

OCD Hobbs

14-394

Form 3160-3
(March 2012)

HOBBS OCD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 27 2014

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 20145. Lease Serial No.
SHL: NMNM0004452; BHL: NMNM057285

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.
Mallon 27 Federal Com #1H

9. API Well No.

30-025-42212

10. Field and Pool, or Exploratory

LEA; DONE SPRING (77570)

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

27, 19S, 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.

(215099)

3a. Address

600 N. Marienfield St. Ste. 600 Midland Tx 79071

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

330 FSL & 660 FEL, Sec. 27

(P)
(I)

At proposed prod. Zone

2310 FSL & 660 FEL, Sec. 22

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

Hobbs NM is 23 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)

330'

16. No of acres in lease

NMNM0004452=440.00 acres
NMNM057285=1280.00 acres

17. Spacing Unit dedicated to this well

240.00

18. Distance from proposed* location to
nearest well, drilling, completed,
applied for, on this lease, ft.

1320' to 2H

19. Proposed Depth

Pilot Hole TD: 11,100

17,929 MD

10,860 TVD

20. BLM/BIA Bond No. on File

NM2575; NMB000835

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

3722 GR

22. Approximate date work will start*

11/11/14

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

Regulatory Compliance

Name (Printed/Typed)

Terri Stathem

Date

1/17/14

Title

Approved By (Signature)

Steve Caffey

Name (Printed/Typed)

CARLSBAD FIELD OFFICE

Date

OCT 17 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)

*(Instructions on page 2)

Capitan Controlled Water Basin

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

OCT 28 2014

Operator Certification Statement

Mallon 27 Federal Com #1H

Cimarex Energy Co.
UL: P, Sec. 27, 19S, 34E
Lea Co., NM

HOBBS OCD

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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 17 day of January, 2014

NAME: Gloria Garza
Gloria Garza

TITLE: Regulatory Compliance

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

TELEPHONE: 432-571-7800

EMAIL: ggarza@cimarex.com

Field Representative: Same as above

Application to Drill
Mallon 27 Federal Com #1H
 Cimarex Energy Co.
 UL: P, Sec. 27, 19S, 34E
 Lea Co., NM

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OCT 27 2014

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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 & 660 FEL
BHL 330 FNL & 660 FEL
2. **Elevation Above Sea Level:** 3,722' 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:** 15,329 MD 10,900 TVD Pilot Hole TD: 11,100
6. **Estimated Tops of Geological Markers:**

Formation	Est Top	Bearing
Rustler	1750	N/A
Salt	2120	N/A
Yates	3575	N/A
Queen	4575	N/A
Capitan Reef	5070	N/A
Cherry Canyon	5620	Hydrocarbons
Bone Spring	8250	N/A
Upper Bone Spring Shale	8700	Hydrocarbons
1st BSS	9550	Hydrocarbons
2nd BSS	10020	Hydrocarbons
3rd BSS	10650	Hydrocarbons
Wolfcamp	10980	Hydrocarbons

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

7A. **OSE Ground Water Estimated Depth:** 150'

8. **Casing Program:**

See 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	1800	1800	17 1/2	13-3/8"	54.50	J-55	ST&C	New	776	8.3	1.45		3.53	98,100	85,669	6.00
Intermediate	0	5600	5600	12 1/4	9-5/8"	40.00	J-55	LT&C	New	2912	10.0		1.34	1.36	224,000	189,801	2.74
Production	0	10660	10660	8 3/4	5-1/2"	17.00	L-80	LT&C	New	4988	9.0	1.26		1.55	185,300	159,839	2.11
Production	10660	15329	10900	8 3/4	5-1/2"	17.00	L-80	BT&C	New	5101	9.0	1.23		1.52	4,080	3,519	112.80

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
Mallon 27 Federal Com #1H
 Cimarex Energy Co.
 UL: P, Sec. 27, 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	1143	1.75	13.50	2000	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	233	1.34	14.80	312	Class C + LCM, 6.32 gps water
	TOC: 0	85% Excess				Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	1233	1.88	12.90	2318	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 <i>See COA</i>	Lead	622	2.40	11.90	1491	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1317	1.24	14.50	1633	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: 11,100' KOP: 10,660' EOC: 11,173'

Set OH mechanical whipstock w/ 390 ft of 2.875 tubing and pump 30 bbls of Mudpush @ 12 ppg, followed by 195 sks Type H cement, dispersant 0.080 gals/sk, retarder 0.045 gals/sk @ 17.50 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 and cement.

Application to Drill
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Lea Co., NM

10. Pressure Control Equipment:

Exhibit "E-1". A BOP consisting of two rams with blind rams and pipe rams, and one annular preventer. Below the surface casing, a 2M system will be used. Below the intermediate casing, a 3M system will be used. See attachments for BOP and choke manifold diagrams. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A Rotating head may be installed as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP and associated equipment will be installed, used, maintained, and tested in a manner necessary to assure well control and shall be in place and operational prior to drilling the surface casing shoe. The Annular Preventer shall be functioned at least weekly. The pipe and blind rams will be operated each trip. No abnormal pressure or temperature is expected while drilling.

BOPS will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high.

The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 low and 1500 high on the intermediate casing.

See COA
Cimarex Energy Co. of Colorado requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (please see Exhibit F, F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

11. Proposed Mud Circulating System:

See COA

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1800'	8.30	28	NC	FW Spud Mud
1800' to 5600'	10.00	30-32	NC	Brine Water
5600' to 15329'	9.00	30-32	NC	FW/Cut Brine

Need to witness

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

13. Potential Hazards:

See COA
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: 4995 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.

Upper Bone Spring Shale pay will be perforated and stimulated.

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



Critical Point	Critical Points							
	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
9 5/8 Casing Point	5480.00	0.00	359.52	5480.00	0.00	0.00	0.00	0.00
Tie-In, Build 12° DLS	10422.50	0.00	359.52	10422.50	0.00	0.00	0.00	
3rd BSS	10659.63	28.45	359.52	10650.00	57.68	57.68	-0.49	12.00
Landing Point	11172.56	90.00	359.52	10900.00	477.48	477.48	-4.04	12.00
Cimarex Mallon Federal Com #1H - PBHL	15328.73	90.00	359.52	10900.00	4633.52	4633.52	-39.00	0.00



Cimarex Mallon 27 Federal Com #1H Rev0 TP 20-Nov-13 Proposal Report

(Def Plan)

Report Date: November 20, 2013 - 10:48 AM Client: Cimarex Field: NM Lea County (NAD 83) Structure / Slot: Cimarex Mallon 27 Federal Com #1H / Mallon 27 Federal Com #1H Well: Mallon 27 Federal Com #1H Borehole: ST01 UWI / API#: Unknown / Unknown Survey Name: Cimarex Mallon 27 Federal Com #1H Rev0 TP 20-Nov-13 Survey Date: November 20, 2013 Tort / AHD / DDI / ERD Ratio: 90.006 * / 4633.679 ft / 5.768 / 0.425 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 37' 29.71123", W 103° 32' 29.84491" Location Grid N/E Y/X: N 591984.600 ftUS, E 785082.200 ftUS CRS Grid Convergence Angle: 0.4269 * Grid Scale Factor: 0.99997713	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 0.000 * (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: Ground Level TVD Reference Elevation: 3722.000 ft above MSL Seabed / Ground Elevation: 3722.000 ft above MSL Magnetic Declination: 7.412 * Total Field Strength: 48575.910 nT Magnetic Dip Angle: 60.460 * Declination Date: November 20, 2013 Magnetic Declination Model: BGGM 2012 North Reference: Grid North Grid Convergence Used: 0.4269 * Total Corr Mag North->Grid North: 6.9855 * Local Coord Referenced To: Structure Reference Point	
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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S * ° ' ")	Longitude (E/W * ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (ft/100ft)
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	591984.60	785082.20	N 32 37 29.71	W 103 32 29.84	0.00	0.00	N/A
9 5/8 Casina Point	5480.00	0.00	359.52	5480.00	0.00	0.00	0.00	591984.60	785082.20	N 32 37 29.71	W 103 32 29.84	0.00	0.00	0.00
Tie-In, Build 12"	10422.50	0.00	359.52	10422.50	0.00	0.00	0.00	591984.60	785082.20	N 32 37 29.71	W 103 32 29.84	0.00	0.00	N/A
DLS	10500.00	9.30	359.52	10499.66	6.28	6.28	-0.05	591980.88	785082.15	N 32 37 29.77	W 103 32 29.84	6.28	359.52	12.00
	10600.00	21.30	359.52	10595.94	32.61	32.61	-0.28	592017.21	785081.92	N 32 37 30.03	W 103 32 29.85	32.61	359.52	12.00
3rd BSS	10659.63	28.45	359.52	10650.00	57.68	57.68	-0.49	592042.28	785081.71	N 32 37 30.28	W 103 32 29.85	57.68	359.52	12.00
	10700.00	33.30	359.52	10684.64	78.39	78.39	-0.68	592062.99	785081.54	N 32 37 30.49	W 103 32 29.85	78.39	359.52	12.00
	10800.00	45.30	359.52	10761.89	141.60	141.60	-1.20	592126.20	785081.00	N 32 37 31.11	W 103 32 29.85	141.61	359.52	12.00
	10900.00	57.30	359.52	10824.30	219.50	219.50	-1.86	592204.09	785080.34	N 32 37 31.88	W 103 32 29.85	219.51	359.52	12.00
	11000.00	69.29	359.52	10869.16	308.68	308.68	-2.61	592293.26	785079.59	N 32 37 32.77	W 103 32 29.85	308.68	359.52	12.00
Landing Point	11100.00	81.29	359.52	10894.50	405.21	405.21	-3.43	592389.80	785078.77	N 32 37 33.72	W 103 32 29.85	405.22	359.52	12.00
	11172.56	90.00	359.52	10900.00	477.48	477.48	-4.04	592462.07	785078.16	N 32 37 34.44	W 103 32 29.85	477.50	359.52	12.00
	11200.00	90.00	359.52	10900.00	504.93	504.93	-4.27	592489.51	785077.93	N 32 37 34.71	W 103 32 29.85	504.94	359.52	0.00
	11300.00	90.00	359.52	10900.00	604.92	604.92	-5.12	592589.51	785077.08	N 32 37 35.70	W 103 32 29.85	604.94	359.52	0.00
	11400.00	90.00	359.52	10900.00	704.92	704.92	-5.97	592689.50	785076.23	N 32 37 36.69	W 103 32 29.85	704.94	359.52	0.00
	11500.00	90.00	359.52	10900.00	804.92	804.92	-6.81	592789.50	785075.39	N 32 37 37.68	W 103 32 29.85	804.94	359.52	0.00
	11600.00	90.00	359.52	10900.00	904.91	904.91	-7.66	592889.49	785074.54	N 32 37 38.67	W 103 32 29.86	904.94	359.52	0.00
	11700.00	90.00	359.52	10900.00	1004.91	1004.91	-8.50	592989.48	785073.70	N 32 37 39.65	W 103 32 29.86	1004.94	359.52	0.00
	11800.00	90.00	359.52	10900.00	1104.91	1104.91	-9.35	593089.48	785072.85	N 32 37 40.64	W 103 32 29.86	1104.94	359.52	0.00
	11900.00	90.00	359.52	10900.00	1204.90	1204.90	-10.19	593189.47	785072.01	N 32 37 41.63	W 103 32 29.86	1204.94	359.52	0.00
	12000.00	90.00	359.52	10900.00	1304.90	1304.90	-11.04	593289.47	785071.16	N 32 37 42.62	W 103 32 29.86	1304.94	359.52	0.00
	12100.00	90.00	359.52	10900.00	1404.89	1404.89	-11.88	593389.46	785070.32	N 32 37 43.61	W 103 32 29.86	1404.94	359.52	0.00
	12200.00	90.00	359.52	10900.00	1504.89	1504.89	-12.73	593489.45	785069.47	N 32 37 44.60	W 103 32 29.86	1504.94	359.52	0.00
	12300.00	90.00	359.52	10900.00	1604.89	1604.89	-13.57	593589.45	785068.63	N 32 37 45.59	W 103 32 29.86	1604.94	359.52	0.00
	12400.00	90.00	359.52	10900.00	1704.88	1704.88	-14.41	593689.44	785067.79	N 32 37 46.58	W 103 32 29.86	1704.94	359.52	0.00
	12500.00	90.00	359.52	10900.00	1804.88	1804.88	-15.26	593789.44	785066.94	N 32 37 47.57	W 103 32 29.87	1804.94	359.52	0.00
	12600.00	90.00	359.52	10900.00	1904.88	1904.88	-16.10	593889.43	785066.10	N 32 37 48.56	W 103 32 29.87	1904.94	359.52	0.00
	12700.00	90.00	359.52	10900.00	2004.87	2004.87	-16.94	593989.42	785065.26	N 32 37 49.55	W 103 32 29.87	2004.94	359.52	0.00
	12800.00	90.00	359.52	10900.00	2104.87	2104.87	-17.78	594089.42	785064.42	N 32 37 50.54	W 103 32 29.87	2104.94	359.52	0.00
	12900.00	90.00	359.52	10900.00	2204.87	2204.87	-18.63	594189.41	785063.57	N 32 37 51.53	W 103 32 29.87	2204.94	359.52	0.00
	13000.00	90.00	359.52	10900.00	2304.86	2304.86	-19.47	594289.41	785062.73	N 32 37 52.52	W 103 32 29.87	2304.94	359.52	0.00
	13100.00	90.00	359.52	10900.00	2404.86	2404.86	-20.31	594389.40	785061.89	N 32 37 53.51	W 103 32 29.87	2404.94	359.52	0.00
	13200.00	90.00	359.52	10900.00	2504.86	2504.86	-21.15	594489.39	785061.05	N 32 37 54.50	W 103 32 29.87	2504.94	359.52	0.00
	13300.00	90.00	359.52	10900.00	2604.85	2604.85	-21.99	594589.39	785060.21	N 32 37 55.49	W 103 32 29.88	2604.94	359.52	0.00
	13400.00	90.00	359.52	10900.00	2704.85	2704.85	-22.83	594689.38	785059.37	N 32 37 56.48	W 103 32 29.88	2704.94	359.52	0.00
	13500.00	90.00	359.52	10900.00	2804.84	2804.84	-23.67	594789.38	785058.53	N 32 37 57.46	W 103 32 29.88	2804.94	359.52	0.00
	13600.00	90.00	359.52	10900.00	2904.84	2904.84	-24.51	594889.37	785057.69	N 32 37 58.45	W 103 32 29.88	2904.94	359.52	0.00
	13700.00	90.00	359.52	10900.00	3004.84	3004.84	-25.35	594989.36	785056.85	N 32 37 59.44	W 103 32 29.88	3004.94	359.52	0.00
	13800.00	90.00	359.52	10900.00	3104.83	3104.83	-26.19	595089.36	785056.01	N 32 38 0.43	W 103 32 29.88	3104.94	359.52	0.00
	13900.00	90.00	359.52	10900.00	3204.83	3204.83	-27.03	595189.35	785055.17	N 32 38 1.42	W 103 32 29.88	3204.94	359.52	0.00
	14000.00	90.00	359.52	10900.00	3304.83	3304.83	-27.87	595289.35	785054.33	N 32 38 2.41	W 103 32 29.88	3304.94	359.52	0.00
	14100.00	90.00	359.52	10900.00	3404.82	3404.82	-28.71	595389.34	785053.49	N 32 38 3.40	W 103 32 29.88	3404.94	359.52	0.00
	14200.00	90.00	359.52	10900.00	3504.82	3504.82	-29.55	595489.33	785052.65	N 32 38 4.39	W 103 32 29.89	3504.94	359.52	0.00
	14300.00	90.00	359.52	10900.00	3604.82	3604.82	-30.39	595589.33	785051.81	N 32 38 5.38	W 103 32 29.89	3604.94	359.52	0.00
	14400.00	90.00	359.52	10900.00	3704.81	3704.81	-31.23	595689.32	785050.97	N 32 38 6.37	W 103 32 29.89	3704.94	359.52	0.00
	14500.00	90.00	359.52	10900.00	3804.81	3804.81	-32.07	595789.32	785050.14	N 32 38 7.36	W 103 32 29.89	3804.94	359.52	0.00
	14600.00	90.00	359.52	10900.00	3904.81	3904.81	-32.90	595889.31	785049.30	N 32 38 8.35	W 103 32 29.89	3904.94	359.52	0.00
	14700.00	90.00	359.52	10900.00	4004.80	4004.80	-33.74	595989.30	785048.46	N 32 38 9.34	W 103 32 29.89	4004.94	359.52	0.00
	14800.00	90.00	359.52	10900.00	4104.80	4104.80	-34.58	596089.30	785047.62	N 32 38 10.33	W 103 32 29.89	4104.94	359.52	0.00
	14900.00	90.00	359.52	10900.00	4204.80	4204.80	-35.42	596189.29	785046.79	N 32 38 11.32	W 103 32 29.89	4204.94	359.52	0.00
	15000.00	90.00	359.52	10900.00	4304.79	4304.79	-36.25	596289.29	785045.95	N 32 38 12.31	W 103 32 29.89	4304.94	359.52	0.00
	15100.00	90.00	359.52	10900.00	4404.79	4404.79	-37.09	596389.28	785045.11	N 32 38 13.30	W 103 32 29.89	4404.94	359.52	0.00
	15200.00	90.00	359.52	10900.00	4504.79	4504.79	-37.92	596489.27	785044.28	N 32 38 14.29	W 103 32 29.90	4504.94	359.52	0.00
	15300.00	90.00	359.52	10900.00	4604.78	4604.78	-38.76	596589.27	785043.44	N 32 38 15.27	W 103 32 29.90	4604.94	359.52	0.00
Cimarex Mallon Federal Com #1H - PBHL	15328.73	90.00	359.52	10900.00	4633.52	4633.52	-39.00	596618.00	785043.20	N 32 38 15.56	W 103 32 29.90	4633.68	359.52	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	10422.500	1/100.000	30.000	30.000	SLB_MWD-STD	Pilot Hole / Cimarex Mallon Federal Com #1H Pilot Hole Rev0
	10422.500	15328.735	1/100.000	30.000	30.000	SLB_MWD-STD	ST01 / Cimarex Mallon 27 Federal Com #1H Rev0 TP 20-Nov-13

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

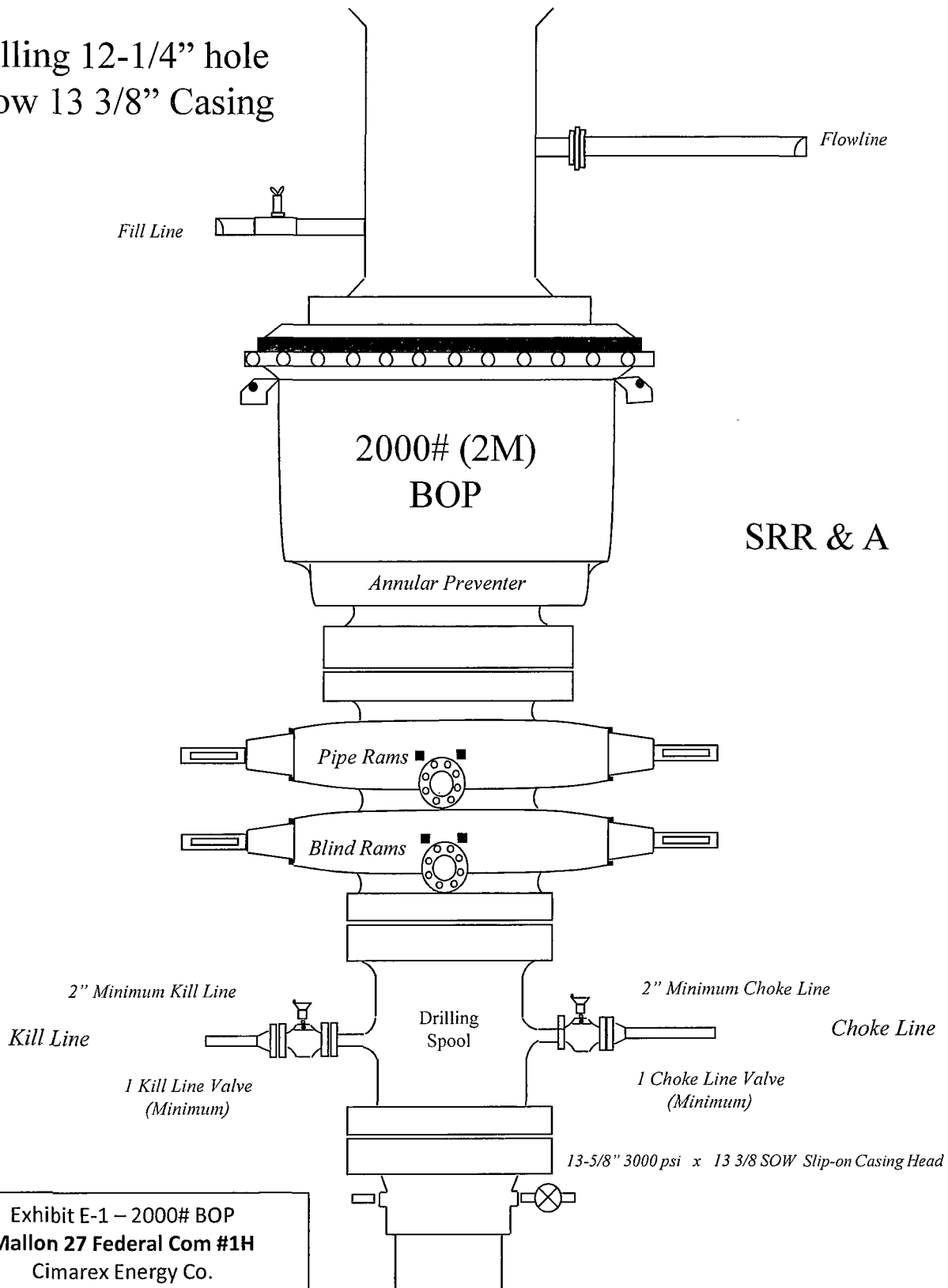


Exhibit E-1 – 2000# BOP
Mallon 27 Federal Com #1H
Cimarex Energy Co.
27-19S-34E
SHL 330 FSL & 660 FEL
BHL 330 FNL & 660 FEL
Lea County, NM

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

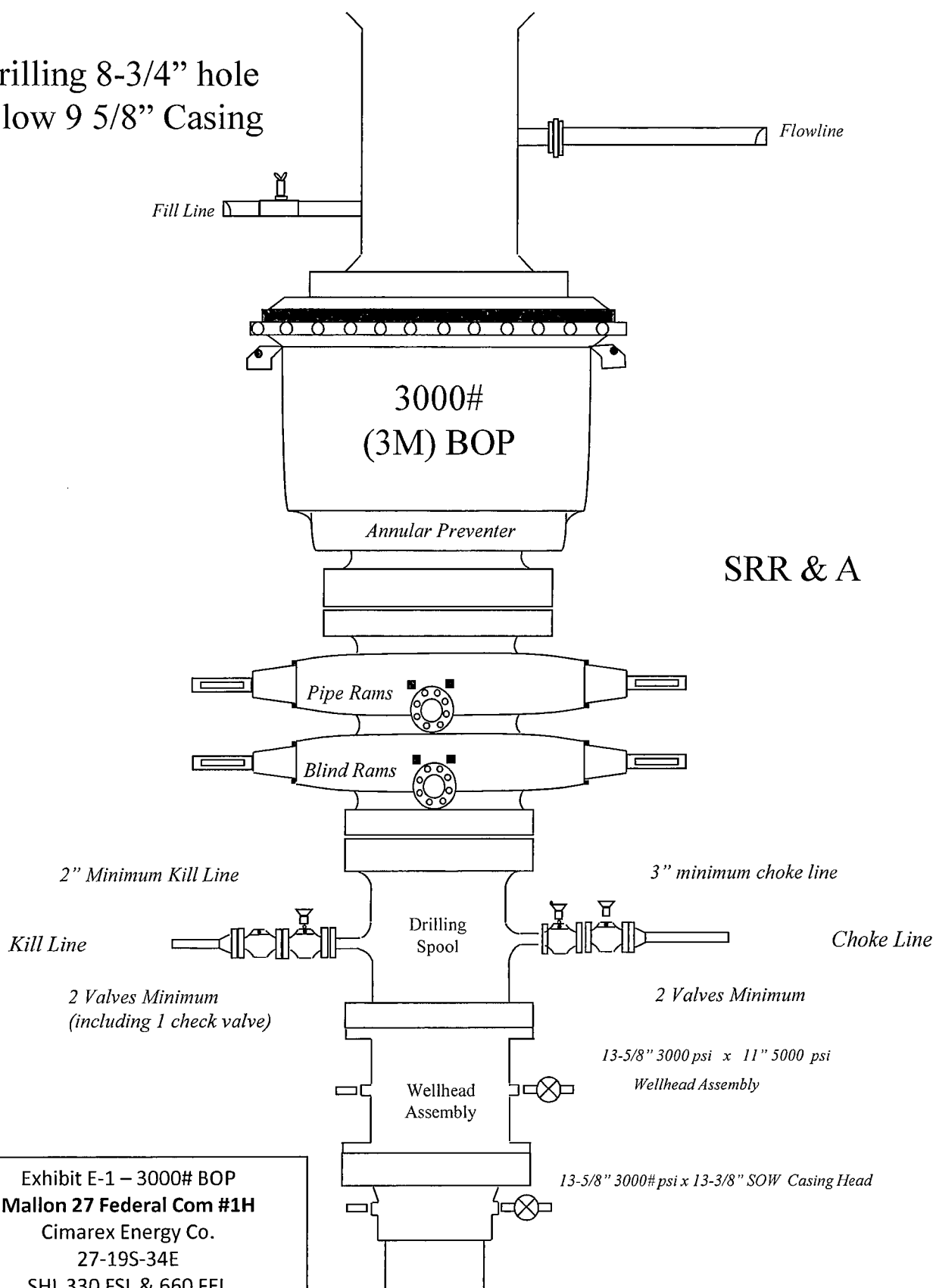
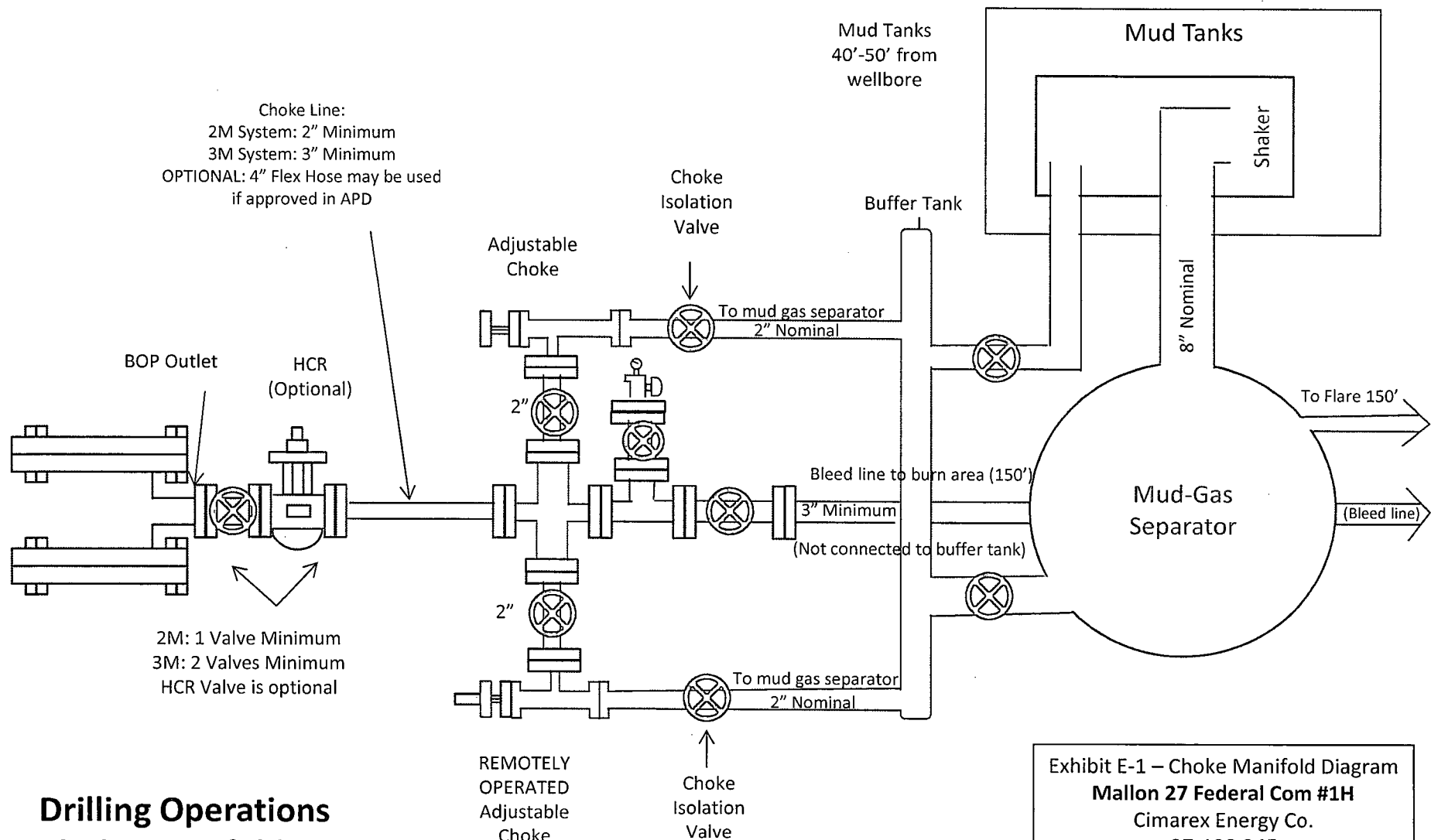


Exhibit E-1 – 3000# BOP
Mallon 27 Federal Com #1H
Cimarex Energy Co.
27-19S-34E
SHL 330 FSL & 660 FEL
BHL 330 FNL & 660 FEL
Lea County, NM



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Mallon 27 Federal Com #1H
Cimarex Energy Co.
27-19S-34E
SHL 330 FSL & 660 FEL
BHL 330 FNL & 660 FEL
Lea County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Mallon 27 Federal Com #1H

Cimarex Energy Co.

27-19S-34E

SHL 330 FSL & 660 FEL

BHL 330 FNL & 660 FEL

Lea County, NM



Midwest Hose
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: Oderco Inc.		P.O. Number: odyd-271
HOSE SPECIFICATIONS		
Type: Stainless Steel Armor Choke & Kill Hose		Hose Length: 45'ft.
I.D. 4 INCHES	O.D. 9 INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI	BURST PRESSURE 0 PSI
COUPLINGS		
Stem Part No. OKC OKC		Ferrule No. OKC OKC
Type of Coupling: Swage-It		
PROCEDURE		
<u>Hose assembly pressure tested with water at ambient temperature.</u>		
TIME HELD AT TEST PRESSURE 15 MIN.		ACTUAL BURST PRESSURE: 0 PSI
Hose Assembly Serial Number: 79793		Hose Serial Number: OKC
Comments:		
Date: 3/8/2011	Tested: <i>A. James Smith</i>	Approved: <i>[Signature]</i>

March 3, 2011

Internal Hydrostatic Test Graph



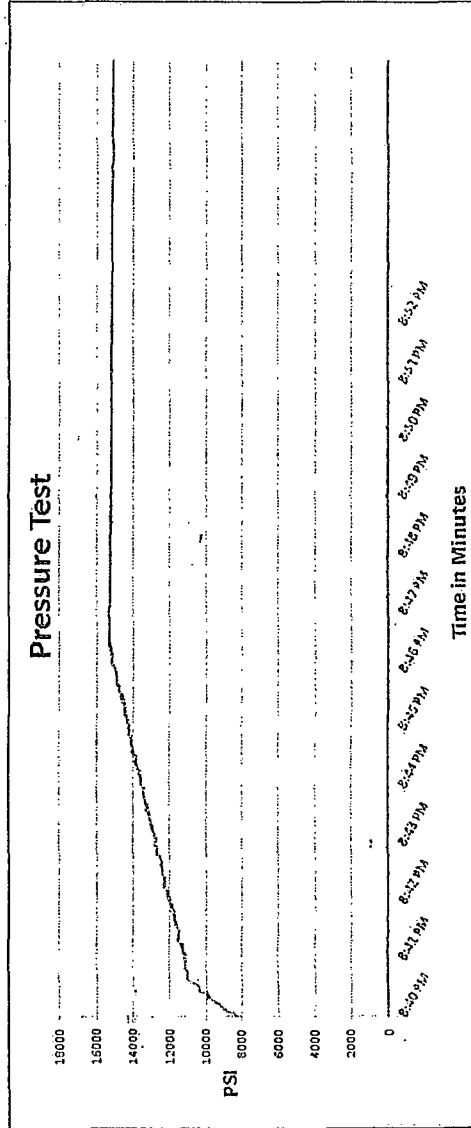
Midwest Hose
& Specialty, Inc.

Customer: Houston

Pick Ticket #: 94260

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

Pressure Test



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 Minutes		15483 PSI

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

Tested By: Zac McConnell

Approved By: Kim Thomas

[Signature]

[Signature]



Midwest Hose
& Specialty, Inc.

Exhibit F -3- Co-Flex Hose
Mallon 27 Federal Com #1H
Cimarex Energy Co.
27-19S-34E
SHL 330 FSL & 660 FEL
BHL 330 FNL & 660 FEL
Lea County, NM

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2". 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

Lea County, NM



Midwest Hose & Specialty, Inc.

Certificate of Conformity

Customer:

DEM

PO

ÖDÜD-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
Mallon 27 Federal Com #1H

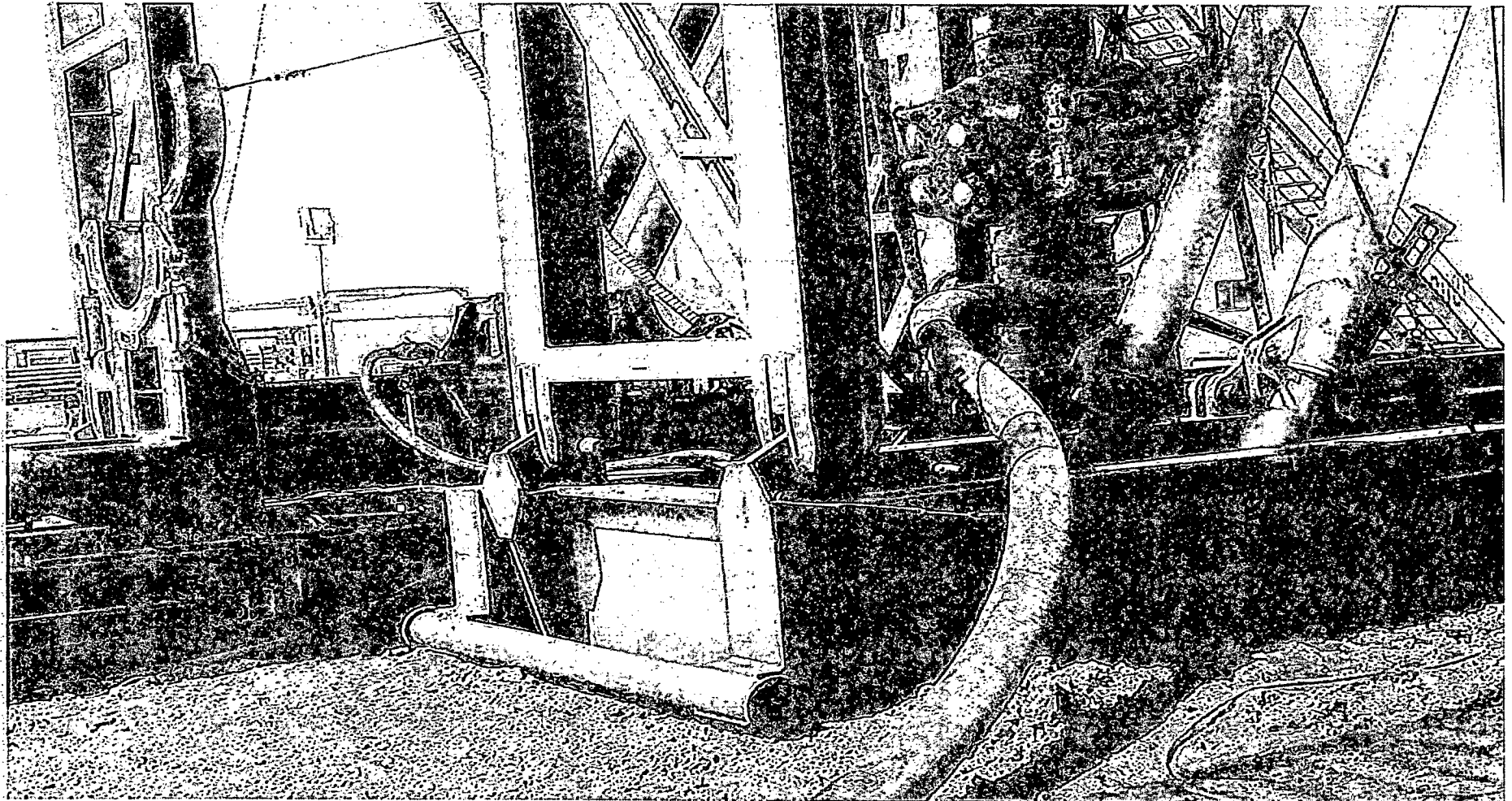
Cimarex Energy Co.

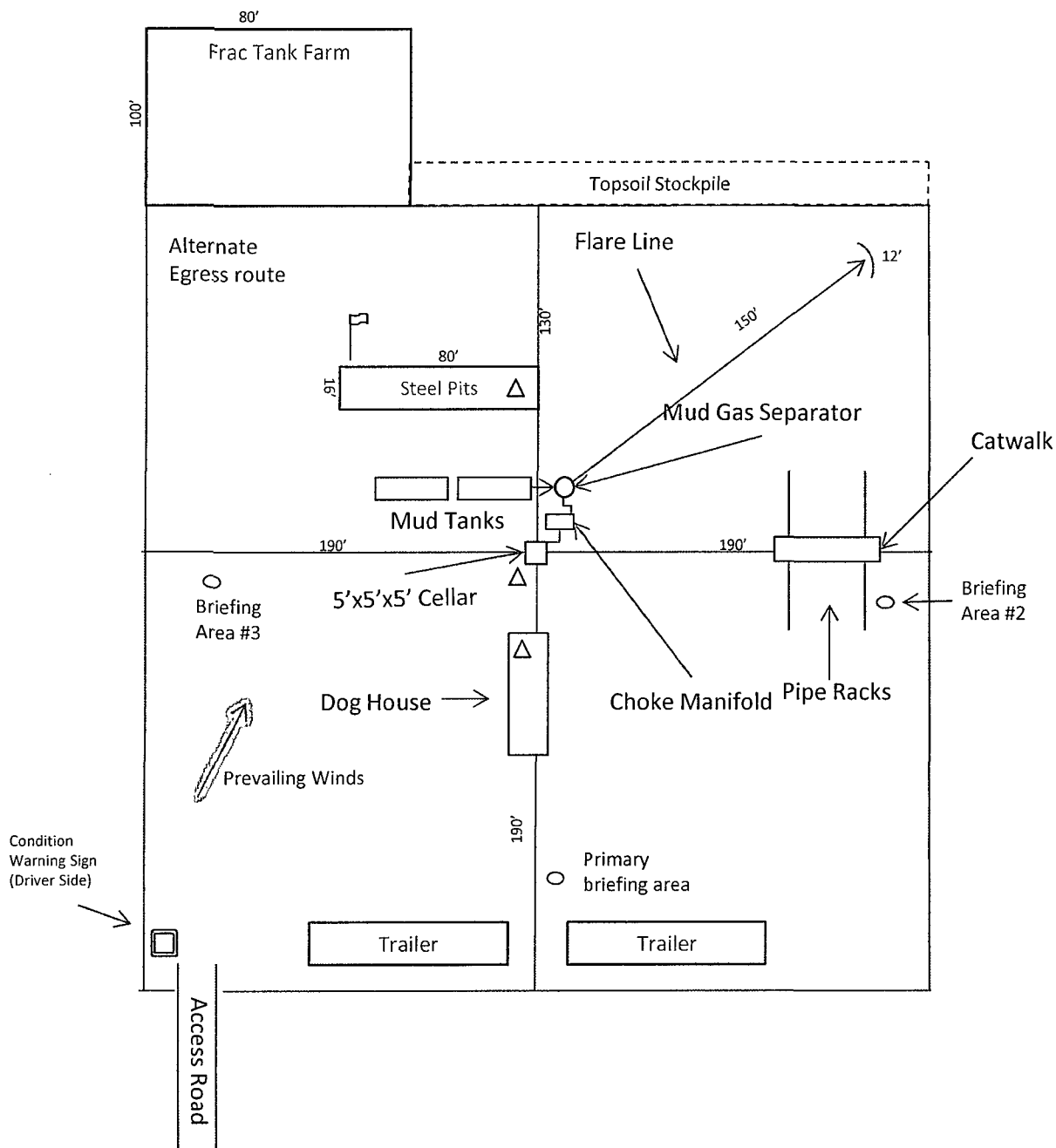
27-19S-34E

SHL 330 FSL & 660 FEL

BHL 330 FNL & 660 FEL

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
Mallon 27 Federal Com #1H
 Cimarex Energy Co.
 27-19S-34E
 SHL 330 FSL & 660 FEL
 BHL 330 FNL & 660 FEL
 Lea County, NM