

ATS-11-542

OCD-HOBBS

Form 3160-3
(April 2004)

HOBBS OCD

AUG 10 2011

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

1a Type of Work ☒ DRILL ☐ REENTER		5 Lease Serial No LC-060329
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. of Colorado		7. If Unit or CA Agreement, Name and No.
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8 Lease Name and Well No <38399> HT 18 Federal No. 2
3b Phone No (include area code) 432-571-7800		9 API Well No 30-015- 025-40231
4 Location of Well (Report location clearly and in accordance with any State requirements *) At Surface 940 FSL & 615 FWL Unit M At proposed prod Zone 990 FSL & 330 FWL Unit M		10 Field and Pool, or Exploratory Maljamar; Yeso-West <44500>
14. Distance in miles and direction from nearest town or post office*		11 Sec, T, R, M or Blk. and Survey or Area 18-17S-32E
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any) 615	16. No of acres in lease 323.76	12 County or Parish Lea
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 165'	19. Proposed Depth 6850' TVD 6859' MD	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3937' GR	22 Approximate date work will start* 06.01.11	20 BLM/BIA Bond No. on File NM-2575
23. Estimated duration 10-15 days		17. Spacing Unit dedicated to this well SWSW 40.97

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 Zeno Farris	Name (Printed/Typed) Zeno Farris	Date 03.22.11
Title Manager Operations Administration		
Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date AUG - 5 2011
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. 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

*(Instructions on page 2)

ROSWELL CONTROLLED WATER BASIN

KE 08/11/11

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements
& Special Stipulations Attached

AUG 15 2011

Application to Drill
HT-18-Federal-No. 2
 Cimarex Energy Co. of Colorado
 Lot 4, Section 18
 T17S R32E, Lea County, NM

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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 940 FSL & 615 FWL
 BHL 990 FSL & 330 FWL
- 2 Elevation above sea level: 3937' 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: MD 6859 TVD 6850
- 6 Estimated tops of geological markers:

Rustler	750'
T. Salt	900'
B. Salt	1600'
Yates	2025'
7 Rivers	2340'
Queen	2960'
San Andres	3690'
Glorieta	5235'
Paddock	5290'
Blaine	5875'
Tubb	6715'
- 7 Possible mineral bearing formation:

Paddock	Oil
Blaine	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 700'	8.4 - 8.8	40-45	NC	FW
700' to 1935'	9.9 - 10.1	28-32	NC	Brine
1935' to 6859'	9.1	28-32	NC	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.

Application to Drill
HT 18 Federal No. 2
 Cimarex Energy Co. of Colorado
 Lot 4, Section 18
 T17S R32E, Lea County, NM

9 Directional Plan:

With 7½" bit, drill out of bottom of 8½" casing shoe to KOP of 2100. Build and hold to TD @ 6859. Set 5½" casing to TD and cement to 1740.

10 Casing Plan:

** See COA*

String	Hole Size	Depth	Casing OD	Weight	Thread	Collar	Grade
Surface	16"	0' to 700' 775'	New 11¾"	42#	8-R	STC	H-40
Intermediate	11"	0' to 1935' 1915'	New 8½"	24#	8-R	STC	K-55
Production	7½"	0' to 6859'	New 5½"	17#	8-R	LTC	J-55

11 Cementing Plan:

Surface Lead: 450 sx Class C + 4% D-20 + 0.2% D-46 + 0.125 ppg D-130 (wt 12.9 ppg, yield 1.99)

100% Excess Tail: 200 sx Class C + 0.125 pps D130 (wt 14.80, yield 1.34)

TOC Surface Centralizers per Onshorder 2.III.B.1.f

Intermediate Lead: 270 sx 35:65 Poz: Class C + 0.2% Defoamer (D046) + 5% D044 (Salt) + 6% D020 (Extender Gel) + 1/8 pps Polyflake (D130) + 2 pps Gilsontite (D042) (wt 12.6, yld 2.07)

70% Excess Tail: 200 sx Class C + 0.2% D-13 (wt 14.8, yld 1.33)

TOC Surface

Production Lead: 575 sacks 35:65 POZC + 0.2% Defoamer (D046) + 0.6% Fluid Loss (D167) + 1 lb/sx Extender (D042) + 0.02% Retarder (D013) + 23 lbs/sx Silica (D178) + 40 lbs/sx Extender (D124) (wt 9.9, yield 2.35)

25% Excess Tail: 450 sacks PVL + 1.3% NaCl (D044) + 0.2% Fluid Loss (D167) + 0.2% Cement Retarder (D013) + 0.2% Dispersant (D065) (wt 13, yld 1.4)

** See COA*

TOC ~~1740'~~ ^{1715'} Centralizers bottom 10 joints, then every other joint above zone of interest (Blinbry / Paddock)

700'

According to the State Engineer, depth to groundwater is 200.' Fresh water zones will be protected by setting 11¾" casing at ~~775'~~ ^{700'} and cementing to surface. Hydrocarbon zones will be protected by setting 8½" casing at ~~1915'~~ ^{1935'} and cementing to surface and by setting 5½" casing at 6859' and cementing to 1715.'

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

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12 Pressure control Equipment: ✓

A 13 $\frac{5}{8}$ " 3000 PSI working pressure B.O.P. consisting of a one set of blind rams and one set of pipe rams and a 3000 psi annular-type preventor. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. 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. Test BOP equipment and choke manifold to 250 psi low and 3000 psi high and annular BOP to 250 psi low and 1500 psi high by an independent service company. Mud gas separator will be available if drilling in H2S areas.

BOP unit will be hydraulically operated. Below intermediate casing shoe, BOP will be 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. From the base of the surface pipe through the running of production casing, the well will be equipped with a 3000 psi BOP system.

BOPS will be tested by an independent service company to 250 psi low and 3000 psi high. Hydril will be tested to 250 psi low and 1500 psi high.

13 Testing, Logging and Coring Program:

** See COA*

- A. Mud logging No mud logging program.
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- C. No DSTs or cores are planned at this time.

14 Potential Hazards:

No abnormal pressures or temperatures are expected. The area has a potential H2S hazard. An H2S drilling plan is attached. 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 **2300 psi** Estimated BHT **110°**

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

Drilling expected to take 10-15 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 total depth over possible pay intervals.

Blinebry pay will be perforated and stimulated.

The proposed well will be tested and potentialized as **an oil well.**



Planned Wellpath Report

Prelim_1
Page 1 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2 SHL
Area	Lea County, NM	Well	No. 2
Field	(HT) Sec 18, T17S, R32E	Wellbore	No. 2 PWB
Facility	HT 18 Fed No. 2		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Calhphik
Scale	0.999938	Report Generated	3/16/2011 at 10:54:39 AM
Convergence at slot	0.28° East	Database/Source file	WA Midland/No. 2_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W
Facility Reference Pt			701321.10	666085.50	32°49'48.043"N	103°48'44.978"W
Field Reference Pt			701281.80	665775.50	32°49'44.978"N	103°48'45.456"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 2 SHL (RT) to GL	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 2 SHL (RT) to Mean Sea Level	3937.00ft
Vertical Reference Pt	Rig on No. 2 SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	279.76°



Planned Wellpath Report

Prelim_1
Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
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Area	Lea County, NM	Well	No. 2
Field	(HT) Sec 18, T17S, R32E	Wellbore	No. 2 PWB
Facility	HT 18 Fed No. 2		

WELLPATH DATA (71 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	279.756	0.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	Tie On
100.00†	0.000	279.756	100.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
200.00†	0.000	279.756	200.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
300.00†	0.000	279.756	300.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
400.00†	0.000	279.756	400.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
500.00†	0.000	279.756	500.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
600.00†	0.000	279.756	600.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
700.00†	0.000	279.756	700.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
800.00†	0.000	279.756	800.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
900.00†	0.000	279.756	900.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1000.00†	0.000	279.756	1000.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1100.00†	0.000	279.756	1100.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1200.00†	0.000	279.756	1200.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1300.00†	0.000	279.756	1300.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1400.00†	0.000	279.756	1400.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1500.00†	0.000	279.756	1500.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1600.00†	0.000	279.756	1600.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1700.00†	0.000	279.756	1700.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1800.00†	0.000	279.756	1800.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
1900.00†	0.000	279.756	1900.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
2000.00†	0.000	279.756	2000.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	
2100.00	0.000	279.756	2100.00	0.00	0.00	0.00	701321.10	666085.50	32°49'48.043"N	103°48'44.978"W	0.00	Est KOP
2200.00†	2.000	279.756	2199.98	1.75	0.30	-1.72	701319.38	666085.80	32°49'48.046"N	103°48'44.998"W	2.00	
2277.69	3.554	279.756	2277.58	5.51	0.93	-5.43	701315.67	666086.43	32°49'48.053"N	103°48'45.041"W	2.00	EOC
2300.00†	3.554	279.756	2299.84	6.89	1.17	-6.79	701314.31	666086.67	32°49'48.055"N	103°48'45.057"W	0.00	
2400.00†	3.554	279.756	2399.65	13.09	2.22	-12.90	701308.20	666087.72	32°49'48.066"N	103°48'45.129"W	0.00	
2500.00†	3.554	279.756	2499.46	19.29	3.27	-19.01	701302.09	666088.77	32°49'48.077"N	103°48'45.200"W	0.00	
2600.00†	3.554	279.756	2599.27	25.49	4.32	-25.12	701295.98	666089.82	32°49'48.087"N	103°48'45.272"W	0.00	
2700.00†	3.554	279.756	2699.07	31.69	5.37	-31.23	701289.87	666090.87	32°49'48.098"N	103°48'45.343"W	0.00	
2800.00†	3.554	279.756	2798.88	37.89	6.42	-37.34	701283.77	666091.92	32°49'48.109"N	103°48'45.415"W	0.00	
2900.00†	3.554	279.756	2898.69	44.08	7.47	-43.45	701277.66	666092.97	32°49'48.119"N	103°48'45.486"W	0.00	
3000.00†	3.554	279.756	2998.50	50.28	8.52	-49.56	701271.55	666094.02	32°49'48.130"N	103°48'45.558"W	0.00	
3100.00†	3.554	279.756	3098.30	56.48	9.57	-55.66	701265.44	666095.07	32°49'48.141"N	103°48'45.629"W	0.00	
3200.00†	3.554	279.756	3198.11	62.68	10.62	-61.77	701259.33	666096.12	32°49'48.151"N	103°48'45.701"W	0.00	
3300.00†	3.554	279.756	3297.92	68.88	11.67	-67.88	701253.22	666097.17	32°49'48.162"N	103°48'45.772"W	0.00	
3400.00†	3.554	279.756	3397.73	75.08	12.72	-73.99	701247.11	666098.22	32°49'48.173"N	103°48'45.844"W	0.00	
3500.00†	3.554	279.756	3497.54	81.28	13.77	-80.10	701241.00	666099.27	32°49'48.183"N	103°48'45.916"W	0.00	
3600.00†	3.554	279.756	3597.34	87.47	14.82	-86.21	701234.90	666100.32	32°49'48.194"N	103°48'45.987"W	0.00	
3700.00†	3.554	279.756	3697.15	93.67	15.87	-92.32	701228.79	666101.37	32°49'48.205"N	103°48'46.059"W	0.00	
3800.00†	3.554	279.756	3796.96	99.87	16.92	-98.43	701222.68	666102.42	32°49'48.216"N	103°48'46.130"W	0.00	
3900.00†	3.554	279.756	3896.77	106.07	17.97	-104.54	701216.57	666103.47	32°49'48.226"N	103°48'46.202"W	0.00	
4000.00†	3.554	279.756	3996.57	112.27	19.02	-110.65	701210.46	666104.52	32°49'48.237"N	103°48'46.273"W	0.00	
4100.00†	3.554	279.756	4096.38	118.47	20.07	-116.75	701204.35	666105.57	32°49'48.248"N	103°48'46.345"W	0.00	
4200.00†	3.554	279.756	4196.19	124.67	21.12	-122.86	701198.24	666106.62	32°49'48.258"N	103°48'46.416"W	0.00	
4300.00†	3.554	279.756	4296.00	130.87	22.18	-128.97	701192.14	666107.67	32°49'48.269"N	103°48'46.488"W	0.00	



Planned Wellpath Report

Prelim_1

Page 3 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2 SHL
Area	Lea County, NM	Well	No. 2
Field	(HT) Sec 18, T17S, R32E	Wellbore	No. 2 PWB
Facility	HT 18 Fed No. 2		

WELLPATH DATA (71 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4400.00†	3.554	279.756	4395.80	137.06	23.23	-135.08	701186.03	666108.72	32°49'48.280"N	103°48'46.559"W	0.00	
4500.00†	3.554	279.756	4495.61	143.26	24.28	-141.19	701179.92	666109.77	32°49'48.290"N	103°48'46.631"W	0.00	
4600.00†	3.554	279.756	4595.42	149.46	25.33	-147.30	701173.81	666110.82	32°49'48.301"N	103°48'46.702"W	0.00	
4700.00†	3.554	279.756	4695.23	155.66	26.38	-153.41	701167.70	666111.87	32°49'48.312"N	103°48'46.774"W	0.00	
4800.00†	3.554	279.756	4795.04	161.86	27.43	-159.52	701161.59	666112.93	32°49'48.322"N	103°48'46.845"W	0.00	
4900.00†	3.554	279.756	4894.84	168.06	28.48	-165.63	701155.48	666113.98	32°49'48.333"N	103°48'46.917"W	0.00	
5000.00†	3.554	279.756	4994.65	174.26	29.53	-171.74	701149.37	666115.03	32°49'48.344"N	103°48'46.988"W	0.00	
5100.00†	3.554	279.756	5094.46	180.45	30.58	-177.84	701143.27	666116.08	32°49'48.354"N	103°48'47.060"W	0.00	
5200.00†	3.554	279.756	5194.27	186.65	31.63	-183.95	701137.16	666117.13	32°49'48.365"N	103°48'47.132"W	0.00	
5300.00†	3.554	279.756	5294.07	192.85	32.68	-190.06	701131.05	666118.18	32°49'48.376"N	103°48'47.203"W	0.00	
5400.00†	3.554	279.756	5393.88	199.05	33.73	-196.17	701124.94	666119.23	32°49'48.387"N	103°48'47.275"W	0.00	
5500.00†	3.554	279.756	5493.69	205.25	34.78	-202.28	701118.83	666120.28	32°49'48.397"N	103°48'47.346"W	0.00	
5600.00†	3.554	279.756	5593.50	211.45	35.83	-208.39	701112.72	666121.33	32°49'48.408"N	103°48'47.418"W	0.00	
5700.00†	3.554	279.756	5693.30	217.65	36.88	-214.50	701106.61	666122.38	32°49'48.419"N	103°48'47.489"W	0.00	
5800.00†	3.554	279.756	5793.11	223.85	37.93	-220.61	701100.51	666123.43	32°49'48.429"N	103°48'47.561"W	0.00	
5900.00†	3.554	279.756	5892.92	230.04	38.98	-226.72	701094.40	666124.48	32°49'48.440"N	103°48'47.632"W	0.00	
6000.00†	3.554	279.756	5992.73	236.24	40.03	-232.83	701088.29	666125.53	32°49'48.451"N	103°48'47.704"W	0.00	
6100.00†	3.554	279.756	6092.54	242.44	41.08	-238.94	701082.18	666126.58	32°49'48.461"N	103°48'47.775"W	0.00	
6200.00†	3.554	279.756	6192.34	248.64	42.13	-245.04	701076.07	666127.63	32°49'48.472"N	103°48'47.847"W	0.00	
6300.00†	3.554	279.756	6292.15	254.84	43.18	-251.15	701069.96	666128.68	32°49'48.483"N	103°48'47.918"W	0.00	
6400.00†	3.554	279.756	6391.96	261.04	44.23	-257.26	701063.85	666129.73	32°49'48.493"N	103°48'47.990"W	0.00	
6500.00†	3.554	279.756	6491.77	267.24	45.28	-263.37	701057.75	666130.78	32°49'48.504"N	103°48'48.061"W	0.00	
6600.00†	3.554	279.756	6591.57	273.43	46.33	-269.48	701051.64	666131.83	32°49'48.515"N	103°48'48.133"W	0.00	
6700.00†	3.554	279.756	6691.38	279.63	47.38	-275.59	701045.53	666132.88	32°49'48.526"N	103°48'48.205"W	0.00	
6800.00†	3.554	279.756	6791.19	285.83	48.43	-281.70	701039.42	666133.93	32°49'48.536"N	103°48'48.276"W	0.00	
6858.92	3.554	279.756	6850.00†	289.48	49.05	-285.30	701035.82	666134.55	32°49'48.542"N	103°48'48.318"W	0.00	No. 2 PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 2 PWB Ref Wellpath: Prelim_1									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
16in Open Hole	0.00	775.00	775.00	0.00	775.00	0.00	0.00	0.00	0.00
11.75in Casing	0.00	775.00	775.00	0.00	775.00	0.00	0.00	0.00	0.00
11in Open Hole	775.00	1940.00	1165.00	775.00	1940.00	0.00	0.00	0.00	0.00
8.625in Casing	0.00	1940.00	1940.00	0.00	1940.00	0.00	0.00	0.00	0.00
7.875in Open Hole	1940.00	6850.00	4910.00	1940.00	6841.09	0.00	0.00	48.96	-284.75
5.5in Casing	0.00	6850.00	6850.00	0.00	6841.09	0.00	0.00	48.96	-284.75



Planned Wellpath Report

Prelim_1
Page 4 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2 SHL
Area	Lea County, NM	Well	No. 2
Field	(HT) Sec 18, T17S, R32E	Wellbore	No. 2 PWB
Facility	HT 18 Fed No. 2		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 2 PBHL	6858.92	6850.00	49.05	-285.30	701035.82	666134.55	32°49'48.542"N	103°48'48.318"W	point

SR & A

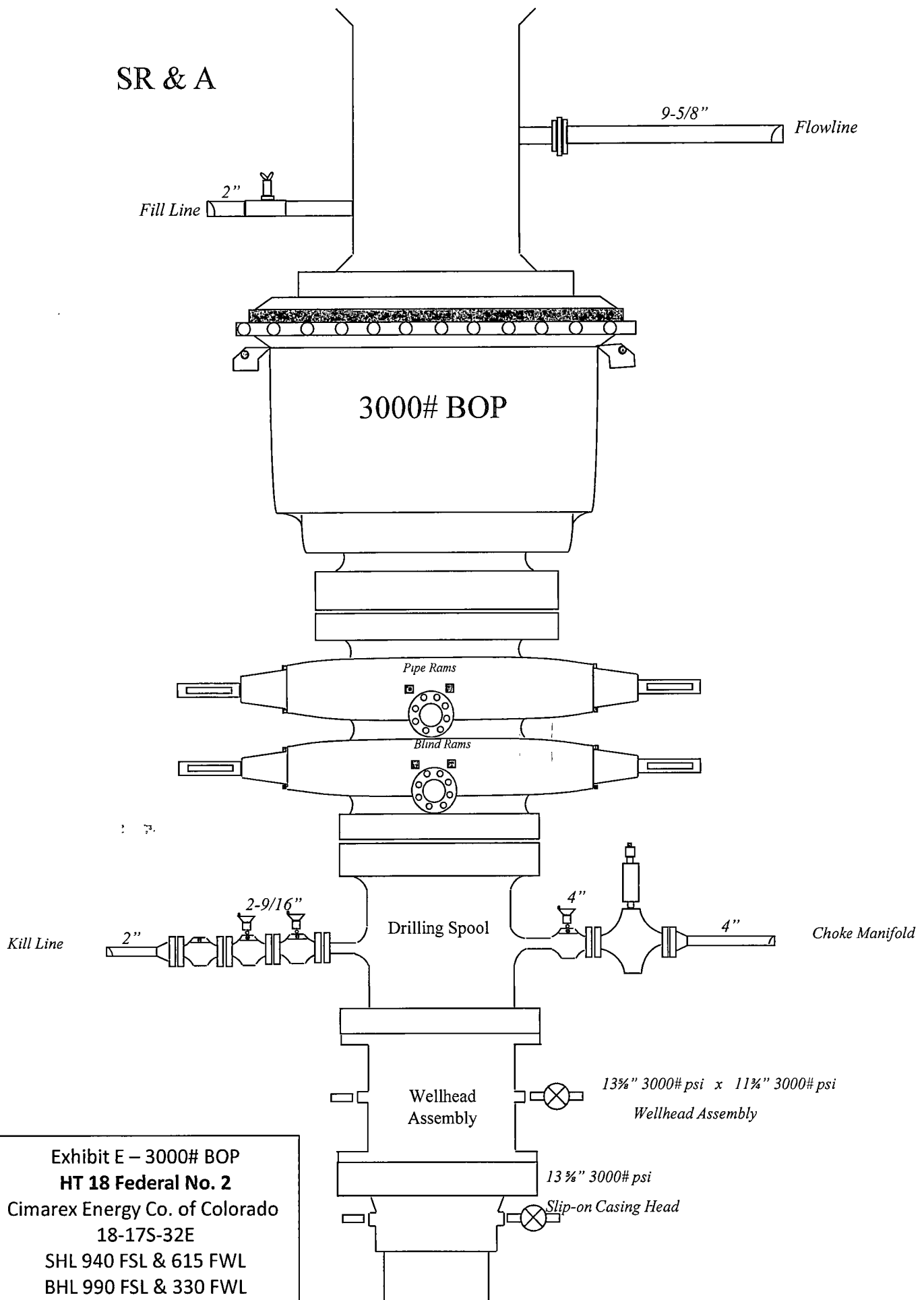
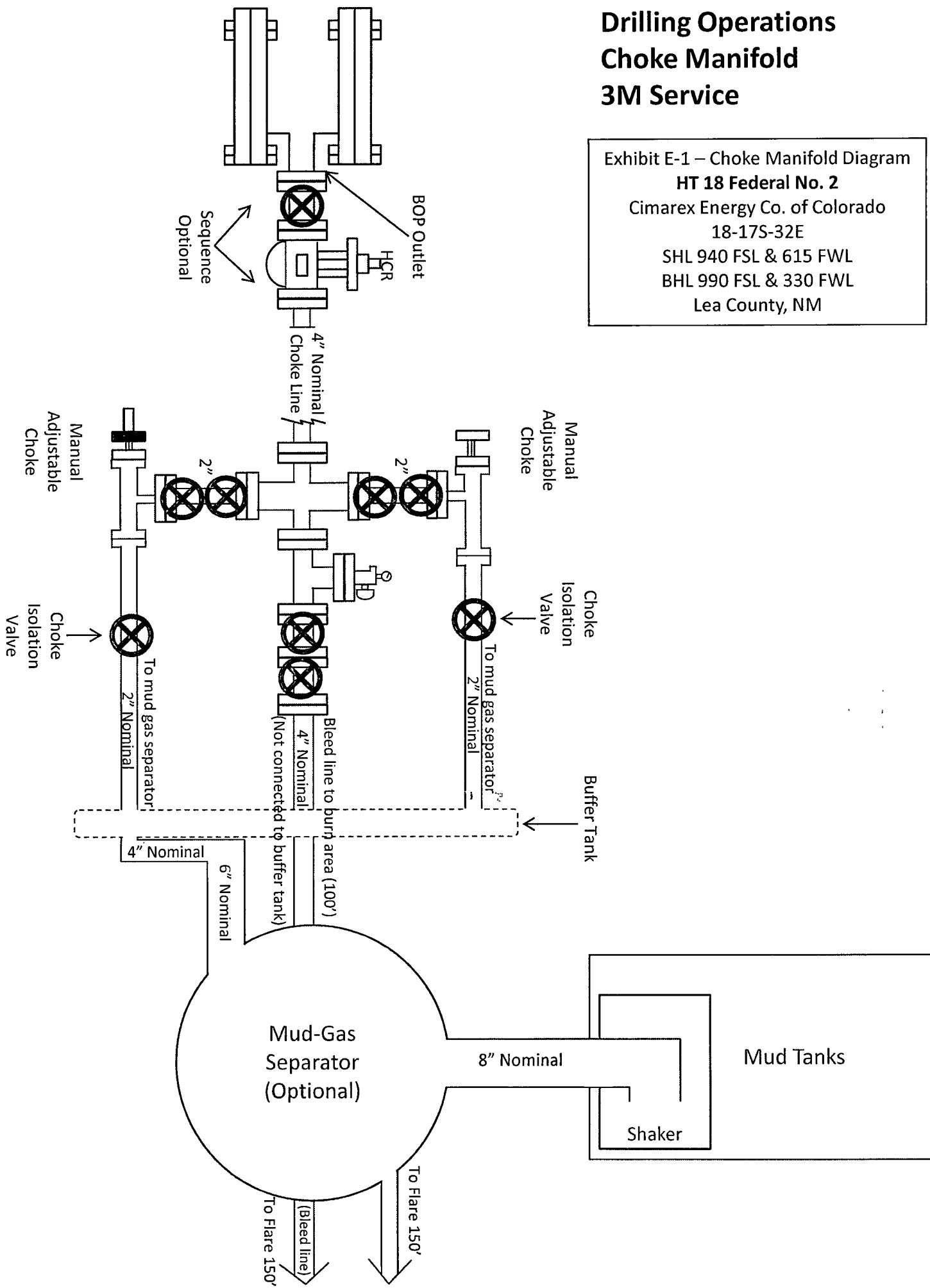


Exhibit E – 3000# BOP
HT 18 Federal No. 2
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 940 FSL & 615 FWL
BHL 990 FSL & 330 FWL
Lea County, NM

Drilling Operations
Choke Manifold
3M Service

Exhibit E-1 – Choke Manifold Diagram
HT 18 Federal No. 2
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 940 FSL & 615 FWL
BHL 990 FSL & 330 FWL
Lea County, NM



Silver Oak #3

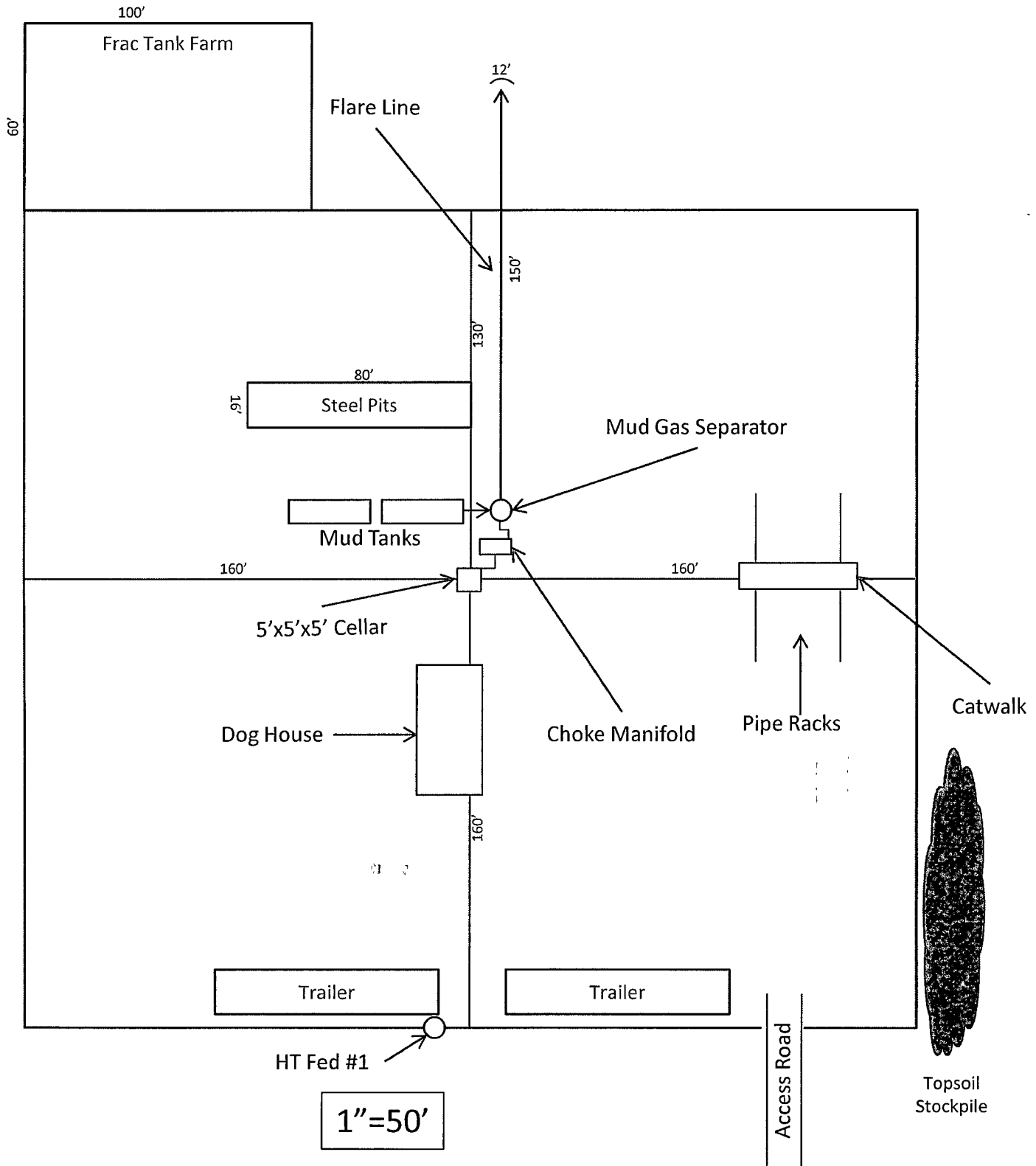


Exhibit D – Rig Diagram
HT 18 Federal No. 2
Cimarex Energy Co. of Colorado
18-17S-32E
SHL 940 FSL & 615 FWL
BHL 990 FSL & 330 FWL
Lea County, NM