14-347

OCD Hobbs

Form 3160-3
(March 2012)

HOBBS OCD

MAY 19 2015

RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
SHL: NMNM0025497; BHL: NMNM0063530

6. If Indian, Allotee or Tribe Name (H)

1a. Type of Work: [X] DRILL [ ] REENTER

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

1b. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No. (38371)
East Lusk 15 Federal Com 4H

2. Name of Operator
Cimarex Energy Co. OF COLORADO (162683)

9. API Well No.
30-025-42574

3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
600 N. Marienfield St. Ste. 600 Midland Tx 79071	432-571-7800	Lusk; Bone Spring East (41442)

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

			11. Sec,. T. R. M. or Blk. and Survey and Area
At Surface	900 FNL 330 FEL (A)		
At proposed prod. Zone	900 FNL 330 FWL (D)	*Bone Spring*	15, 19S, 32E

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
Carlsbad NM is 32.8 miles southwesterly	Lea	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
330'	NMNM0025497=920.00 acres NMNM0063530=440.00 acres	160.00

18. Distance from proposed* location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on File
1380' to the East Lusk 15 Federal #3H	Pilot Hole TD: N/A 13,986 MD 9,450 TVD	NM2575 & NMB000835

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3642 GR	2/1/14	35 days

24. Attachments

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

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

25. Signature	Name *(Printed/Typed)*	Date
	Terri Stathem	12/20/13

Title: Regulatory Compliance

Approved By *(Signature)*	Name (Printed/Typed)	Date
Steve Caffey		MAY 14 2015
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.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)

KZ 05/19/15

SEE ATTACHED FOR CONDITIONS OF APPROVAL

Capitan Controlled Water Basin

Approval Subject to General Requirements & Special Stipulations Attached

MAY 20 2015

Application to Drill
East Lusk 15 Federal Com 4
Cimarex Energy Co.
UL: A, Sec. 15, 19S, 32E
Lea Co., NM

HOBBS OCD

MAY 19 2015

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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 900 FNL 330 FEL
BHL 900 FNL 330 FWL

2. Elevation Above Sea Level: 3,642' 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: 13,986 MD 9,450 TVD Pilot Hole TD: N/A

6. Estimated Tops of Geological Markers:

Formation	Est Top	Bearing
Rustler	1130	N/A
Salt	1345	N/A
Tansil	2735	N/A
Yates	2895	N/A
Seven Rivers	3225	N/A
CPTN	4040	N/A
Cherry Canyon	4760	N/A
Brushy Canyon	7020	Hydrocarbons
1st BSS	8530	Hydrocarbons
2nd BSS	9290	Hydrocarbons

7. Possible Mineral Bearing Formation: Shown above

7A. OSE Ground Water Estimated Depth: 375'

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	Conditon	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	~~1180~~ 1230	1180	17 1/2	13-3/8"	48.00	H-40	ST&C	New	509	8.3	1.45		3.40	56,640	49,463	6.51
Intermediate	0	4700	4700	12 1/4	9-5/8"	40.00	J-55	LT&C	New	2444	10.0		1.57	1.62	188,000	159,298	3.26
Production	0	9083	9083	8 3/4	5-1/2"	17.00	L-80	LT&C	New	4250	9.0	1.48		1.82	160,650	138,576	2.44
Production	9083	13986	9450	8 3/4	5-1/2"	17.00	L-80	BT&C	New	4422	9.0	1.42		1.75	6,239	5,382	73.77

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.~~ Submit Sundry.

Application to Drill
East Lusk 15 Federal Com 4
Cimarex Energy Co.
UL: A, Sec. 15, 19S, 32E
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	562	1.75	13.50	983	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	153	1.34	14.80	204	Class C + LCM, 6.320 gps water
	TOC: 0		**45% Excess**			**Centralizers per Onshore Order 2.III.B.1f**
Intermediate	Lead	842	1.88	12.90	1582	35:65 (Poz:C) + Salt + Bentonite + LCM + Retarder, 9.650 gps water
See COA	Tail	275	1.34	14.80	368	Class C + Retarder + LCM, 6.320 gps water
	TOC: 0		**44% Excess**			
Production	Lead	533	2.40	11.90	1277	35:65 (poz/H) + Salt + Sodium Metasilcate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.800 gps water
	Tail	1212	1.24	14.50	1502	50:50(Poz:H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.550 gps water
See COA	**TOC: 4500**		**16% 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

50' above Capitan Reef.

9a. Proposed Drilling Plan:

Pilot Hole TD: No Pilot KOP: 9,083' EOC: 9,845'

Set Surface and Intermediate casing strings. Drill production hole to KOP. Continue drillling lateral through the curve to TD. Run prod casing & cement.

10. Pressure Control Equipment:

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

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

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

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

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.

Application to Drill
East Lusk 15 Federal Com 4
Cimarex Energy Co.
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Lea Co., NM

See COA

11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1230'	7.80 - 8.30	28	NC	FW Spud Mud
1180' to 4700'	9.50 - 10.00	30-32	NC	Brine Water
4700' to 13986	8.50 - 9.00	30-32	NC	FW/Cut Brine

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

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

12. Testing, Logging and Coring Program:

A. Mud logging program: 2 man unit from 4700 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 H_2S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H_2S Safety package on all wells, attached is an "H_2S 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: 4253 psi Estimated BHT: 156°

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.
2nd BSS pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **Oil**

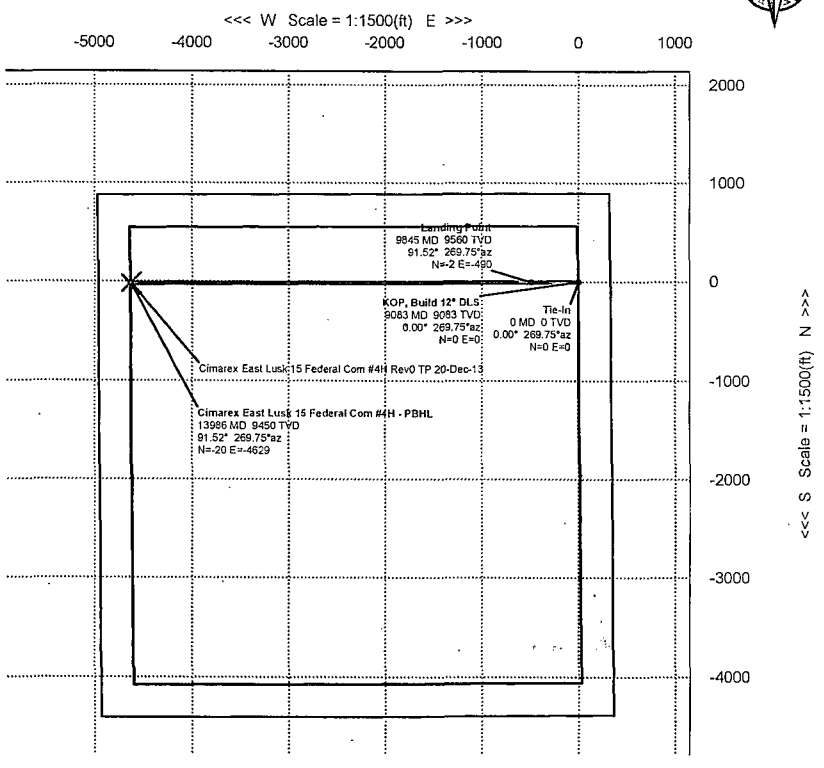
Cimarex

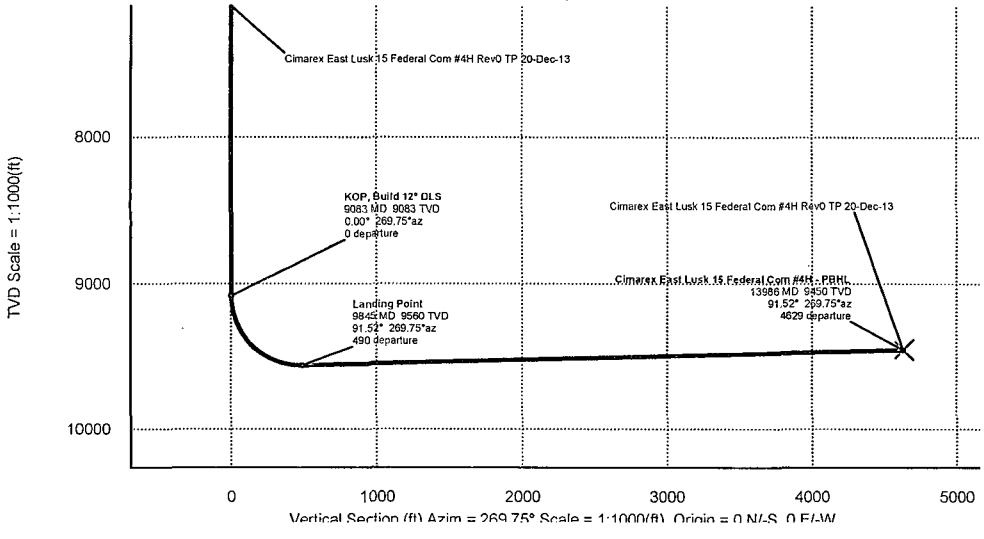
PATHFINDER
A Schlumberger Company

WELL	FIELD	STRUCTURE
East Lusk 15 Federal Com #4H	NM Lea County (NAD 83)	Cimarex East Lusk 15 Federal

Magnetic Parameters				Surface Location				Miscellaneous	
Model: BGGM 2012	Dip: 60.458°	Date: December 20, 2013		Lat: N 32 39 54.648	Northing: 606222.62 ftUS	Grid Conv: 0.317°		Slot: East Lusk 15 Federal Com #4H,VD Ref: Ground Leve(3842ft above MSL)	
	Mag Dec: 7.503°	FS: 48565.6nT		Lon: W 103 44 47.578	Easting: 721909.41 ftUS	Scale Fact: 0.99994843		Plan: Cimarex East Lusk 15 Federal Com #4H Rev0(FTP/LTP/BHL)(3842ft above MSL)	

Grid North
Tot Corr (M->G 7.1863°)
Mag Dec (7.503°)
Grid Conv (0.317°)





Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	269.75	0.00	0.00	0.00	0.00	
KOP, Build 12° DLS	9083.00	0.00	269.75	9083.00	0.00	0.00	0.00	0.00
Landing Point	9845.19	91.52	269.75	9560.00	489.83	-2.14	-489.82	12.01
Cimarex East Lusk 15 Federal Com #4H - PBHL	13986.11	91.52	269.75	9450.00	4629.28	-20.02	-4629.24	0.00

PATHFINDER
A Schlumberger Company

Cimarex East Lusk 15 Federal Com #4H Rev0 TP 20-Dec-13 Proposal Report

(Def Plan)

Report Date:	December 20, 2013 - 03:42 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex	**Vertical Section Azimuth:**	269.752 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex East Lusk 15 Federal Com #4H / East Lusk 15 Federal Com #4H	**TVD Reference Datum:**	Ground Level
Well:	East Lusk 15 Federal Com #4H	**TVD Reference Elevation:**	3642.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3642.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.503 °
Survey Name:	Cimarex East Lusk 15 Federal Com #4H Rev0 TP 20-Dec-13	**Total Field Strength:**	48565.607 nT
Survey Date:	December 20, 2013	**Magnetic Dip Angle:**	60.458 °
Tort / AHD / DDI / ERD Ratio:	91.527 ° / 4629.281 ft / 5.792 / 0.484	**Declination Date:**	December 20, 2013
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Declination Model:**	BGGM 2012
Location Lat / Long:	N 32° 39' 54.64827", W 103° 44' 47.57785"	**North Reference:**	Grid North
Location Grid N/E Y/X:	N 606222.620 ftUS, E 721909.410 ftUS	**Grid Convergence Used:**	0.3167 °
CRS Grid Convergence Angle:	0.3167 °	**Total Corr Mag North->Grid North:**	7.1863 °
Grid Scale Factor:	0.99994643	**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)
Tie-In	0.00	0.00	269.75	0.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	N/A
	100.00	0.00	269.75	100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	200.00	0.00	269.75	200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	300.00	0.00	269.75	300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	400.00	0.00	269.75	400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	500.00	0.00	269.75	500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	600.00	0.00	269.75	600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	700.00	0.00	269.75	700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	800.00	0.00	269.75	800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	900.00	0.00	269.75	900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1000.00	0.00	269.75	1000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1100.00	0.00	269.75	1100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1200.00	0.00	269.75	1200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1300.00	0.00	269.75	1300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1400.00	0.00	269.75	1400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1500.00	0.00	269.75	1500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1600.00	0.00	269.75	1600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1700.00	0.00	269.75	1700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1800.00	0.00	269.75	1800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	1900.00	0.00	269.75	1900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2000.00	0.00	269.75	2000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2100.00	0.00	269.75	2100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2200.00	0.00	269.75	2200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2300.00	0.00	269.75	2300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2400.00	0.00	269.75	2400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2500.00	0.00	269.75	2500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2600.00	0.00	269.75	2600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2700.00	0.00	269.75	2700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2800.00	0.00	269.75	2800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	2900.00	0.00	269.75	2900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	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)
	3000.00	0.00	269.75	3000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3100.00	0.00	269.75	3100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3200.00	0.00	269.75	3200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3300.00	0.00	269.75	3300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3400.00	0.00	269.75	3400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3500.00	0.00	269.75	3500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3600.00	0.00	269.75	3600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3700.00	0.00	269.75	3700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3800.00	0.00	269.75	3800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	3900.00	0.00	269.75	3900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4000.00	0.00	269.75	4000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4100.00	0.00	269.75	4100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4200.00	0.00	269.75	4200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4300.00	0.00	269.75	4300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4400.00	0.00	269.75	4400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4500.00	0.00	269.75	4500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4600.00	0.00	269.75	4600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4700.00	0.00	269.75	4700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4800.00	0.00	269.75	4800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	4900.00	0.00	269.75	4900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5000.00	0.00	269.75	5000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5100.00	0.00	269.75	5100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5200.00	0.00	269.75	5200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5300.00	0.00	269.75	5300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5400.00	0.00	269.75	5400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5500.00	0.00	269.75	5500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5600.00	0.00	269.75	5600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5700.00	0.00	269.75	5700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5800.00	0.00	269.75	5800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	5900.00	0.00	269.75	5900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6000.00	0.00	269.75	6000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6100.00	0.00	269.75	6100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6200.00	0.00	269.75	6200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6300.00	0.00	269.75	6300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6400.00	0.00	269.75	6400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6500.00	0.00	269.75	6500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6600.00	0.00	269.75	6600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6700.00	0.00	269.75	6700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6800.00	0.00	269.75	6800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	6900.00	0.00	269.75	6900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7000.00	0.00	269.75	7000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7100.00	0.00	269.75	7100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7200.00	0.00	269.75	7200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7300.00	0.00	269.75	7300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7400.00	0.00	269.75	7400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7500.00	0.00	269.75	7500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7600.00	0.00	269.75	7600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7700.00	0.00	269.75	7700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7800.00	0.00	269.75	7800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	7900.00	0.00	269.75	7900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8000.00	0.00	269.75	8000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8100.00	0.00	269.75	8100.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8200.00	0.00	269.75	8200.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8300.00	0.00	269.75	8300.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8400.00	0.00	269.75	8400.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	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)
	8500.00	0.00	269.75	8500.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8600.00	0.00	269.75	8600.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8700.00	0.00	269.75	8700.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8800.00	0.00	269.75	8800.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	8900.00	0.00	269.75	8900.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	9000.00	0.00	269.75	9000.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
KOP, Build 12° DLS	9083.00	0.00	269.75	9083.00	0.00	0.00	0.00	606222.62	721909.41	N 32 39 54.65	W 103 44 47.58	0.00	0.00	0.00
	9100.00	2.04	269.75	9100.00	0.30	0.00	-0.30	606222.62	721909.11	N 32 39 54.65	W 103 44 47.58	0.30	269.75	12.01
	9200.00	14.05	269.75	9198.83	14.27	-0.06	-14.27	606222.56	721895.14	N 32 39 54.65	W 103 44 47.74	14.27	269.75	12.01
	9300.00	26.06	269.75	9292.60	48.50	-0.21	-48.50	606222.41	721860.92	N 32 39 54.65	W 103 44 48.15	48.50	269.75	12.01
	9400.00	38.06	269.75	9377.19	101.48	-0.44	-101.48	606222.18	721807.94	N 32 39 54.65	W 103 44 48.76	101.48	269.75	12.01
	9500.00	50.07	269.75	9448.91	170.90	-0.75	-170.90	606221.87	721738.52	N 32 39 54.65	W 103 44 49.58	170.90	269.75	12.01
	9600.00	62.08	269.75	9504.62	253.73	-1.11	-253.73	606221.51	721655.70	N 32 39 54.65	W 103 44 50.55	253.73	269.75	12.01
	9700.00	74.09	269.75	9541.88	346.33	-1.51	-346.33	606221.11	721563.10	N 32 39 54.65	W 103 44 51.63	346.33	269.75	12.01
	9800.00	86.09	269.75	9559.06	444.66	-1.94	-444.66	606220.68	721464.78	N 32 39 54.65	W 103 44 52.78	444.66	269.75	12.01
Landing Point	9845.19	91.52	269.75	9560.00	489.83	-2.14	-489.82	606220.48	721419.62	N 32 39 54.65	W 103 44 53.31	489.83	269.75	12.01
	9900.00	91.52	269.75	9558.55	544.61	-2.38	-544.61	606220.24	721364.83	N 32 39 54.65	W 103 44 53.95	544.61	269.75	0.00
	10000.00	91.52	269.75	9555.89	644.58	-2.81	-644.57	606219.81	721264.87	N 32 39 54.66	W 103 44 55.12	644.58	269.75	0.00
	10100.00	91.52	269.75	9553.24	744.54	-3.25	-744.54	606219.37	721164.92	N 32 39 54.66	W 103 44 56.29	744.54	269.75	0.00
	10200.00	91.52	269.75	9550.59	844.51	-3.68	-844.50	606218.94	721064.96	N 32 39 54.66	W 103 44 57.46	844.51	269.75	0.00
	10300.00	91.52	269.75	9547.93	944.47	-4.12	-944.46	606218.50	720965.00	N 32 39 54.66	W 103 44 58.63	944.47	269.75	0.00
	10400.00	91.52	269.75	9545.28	1044.44	-4.55	-1044.43	606218.07	720865.04	N 32 39 54.66	W 103 44 59.80	1044.44	269.75	0.00
	10500.00	91.52	269.75	9542.63	1144.40	-4.99	-1144.39	606217.63	720765.08	N 32 39 54.66	W 103 45 0.96	1144.40	269.75	0.00
	10600.00	91.52	269.75	9539.97	1244.37	-5.42	-1244.36	606217.20	720665.12	N 32 39 54.66	W 103 45 2.13	1244.37	269.75	0.00
	10700.00	91.52	269.75	9537.32	1344.33	-5.86	-1344.32	606216.76	720565.17	N 32 39 54.66	W 103 45 3.30	1344.33	269.75	0.00
	10800.00	91.52	269.75	9534.66	1444.30	-6.29	-1444.28	606216.33	720465.21	N 32 39 54.66	W 103 45 4.47	1444.30	269.75	0.00
	10900.00	91.52	269.75	9532.01	1544.26	-6.73	-1544.25	606215.89	720365.25	N 32 39 54.67	W 103 45 5.64	1544.26	269.75	0.00
	11000.00	91.52	269.75	9529.36	1644.23	-7.16	-1644.21	606215.46	720265.29	N 32 39 54.67	W 103 45 6.81	1644.23	269.75	0.00
	11100.00	91.52	269.75	9526.70	1744.19	-7.59	-1744.17	606215.03	720165.33	N 32 39 54.67	W 103 45 7.98	1744.19	269.75	0.00
	11200.00	91.52	269.75	9524.05	1844.16	-8.03	-1844.14	606214.59	720065.37	N 32 39 54.67	W 103 45 9.15	1844.16	269.75	0.00
	11300.00	91.52	269.75	9521.39	1944.12	-8.46	-1944.10	606214.16	719965.42	N 32 39 54.67	W 103 45 10.32	1944.12	269.75	0.00
	11400.00	91.52	269.75	9518.73	2044.09	-8.89	-2044.07	606213.73	719865.46	N 32 39 54.67	W 103 45 11.49	2044.09	269.75	0.00
	11500.00	91.52	269.75	9516.08	2144.05	-9.33	-2144.03	606213.29	719765.50	N 32 39 54.67	W 103 45 12.66	2144.05	269.75	0.00
	11600.00	91.52	269.75	9513.42	2244.01	-9.76	-2243.99	606212.86	719665.54	N 32 39 54.67	W 103 45 13.83	2244.01	269.75	0.00
	11700.00	91.52	269.75	9510.77	2343.98	-10.19	-2343.96	606212.43	719565.58	N 32 39 54.67	W 103 45 15.00	2343.98	269.75	0.00
	11800.00	91.52	269.75	9508.11	2443.94	-10.62	-2443.92	606212.00	719465.62	N 32 39 54.68	W 103 45 16.17	2443.94	269.75	0.00
	11900.00	91.52	269.75	9505.46	2543.91	-11.06	-2543.88	606211.56	719365.67	N 32 39 54.68	W 103 45 17.34	2543.91	269.75	0.00
	12000.00	91.52	269.75	9502.80	2643.87	-11.49	-2643.85	606211.13	719265.71	N 32 39 54.68	W 103 45 18.50	2643.87	269.75	0.00
	12100.00	91.52	269.75	9500.14	2743.84	-11.92	-2743.81	606210.70	719165.75	N 32 39 54.68	W 103 45 19.67	2743.84	269.75	0.00
	12200.00	91.52	269.75	9497.49	2843.80	-12.35	-2843.78	606210.27	719065.79	N 32 39 54.68	W 103 45 20.84	2843.80	269.75	0.00
	12300.00	91.52	269.75	9494.83	2943.77	-12.78	-2943.74	606209.84	718965.83	N 32 39 54.68	W 103 45 22.01	2943.77	269.75	0.00
	12400.00	91.52	269.75	9492.17	3043.73	-13.21	-3043.70	606209.41	718865.88	N 32 39 54.68	W 103 45 23.18	3043.73	269.75	0.00
	12500.00	91.52	269.75	9489.51	3143.70	-13.64	-3143.67	606208.98	718765.92	N 32 39 54.68	W 103 45 24.35	3143.70	269.75	0.00
	12600.00	91.52	269.75	9486.86	3243.66	-14.07	-3243.63	606208.55	718665.96	N 32 39 54.68	W 103 45 25.52	3243.66	269.75	0.00
	12700.00	91.52	269.75	9484.20	3343.63	-14.50	-3343.59	606208.12	718566.00	N 32 39 54.69	W 103 45 26.69	3343.63	269.75	0.00
	12800.00	91.52	269.75	9481.54	3443.59	-14.93	-3443.56	606207.69	718466.04	N 32 39 54.69	W 103 45 27.86	3443.59	269.75	0.00
	12900.00	91.52	269.75	9478.88	3543.56	-15.36	-3543.52	606207.26	718366.08	N 32 39 54.69	W 103 45 29.03	3543.56	269.75	0.00
	13000.00	91.52	269.75	9476.22	3643.52	-15.79	-3643.49	606206.83	718266.13	N 32 39 54.69	W 103 45 30.20	3643.52	269.75	0.00
	13100.00	91.52	269.75	9473.57	3743.48	-16.22	-3743.45	606206.40	718166.17	N 32 39 54.69	W 103 45 31.37	3743.48	269.75	0.00
	13200.00	91.52	269.75	9470.91	3843.45	-16.65	-3843.41	606205.97	718066.21	N 32 39 54.69	W 103 45 32.54	3843.45	269.75	0.00
	13300.00	91.52	269.75	9468.25	3943.41	-17.08	-3943.38	606205.54	717966.25	N 32 39 54.69	W 103 45 33.71	3943.41	269.75	0.00
	13400.00	91.52	269.75	9465.59	4043.38	-17.51	-4043.34	606205.11	717866.29	N 32 39 54.69	W 103 45 34.88	4043.38	269.75	0.00
	13500.00	91.52	269.75	9462.93	4143.34	-17.94	-4143.30	606204.68	717766.34	N 32 39 54.69	W 103 45 36.04	4143.34	269.75	0.00
	13600.00	91.52	269.75	9460.27	4243.31	-18.37	-4243.27	606204.25	717666.38	N 32 39 54.70	W 103 45 37.21	4243.31	269.75	0.00
	13700.00	91.52	269.75	9457.61	4343.27	-18.80	-4343.23	606203.82	717566.42	N 32 39 54.70	W 103 45 38.38	4343.27	269.75	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)
	13800.00	91.52	269.75	9454.95	4443.24	-19.22	-4443.20	606203.40	717466.46	N 32 39 54.70	W 103 45 39.55	4443.24	269.75	0.00
	13900.00	91.52	269.75	9452.29	4543.20	-19.65	-4543.16	606202.97	717366.50	N 32 39 54.70	W 103 45 40.72	4543.20	269.75	0.00
Cimarex East Lusk 15 Federal Com #4H - PBHL	13986.11	91.52	269.75	9450.00	4629.28	-20.02	-4629.24	606202.60	717280.43	N 32 39 54.70	W 103 45 41.73	4629.28	269.75	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	13986.109		1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex East Lusk 15 Federal Com #4H Rev0

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

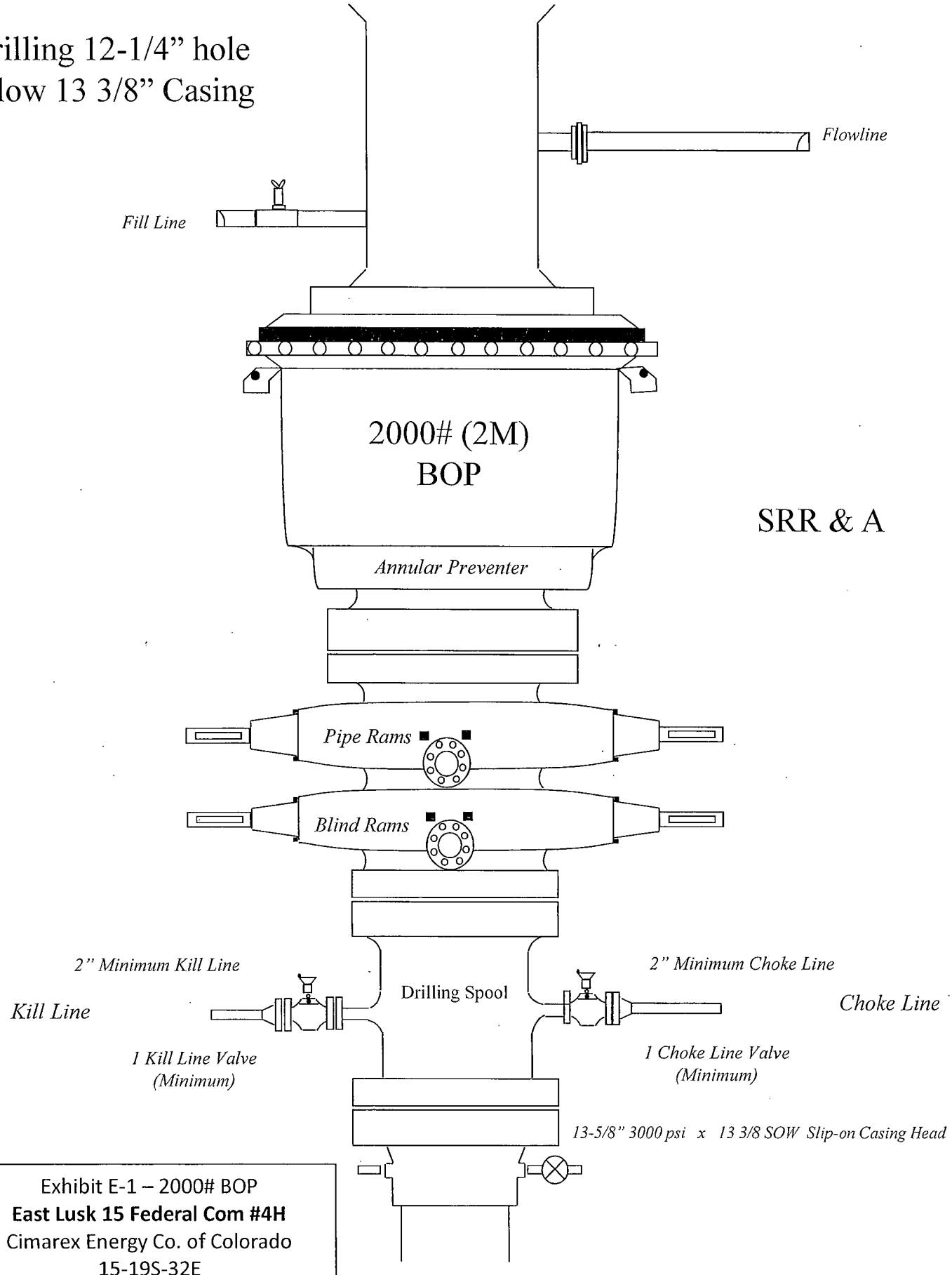
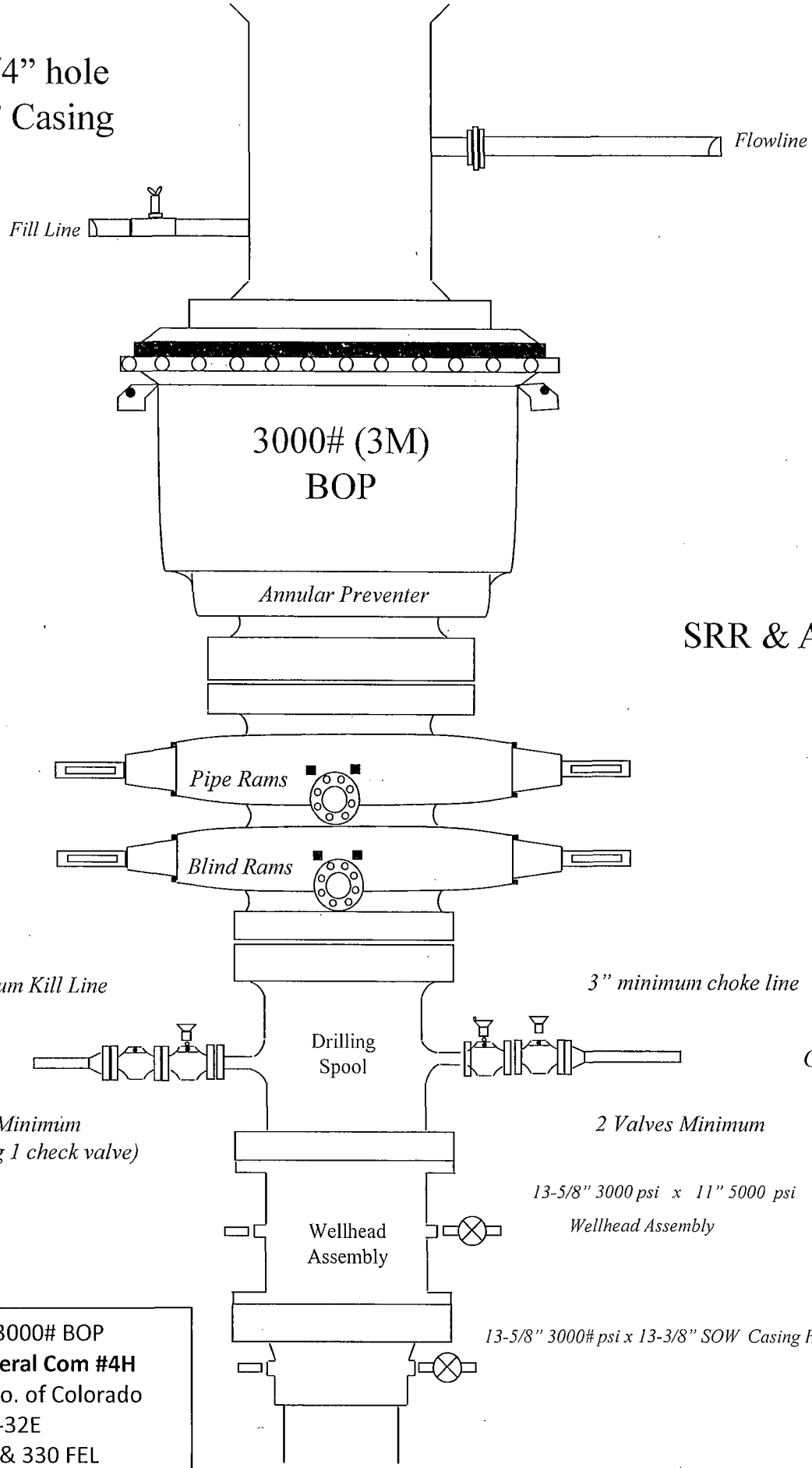


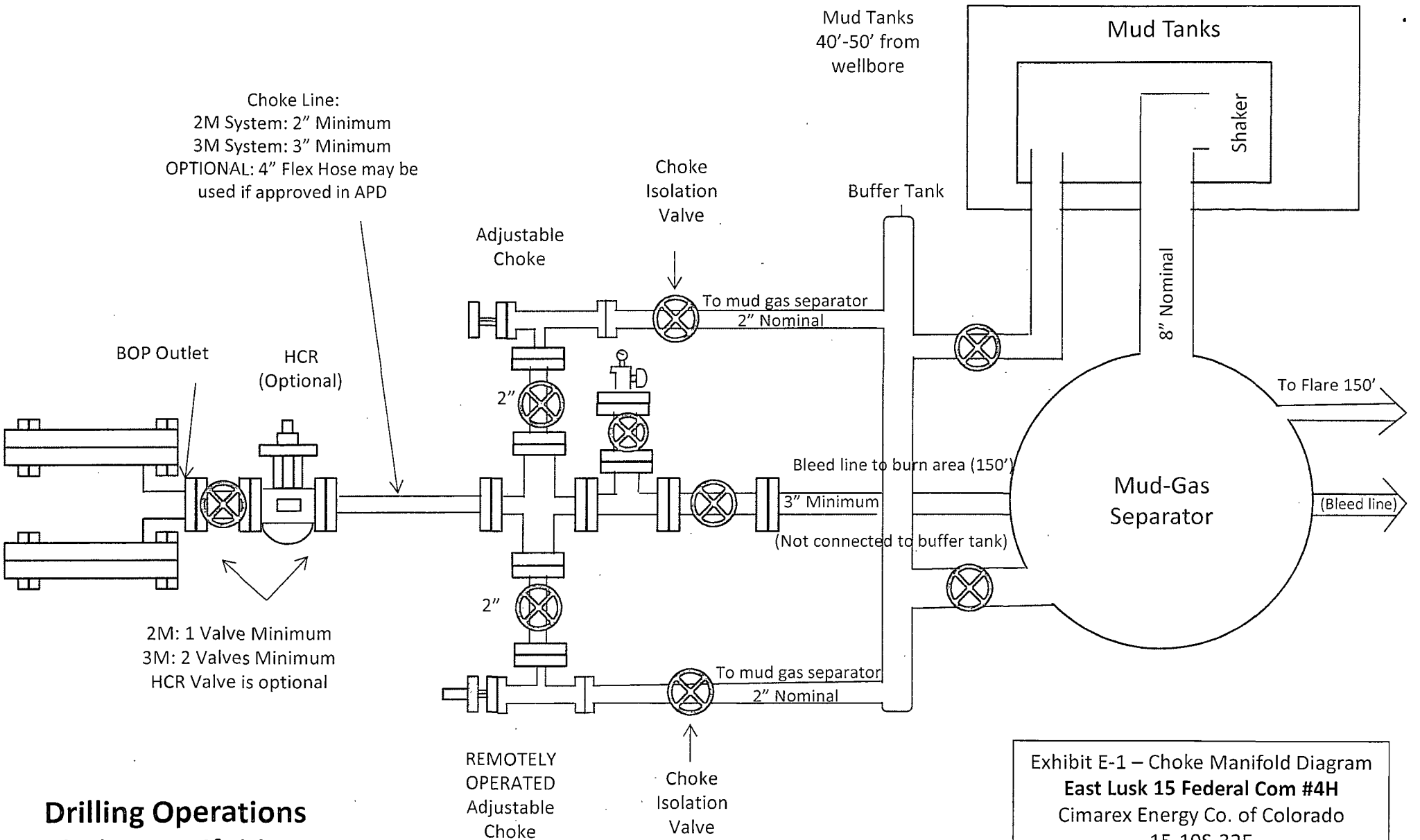
Exhibit E-1 – 2000# BOP
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 FWL
Lea County, NM

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



SRR & A

Exhibit E-1 – 3000# BOP
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 FWL
Lea County, NM



Drilling Operations
Choke Manifold
2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 FWL
Lea County, NM

Exhibit F – Co-Flex Hose

East Lusk 15 Federal Com #4H

Cimarex Energy Co. of Colorado

15-19S-32E

SHL 900 FNL & 330 FEL

BHL 900 FNL & 330 FWL

Lea County, NM

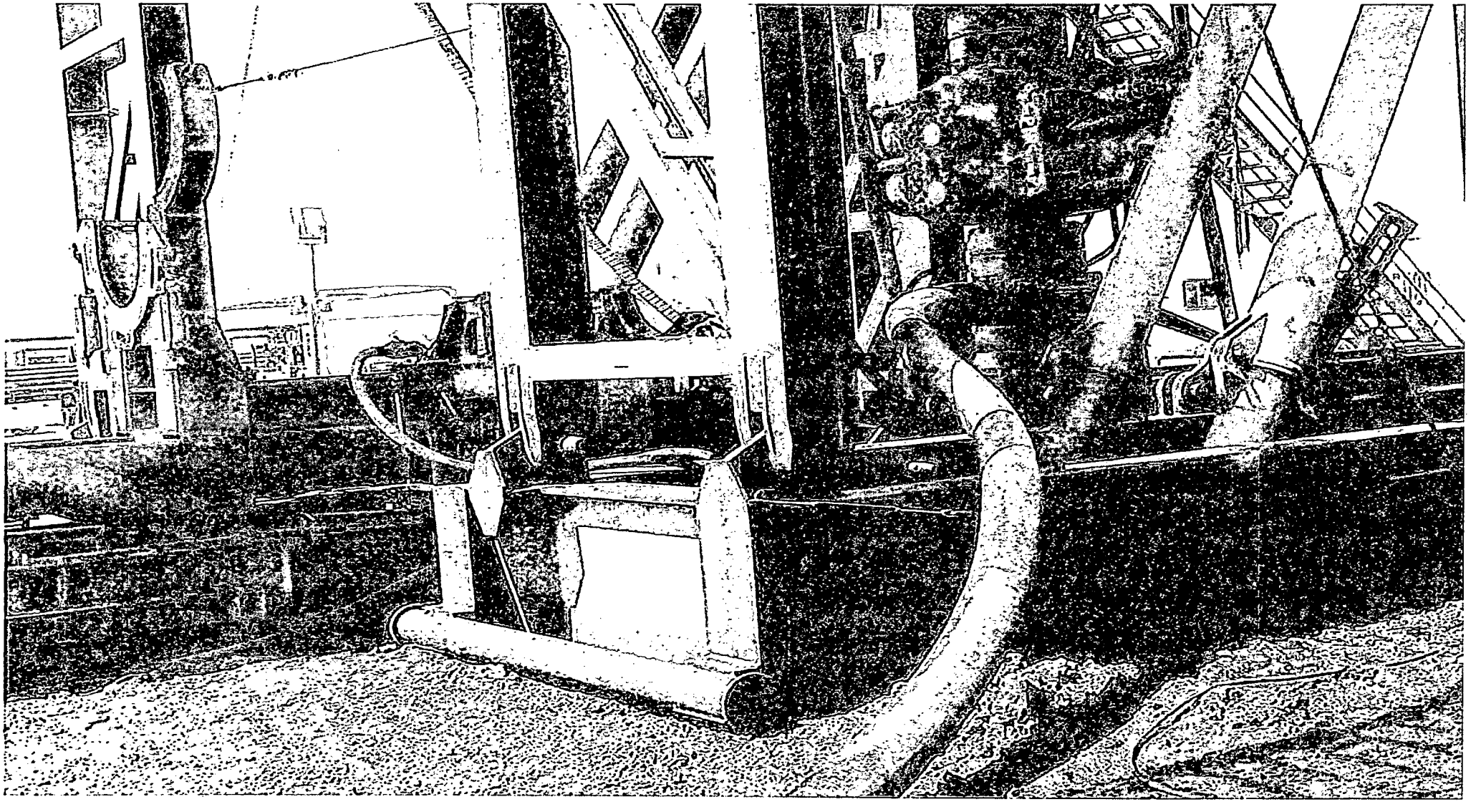


Exhibit F-1 – Co-Flex Hose Hydrostatic Test
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 FWL
Lea County, NM

Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	P.O. Number:
Oderco Inc	odyd-271

HOSE SPECIFICATIONS

Type:	Hose Length:
Stainless Steel Armor Choke & Kill Hose	45'ft.

I.D.	O.D.
4 INCHES	9 INCHES

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 PSI	15,000 PSI	0 PSI

COUPLINGS

Stem Part No.	Ferrule No.
OKC OKC	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:	Hose Serial Number:
79793	OKC

Comments:

Date:	Tested:	Approved:
3/8/2011		

Midwest Hose & Specialty, Inc.

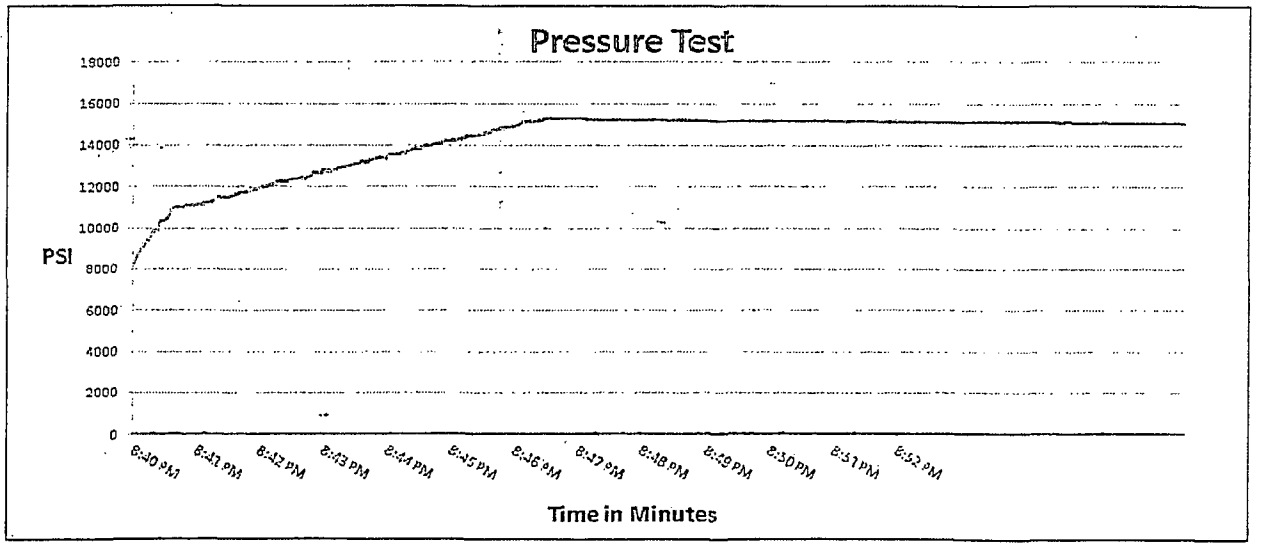
Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

Pick Ticket #: 94260

Hose Specifications		Verification	
Hose Type	Length	Type of Fitting	Coupling Method
C & K	45'	4 1/16 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



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*

Exhibit F-1 – Co-Flex Hose Hydrostatic Test
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 FWL
Lea County, NM

Exhibit F-2 – Co-Flex Hose
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 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 cerify 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: Jarod Garcia	**Date:** 3/8/2011

Midwest Hose & Specialty, Inc.

Exhibit F -3– Co-Flex Hose
East Lusk 15 Federal Com #4H
Cimarex Energy Co. of Colorado
15-19S-32E
SHL 900 FNL & 330 FEL
BHL 900 FNL & 330 FWL
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 vermculite 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, unibolt 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)

P.O. Box 96558 – 1421 S.E. 29th St. Oklahoma City, OK 73143 * (405) 670-6718 * Fax: (405) 670-6816

BEGINNING AT THE INTERSECTION OF HIGHWAY 180 AND BUFFALO GRASS ROAD LOCATED IN THE SW 1/4 OF SECTION 36, T20S, R31E, N.M.P.M. PROCEED IN NORTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 3.8 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 126A TO THE NORTH; TURN LEFT AND PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 6.1 MILES TO THE JUNCTION OF THIS ROAD AND COUNTY ROAD 126 TO THE EAST; TURN RIGHT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 2.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTH; PROCEED IN A NORTHERLY DIRECTION APPROXIMATELY 0.2 MILES TO THE EXISTING EAST LUSK 15 FEDERAL COM 3H AND THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTH; FOLLOW ROAD FLAGS IN A NORTHERLY DIRECTION APPROXIMATELY 1,079' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM INTERSECTION OF HIGHWAY 180 AND BUFFALO GRASS ROAD TO THE PROPOSED LOCATION IS APPROXIMATELY 13.2 MILES.

DRAWN BY: L.S.	REVISED: 00-00-00	
DATE DRAWN: 12-06-13		

UINTAH ENGINEERING & LAND SURVEYING
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

CIMAREX ENERGY CO.

EAST LUSK 15 FEDERAL COM #4H
SECTION 15, T19S, R32E, N.M.P.M.
900' FNL 330' FEL

ROAD DESCRIPTION | EXHIBIT J