

OCD Hobbs

Form 3160-3
(March 2012)**UNORTHODOX
LOCATION**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 20145. Lease Serial No.
SHLABHL: NMNM85939

6. If Indian, Allottee or Tribe Name

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

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

8. Lease Name and Well No.

Colibri Federal #27H

2. Name of Operator

Cimarex Energy Co.

9. API Well No.

30-024-42184

3a. Address

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

3b. Phone No. (include area code)

918-585-1100

10. Field and Pool, or Exploratory

DIAMOND TAIL; B-5

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

At Surface 170 FNL & 865 FEL (A)

At proposed prod. Zone 330 FSL & 440 FEL (P)

Bone Spring

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

10, 23s, 32e

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

Malaga NM is 25.3 miles southwesterly

12. County or Parish

13. State

lea

NM

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

170

16. No of acres in lease

NMNM85939=640.00 acres

17. Spacing Unit dedicated to this well

160.00

HOBBS OCD

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

30' to the
#26H19. Proposed Depth
Pilot Hole TD: N/A

14,290 MD

9,700 TVD

20. BLM/BIA Bond No. on File

NM2575; NMB000835

OCT 14 2014

RECEIVED

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

3710 GR

22. Approximate date work will start*

7/28/14

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:

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

25. Signature

Aricka Easterling

Name (Printed/Typed)

Aricka Easterling

Date

3/19/14

Title

Regulatory Compliance

Approved By

Steve Caffey

Name (Printed/Typed)

CARLSBAD FIELD OFFICE

Date

OCT - 8 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)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations AttachedSEE ATTACHED FOR
CONDITIONS OF APPROVAL
OCT 15 2014

Application to Drill
Colibri Federal #27H
 Cimarex Energy Co.
 UL: A, Sec. 10, 23s, 32e
 Lea Co., NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1. Location: SHL 170 FNL & 865 FEL
 BHL 330 FSL & 440 FEL

2. Elevation Above Sea Level: 3,710' 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: 14,290 MD 9,700 TVD Pilot Hole TD: N/A

6. Estimated Tops of Geological Markers:

Formation	Est Top	Bearing
Rustler	1160	N/A
Salt	1340	N/A
Castille	3450	N/A
Base Salt	4600	N/A
Lamar	4840	N/A
Bell Canyon	4880	N/A
Cherry Canyon	7025	N/A
Brushy Canyon	7180	N/A
Basal Brushy Canyon	8500	N/A
Bone Spring	8725	Hydrocarbons
Avalon Shale	9490	Hydrocarbons
1st BSS	9885	Hydrocarbons

7. Possible Mineral Bearing Formation: Shown above

7A. OSE Ground Water Estimated Depth: 475'

8. Casing Program:

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	1210	1210	17 1/2	13-3/8"	48.00	H-40	ST&C	New	553	8.8	1.34		3.12	58,080	50,277	6.40
Intermediate	0	4860	4860	12 1/4	9-5/8"	36.00	J-55	LT&C	New	2552	10.1		1.19	1.38	174,960	147,981	3.06
Production	0	9223	9223	8 3/4	5-1/2"	17.00	L-80	LT&C	New	4412	9.2	1.43		1.75	164,900	141,738	2.38
Production	9223	14290	9700	8 3/4	5-1/2"	17.00	L-80	BT&C	New	4640	9.2	1.36		1.67	8,109	6,970	56.96

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.

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8A. Casing Design and Casing Loading Assumptions:

Surface	Tension	A 1.8 design factor with effects of buoyancy: 8.80 ppg.
	Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to a 8.80 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: 10.10 ppg.
	Collapse	A 1.125 design factor evacuated 1/3 TVD of next casing string with a collapse force equal to a 10.10 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: 9.20 ppg.
	Collapse	A 1.125 design factor with full internal evacuation of next casing string with a collapse force equal to a 9.20 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	576	1.75	13.50	1008	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	157	1.34	14.80	210	Class C + LCM, 6.32 gps water
	TOC: 0	45% Excess				Centralizers per Onshore Order 2.III.B.1f
Intermediate <i>See COA</i>	Lead	872	1.88	12.90	1638	35:65 (poz/C) + Salt + Bentonite + LCM + retarder, 9.65 gps water
	Tail	284	1.34	14.80	380	Class C + retarder + LCM, 6.32 gps water
	TOC: 0	44% Excess				
Production <i>See COA</i>	Lead	530	2.40	11.90	1271	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1248	1.24	14.50	1547	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 4660	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

9a. Proposed Drilling Plan:

Pilot Hole TD: No Pilot KOP: 9,223' EOC: 9,973'

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

10. Pressure Control Equipment:

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

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

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

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

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.

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See COA
11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1210'	8.30 - 8.80	28	NC	FW Spud Mud
1210' to 4860'	9.60 - 10.10	30-32	NC	Brine Water
4860' to 14290'	8.70 - 9.20	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 4860 to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL /GR -- Inter. Csg to TD
CNL /GR -- Surf to Inter. Csg
- C. No DSTs or cores are planned at this time
- D. CBL w/ CCL from as far as gravity will let it fall to TOC

See COA
13. Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP: 4365 psi

Estimated BHT: 158°

14. Construction and Drilling:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take: 35 days.

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15. Other Facets of Operations:

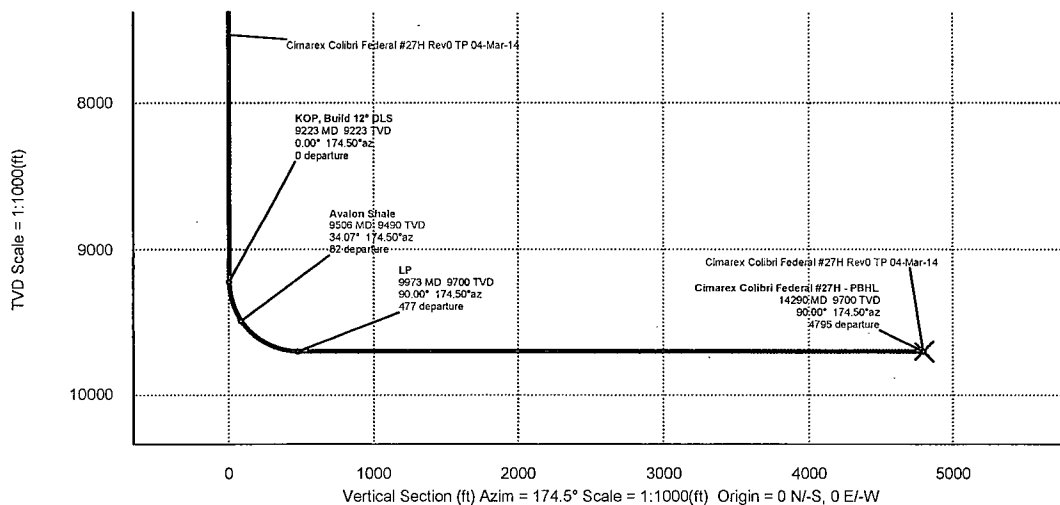
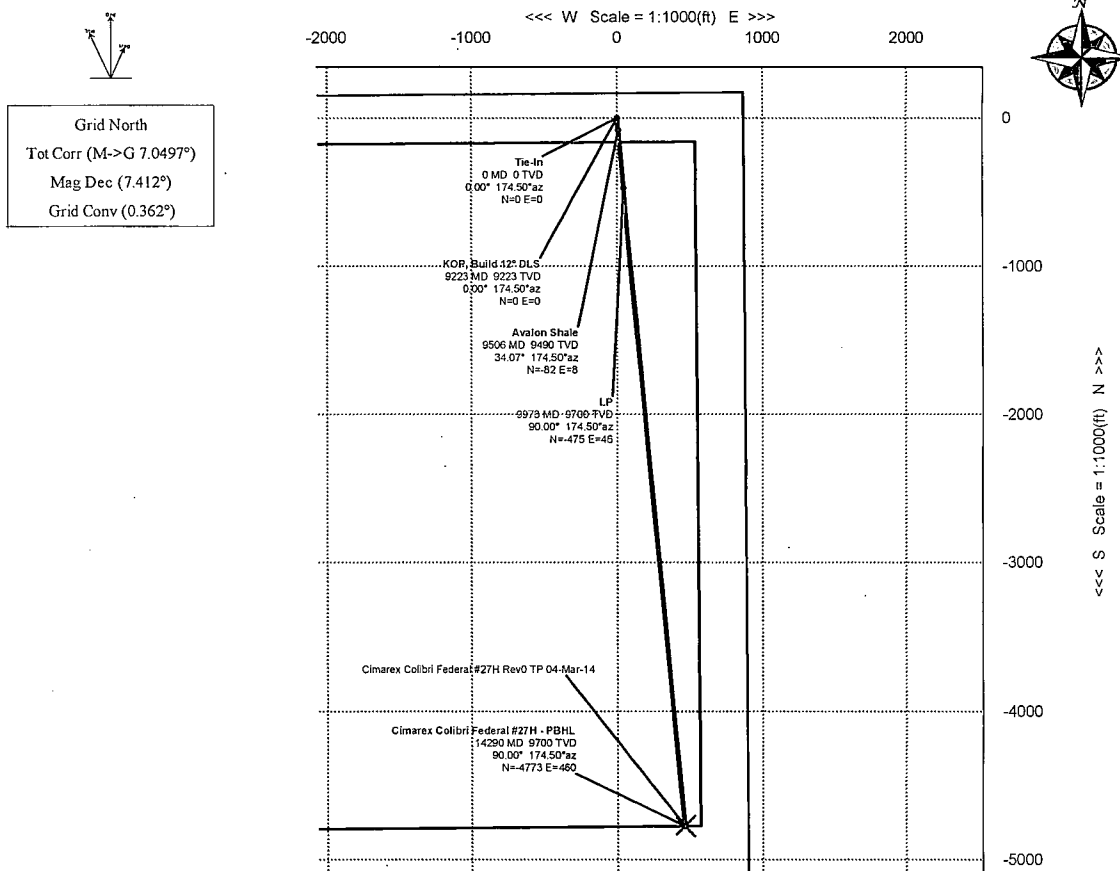
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

Bone Spring pay will be perforated and stimulated.

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



WELL	Colibri Federal #27H		FIELD	NM Lea County (NAD 83)		STRUCTURE	Cimarex Colibri Federal #27H	
Magnetic Parameters	Dip	60.185°	Date	March 04, 2014	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous	
Model	BOGM 2013	Mag Dec: 7.412°	FS	48374.8mT	Lat	N 32 19 33.478	Site	Colibri Federal #27H
					Lon	W 103 39 24.408	Plan	Cimarex Colibri Federal #27H-04Mar-14
					Northings	482978.48 NUB		
					Eastings	750317.90 NUB		
						Scale Fact: 0.9995911		
						Grid Conv: 0.362°		



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	174.50	0.00	0.00	0.00	0.00	
KOP, Build 12° DLS	9222.54	0.00	174.50	9222.54	0.00	0.00	0.00	0.00
Avalon Shale	9506.44	34.07	174.50	9490.00	81.95	-81.57	7.86	12.00
LP	9972.54	90.00	174.50	9700.00	477.46	-475.26	45.80	12.00
Cimarex Colibri Federal #27H - PBHL	14290.01	90.00	174.50	9700.00	4794.94	-4772.83	459.93	0.00



A Schlumberger Company

Cimarex Colibri Federal #27H Rev0 TP 04-Mar-14 Proposal Report

(Non-Def Plan)

Report Date: March 04, 2014 - 02:07 PM
 Client:
 Field: NM Lea County (NAD 83)
 Structure / Slot: Cimarex Colibri Federal #27H / Colibri Federal #27H
 Well: Colibri Federal #27H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Colibri Federal #27H Rev0 TP 04-Mar-14
 Survey Date: March 04, 2014
 Tort / AHD / DDI / ERD Ratio: 90.000 ° / 4794.944 ft / 5.803 / 0.494
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 19' 33.47848", W 103° 39' 24.40558"
 Location Grid N/E Y/X: N 482978.490 ftUS, E 750317.900 ftUS
 CRS Grid Convergence Angle: 0.3618 °
 Grid Scale Factor: 0.99995911

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 174.496 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: Unknown
 TVD Reference Elevation: 3710.000 ft above MSL
 Seabed / Ground Elevation: 3710.000 ft above MSL
 Magnetic Declination: 7.412 °
 Total Field Strength: 48374.784 nT
 Magnetic Dip Angle: 60.185 °
 Declination Date: March 04, 2014
 Magnetic Declination Model: BGGM 2013
 North Reference: Grid North
 Grid Convergence Used: 0.3618 °
 Total Corr Mag North->Grid North: 7.0497 °
 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	174.50	0.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	N/A
	100.00	0.00	174.50	100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	200.00	0.00	174.50	200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	300.00	0.00	174.50	300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	400.00	0.00	174.50	400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	500.00	0.00	174.50	500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	600.00	0.00	174.50	600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	700.00	0.00	174.50	700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	800.00	0.00	174.50	800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	900.00	0.00	174.50	900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1000.00	0.00	174.50	1000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1100.00	0.00	174.50	1100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1200.00	0.00	174.50	1200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1300.00	0.00	174.50	1300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1400.00	0.00	174.50	1400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1500.00	0.00	174.50	1500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1600.00	0.00	174.50	1600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1700.00	0.00	174.50	1700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1800.00	0.00	174.50	1800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	1900.00	0.00	174.50	1900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2000.00	0.00	174.50	2000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2100.00	0.00	174.50	2100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2200.00	0.00	174.50	2200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2300.00	0.00	174.50	2300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2400.00	0.00	174.50	2400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2500.00	0.00	174.50	2500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2600.00	0.00	174.50	2600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2700.00	0.00	174.50	2700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2800.00	0.00	174.50	2800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	2900.00	0.00	174.50	2900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3000.00	0.00	174.50	3000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3100.00	0.00	174.50	3100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3200.00	0.00	174.50	3200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	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)
	3300.00	0.00	174.50	3300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3400.00	0.00	174.50	3400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3500.00	0.00	174.50	3500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3600.00	0.00	174.50	3600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3700.00	0.00	174.50	3700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3800.00	0.00	174.50	3800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	3900.00	0.00	174.50	3900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4000.00	0.00	174.50	4000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4100.00	0.00	174.50	4100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4200.00	0.00	174.50	4200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4300.00	0.00	174.50	4300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4400.00	0.00	174.50	4400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4500.00	0.00	174.50	4500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4600.00	0.00	174.50	4600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4700.00	0.00	174.50	4700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4800.00	0.00	174.50	4800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	4900.00	0.00	174.50	4900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5000.00	0.00	174.50	5000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5100.00	0.00	174.50	5100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5200.00	0.00	174.50	5200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5300.00	0.00	174.50	5300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5400.00	0.00	174.50	5400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5500.00	0.00	174.50	5500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5600.00	0.00	174.50	5600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5700.00	0.00	174.50	5700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5800.00	0.00	174.50	5800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	5900.00	0.00	174.50	5900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6000.00	0.00	174.50	6000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6100.00	0.00	174.50	6100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6200.00	0.00	174.50	6200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6300.00	0.00	174.50	6300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6400.00	0.00	174.50	6400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6500.00	0.00	174.50	6500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6600.00	0.00	174.50	6600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6700.00	0.00	174.50	6700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6800.00	0.00	174.50	6800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	6900.00	0.00	174.50	6900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7000.00	0.00	174.50	7000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7100.00	0.00	174.50	7100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7200.00	0.00	174.50	7200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7300.00	0.00	174.50	7300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7400.00	0.00	174.50	7400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7500.00	0.00	174.50	7500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7600.00	0.00	174.50	7600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7700.00	0.00	174.50	7700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7800.00	0.00	174.50	7800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	7900.00	0.00	174.50	7900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8000.00	0.00	174.50	8000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8100.00	0.00	174.50	8100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8200.00	0.00	174.50	8200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8300.00	0.00	174.50	8300.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8400.00	0.00	174.50	8400.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8500.00	0.00	174.50	8500.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8600.00	0.00	174.50	8600.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8700.00	0.00	174.50	8700.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	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)
	8800.00	0.00	174.50	8800.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	8900.00	0.00	174.50	8900.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	9000.00	0.00	174.50	9000.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	9100.00	0.00	174.50	9100.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	9200.00	0.00	174.50	9200.00	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
KOP, Build 12" DLS	9222.54	0.00	174.50	9222.54	0.00	0.00	0.00	482978.49	750317.90	N 32 19 33.48	W 103 39 24.41	0.00	0.00	0.00
	9300.00	9.30	174.50	9299.66	6.27	-6.24	0.60	482972.25	750318.50	N 32 19 33.42	W 103 39 24.40	6.27	174.50	12.00
	9400.00	21.30	174.50	9395.94	32.60	-32.45	3.13	482946.04	750321.03	N 32 19 33.16	W 103 39 24.37	32.60	174.50	12.00
Avalon Shale	9500.00	33.30	174.50	9484.64	78.38	-78.02	7.52	482900.48	750325.42	N 32 19 32.71	W 103 39 24.32	78.38	174.50	12.00
	9506.44	34.07	174.50	9490.00	81.95	-81.57	7.86	482896.93	750325.76	N 32 19 32.67	W 103 39 24.32	81.95	174.50	12.00
	9600.00	45.30	174.50	9561.89	141.59	-140.94	13.58	482837.56	750331.48	N 32 19 32.08	W 103 39 24.26	141.59	174.50	12.00
	9700.00	57.30	174.50	9624.31	219.49	-218.48	21.05	482760.02	750338.95	N 32 19 31.32	W 103 39 24.18	219.49	174.50	12.00
	9800.00	69.30	174.50	9669.16	308.66	-307.24	29.61	482671.27	750347.51	N 32 19 30.44	W 103 39 24.08	308.66	174.50	12.00
LP	9900.00	81.30	174.50	9694.50	405.21	-403.34	38.87	482575.17	750356.77	N 32 19 29.49	W 103 39 23.98	405.21	174.50	12.00
	9972.54	90.00	174.50	9700.00	477.46	-475.26	45.80	482503.25	750363.70	N 32 19 28.77	W 103 39 23.91	477.46	174.50	12.00
	10000.00	90.00	174.50	9700.00	504.93	-502.60	48.43	482475.91	750366.33	N 32 19 28.50	W 103 39 23.88	504.93	174.50	0.00
	10100.00	90.00	174.50	9700.00	604.93	-602.14	58.02	482376.38	750375.92	N 32 19 27.52	W 103 39 23.77	604.93	174.50	0.00
	10200.00	90.00	174.50	9700.00	704.93	-701.68	67.62	482276.84	750385.51	N 32 19 26.53	W 103 39 23.67	704.93	174.50	0.00
	10300.00	90.00	174.50	9700.00	804.93	-801.22	77.21	482177.31	750395.11	N 32 19 25.55	W 103 39 23.56	804.93	174.50	0.00
	10400.00	90.00	174.50	9700.00	904.93	-900.76	86.80	482077.77	750404.70	N 32 19 24.56	W 103 39 23.46	904.93	174.50	0.00
	10500.00	90.00	174.50	9700.00	1004.93	-1000.30	96.39	481978.24	750414.29	N 32 19 23.57	W 103 39 23.36	1004.93	174.50	0.00
	10600.00	90.00	174.50	9700.00	1104.93	-1099.83	105.98	481878.70	750423.88	N 32 19 22.59	W 103 39 23.25	1104.93	174.50	0.00
	10700.00	90.00	174.50	9700.00	1204.93	-1199.37	115.58	481779.17	750433.47	N 32 19 21.60	W 103 39 23.15	1204.93	174.50	0.00
	10800.00	90.00	174.50	9700.00	1304.93	-1298.91	125.17	481679.63	750443.06	N 32 19 20.62	W 103 39 23.04	1304.93	174.50	0.00
	10900.00	90.00	174.50	9700.00	1404.93	-1398.45	134.76	481580.10	750452.65	N 32 19 19.63	W 103 39 22.94	1404.93	174.50	0.00
	11000.00	90.00	174.50	9700.00	1504.93	-1497.99	144.35	481480.56	750462.25	N 32 19 18.65	W 103 39 22.83	1504.93	174.50	0.00
	11100.00	90.00	174.50	9700.00	1604.93	-1597.53	153.94	481381.03	750471.84	N 32 19 17.66	W 103 39 22.73	1604.93	174.50	0.00
	11200.00	90.00	174.50	9700.00	1704.93	-1697.07	163.54	481281.49	750481.43	N 32 19 16.68	W 103 39 22.62	1704.93	174.50	0.00
	11300.00	90.00	174.50	9700.00	1804.93	-1796.61	173.13	481181.96	750491.02	N 32 19 15.69	W 103 39 22.52	1804.93	174.50	0.00
	11400.00	90.00	174.50	9700.00	1904.93	-1896.15	182.72	481082.43	750500.61	N 32 19 14.71	W 103 39 22.42	1904.93	174.50	0.00
	11500.00	90.00	174.50	9700.00	2004.93	-1995.69	192.31	480982.89	750510.20	N 32 19 13.72	W 103 39 22.31	2004.93	174.50	0.00
	11600.00	90.00	174.50	9700.00	2104.93	-2095.22	201.90	480883.36	750519.80	N 32 19 12.73	W 103 39 22.21	2104.93	174.50	0.00
	11700.00	90.00	174.50	9700.00	2204.93	-2194.76	211.50	480783.82	750529.39	N 32 19 11.75	W 103 39 22.10	2204.93	174.50	0.00
	11800.00	90.00	174.50	9700.00	2304.93	-2294.30	221.09	480684.29	750538.98	N 32 19 10.76	W 103 39 22.00	2304.93	174.50	0.00
	11900.00	90.00	174.50	9700.00	2404.93	-2393.84	230.68	480584.75	750548.57	N 32 19 9.78	W 103 39 21.89	2404.93	174.50	0.00
	12000.00	90.00	174.50	9700.00	2504.93	-2493.38	240.27	480485.22	750558.16	N 32 19 8.79	W 103 39 21.79	2504.93	174.50	0.00
	12100.00	90.00	174.50	9700.00	2604.93	-2592.92	249.86	480385.68	750567.75	N 32 19 7.81	W 103 39 21.68	2604.93	174.50	0.00
	12200.00	90.00	174.50	9700.00	2704.93	-2692.46	259.46	480286.15	750577.34	N 32 19 6.82	W 103 39 21.58	2704.93	174.50	0.00
	12300.00	90.00	174.50	9700.00	2804.93	-2792.00	269.05	480186.61	750586.94	N 32 19 5.84	W 103 39 21.48	2804.93	174.50	0.00
	12400.00	90.00	174.50	9700.00	2904.93	-2891.54	278.64	480087.08	750596.53	N 32 19 4.85	W 103 39 21.37	2904.93	174.50	0.00
	12500.00	90.00	174.50	9700.00	3004.93	-2991.07	288.23	479987.54	750606.12	N 32 19 3.86	W 103 39 21.27	3004.93	174.50	0.00
	12600.00	90.00	174.50	9700.00	3104.93	-3090.61	297.82	479888.01	750615.71	N 32 19 2.88	W 103 39 21.16	3104.93	174.50	0.00
	12700.00	90.00	174.50	9700.00	3204.93	-3190.15	307.42	479788.47	750625.30	N 32 19 1.89	W 103 39 21.06	3204.93	174.50	0.00
	12800.00	90.00	174.50	9700.00	3304.93	-3289.69	317.01	479688.94	750634.89	N 32 19 0.91	W 103 39 20.95	3304.93	174.50	0.00
	12900.00	90.00	174.50	9700.00	3404.93	-3389.23	326.60	479589.41	750644.49	N 32 18 59.92	W 103 39 20.85	3404.93	174.50	0.00
	13000.00	90.00	174.50	9700.00	3504.93	-3488.77	336.19	479489.87	750654.08	N 32 18 58.94	W 103 39 20.74	3504.93	174.50	0.00
	13100.00	90.00	174.50	9700.00	3604.93	-3588.31	345.78	479390.34	750663.67	N 32 18 57.95	W 103 39 20.64	3604.93	174.50	0.00
	13200.00	90.00	174.50	9700.00	3704.93	-3687.85	355.38	479290.80	750673.26	N 32 18 56.97	W 103 39 20.54	3704.93	174.50	0.00
	13300.00	90.00	174.50	9700.00	3804.93	-3787.39	364.97	479191.27	750682.85	N 32 18 55.98	W 103 39 20.43	3804.93	174.50	0.00
	13400.00	90.00	174.50	9700.00	3904.93	-3886.92	374.56	479091.73	750692.44	N 32 18 54.99	W 103 39 20.33	3904.93	174.50	0.00
	13500.00	90.00	174.50	9700.00	4004.93	-3986.46	384.15	478992.20	750702.04	N 32 18 54.01	W 103 39 20.22	4004.93	174.50	0.00
	13600.00	90.00	174.50	9700.00	4104.93	-4086.00	393.74	478892.66	750711.63	N 32 18 53.02	W 103 39 20.12	4104.93	174.50	0.00
	13700.00	90.00	174.50	9700.00	4204.93	-4185.54	403.34	478793.13	750721.22	N 32 18 52.04	W 103 39 20.01	4204.93	174.50	0.00
	13800.00	90.00	174.50	9700.00	4304.93	-4285.08	412.93	478693.59	750730.81	N 32 18 51.05	W 103 39 19.91	4304.93	174.50	0.00

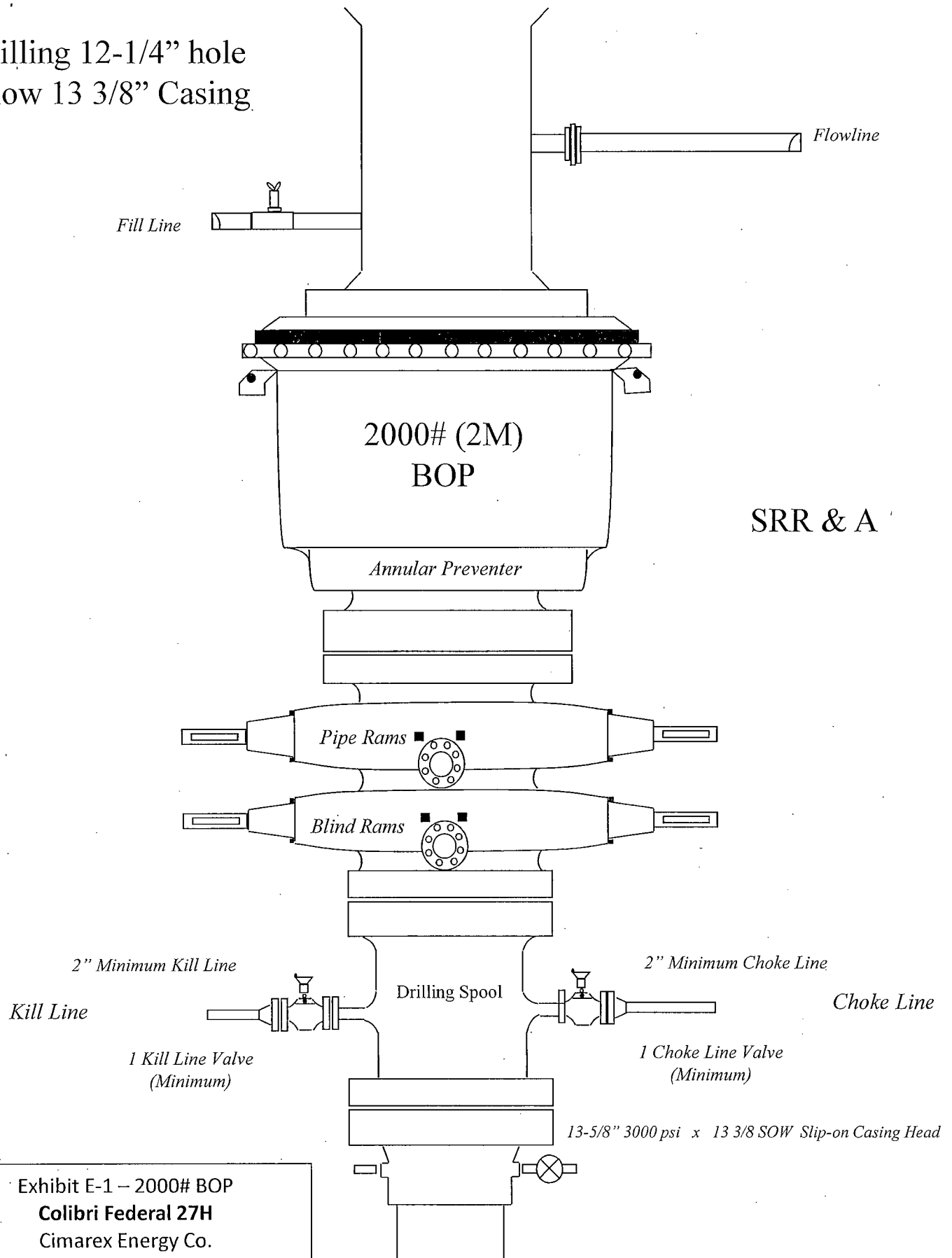
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	13900.00	90.00	174.50	9700.00	4404.93	-4384.62	422.52	478594.06	750740.40	N 32 18 50.07	W 103 39 19.80	4404.93	174.50	0.00
	14000.00	90.00	174.50	9700.00	4504.93	-4484.16	432.11	478494.52	750749.99	N 32 18 49.08	W 103 39 19.70	4504.93	174.50	0.00
	14100.00	90.00	174.50	9700.00	4604.93	-4583.70	441.70	478394.99	750759.58	N 32 18 48.10	W 103 39 19.60	4604.93	174.50	0.00
	14200.00	90.00	174.50	9700.00	4704.93	-4683.24	451.30	478295.46	750769.18	N 32 18 47.11	W 103 39 19.49	4704.93	174.50	0.00
Cimarex Colibri Federal #27H - PBHL	14290.01	90.00	174.50	9700.00	4794.94	-4772.83	459.93	478205.86	750777.81	N 32 18 46.22	W 103 39 19.40	4794.94	174.50	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	9506.436	1/100.000	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Colibri Federal #27H Rev0 TP 04-
	9506.436	14290.014	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Colibri Federal #27H Rev0 TP 04-

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



SRR & A

Exhibit E-1 – 2000# BOP
Colibri Federal 27H
Cimarex Energy Co.
10-23S-32E
SHL 170 FNL & 865 FEL
BHL 330 FSL & 440 FEL
Lea County, NM

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

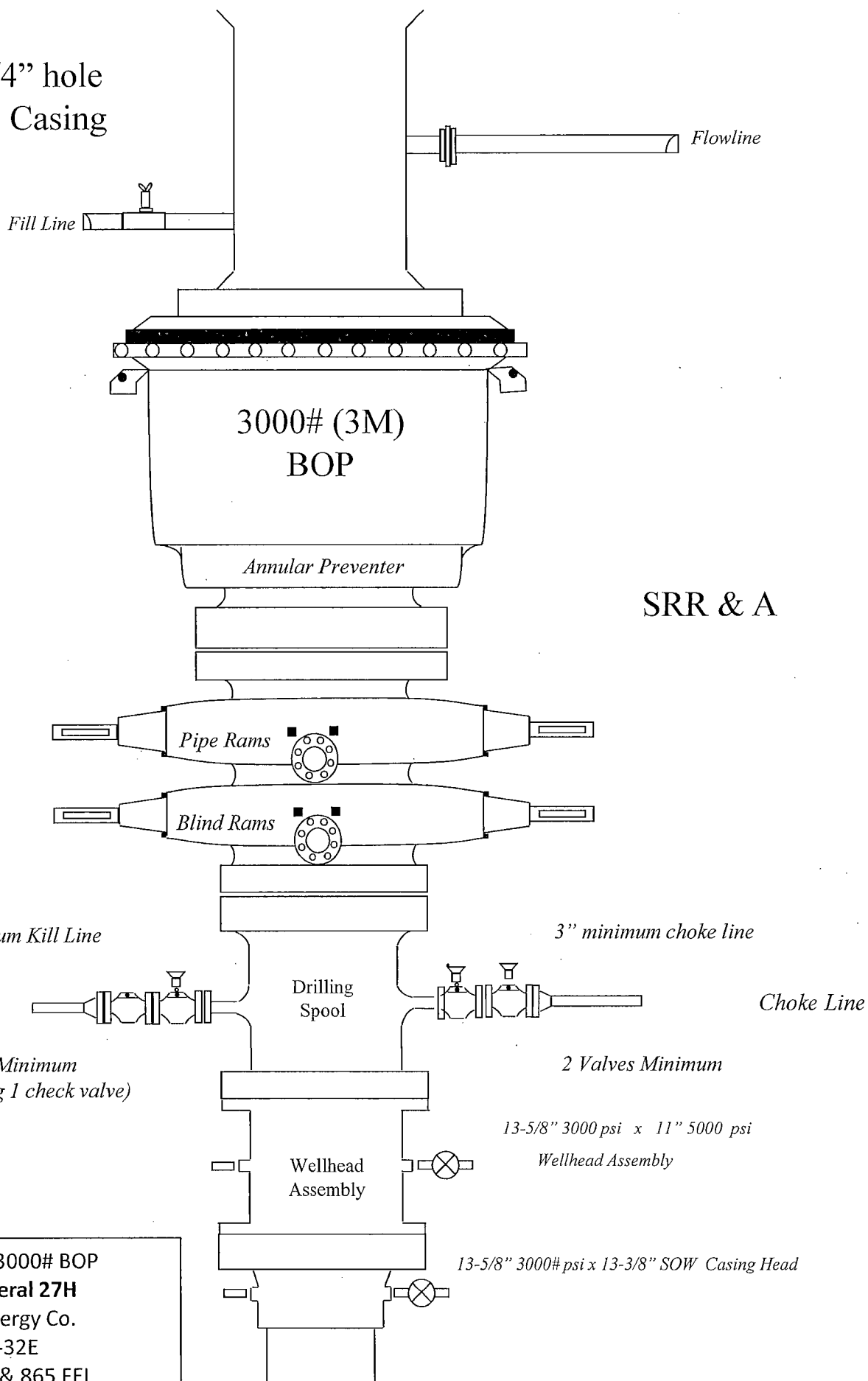
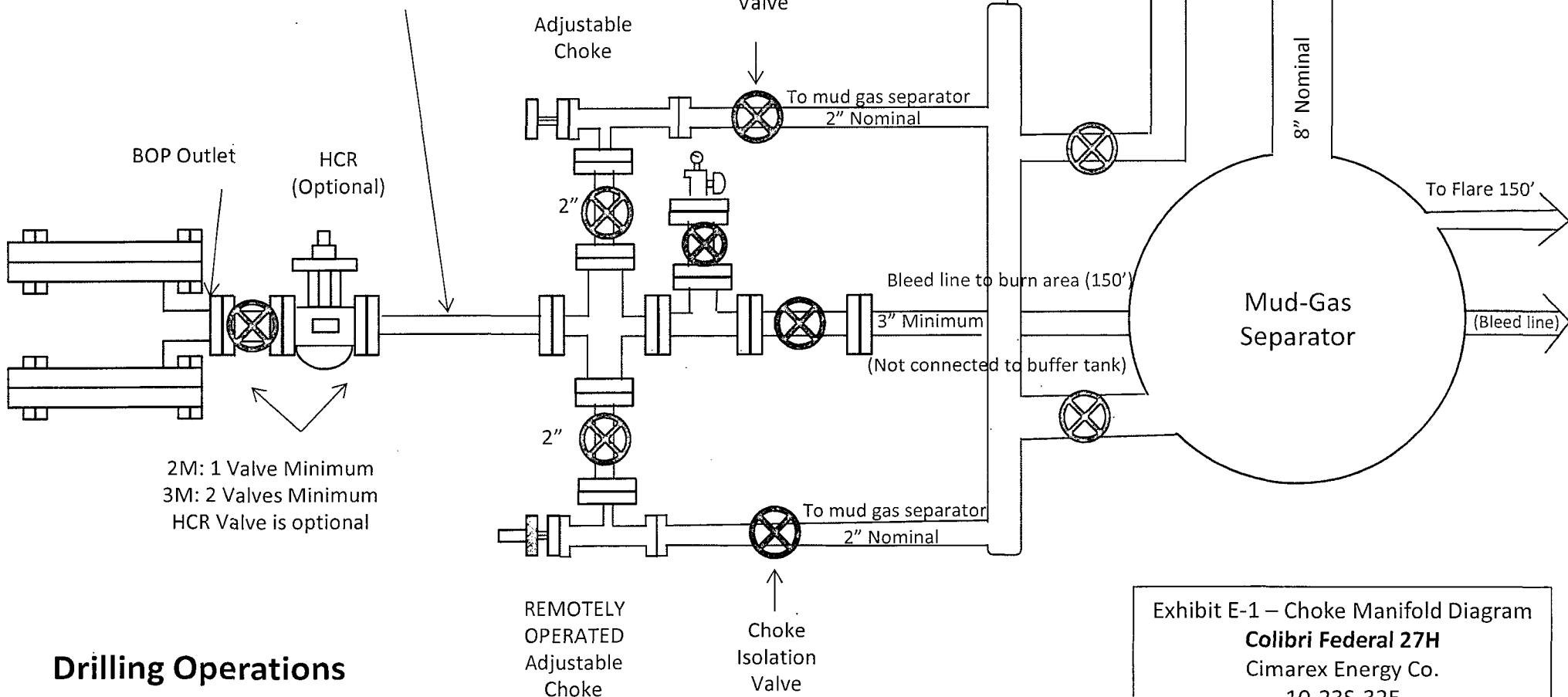


Exhibit E-1 – 3000# BOP
Colibri Federal 27H
Cimarex Energy Co.
10-23S-32E
SHL 170 FNL & 865 FEL
BHL 330 FSL & 440 FEL
Lea County, NM

Choke Line:
 2M System: 2" Minimum
 3M System: 3" Minimum
 OPTIONAL: 4" Flex Hose may be
 used if approved in APD



Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Colibri Federal 27H
 Cimarex Energy Co.
 10-23S-32E
 SHL 170 FNL & 865 FEL
 BHL 330 FSL & 440 FEL
 Lea County, NM

Exhibit F-1 – Co-Flex Hose Hydrostatic Test

Colibri Federal 27H

Cimarex Energy Co.

10-23S-32E

SHL 170 FNL & 865 FEL

BHL 330 FSL & 440 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

TEST PRESSURE

BURST PRESSURE

10,000 PSI

15,000 PSI

0 PSI

COUPLINGS

Stem Part No.

OKC

OKC

Ferrule No.

OKC

OKC

Type of Coupling:

Swage-It

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE

ACTUAL BURST PRESSURE:

15 MIN.

0 PSI

Hose Assembly Serial Number:

79793

Hose Serial Number:

OKC

Comments:

Date:

3/8/2011

Tested:

Approved:

Exhibit F-2 – Co-Flex Hose

Colibri Federal 27H

Cimarex Energy Co.

10-23S-32E

SHL 170 FNL & 865 FEL

BHL 330 FSL & 440 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:

David Garcia

Date:

3/8/2011



Exhibit F -3- Co-Flex Hose
Colibri Federal 27H
Cimarex Energy Co.
10-23S-32E
SHL 170 FNL & 865 FEL
BHL 330 FSL & 440 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)

Exhibit F – Co-Flex Hose

Colibri Federal 27H

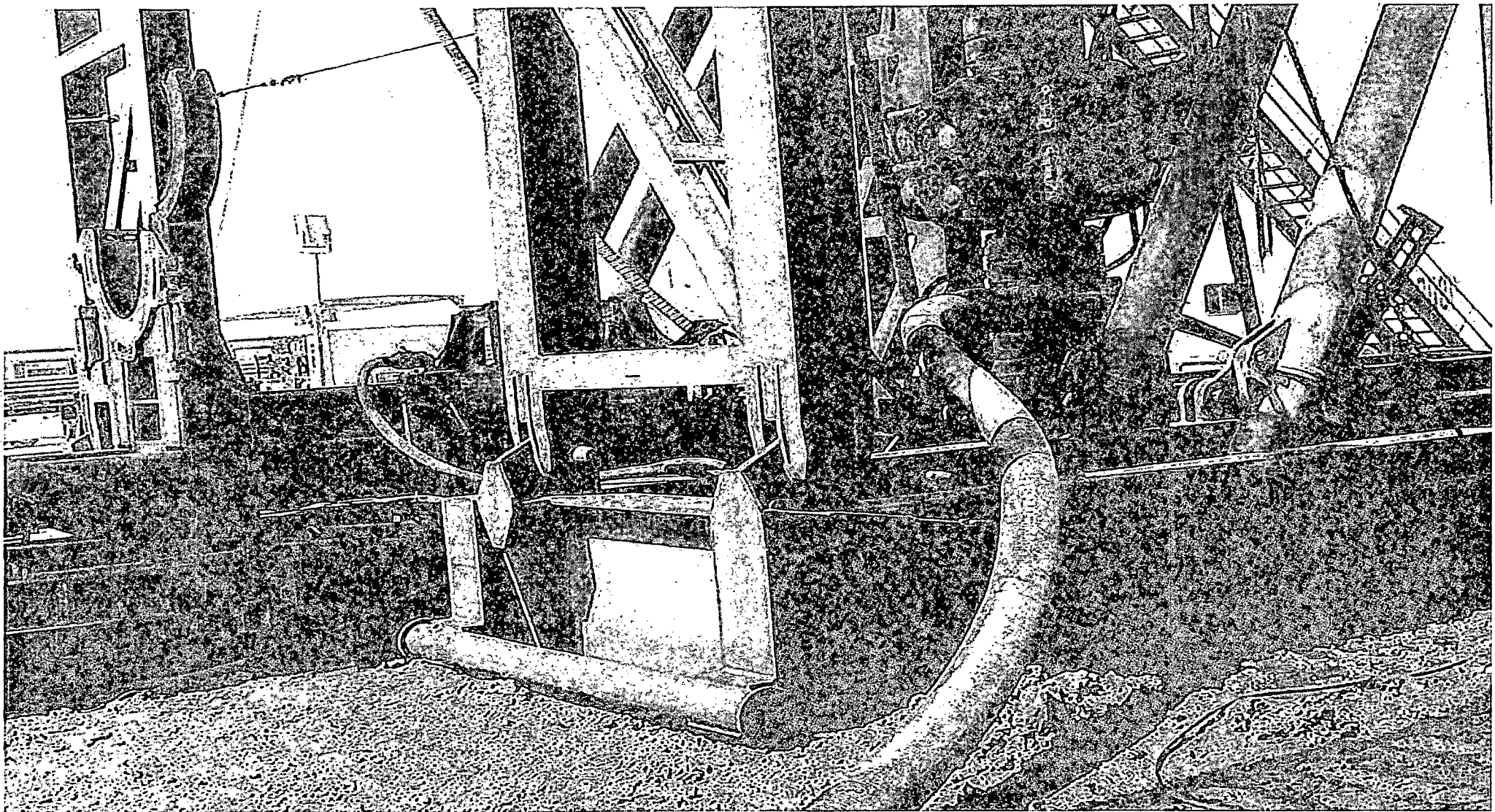
Cimarex Energy Co.

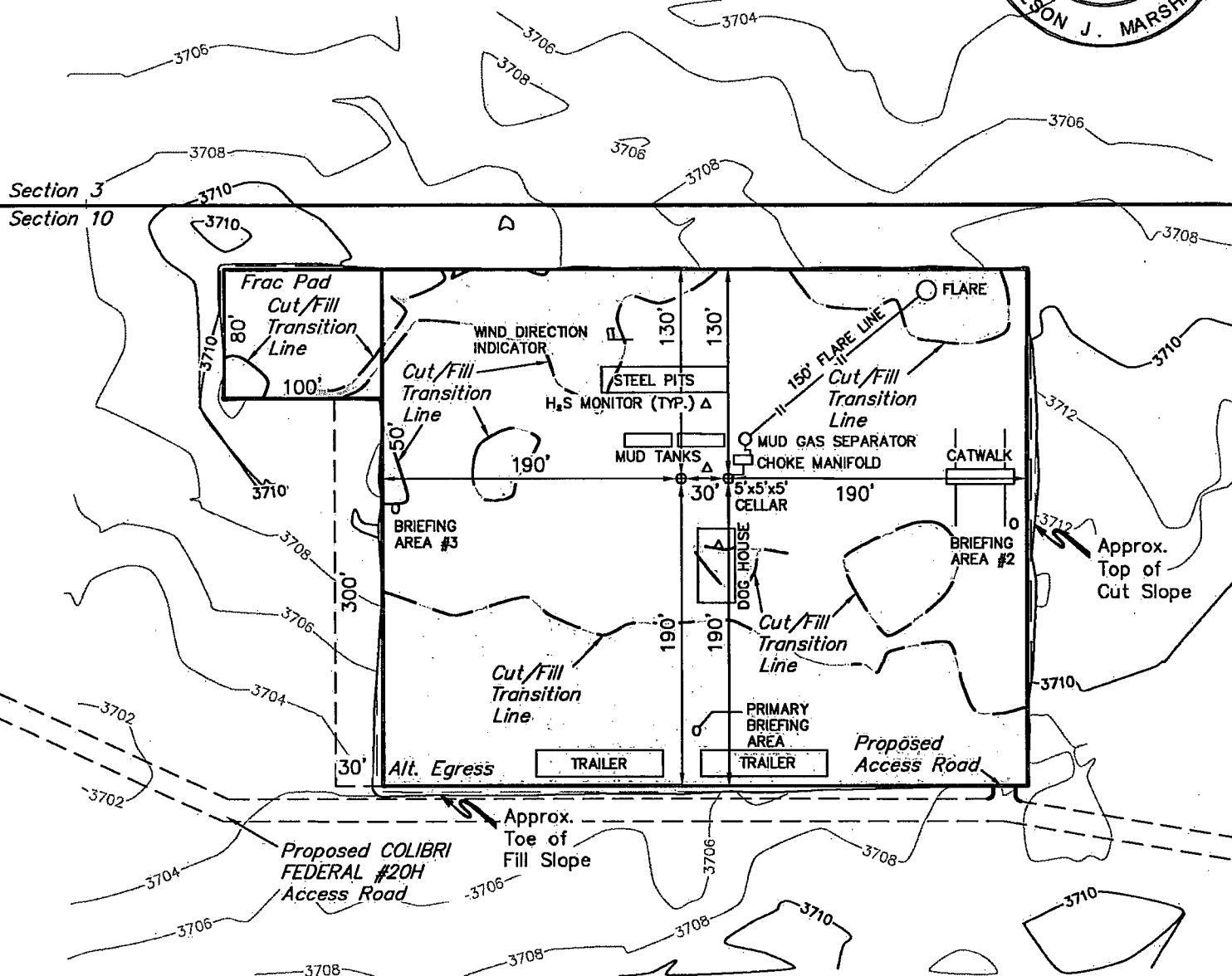
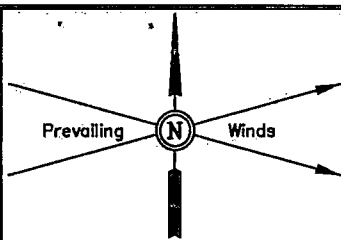
10-23S-32E

SHL 170 FNL & 865 FEL

BHL 330 FSL & 440 FEL

Lea County, NM





NOTES:

- Flare pit is to be located a min. of 160' from the well head.



CIMAREX ENERGY CO.

COLIBRI FEDERAL #26H & #27H
SECTION 10, T23S, R32E, N.M.P.M.
NE 1/4 NE 1/4

DRAWN BY: B.D.H.

SCALE: 1" = 100'

DATE: 02-03-14

REVISED: 02-12-14



Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

TYPICAL RIG LAYOUT

EXHIBIT D