 9.2 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.

Drilling Plan
Mallon 27 Federal Com 3
 Cimarex Energy Co.
 UL: N, Sec 27-19S-34E
 Lea County, NM

9 Cementing Program:

13 3/8 **Surface**

	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	1050	1.75	13.5	1834	Class C + Bentonite + Calcium Chloride + LCM
Tail	220	1.34	14.8	287	Class C + LCM

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

9 5/8 **Intermediate**

	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	1230	1.88	12.9	2302	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
Tail	300	1.34	14.8	392	Class C + retarder + LCM

TOC: 0' 81% Excess

See COA 5 1/2 **Production**

	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	947	2.4	11.9	2274	35:65 (poz/H) + salt + Sodium Metasilcate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder
Tail	1397	1.24	14.5	1732	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 3/8" 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
Mallon 27 Federal Com 3
 Cimarex Energy Co.
 UL: N, Sec 27-19S-34E
 Lea County, NM

11 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1800'	8.4	28	NC	FW Spud Mud
1800' to 2205'	10.2	30-32	NC	Brine water
2205' to 15386'	9.2	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: 11,100' KOP: 10,422' EOC: 11200'

Set OH mechanical whipstock w/ 620 ft of 2.875 tubing and pump 30 bbls of Mudpush @ 12 ppg, followed by 310 sks Type H cement, dispersant 0.080 gals/sk, retarder 0.045 gals/sk @ 17.5 ppg, 0.94 cuft/sk, & 0 % excess from pilot hole TD to KOP. KO lateral and drill through the curve to TD. Run production csg to TD & cement.

13 Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 2205' 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 **4905 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.

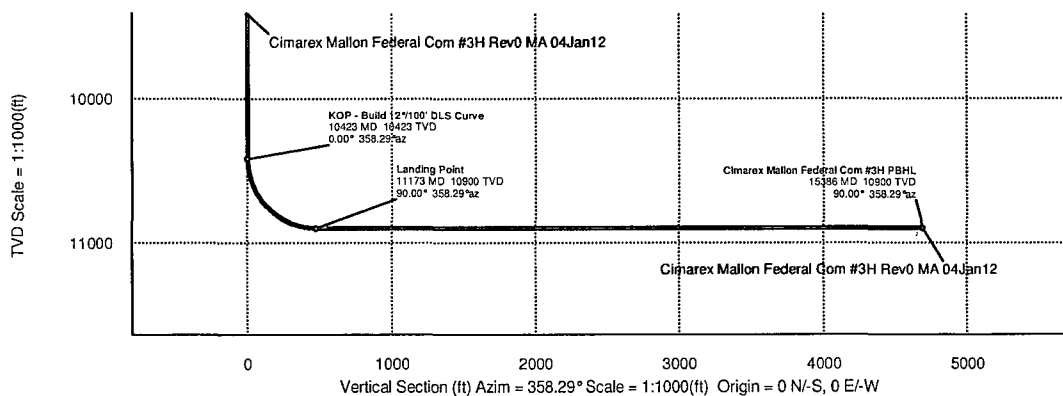
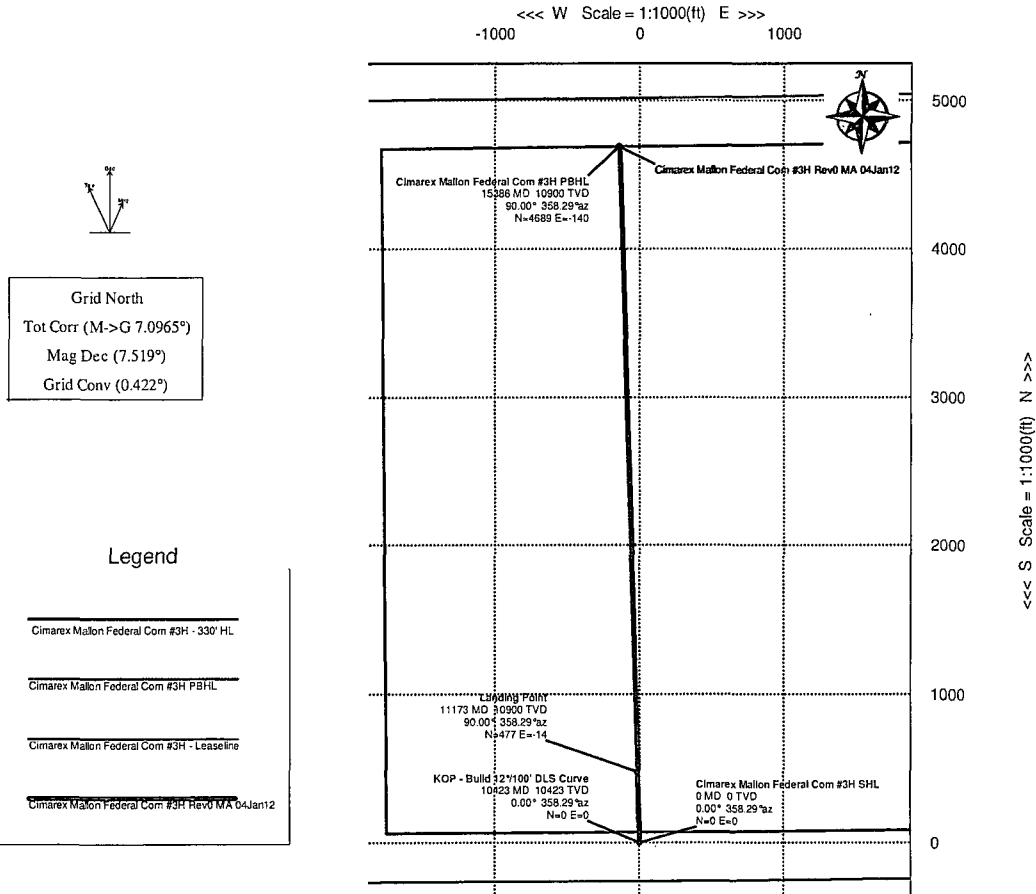
The proposed well will be tested and potentialized as **Oil**



Cimarex

PATHFINDER
A Schlumberger Company

WELL	FIELD	STRUCTURE
Mallon Federal Com #3H	NM Lea County	Mallon Federal Com #3H
Magnetic Parameters		
Model: SGG V 2012	De: 80.485° Mag Dec: 7.519°	Date: January 03, 2013 PS: 48488.517
Surface Location		
Lat: N 32 37 28.987° Lon: N 103 32 58.871°	Northings: 691802.80 NUB Easting: 792340.50 NUB	NGD83 New Mexico State Plane, Eastern Zone, 16 Feet Grid Zone: 0 422° Scale Factor: 0.99987072
Miscellaneous		
Shot: Mallon Federal Com #3H Plan: Rev0 1st 04Jan12	TVD Ref: Ground Level (1000 above MSL) Rev Date: January 03, 2013	



Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Cimarex Mallon Federal Com #3H SHL	0.00	0.00	358.29	0.00	0.00	0.00	0.00	
KOP - Build 12°/100' DLS Curve	10422.50	0.00	358.29	10422.50	0.00	0.00	0.00	0.00
Landing Point	11172.56	90.00	358.29	10900.00	477.50	477.29	-14.25	12.00
Cimarex Mallon Federal Com #3H PBHL	15385.87	90.00	358.29	10900.00	4690.81	4688.72	-139.90	0.00



Cimarex Mallon Federal Com #3H Rev0 MA 04Jan13 Proposal Report 100'
Interpolated
(Non-Def Plan)

Schlumberger

Report Date: January 04, 2013 - 10:31 AM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Mallon Federal Com #3H / Cimarex Mallon Federal Com #3H
Well: Cimarex Mallon Federal Com #3H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Mallon Federal Com #3H Rev0 MA 04Jan13
Survey Date: January 03, 2013
Tort / AHD / DDI / ERD Ratio: 90.002 ° / 4690.810 ft / 5.775 / 0.430
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 37' 28.98732", W 103° 32' 59.57103"
Location Grid N/E Y/X: N 591892.600 ftUS, E 782540.500 ftUS
CRS Grid Convergence Angle: 0.4224 °
Grid Scale Factor: 0.99997572
Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 358.291 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Level
TVD Reference Elevation: 3709.000 ft above MSL
Seabed / Ground Elevation: 3709.000 ft above MSL
Magnetic Declination: 7.519 °
Total Gravity Field Strength: 998.4914mgN (9.80665 Based)
Total Magnetic Field Strength: 48688.160 nT
Magnetic Dip Angle: 60.488 °
Declination Date: January 03, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.4224 °
Total Corr Mag North->Grid North: 7.0965 °
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 Mallon Federal Com #3H SHL	0.00	0.00	358.29	0.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	N/A
	100.00	0.00	358.29	100.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	200.00	0.00	358.29	200.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	300.00	0.00	358.29	300.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	400.00	0.00	358.29	400.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	500.00	0.00	358.29	500.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	600.00	0.00	358.29	600.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	700.00	0.00	358.29	700.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	800.00	0.00	358.29	800.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	900.00	0.00	358.29	900.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1000.00	0.00	358.29	1000.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1100.00	0.00	358.29	1100.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1200.00	0.00	358.29	1200.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1300.00	0.00	358.29	1300.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1400.00	0.00	358.29	1400.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1500.00	0.00	358.29	1500.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1600.00	0.00	358.29	1600.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1700.00	0.00	358.29	1700.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1800.00	0.00	358.29	1800.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	1900.00	0.00	358.29	1900.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2000.00	0.00	358.29	2000.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2100.00	0.00	358.29	2100.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2200.00	0.00	358.29	2200.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2300.00	0.00	358.29	2300.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2400.00	0.00	358.29	2400.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2500.00	0.00	358.29	2500.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2600.00	0.00	358.29	2600.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	2700.00	0.00	358.29	2700.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00

5/23/2013 12:55 PM Page 2 of 4

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	358.29	8300.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	8400.00	0.00	358.29	8400.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	8500.00	0.00	358.29	8500.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	8600.00	0.00	358.29	8600.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	8700.00	0.00	358.29	8700.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	8800.00	0.00	358.29	8800.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	8900.00	0.00	358.29	8900.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9000.00	0.00	358.29	9000.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9100.00	0.00	358.29	9100.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9200.00	0.00	358.29	9200.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9300.00	0.00	358.29	9300.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9400.00	0.00	358.29	9400.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9500.00	0.00	358.29	9500.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9600.00	0.00	358.29	9600.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9700.00	0.00	358.29	9700.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9800.00	0.00	358.29	9800.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	9900.00	0.00	358.29	9900.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	10000.00	0.00	358.29	10000.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	10100.00	0.00	358.29	10100.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	10200.00	0.00	358.29	10200.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	10300.00	0.00	358.29	10300.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	10400.00	0.00	358.29	10400.00	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
KOP - Build 12"/100' DLS Curve	10422.50	0.00	358.29	10422.50	0.00	0.00	0.00	591892.60	782540.50	N 32 37 28.99	W 103 32 59.57	0.00	0.00	0.00
	10500.00	9.30	358.29	10499.66	6.28	6.27	-0.19	591898.87	782540.31	N 32 37 29.05	W 103 32 59.57	6.28	358.29	12.00
	10600.00	21.30	358.29	10595.94	32.61	32.60	-0.97	591925.20	782539.53	N 32 37 29.31	W 103 32 59.58	32.61	358.29	12.00
	10700.00	33.30	358.29	10684.64	78.39	78.36	-2.34	591970.95	782538.16	N 32 37 29.76	W 103 32 59.59	78.39	358.29	12.00
	10800.00	45.30	358.29	10761.89	141.61	141.55	-4.23	592034.14	782536.27	N 32 37 30.39	W 103 32 59.61	141.61	358.29	12.00
	10900.00	57.30	358.29	10824.30	219.51	219.41	-6.55	592112.00	782533.95	N 32 37 31.16	W 103 32 59.63	219.51	358.29	12.00
	11000.00	69.29	358.29	10869.16	308.68	308.54	-9.21	592201.13	782531.29	N 32 37 32.04	W 103 32 59.65	308.68	358.29	12.00
	11100.00	81.29	358.29	10894.50	405.22	405.04	-12.09	592297.63	782528.41	N 32 37 33.00	W 103 32 59.68	405.22	358.29	12.00
	11172.56	90.00	358.29	10900.00	477.50	477.29	-14.25	592369.87	782526.25	N 32 37 33.71	W 103 32 59.70	477.50	358.29	12.00
	11200.00	90.00	358.29	10900.00	504.94	504.72	-15.07	592397.31	782525.43	N 32 37 33.98	W 103 32 59.70	504.94	358.29	0.00
	11300.00	90.00	358.29	10900.00	604.94	604.68	-18.05	592497.26	782522.45	N 32 37 34.97	W 103 32 59.73	604.94	358.29	0.00
	11400.00	90.00	358.29	10900.00	704.94	704.63	-21.04	592597.21	782519.46	N 32 37 35.96	W 103 32 59.76	704.94	358.29	0.00
	11500.00	90.00	358.29	10900.00	804.94	804.59	-24.02	592697.17	782516.48	N 32 37 36.95	W 103 32 59.78	804.94	358.29	0.00
	11600.00	90.00	358.29	10900.00	904.94	904.54	-27.00	592797.12	782513.50	N 32 37 37.94	W 103 32 59.81	904.94	358.29	0.00
	11700.00	90.00	358.29	10900.00	1004.94	1004.50	-29.99	592897.07	782510.51	N 32 37 38.93	W 103 32 59.84	1004.94	358.29	0.00
	11800.00	90.00	358.29	10900.00	1104.94	1104.45	-32.97	592997.02	782507.53	N 32 37 39.92	W 103 32 59.86	1104.94	358.29	0.00
	11900.00	90.00	358.29	10900.00	1204.94	1204.41	-35.95	593096.98	782504.55	N 32 37 40.91	W 103 32 59.89	1204.94	358.29	0.00
	12000.00	90.00	358.29	10900.00	1304.94	1304.36	-38.94	593196.93	782501.56	N 32 37 41.90	W 103 32 59.91	1304.94	358.29	0.00
	12100.00	90.00	358.29	10900.00	1404.94	1404.32	-41.92	593296.88	782498.58	N 32 37 42.89	W 103 32 59.94	1404.94	358.29	0.00
	12200.00	90.00	358.29	10900.00	1504.94	1504.27	-44.90	593396.84	782495.60	N 32 37 43.87	W 103 32 59.97	1504.94	358.29	0.00
	12300.00	90.00	358.29	10900.00	1604.94	1604.23	-47.89	593496.79	782492.61	N 32 37 44.86	W 103 32 59.99	1604.94	358.29	0.00
	12400.00	90.00	358.29	10900.00	1704.94	1704.19	-50.87	593596.74	782489.63	N 32 37 45.85	W 103 33 0.02	1704.94	358.29	0.00
	12500.00	90.00	358.29	10900.00	1804.94	1804.14	-53.85	593696.69	782486.65	N 32 37 46.84	W 103 33 0.05	1804.94	358.29	0.00
	12600.00	90.00	358.29	10900.00	1904.94	1904.10	-56.84	593796.65	782483.67	N 32 37 47.83	W 103 33 0.07	1904.94	358.29	0.00
	12700.00	90.00	358.29	10900.00	2004.94	2004.05	-59.82	593896.60	782480.68	N 32 37 48.82	W 103 33 0.10	2004.94	358.29	0.00
	12800.00	90.00	358.29	10900.00	2104.94	2104.01	-62.80	593996.55	782477.70	N 32 37 49.81	W 103 33 0.12	2104.94	358.29	0.00
	12900.00	90.00	358.29	10900.00	2204.94	2203.96	-65.78	594096.51	782474.72	N 32 37 50.80	W 103 33 0.15	2204.94	358.29	0.00
	13000.00	90.00	358.29	10900.00	2304.94	2303.92	-68.77	594196.46	782471.73	N 32 37 51.79	W 103 33 0.18	2304.94	358.29	0.00
	13100.00	90.00	358.29	10900.00	2404.94	2403.87	-71.75	594296.41	782468.75	N 32 37 52.78	W 103 33 0.20	2404.94	358.29	0.00
	13200.00	90.00	358.29	10900.00	2504.94	2503.83	-74.73	594396.36	782465.77	N 32 37 53.77	W 103 33 0.23	2504.94	358.29	0.00
	13300.00	90.00	358.29	10900.00	2604.94	2603.79	-77.71	594496.32	782462.79	N 32 37 54.76	W 103 33 0.26	2604.94	358.29	0.00
	13400.00	90.00	358.29	10900.00	2704.94	2703.74	-80.70	594596.27	782459.81	N 32 37 55.74	W 103 33 0.28	2704.94	358.29	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	90.00	358.29	10900.00	2804.94	2803.70	-83.68	594696.22	782456.82	N 32 37 56.73	W 103 33 0.31	2804.94	358.29	0.00
	13600.00	90.00	358.29	10900.00	2904.94	2903.65	-86.66	594796.18	782453.84	N 32 37 57.72	W 103 33 0.33	2904.94	358.29	0.00
	13700.00	90.00	358.29	10900.00	3004.94	3003.61	-89.64	594896.13	782450.86	N 32 37 58.71	W 103 33 0.36	3004.94	358.29	0.00
	13800.00	90.00	358.29	10900.00	3104.94	3103.56	-92.63	594996.08	782447.88	N 32 37 59.70	W 103 33 0.39	3104.94	358.29	0.00
	13900.00	90.00	358.29	10900.00	3204.94	3203.52	-95.61	595096.03	782444.90	N 32 38 0.69	W 103 33 0.41	3204.94	358.29	0.00
	14000.00	90.00	358.29	10900.00	3304.94	3303.47	-98.59	595195.99	782441.91	N 32 38 1.68	W 103 33 0.44	3304.94	358.29	0.00
	14100.00	90.00	358.29	10900.00	3404.94	3403.43	-101.57	595295.94	782438.93	N 32 38 2.67	W 103 33 0.47	3404.94	358.29	0.00
	14200.00	90.00	358.29	10900.00	3504.94	3503.39	-104.55	595395.89	782435.95	N 32 38 3.66	W 103 33 0.49	3504.94	358.29	0.00
	14300.00	90.00	358.29	10900.00	3604.94	3603.34	-107.53	595495.85	782432.97	N 32 38 4.65	W 103 33 0.52	3604.94	358.29	0.00
	14400.00	90.00	358.29	10900.00	3704.94	3703.30	-110.52	595595.80	782429.99	N 32 38 5.64	W 103 33 0.54	3704.94	358.29	0.00
	14500.00	90.00	358.29	10900.00	3804.94	3803.25	-113.50	595695.75	782427.01	N 32 38 6.63	W 103 33 0.57	3804.94	358.29	0.00
	14600.00	90.00	358.29	10900.00	3904.94	3903.21	-116.48	595795.70	782424.03	N 32 38 7.62	W 103 33 0.60	3904.94	358.29	0.00
	14700.00	90.00	358.29	10900.00	4004.94	4003.16	-119.46	595895.66	782421.04	N 32 38 8.60	W 103 33 0.62	4004.94	358.29	0.00
	14800.00	90.00	358.29	10900.00	4104.94	4103.12	-122.44	595995.61	782418.06	N 32 38 9.59	W 103 33 0.65	4104.94	358.29	0.00
	14900.00	90.00	358.29	10900.00	4204.94	4203.07	-125.42	596095.56	782415.08	N 32 38 10.58	W 103 33 0.68	4204.94	358.29	0.00
	15000.00	90.00	358.29	10900.00	4304.94	4303.03	-128.40	596195.52	782412.10	N 32 38 11.57	W 103 33 0.70	4304.94	358.29	0.00
	15100.00	90.00	358.29	10900.00	4404.94	4402.98	-131.38	596295.47	782409.12	N 32 38 12.56	W 103 33 0.73	4404.94	358.29	0.00
	15200.00	90.00	358.29	10900.00	4504.94	4502.94	-134.36	596395.42	782406.14	N 32 38 13.55	W 103 33 0.75	4504.94	358.29	0.00
	15300.00	90.00	358.29	10900.00	4604.94	4602.90	-137.34	596495.38	782403.16	N 32 38 14.54	W 103 33 0.78	4604.94	358.29	0.00
Cimarex Mallon Federal Com #3H PBHL	15385.87	90.00	358.29	10900.00	4690.81	4688.72	-139.90	596581.20	782400.60	N 32 38 15.39	W 103 33 0.80	4690.81	358.29	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	15385.865	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Mallon Federal Com #3H Rev0

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

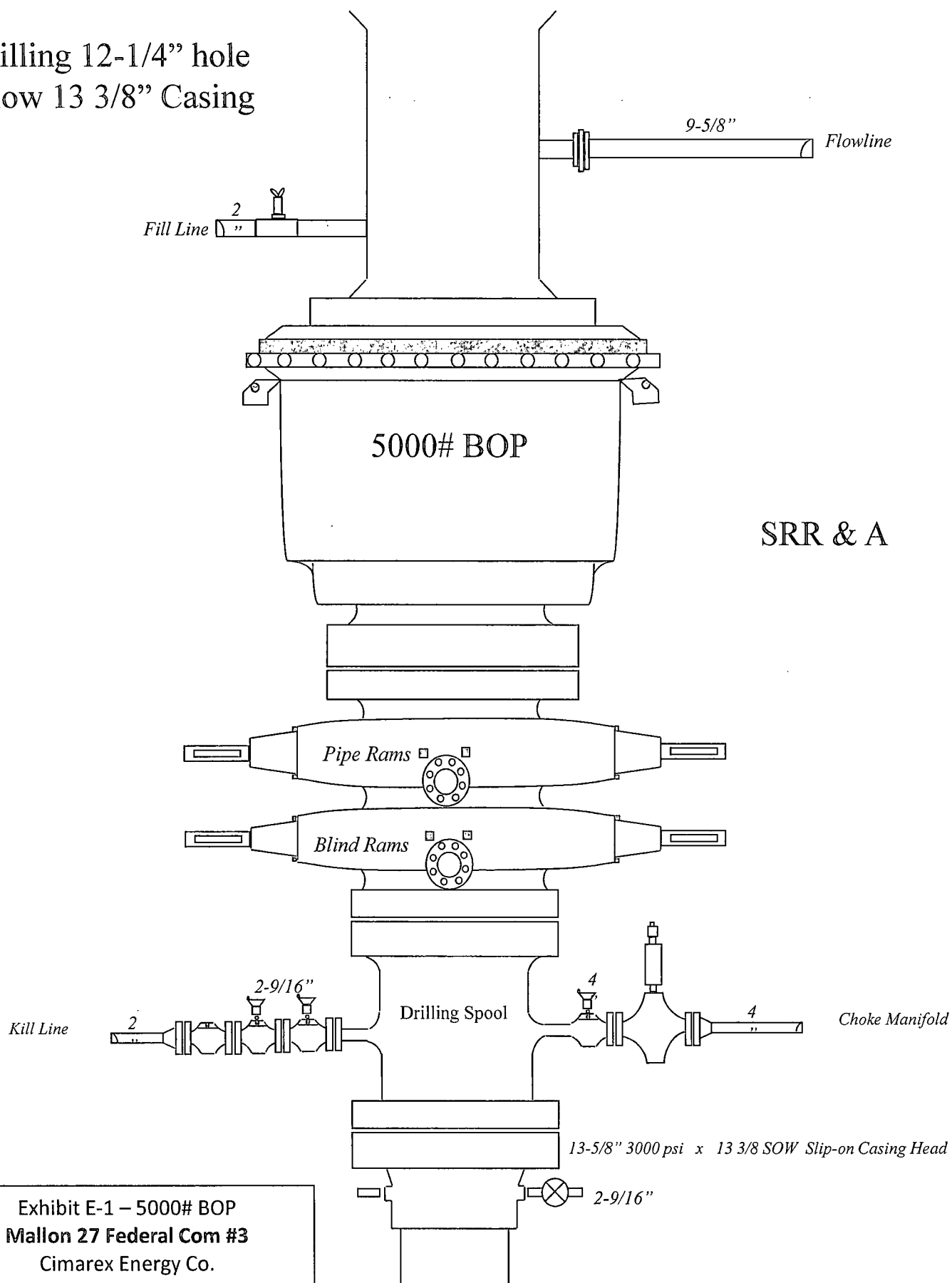


Exhibit E-1 – 5000# BOP
Mallon 27 Federal Com #3
Cimarex Energy Co.
Sec. 27-T19S-R34E
SHL 260 FSL & 2080 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

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

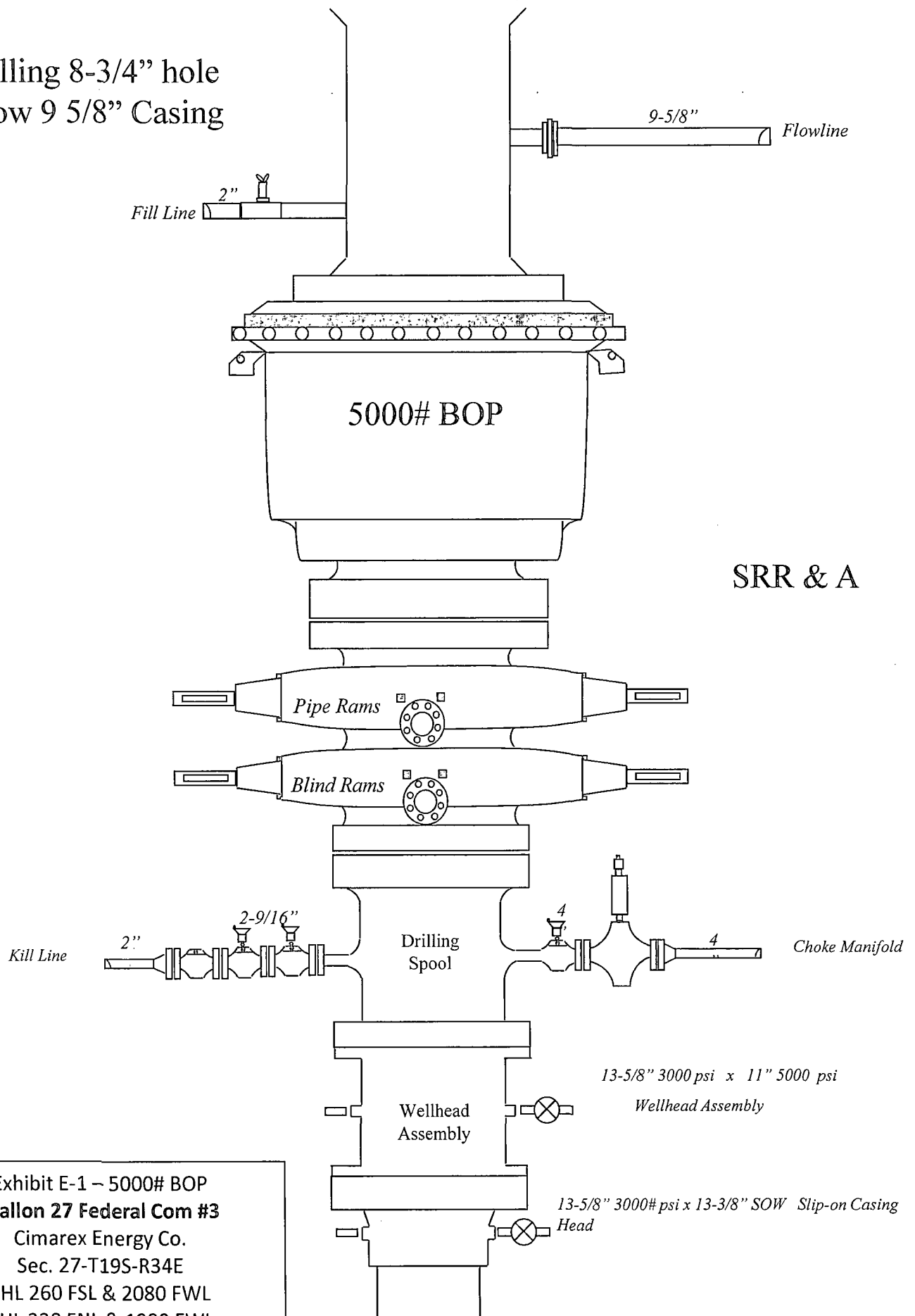


Exhibit E-1 – 5000# BOP
Mallon 27 Federal Com #3
Cimarex Energy Co.
Sec. 27-T19S-R34E
SHL 260 FSL & 2080 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

Mallon 27 Federal Com #3

Cimarex Energy Co.

Sec. 27-T19S-R34E

SHL 260 FSL & 2080 FWL

BHL 330 FNL & 1980 FWL

Lea County, NM

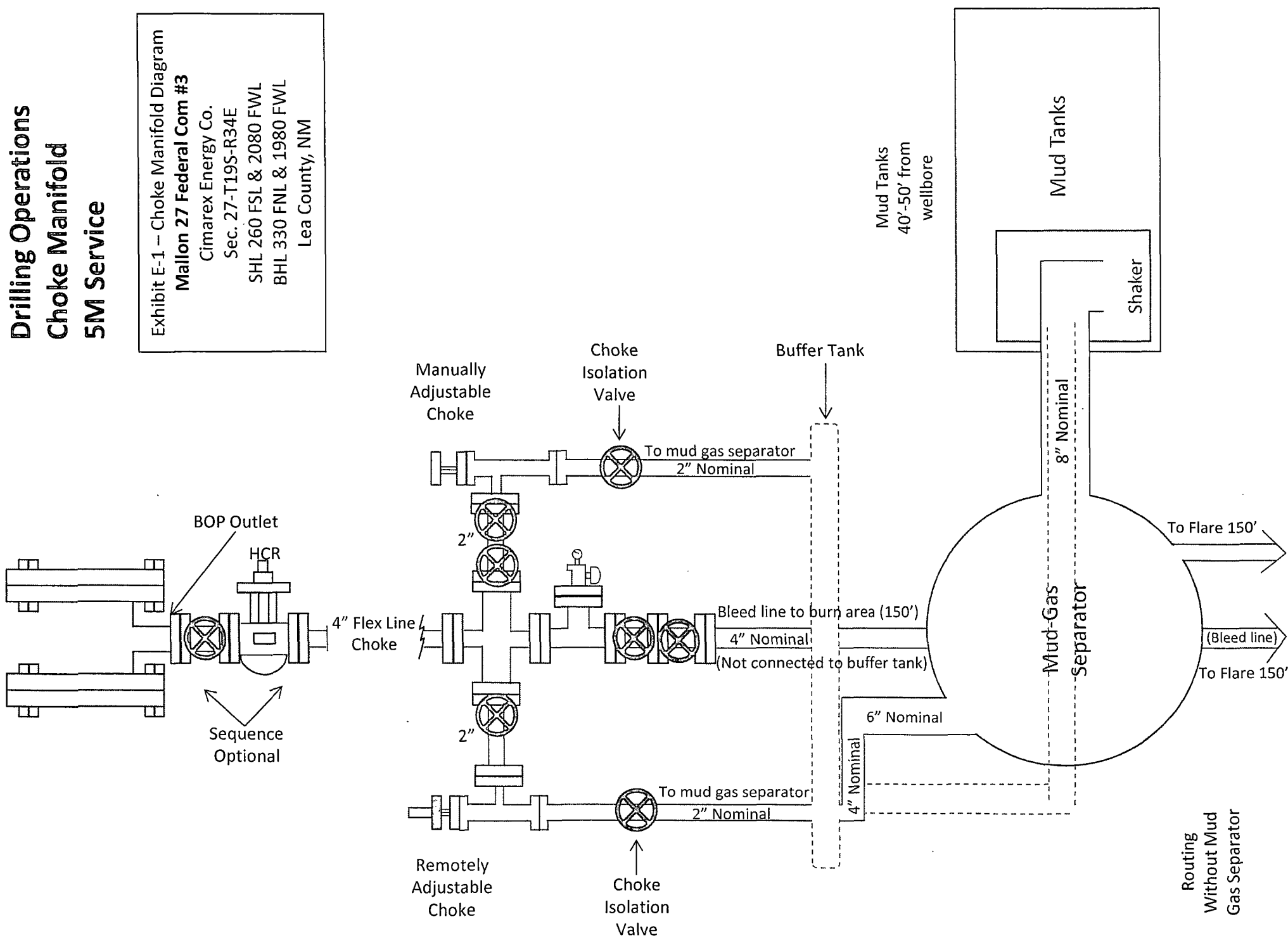


Exhibit F – Co-Flex Hose
Mallon 27 Federal Com #3

Cimarex Energy Co.

Sec. 27-T19S-R34E

SHL 260 FSL & 2080 FWL

BHL 330 FNL & 1980 FWL

Lea County, NM

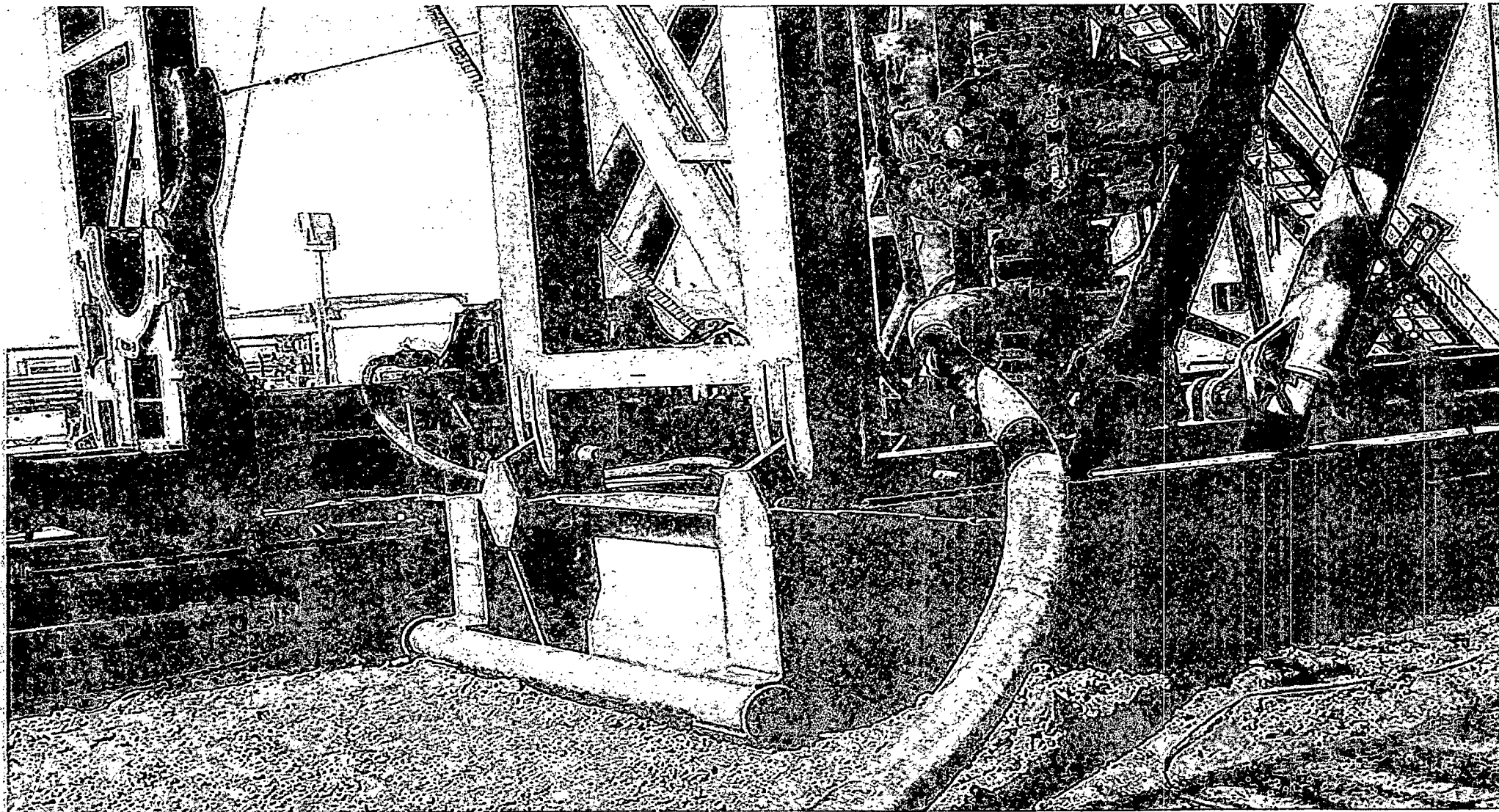


Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Mallon 27 Federal Com #3

Cimarex Energy Co.

Sec. 27-T19S-R34E

SHL 260 FSL & 2080 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

TEST PRESSURE

BURST PRESSURE

10,000 PSI

15,000 PSI

0 PSI

COUPLINGS

Stem Part No.

OKC
OKC

Ferrule No.

OKC
OKC

Type of Coupling:

Swage-It

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE

ACTUAL BURST PRESSURE:

15 MIN.

0 PSI

Hose Assembly Serial Number:

79793

Hose Serial Number:

OKC

Comments:

Date:

3/8/2011

Tested:

A. James Smith

Approved:

Kevin H. H.

Exhibit F-1 – Co-Flex Hose Hydrostatic Test
Mallon 27 Federal Com #3
 Cimarex Energy Co.
 Sec. 27-T19S-R34E
 SHL 260 FSL & 2080 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM



Midwest Hose
& Specialty, Inc.

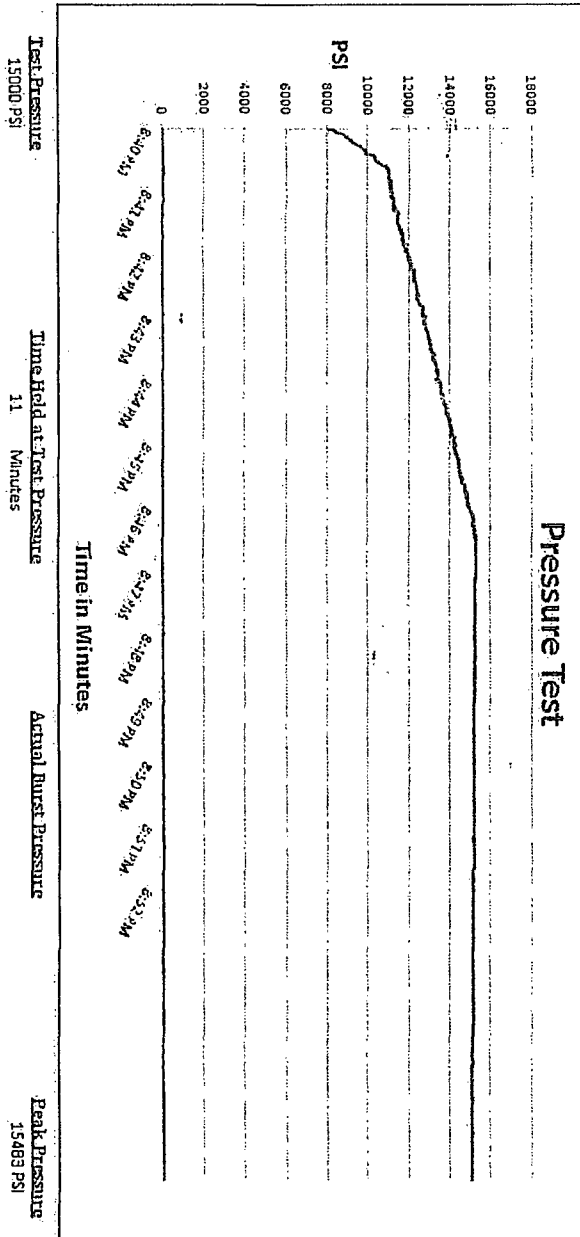
Internal Hydrostatic Test Graph

Customer: Houston

Pick Ticket #: 94260

March 3, 2011

Hose Specifications		Verification	
Hose Type	Length	Time of Fitting	Caulking Method
CER	45'	4/16/20K	Swage
I.D.	O.D.	Die Size	Final O.D.
4"	6.09"	6.30"	6.25"
Working Pressure	Burst Pressure	Hose Serial #	Hose Assembly Serial #
10000 PSI	Standard Safety Factor Applied	5564	79793



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

Tested By: *Zac McConnell*

Approved By: *Kim Thomas*

Exhibit F-2 – Co-Flex Hose
Mallon 27 Federal Com #3
Cimarex Energy Co.
Sec. 27-T19S-R34E
SHL 260 FSL & 2080 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:

David Sanchez

Date:

3/8/2011



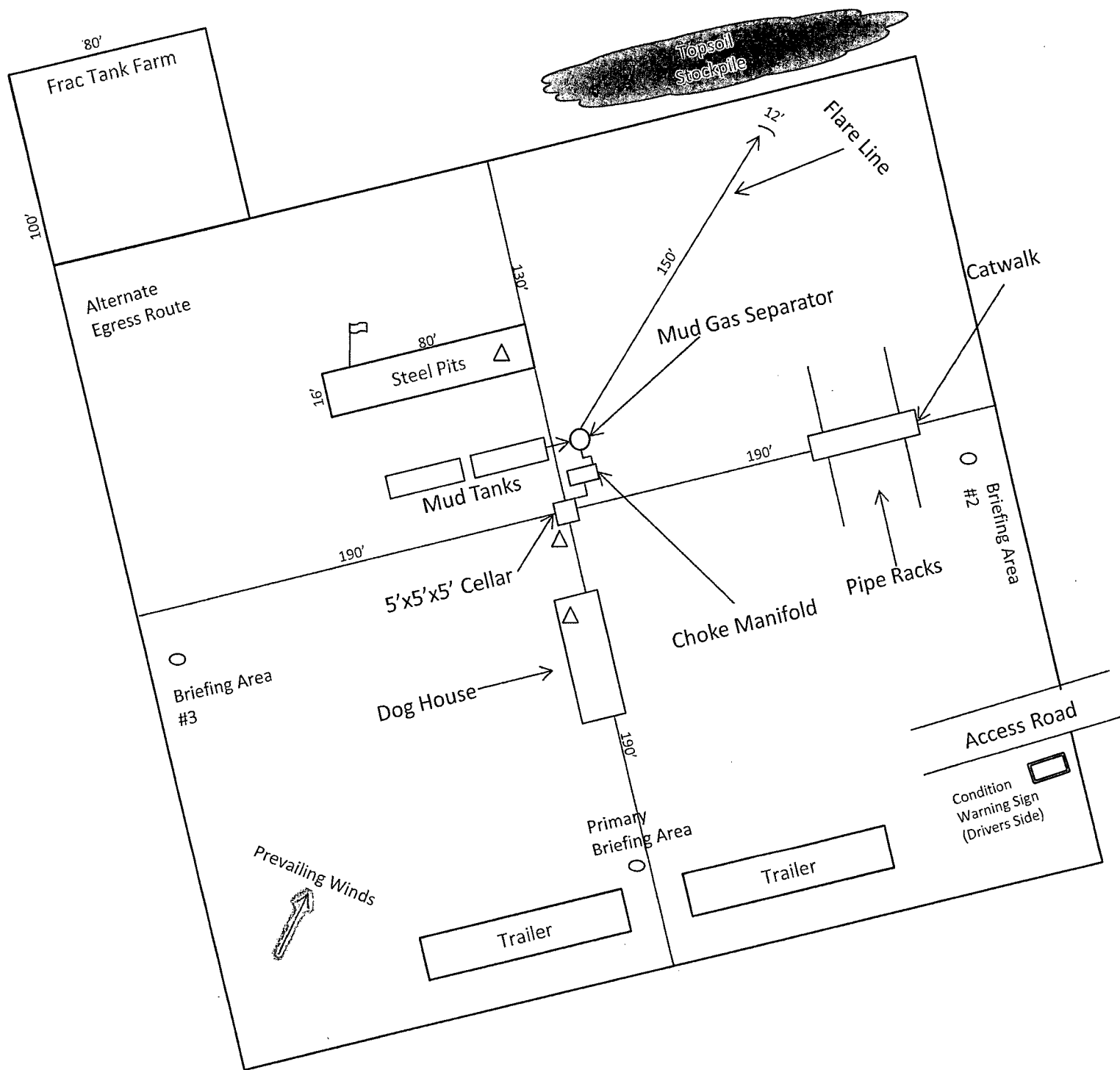
Midwest Hose
& Specialty, Inc.

Exhibit F -3- Co-Flex Hose
Mallon 27 Federal Com #3
Cimarex Energy Co.
Sec. 27-T19S-R34E
SHL 260 FSL & 2080 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)



Wind Direction Indicators
(wind sock or streamers)



- H2S Monitors
(alarms at bell nipple and shale shaker)
(Sensors/detectors on rig floor,
cellar/substructure & shale shaker)



Briefing Areas

Exhibit D – Rig Diagram
Mallon 27 Federal Com #3
 Cimarex Energy Co.
 Sec. 27-T19S-R34E
 SHL 260 FSL & 2080 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM