

HOEBS OCD

MAY 23 2013

OCD HOEBS

Form 3160-3
(March 2012)

SECRETARY'S POTASH

RECEIVED

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

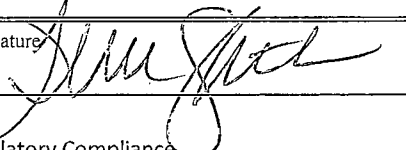
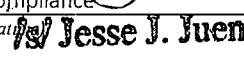
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. SHL NMNM123524; BHL NMNM028880
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co.		7. If Unit or CA Agreement, Name and No. NM127960
3a. Address 600 N. Marienfeld St. Ste. 600 Midland Tx 79701		8. Lease Name and Well No. Lynch 23 Federal Com 6H <398827
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30-025-41195
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 290' FNL & 385' FEL At proposed prod. Zone 330' FSL & 500' FEL Horizontal Bone Spring test		10. Field and Pool, or Exploratory Lea; Bone Spring, S <37580>
14. Distance in miles and direction from nearest town or post office* Approximately 24 miles SSW of Hobbs, NM		11. Sec., T. R. M. or Blk. and Survey or Area 23-20S-34E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 290'	16. No of acres in lease SH (NM12352) 160; BH (NM12466) 160.75	17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 175' from the #3H	19. Proposed Depth 14,019' MD 9,620' TVD	20. BLM/BIA Bond No. on File NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3657' GR	22. Approximate date work will start* 07.15.13	23. Estimated duration 35 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan | 5. Operator Certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature 	Name (Printed/Typed) Terri Stathem	Date 2.20.13
Title Regulatory Compliance		
Approved By (Signature) 	Name (Printed/Typed) Jesse J. Juen	Date MAY 10 2013
Title NM STATE OFFICE	Office STATE DIRECTOR	

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.

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)

APPROVAL FOR TWO YEARS

CAPITAN CONTROLLED WATER BASIN

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHEDSEE ATTACHED FOR
CONDITIONS OF APPROVAL

MAY 28 2013

Application to Drill
Lynch 23 Federal Com 6H
 Cimarex Energy Co.
 UL: A, Sec. 23-20S-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 290' FNL & 385' FEL
 BHL 330' FSL & 500' FEL
- 2 Elevation above sea level: 3657' 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: 14,019' MD 9,620' TVD
- 6 Estimated tops of geological markers:

Formation	Est. Top	Bearing
Rustler	1625	NA
Salt	1850	NA
Base Salt	3440	NA
Seven Rivers	4010	NA
Capitan	4040	NA
Delaware Sands	5530	NA
Basal Brushy Canyon	8082	NA
Bone Spring	8320	NA
Avalon Shale	9200	NA
1st BSS	9530	Hydrocarbons
2nd BSS	10070	NA
3rd BS Carbonate	10580	NA

- 7 Possible mineral bearing formation:
 Shown above
- 7A OSE Ground Water estimated depth: 125'
- 8 Casing Program:

Casing Depth From (ft)	Casing Setting Depth(ft) MD	Casing Setting Depth(ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	SI Surface Pressure & BHP (psig)	Mud Weight (ppg)	Collapse SF (1.125)	Burst SF (1.125)	Cumulative Air Weight (lbs)	Tension SF (1.6)
Surface														
0'	1675'	1675'	17 1/2	13 3/8	54.5	J-55	ST&C	New	754	8.4	1.54	3.6	91288	5.6
Intermediate														
0'	5510'	5510'	12 1/4	9 5/8	40	HCK-5	LT&C	New	2480	9	1.64	1.6	220400	3.1
Production														
0'	9083'	9083'	8 3/4	5 1/2	17	P-110	LT&C	New	2213	8.4	1.89	4.8	163540	2.7
9083'	14019'	9620'	8 3/4	5 1/2	17	P-110	BT&C	New	4329	8.4	1.78	2.5	9129	59.8

Casing Design Criteria and Casing Loading Assumptions:

Surface, Intermediate and Production Casing:

Tension: A 1.6 design factor without effects of buoyancy.

Collapse: A 1.125 design factor with full internal evacuation.

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

Drilling Plan
Lynch 23 Federal Com 6H
 Cimarex Energy Co.
 UL: A, Sec. 23-20S-34E
 Lea County, NM

9 Cementing Program:

13 3/8

Surface	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	1060	1.75	13.5	1862	Class C + Bentonite + Calcium Chloride + LCM
Tail	220	1.34	14.8	291	Class C + LCM

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

Intermediate

9 5/8

	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	1230	1.88	12.9	2294	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
Tail	300	1.34	14.8	395	Class C + retarder + LCM

TOC: 0' 80% Excess

Production

5 1/2

	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	446	2.4	11.9	1070	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder
Tail	1405	1.24	14.5	1743	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder

Cement volumes will be adjusted depending on hole size.

TOC: 5010' 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.

See COA

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.

See COA

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 Lea County, NM

11 Proposed Mud Circulating System:

See COA

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1675'	8.4	28	NC	FW Spud Mud
1675' to 5510'	9	30-32	NC	Brine water
5510' to 14019'	8.4	30-32	NC	FW/Cut Brine

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

The Mud Monitoring System is an electronic Pason System satisfying requirements of Onshore Order 1.

12 Proposed Drilling Plan

Pilot Hole TD: No Pilot Hole KOP: 9,083' EOC: 9826'
 Set Surface and Intermediate casing strings. Drill production hole to KOP. Continue drilling lateral through the curve to TD. Run prod casing & cement.

13 Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 5510 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:

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 **4329 psi** Estimated BHT **138°**

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**

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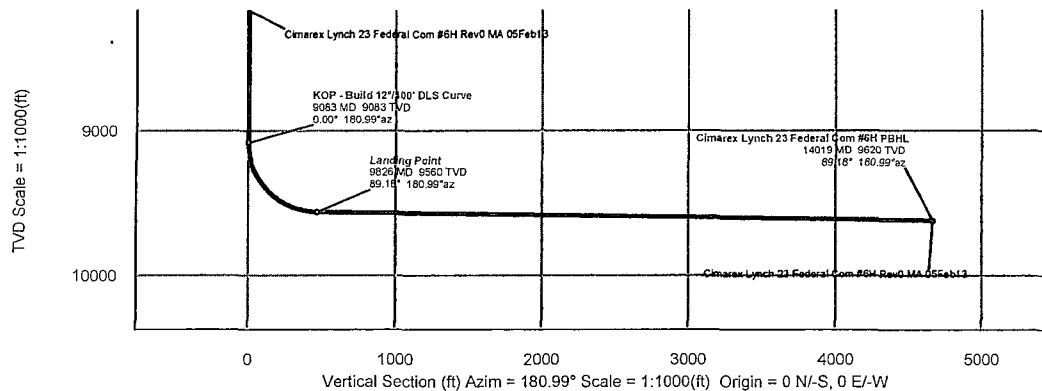
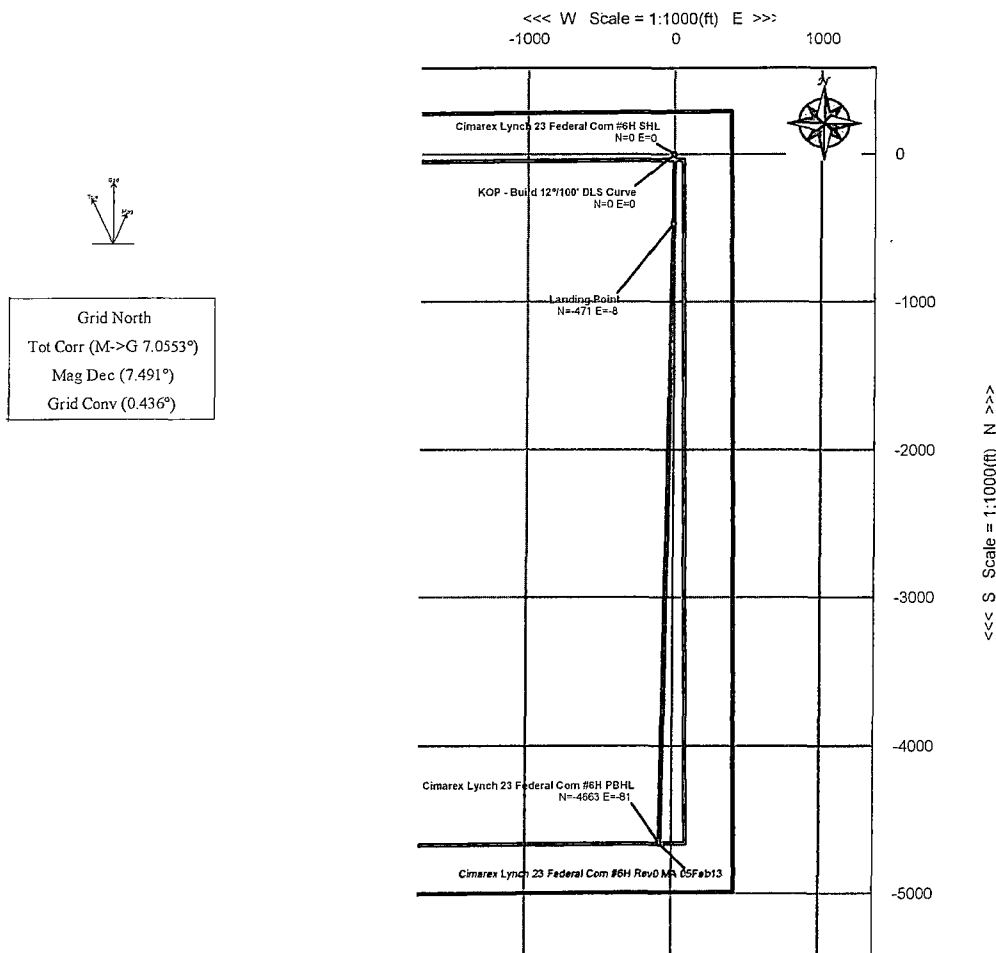


Cimarex

PATHFINDER
A Schlumberger Company

WELL	FIELD	STRUCTURE
Lynch 23 Federal Com #6H	NM Lea County	Lynch 23 Federal Com #6H

Magnetic Parameters	Surface Location	Measurements
Model: BGSN 2012 Dip: 60.434° Mag Dec: 7.491°	Date: February 05, 2013 FID: 42544 Del Lat: N 32 33 54.779 Long: W 103 31 24.657	ICAD3 New Mexico State Plane Eastern Zone, US Feet Northing: 570254.80 DLS Easting: 790305.90 DLS Scale Fact: 0.99990258 Site: Lynch 23 Federal Com #6H Plan: Red MA 05Feb13 TVD Ref: Ground Level (3578 above MSL) Entry Date: February 05, 2013



Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Cimarex Lynch 23 Federal Com #6H SHL	0.00	0.00	180.99	0.00	0.00	0.00	0.00	
KOP - Build 12°/100' DLS Curve	9082.50	0.00	180.99	9082.50	0.00	0.00	0.00	0.00
Landing Point	9825.80	89.18	180.99	9560.00	470.71	-470.64	-8.13	12.00
Cimarex Lynch 23 Federal Com #6H PBHL	14019.31	89.18	180.99	9620.00	4663.80	-4663.10	-80.70	0.00



Cimarex Lynch 23 Federal Com #6H Rev0 MA 05Feb13 Proposal Report



(Non-Def Plan)

Report Date:	February 05, 2013 - 03:29 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex	Vertical Section Azimuth:	180.991 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Lynch 23 Federal Com #6H / Cimarex Lynch 23 Federal Com #6H	TVD Reference Datum:	Ground Level
Well:	Cimarex Lynch 23 Federal Com #6H	TVD Reference Elevation:	3657.000 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3657.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	7.491 °
Survey Name:	Cimarex Lynch 23 Federal Com #6H Rev0 MA 05Feb13	Total Gravity Field Strength:	998.4914mgn (9.80665 Based)
Survey Date:	February 05, 2013	Total Magnetic Field Strength:	48644.047 nT
Tort / AHD / DDI / ERD Ratio:	89.183 ° / 4663.799 ft / 5.783 / 0.485	Magnetic Dip Angle:	60.434 °
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Declination Date:	February 05, 2013
Location Lat / Long:	N 32° 33' 54.27907", W 103° 31' 24.85672"	Magnetic Declination Model:	BGGM 2012
Location Grid N/E Y/X:	N 570254.800 ftUS, E 790805.900 ftUS	North Reference:	Grid North
CRS Grid Convergence Angle:	0.4359 °	Grid Convergence Used:	0.4359 °
Grid Scale Factor:	0.99998036	Total Corr Mag North->Grid North:	7.0553 °
		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 Lynch 23 Federal Com #6H SHL	0.00	0.00	180.99	0.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	N/A
	100.00	0.00	180.99	100.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	200.00	0.00	180.99	200.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	300.00	0.00	180.99	300.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	400.00	0.00	180.99	400.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	500.00	0.00	180.99	500.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	600.00	0.00	180.99	600.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	700.00	0.00	180.99	700.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	800.00	0.00	180.99	800.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	900.00	0.00	180.99	900.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1000.00	0.00	180.99	1000.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1100.00	0.00	180.99	1100.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1200.00	0.00	180.99	1200.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1300.00	0.00	180.99	1300.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1400.00	0.00	180.99	1400.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1500.00	0.00	180.99	1500.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1600.00	0.00	180.99	1600.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1700.00	0.00	180.99	1700.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1800.00	0.00	180.99	1800.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	1900.00	0.00	180.99	1900.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2000.00	0.00	180.99	2000.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2100.00	0.00	180.99	2100.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2200.00	0.00	180.99	2200.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2300.00	0.00	180.99	2300.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2400.00	0.00	180.99	2400.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2500.00	0.00	180.99	2500.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2600.00	0.00	180.99	2600.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2700.00	0.00	180.99	2700.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS ("/100ft)
	2800.00	0.00	180.99	2800.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	2900.00	0.00	180.99	2900.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3000.00	0.00	180.99	3000.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3100.00	0.00	180.99	3100.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3200.00	0.00	180.99	3200.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3300.00	0.00	180.99	3300.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3400.00	0.00	180.99	3400.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3500.00	0.00	180.99	3500.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3600.00	0.00	180.99	3600.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3700.00	0.00	180.99	3700.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3800.00	0.00	180.99	3800.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	3900.00	0.00	180.99	3900.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4000.00	0.00	180.99	4000.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4100.00	0.00	180.99	4100.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4200.00	0.00	180.99	4200.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4300.00	0.00	180.99	4300.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4400.00	0.00	180.99	4400.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4500.00	0.00	180.99	4500.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4600.00	0.00	180.99	4600.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4700.00	0.00	180.99	4700.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4800.00	0.00	180.99	4800.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	4900.00	0.00	180.99	4900.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	5000.00	0.00	180.99	5000.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	5100.00</													

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	8300.00	0.00	180.99	8300.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	8400.00	0.00	180.99	8400.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	8500.00	0.00	180.99	8500.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	8600.00	0.00	180.99	8600.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	8700.00	0.00	180.99	8700.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	8800.00	0.00	180.99	8800.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	8900.00	0.00	180.99	8900.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
	9000.00	0.00	180.99	9000.00	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
KOP - Build 12"/100'	9082.50	0.00	180.99	9082.50	0.00	0.00	0.00	570254.80	790805.90	N 32 33 54.28	W 103 31 24.86	0.00	0.00	0.00
DLS Curve	9100.00	2.10	180.99	9100.00	0.32	-0.32	-0.01	570254.48	790805.89	N 32 33 54.28	W 103 31 24.86	0.32	180.99	12.00
	9200.00	14.10	180.99	9198.82	14.38	-14.38	-0.25	570240.42	790805.65	N 32 33 54.14	W 103 31 24.86	14.38	180.99	12.00
	9300.00	28.10	180.99	9292.56	48.68	-48.67	-0.84	570206.13	790805.06	N 32 33 53.80	W 103 31 24.87	48.68	180.99	12.00
	9400.00	38.09	180.99	9377.12	101.71	-101.70	-1.76	570153.10	790804.14	N 32 33 53.27	W 103 31 24.89	101.71	180.99	12.00
	9500.00	50.09	180.99	9448.81	171.17	-171.14	-2.96	570083.66	790802.94	N 32 33 52.59	W 103 31 24.91	171.17	180.99	12.00
	9600.00	62.09	180.99	9504.50	254.01	-253.97	-4.39	570000.83	790801.51	N 32 33 51.77	W 103 31 24.93	254.01	180.99	12.00
	9700.00	74.09	180.99	9541.75	346.62	-346.56	-5.99	569908.24	790799.91	N 32 33 50.85	W 103 31 24.96	346.62	180.99	12.00
	9800.00	86.08	180.99	9558.93	444.94	-444.88	-7.69	569809.93	790798.21	N 32 33 49.88	W 103 31 24.99	444.94	180.99	12.00
Landing Point	9825.80	89.18	180.99	9560.00	470.71	-470.64	-8.13	569784.17	790797.77	N 32 33 49.62	W 103 31 24.99	470.71	180.99	12.00
	9900.00	89.18	180.99	9561.06	544.91	-544.83	-9.41	569709.98	790796.49	N 32 33 48.89	W 103 31 25.02	544.91	180.99	0.00
	10000.00	89.18	180.99	9562.49	644.90	-644.80	-11.14	569610.01	790794.76	N 32 33 47.90	W 103 31 25.04	644.90	180.99	0.00
	10100.00	89.18	180.99	9563.92	744.89	-744.78	-12.87	569510.04	790793.03	N 32 33 46.91	W 103 31 25.07	744.89	180.99	0.00
	10200.00	89.18	180.99	9565.36	844.88	-844.75	-14.60	569410.07	790791.30	N 32 33 45.92	W 103 31 25.10	844.88	180.99	0.00
	10300.00	89.18	180.99	9566.79	944.87	-944.73	-16.33	569310.09	790789.57	N 32 33 44.93	W 103 31 25.13	944.87	180.99	0.00
	10400.00	89.18	180.99	9568.22	1044.86	-1044.70	-18.06	569210.12	790787.85	N 32 33 43.94	W 103 31 25.16	1044.86	180.99	0.00
	10500.00	89.18	180.99	9569.65	1144.85	-1144.68	-19.78	569110.15	790786.12	N 32 33 42.95	W 103 31 25.19	1144.85	180.99	0.00
	10600.00	89.18	180.99	9571.08	1244.84	-1244.65	-21.51	569010.18	790784.39	N 32 33 41.97	W 103 31 25.22	1244.84	180.99	0.00
	10700.00	89.18	180.99	9572.51	1344.83	-1344.63	-23.24	568910.20	790782.66	N 32 33 40.98	W 103 31 25.25	1344.83	180.99	0.00
	10800.00	89.18	180.99	9573.94	1444.82	-1444.60	-24.97	568810.23	790780.93	N 32 33 39.99	W 103 31 25.28	1444.82	180.99	0.00
	10900.00	89.18	180.99	9575.37	1544.81	-1544.58	-26.70	568710.26	790779.20	N 32 33 39.00	W 103 31 25.31	1544.81	180.99	0.00
	11000.00	89.18	180.99	9576.80	1644.80	-1644.55	-28.43	568610.28	790777.47	N 32 33 38.01	W 103 31 25.34	1644.80	180.99	0.00
	11100.00	89.18	180.99	9578.23	1744.79	-1744.53	-30.16	568510.31	790775.74	N 32 33 37.02	W 103 31 25.36	1744.79	180.99	0.00
	11200.00	89.18	180.99	9579.66	1844.78	-1844.50	-31.89	568410.34	790774.01	N 32 33 36.03	W 103 31 25.39	1844.78	180.99	0.00
	11300.00	89.18	180.99	9581.10	1944.77	-1944.48	-33.62	568310.37	790772.28	N 32 33 35.04	W 103 31 25.42	1944.77	180.99	0.00
	11400.00	89.18	180.99	9582.53	2044.76	-2044.45	-35.35	568210.39	790770.55	N 32 33 34.05	W 103 31 25.45	2044.76	180.99	0.00
	11500.00	89.18	180.99	9583.96	2144.75	-2144.43	-37.08	568110.42	790768.82	N 32 33 33.06	W 103 31 25.48	2144.75	180.99	0.00
	11600.00	89.18	180.99	9585.39	2244.74	-2244.40	-38.81	568010.45	790767.09	N 32 33 32.08	W 103 31 25.51	2244.74	180.99	0.00
	11700.00	89.18	180.99	9586.82	2344.73	-2344.37	-40.54	567910.48	790765.36	N 32 33 31.09	W 103 31 25.54	2344.73	180.99	0.00
	11800.00	89.18	180.99	9588.25	2444.71	-2444.35	-42.27	567810.50	790763.63	N 32 33 30.10	W 103 31 25.57	2444.71	180.99	0.00
	11900.00	89.18	180.99	9589.68	2544.70	-2544.32	-44.00	567710.53	790761.90	N 32 33 29.11	W 103 31 25.60	2544.70	180.99	0.00
	12000.00	89.18	180.99	9591.11	2644.69	-2644.30	-45.73	567610.56	790760.17	N 32 33 28.12	W 103 31 25.63	2644.69	180.99	0.00
	12100.00	89.18	180.99	9592.54	2744.68	-2744.27	-47.46	567510.59	790758.44	N 32 33 27.13	W 103 31 25.66	2744.68	180.99	0.00
	12200.00	89.18	180.99	9593.97	2844.67	-2844.25	-49.19	567410.61	790756.71	N 32 33 26.14	W 103 31 25.68	2844.67	180.99	0.00
	12300.00	89.18	180.99	9595.40	2944.66	-2944.22	-50.92	567310.64	790754.98	N 32 33 25.15	W 103 31 25.71	2944.66	180.99	0.00
	12400.00	89.18	180.99	9596.83	3044.65	-3044.20	-52.65	567210.67	790753.25	N 32 33 24.16	W 103 31 25.74	3044.65	180.99	0.00
	12500.00	89.18	180.99	9598.27	3144.64	-3144.17	-54.38	567110.70	790751.52	N 32 33 23.17	W 103 31 25.77	3144.64	180.99	0.00
	12600.00	89.18	180.99	9599.70	3244.63	-3244.15	-56.11	567010.72	790749.79	N 32 33 22.18	W 103 31 25.80	3244.63	180.99	0.00
	12700.00	89.18	180.99	9601.13	3344.62	-3344.12	-57.84	566910.75	790748.06	N 32 33 21.20	W 103 31 25.83	3344.62	180.99	0.00
	12800.00	89.18	180.99	9602.56	3444.61	-3444.10	-59.58	566810.78	790746.32	N 32 33 20.21	W 103 31 25.86	3444.61	180.99	0.00
	12900.00	89.18	180.99	9603.99	3544.60	-3544.07	-61.31	566710.80	790744.59	N 32 33 19.22	W 103 31 25.89	3544.60	180.99	0.00
	13000.00	89.18	180.99	9605.42	3644.59	-3644.05	-63.04	566610.83	790742.86	N 32 33 18.23	W 103 31 25.92	3644.59	180.99	0.00
	13100.00	89.18	180.99	9606.85	3744.58	-3744.02	-64.77	566510.86	790741.13	N 32 33 17.24	W 103 31 25.95	3744.58	180.99	0.00
	13200.00	89.18	180.99	9608.28	3844.57	-3844.00	-66.50	566410.89	790739.40	N 32 33 16.25	W 103 31 25.98	3844.57	180.99	0.00
	13300.00	89.18	180.99	9609.71	3944.56	-3943.97	-68.24	566310.91	790737.66	N 32 33 15.26	W 103 31 26.00	3944.56	180.99	0.00
	13400.00	89.18	180.99	9611.14	4044.55	-4043.95	-69.97	566210.94	790735.93	N 32 33 14.27	W 103 31 26.03	4044.55	180.99	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	89.18	180.99	9612.57	4144.54	-4143.92	-71.70	566110.97	790734.20	N 32 33 13.28	W 103 31 26.06	4144.54	180.99	0.00
	13600.00	89.18	180.99	9614.00	4244.53	-4243.90	-73.43	566011.00	790732.47	N 32 33 12.29	W 103 31 26.09	4244.53	180.99	0.00
	13700.00	89.18	180.99	9615.43	4344.52	-4343.87	-75.17	565911.02	790730.73	N 32 33 11.31	W 103 31 26.12	4344.52	180.99	0.00
	13800.00	89.18	180.99	9616.86	4444.51	-4443.84	-76.90	565811.05	790729.00	N 32 33 10.32	W 103 31 26.15	4444.51	180.99	0.00
	13900.00	89.18	180.99	9618.29	4544.50	-4543.82	-78.63	565711.08	790727.27	N 32 33 9.33	W 103 31 26.18	4544.50	180.99	0.00
	14000.00	89.18	180.99	9619.72	4644.49	-4643.79	-80.37	565611.11	790725.53	N 32 33 8.34	W 103 31 26.21	4644.49	180.99	0.00
Cimarex Lynch 23 Federal Com #6H PBHL	14019.31	89.18	180.99	9620.00	4663.80	-4663.10	-80.70	565591.80	790725.20	N 32 33 8.15	W 103 31 26.21	4663.80	180.99	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	14019.311	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Lynch 23 Federal Com #6H Rev0 MA

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

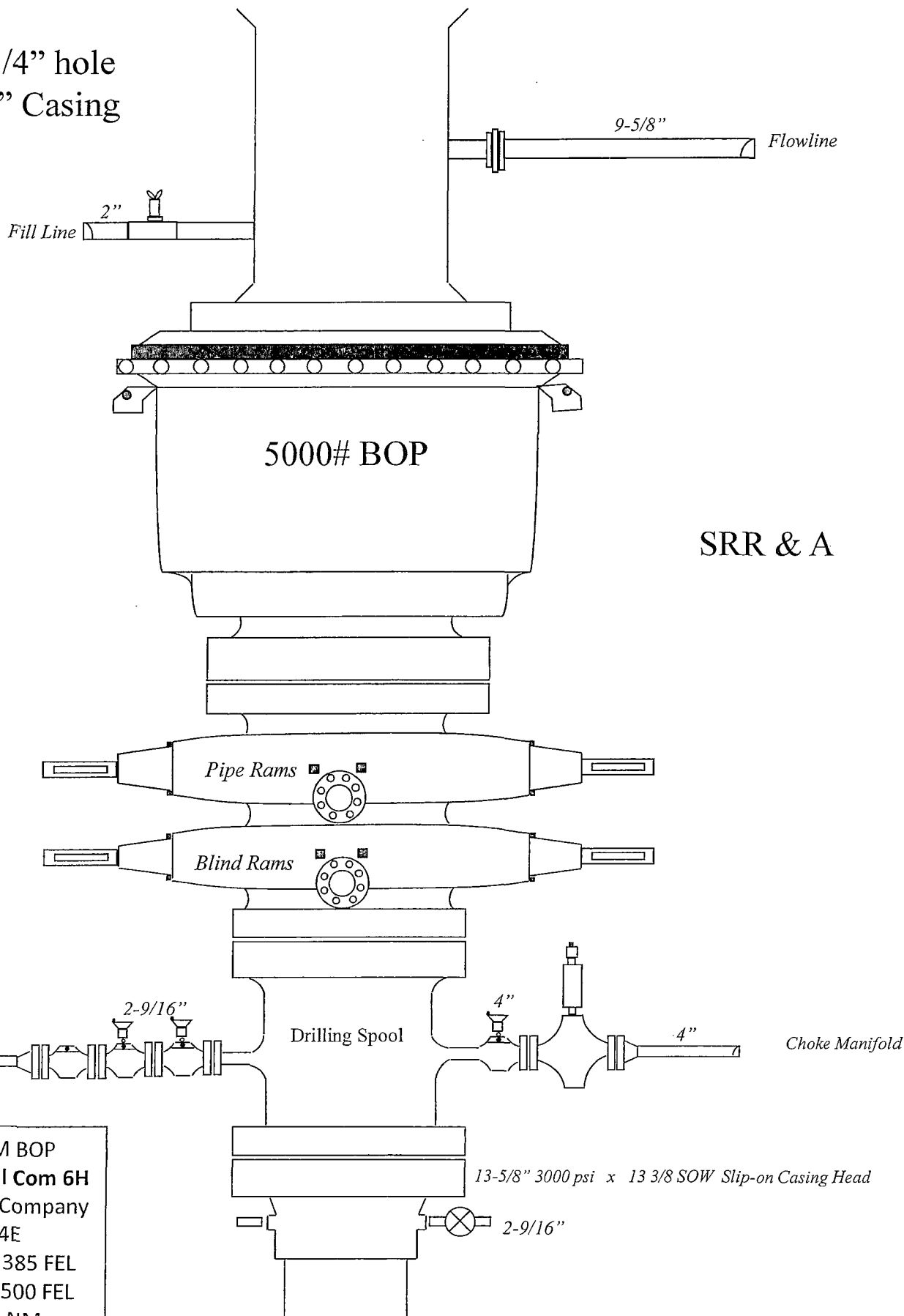


Exhibit E – 5M BOP
Lynch 23 Federal Com 6H
Cimarex Energy Company
23-20S-34E
SHL 290 FNL & 385 FEL
BHL 330 FSL & 500 FEL
Lea County, NM

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

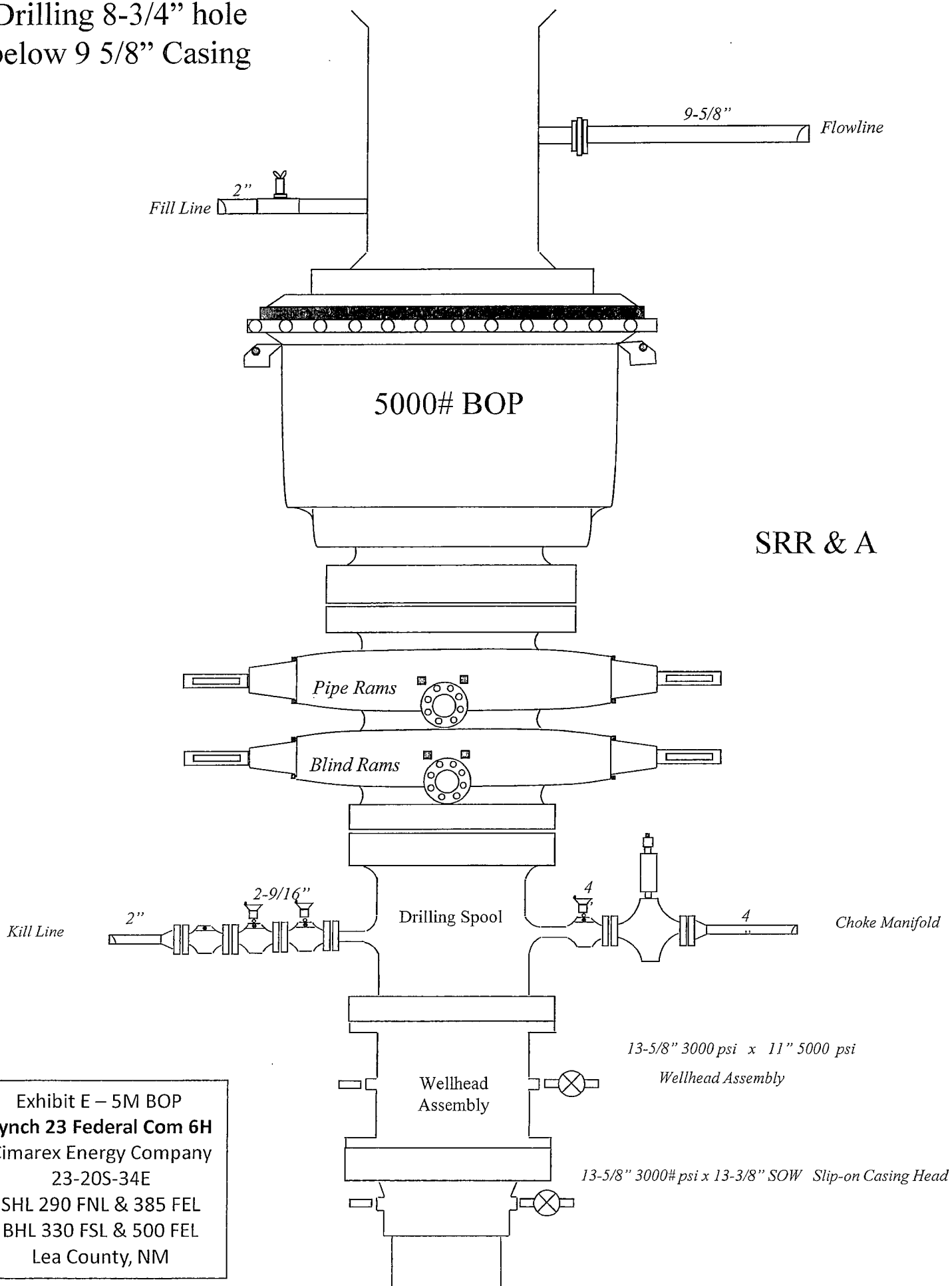


Exhibit E – 5M BOP
Lynch 23 Federal Com 6H
 Cimarex Energy Company
 23-20S-34E
 SHL 290 FNL & 385 FEL
 BHL 330 FSL & 500 FEL
 Lea County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram
Lynch 23 Federal Com 6H
Cimarex Energy Company
23-20S-34E
SHL 290 FNL & 385 FEL
BHL 330 FSL & 500 FEL
Lea County, NM

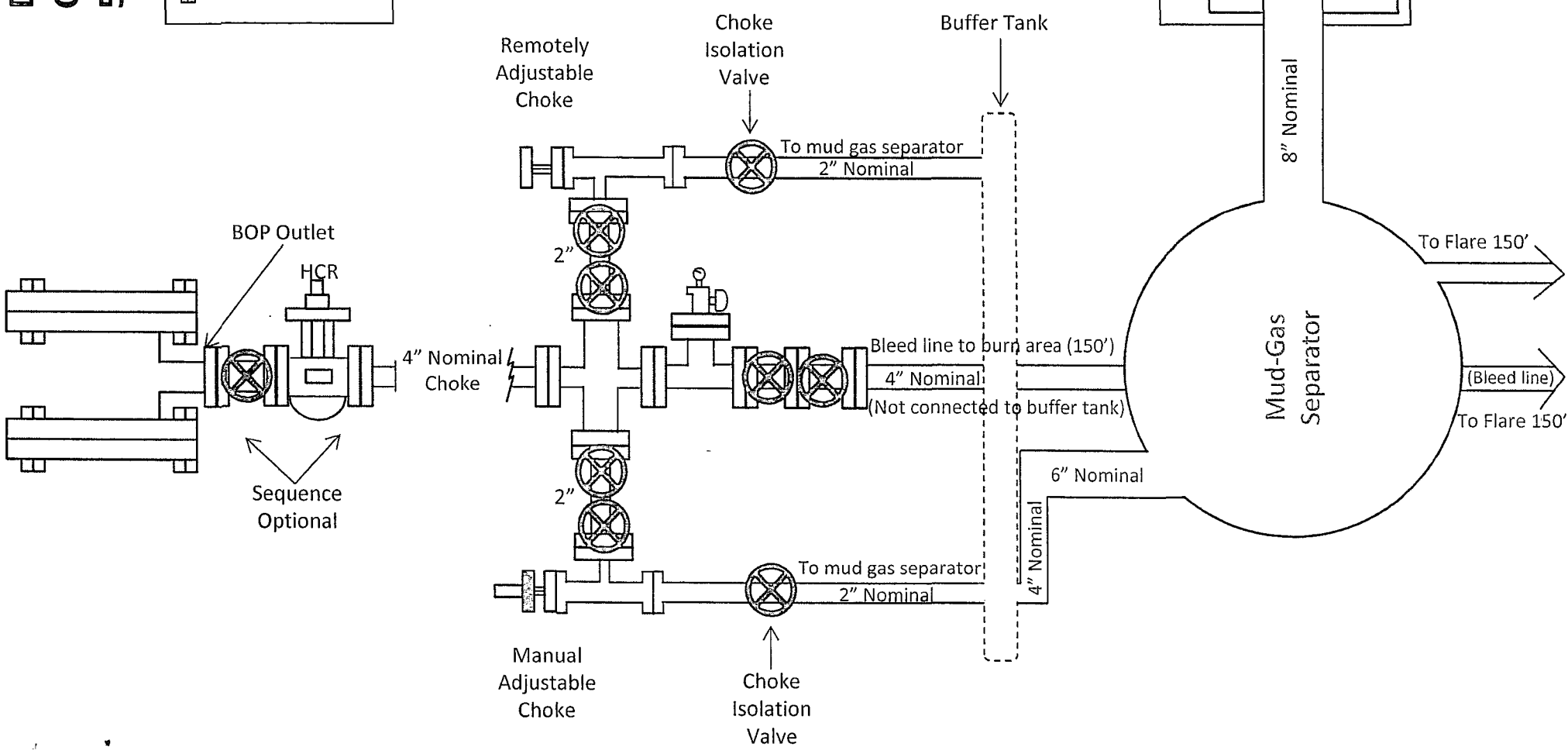
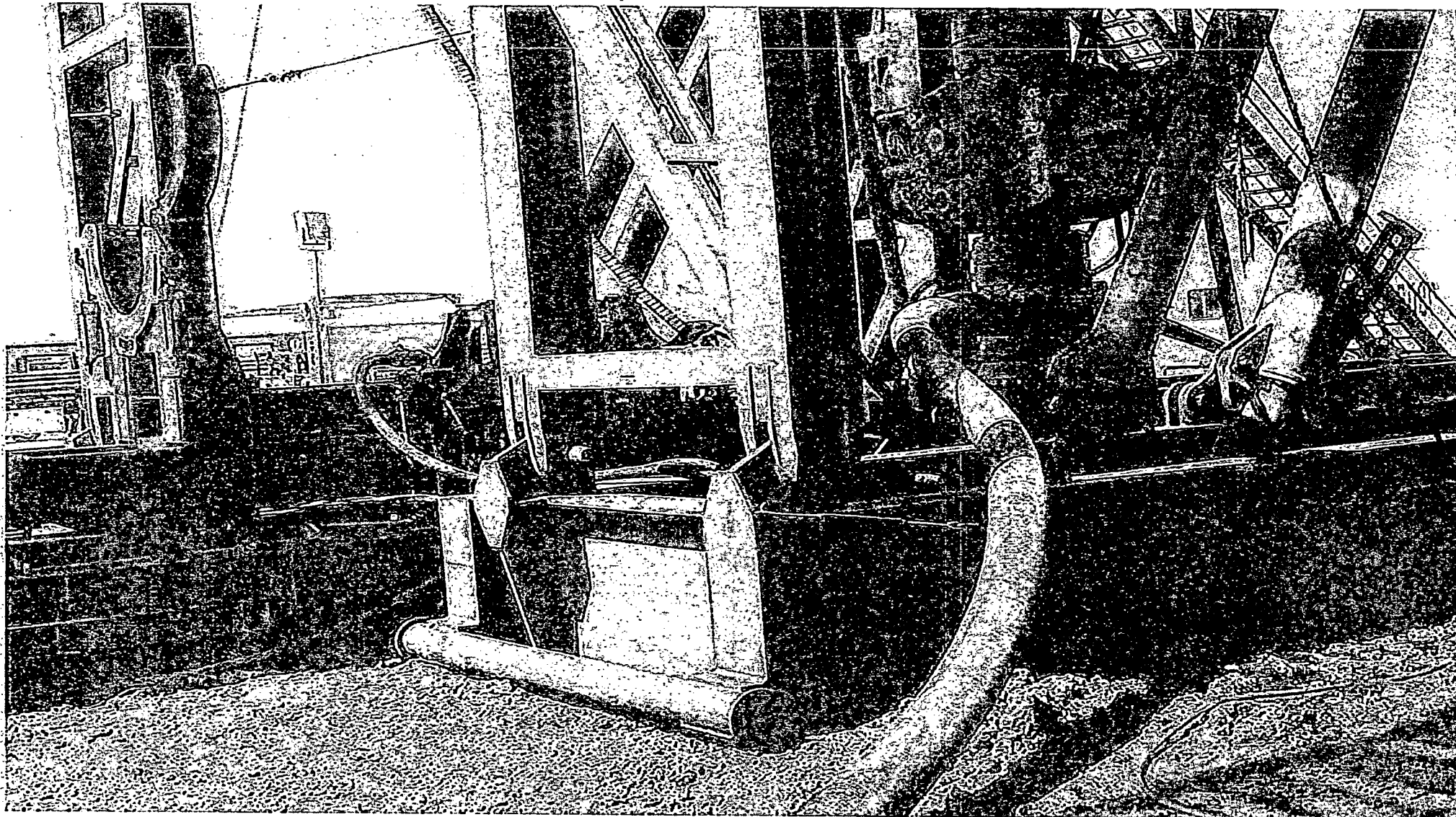


Exhibit F – Co-Flex Hose
Lynch 23 Federal Com 6H
Cimarex Energy Company
23-20S-34E
SHL 290 FNL & 385 FEL
BHL 330 FSL & 500 FEL
Lea County, NM





Midwest Hose
& Specialty, Inc.

Exhibit F -3- Co-Flex Hose
Lynch 23 Federal Com 6H
Cimarex Energy Company
23-20S-34E
SHL 290 FNL & 385 FEL
BHL 330 FSL & 500 FEL
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 E-1 - Co-Flex Hose Hydrostatic Test
 Lynch 23 Federal Com 6H
 Cimarex Energy Company
 23-20S-34E
 SHL 290 FNL & 385 FEL
 BHL 330 FSL & 500 FEL
 Lea County, NM



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

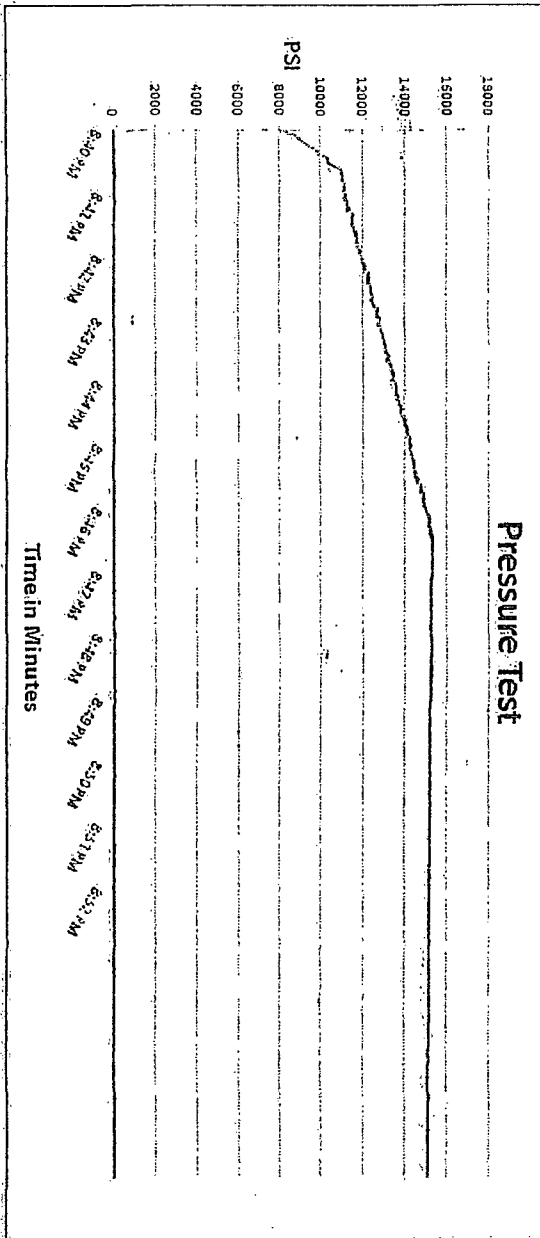
Length: 45'

Burst Pressure: Standard Safety Factor/Applies

Verification

Time of Run: 42/16:10K
 Die Size: 6.38"
 Hose Serial #: 5544

Coupling Method: Swage
 Final I.D.: 6.35"
 Hose Assembly Serial #: 79733



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

Tested By: Zac McConnell

Approved By: Kim Thomas

[Signature]

[Signature]

Exhibit F-2 – Co-Flex Hose
Lynch 23 Federal Com 6H
Cimarex Energy Company
23-20S-34E
SHL 290 FNL & 385 FEL
BHL 330 FSL & 500 FEL
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:

Jonas Garcia

Date:

3/8/2011

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Lynch 23 Federal Com 5H

Cimarex Energy Company

23-20S-33E

SHL 330 FNL & 735 FEL

BHL 330 FSL & 380 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

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE

15 MIN.

ACTUAL BURST PRESSURE:

0 PSI

Hose Assembly Serial Number:

79793

Hose Serial Number:

OKC

Comments:

Date:

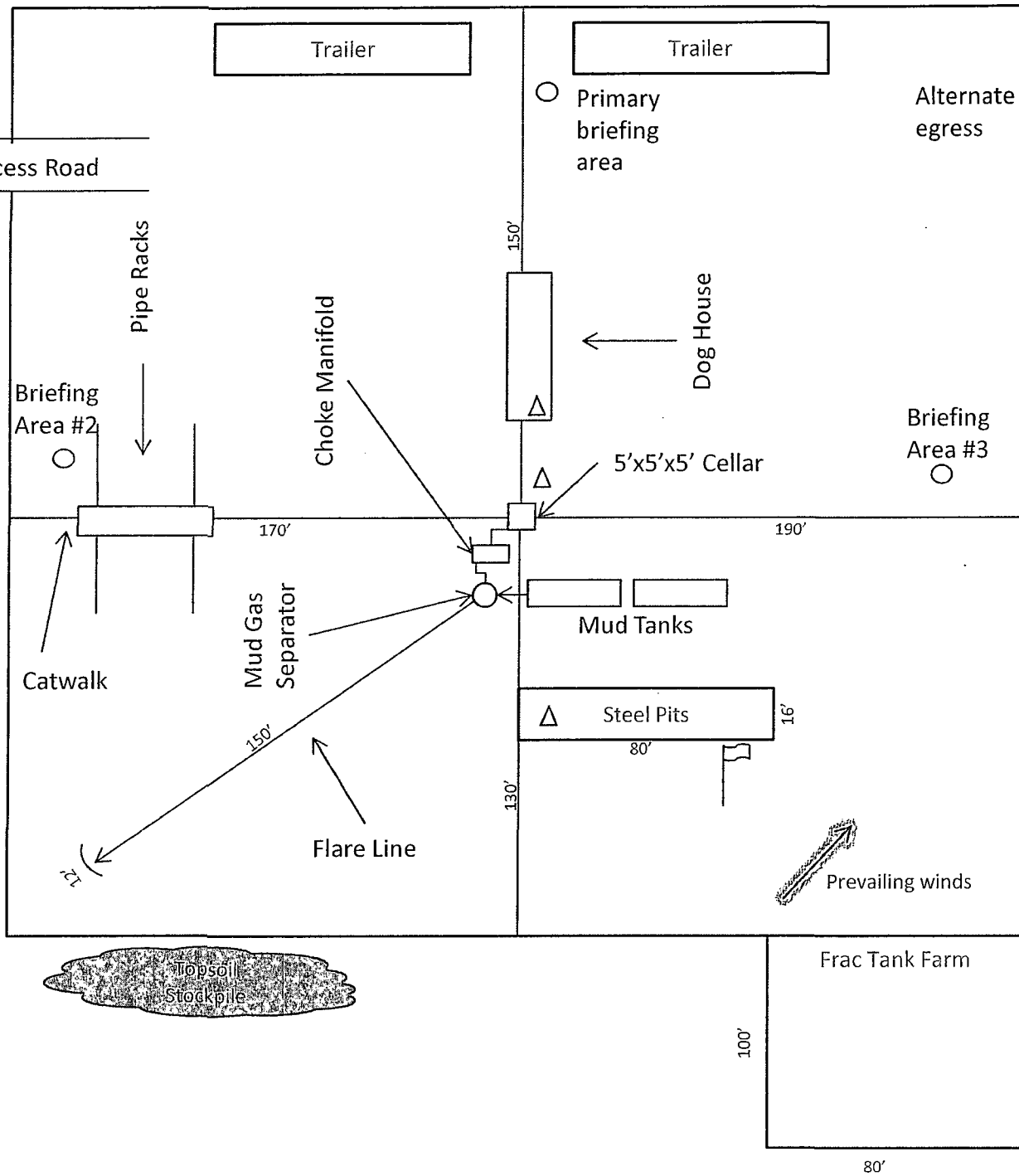
3/8/2011

Tested:

A. John Smith

Approved:

Leif Hef



-  Wind Direction Indicators (wind sock or streamers)
- H2S Monitors (alarms at bell nipple and shale shaker)
-  Briefing Areas



Exhibit D – Rig Diagram
Lynch 23 Federal Com 6H
 Cimarex Energy Company
 23-20S-34E
 SHL 290 FNL & 385 FEL
 BHL 330 FSL & 500 FEL
 Lea County, NM