

ATS-09-623

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Form 3160-3
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-052	
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 <29028> Mallon 34 Federal No. 19 H	
3b. Phone No (include area code) <162683> 432-571-7800		9. API Well No. 30-025- 39894	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 2055 FNL & 790 FEL Unit H At proposed prod. Zone 1980 FNL & 330 FWL Unit E Horizontal Bone Spring test		10. Field and Pool, or Exploratory <50461> Quail Ridge; Bone Spring, South	
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk. and Survey or Area 34-19S-34E	
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line if any) 735'		12. County or Parish Lea	
16. No of acres in lease NM-052 - 1240 acres		13. State NM	
17. Spacing Unit dedicated to this well S2N2 160 acres			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A		20. BLM/BIA Bond No. on File NM-2575	
19. Proposed Depth 11250' MD 15021' TVD 10940'			
21. Elevations (Show whether DF, KDB, RT, GL, etc) 3706' GR		23. Estimated duration 25-30 days	
22. Approximate date work will start* 06.01.10			
24. Attachments			

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

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

25. Signature Zeno Farris	Name (Printed/Typed) Zeno Farris	Date 03.29.10
Title Manager Operations Administration		
Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date SEP - 2 2010
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.

APPROVAL FOR TWO YEARS

Conditions of approval, if any, are attached

Title 18 U.S.S. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction

* (Instructions on page 2)

Capitan Controlled Water Basin

KZ 9/14/10

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1601 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-39894	Pool Code 50461	Pool Name Quail Ridge; Bone Spring, South
Property Code 29028	Property Name MALLON "34" FEDERAL	Well Number 19
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3706'

Surface Location

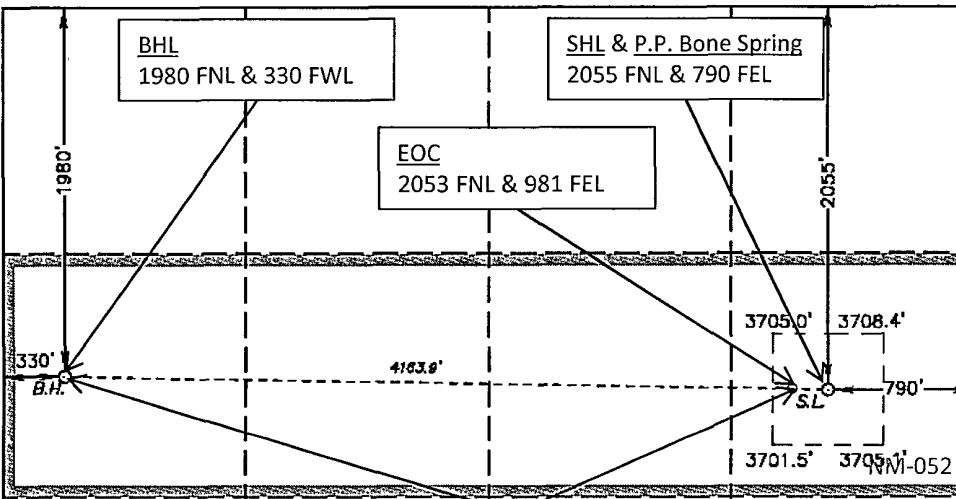
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	34	19 S	34 E		2055	NORTH	790	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	34	19 S	34 E		1980	NORTH	330	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

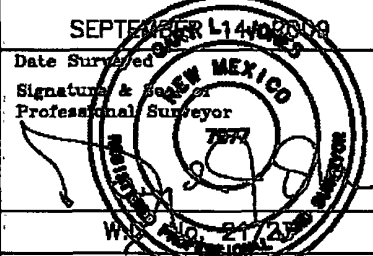
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

		OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <u>Zeno Farris</u> 3/29/2010 Signature Date Zeno Farris Printed Name
BOTTOM HOLE LOCATION Lat - N 32°37'06.90" Long - W 103°33'19.99" NMSPCE - N 780810.841 E 589647.607 (NAD-83)	SURFACE LOCATION Lat - N 32°37'06.14" Long - W 103°32'31.32" NMSPCE - N 589601.4 E 784973.6 (NAD-83)	
Proposed Producing Interval		

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

SEPTEMBER 14 2010
Date Surveyed


Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977

Basin Surveys

Application to Drill
Mallon 34 Federal No. 19
 Cimarex Energy Co. of Colorado
 Unit H, Section 34
 T19S-R34E, Eddy County, NM

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

- 1 Location: SHL 2055 FNL & 790 FEL
 BHL 1980 FNL & 330 FWL

- 2 Elevation above sea level: 3706' 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 15021' TVD 10940'

- 6 Estimated tops of geological markers:

Tansill	3380'	Grayburg	5231'
Yates	3575'	Cherry Canyon	5634'
7 Rivers	3872'	San Andres	6055'
Queen	4579'	Brushy Canyon	6463'
Penrose	4942'	Bone Spring	8239'

- 7 Possible mineral bearing formation:

Bone Spring	Oil
Delaware	Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 1750'	8.4 - 8.6	30-32	May lose circ	FW gel spud mud
1750' to 5500'	8.4 - 8.6	28-29	May lose circ	FW mud
5500' to 11250'	8.4 - 9.4	28-29	NC	FW and brine, use hi-vis sweeps to keep hole clean
10080' to 15021'	9	28-29	NC	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.

Proposed drilling Plan

Set surface and intermediate casing and cement to surface. Drill to TD of 8¾" hole (11250'). Set 7" casing from 0' to 10689' and fiberglass tubing from 10689' to 11250.' Cement fiberglass to 5300.' Drill through cement and kick off 6¾" lateral @ 10749' and drill to lateral TD @ 15021.' Run PEAK completion liner, no cement. Request a 100' tieback for lateral casing string in order to be able to set the pump as deep as possible.

see COA

Application to Drill
Mallon 34 Federal No. 19
 Cimarex Energy Co. of Colorado
 Unit H, Section 34
 T19S-R34E, Eddy County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	17½"	0' to 1750'	New 13½"	48# 54.5	STC	H-40
Intermediate	12½"	0' to 5500'	New 9½"	40#	LTC	N-80
Production	8½"	0' to 10689'	New 7"	26#	LTC	P-110
Fiberglass	8½"	10689' to 11250'	New 2½"	2.18#		IJ
Lateral Pt. 1	6½"	10080' to 11049'	New 4½"	11.6#	BTC	P-110
Lateral Pt. 2	6½"	11049' to 15021'	New 4½"	11.6#	LTC	P-110

J-55
 per operator
 5/7/10
 RGT

10 Cementing:

Surface

Lead: 900 sx Premium Plus + 1% Pheno-Seal + 1% CaCl₂ (wt 12.5, yld 1.97)

Tail: 200 sx Premium Plus + 2% CaCl₂ (wt 14.8, yld 1.33)

TOC Surface

Intermediate

Lead: 1065 sx Interfill C + 1# Pheno-Seal (wt 14.0, yld 2.46)

Tail: 220 sx Premium Plus + 2% CaCl₂ (wt 14.8, yld 1.33)

TOC Surface

See
COA

**Production /
Fiberglass**

Lead: 195 sx Interfill H + 0.1% HR-7 + 1# Pheno-Seal (wt 11.9, yld 2.78)

Tail: 385 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 3# Pheno-Seal + 0.35% HR-7 (wt 13.2, yld 1.62)

TOC 5300'

Lateral

No cement needed. Peak completion assembly.

Fresh water zones will be protected by setting 13½" casing at 1750' and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 5500' and production casing at 10689' with fiberglass to 11250' and cementing to 5300'.

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

11 Pressure control Equipment:

Exhibit "E". A 13½" 5000 PSI working pressure BOP tested to 3000 psi consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

See COA

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system tested to 3000 psi.

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.

See
COA

Application to Drill
Mallon 34 Federal No. 19
Cimarex Energy Co. of Colorado
Unit H, Section 34
T19S-R34E, Eddy County, NM

12 Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 1485' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR — See COA
- C. No DSTs or cores are planned at this time.

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 **3000 psi** Estimated BHT **130°**

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

Drilling expected to take 30-35 days

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

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Bone Spring pay will be perforated and stimulated.

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



Cimarex Energy Co.

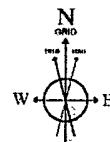
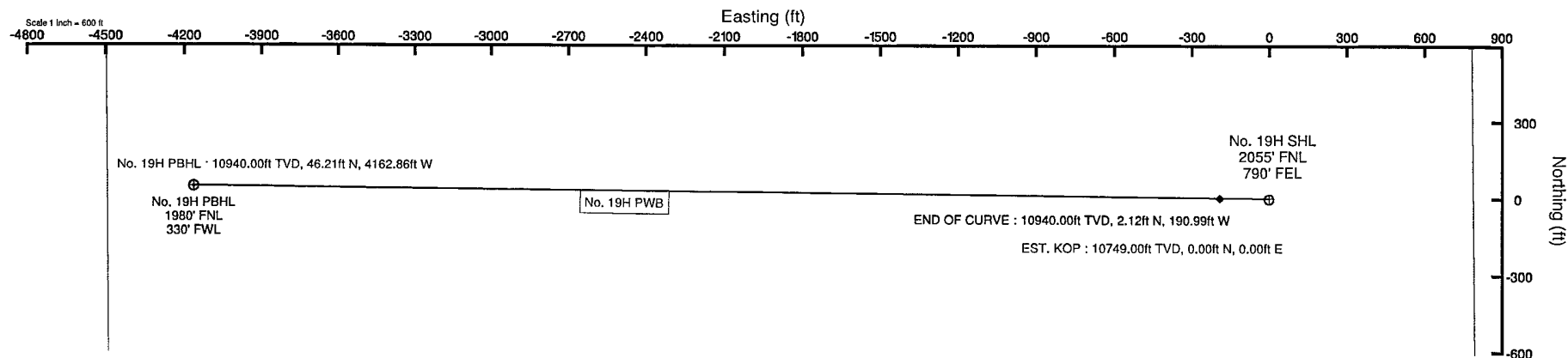
Location: Lea County, NM
Field: (Mallon) Sec 34, T19S, R34E
Facility: Mallon 34 Fed No. 19H

Slot: No. 19H SHL
Well: No. 19H
Wellbore: No. 19H PWB

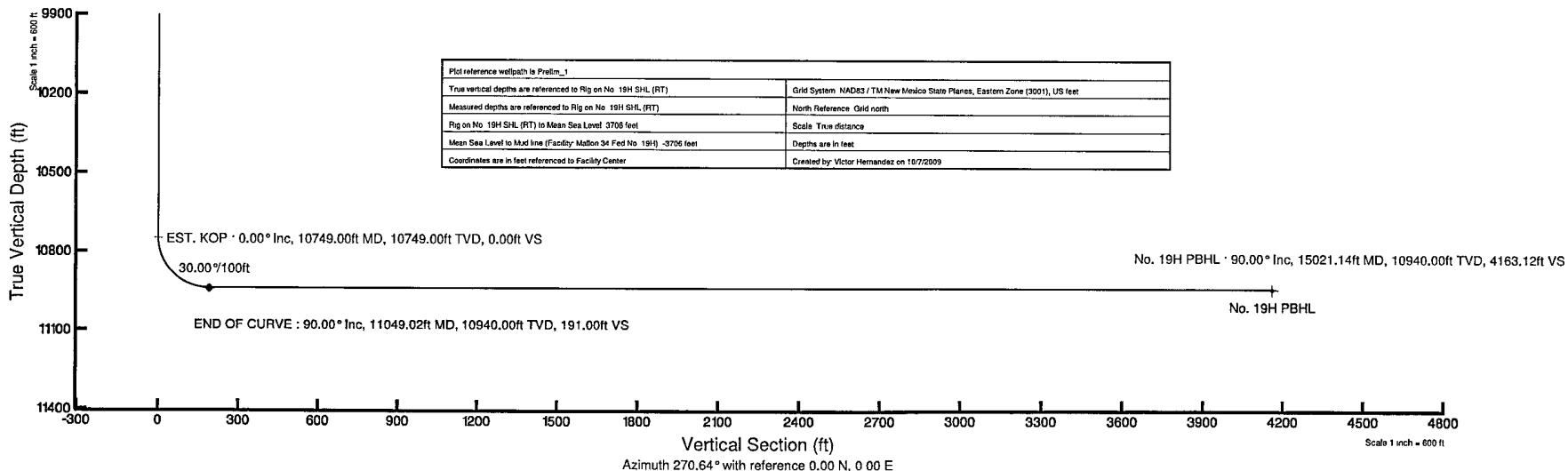


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°100ft)	VS (ft)
Tie On	0.00	0.000	270.636	0.00	0.00	0.00	0.00	0.00
EST. KOP	10749.00	0.000	270.636	10749.00	0.00	0.00	0.00	0.00
END OF CURVE	11049.02	90.000	270.636	10940.00	2.12	-190.99	30.00	191.00
No. 19H PBHL	15021.14	90.000	270.636	10940.00	46.21	-4162.86	0.00	4163.12



BGGM (1945 0 to 2011 0) Dip: 60.62° Field: 49086.7 nT
Magnetic North is 7.85 degrees East of True North (at 10/7/2009)
Grid North is 0.43 degrees East of True North
To correct azimuth from True to Grid subtract 0.43 degrees
To correct azimuth from Magnetic to Grid add 7.42 degrees
For example: if the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 7.42 = 97.42





Planned Wellpath Report

Prelim_1

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 19H SHL
Area	Lea County, NM	Well	No. 19H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 19H PWB
Facility	Mallon 34 Fed No. 19H		

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	Victor Hernandez
Scale	0.999977	Report Generated	10/7/2009 at 2:49:05 PM
Convergence at slot	0.43° East	Database/Source file	WA_Midland/No._19H_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	784973.60	589601.40	32°37'06.139"N	103°32'31.322"W
Facility Reference Pt			784973.60	589601.40	32°37'06.139"N	103°32'31.322"W
Field Reference Pt			780804.80	586972.60	32°36'40.432"N	103°33'20.286"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 19H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 19H SHL (RT) to Mean Sea Level	3706.00ft
Vertical Reference Pt	Rig on No. 19H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 19H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.64°



Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 19H SHL
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Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 19H PWB
Facility	Mallon 34 Fed No. 19H		

WELLPATH DATA (46 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	270.636	0.00	0.00	0.00	0.00	784973.60	589601.40	32°37'06.139"N	103°32'31.322"W	0.00	Tie On
10749.00	0.000	270.636	10749.00	0.00	0.00	0.00	784973.60	589601.40	32°37'06.139"N	103°32'31.322"W	0.00	EST. KOP
10849.00†	29.998	270.636	10844.49	25.59	0.28	-25.58	784948.02	589601.68	32°37'06.143"N	103°32'31.621"W	30.00	
10949.00†	59.996	270.636	10914.40	95.49	1.06	-95.48	784878.12	589602.46	32°37'06.156"N	103°32'32.438"W	30.00	
11049.00†	89.993	270.636	10940.00	190.98	2.12	-190.97	784782.64	589603.52	32°37'06.174"N	103°32'33.555"W	30.00	
11049.02	90.000	270.636	10940.00	191.00	2.12	-190.99	784782.62	589603.52	32°37'06.174"N	103°32'33.555"W	30.00	END OF CURVE
11149.00†	90.000	270.636	10940.00	290.98	3.23	-290.96	784682.65	589604.63	32°37'06.192"N	103°32'34.724"W	0.00	
11249.00†	90.000	270.636	10940.00	390.98	4.34	-390.95	784582.66	589605.74	32°37'06.210"N	103°32'35.892"W	0.00	
11349.00†	90.000	270.636	10940.00	490.98	5.45	-490.95	784482.66	589606.85	32°37'06.229"N	103°32'37.061"W	0.00	
11449.00†	90.000	270.636	10940.00	590.98	6.56	-590.94	784382.67	589607.96	32°37'06.247"N	103°32'38.230"W	0.00	
11549.00†	90.000	270.636	10940.00	690.98	7.67	-690.94	784282.68	589609.07	32°37'06.265"N	103°32'39.399"W	0.00	
11649.00†	90.000	270.636	10940.00	790.98	8.78	-790.93	784182.69	589610.18	32°37'06.284"N	103°32'40.568"W	0.00	
11749.00†	90.000	270.636	10940.00	890.98	9.89	-890.92	784082.70	589611.29	32°37'06.302"N	103°32'41.737"W	0.00	
11849.00†	90.000	270.636	10940.00	990.98	11.00	-990.92	783982.71	589612.40	32°37'06.320"N	103°32'42.906"W	0.00	
11949.00†	90.000	270.636	10940.00	1090.98	12.11	-1090.91	783882.72	589613.51	32°37'06.339"N	103°32'44.075"W	0.00	
12049.00†	90.000	270.636	10940.00	1190.98	13.22	-1190.90	783782.73	589614.62	32°37'06.357"N	103°32'45.244"W	0.00	
12149.00†	90.000	270.636	10940.00	1290.98	14.33	-1290.90	783682.73	589615.73	32°37'06.375"N	103°32'46.413"W	0.00	
12249.00†	90.000	270.636	10940.00	1390.98	15.44	-1390.89	783582.74	589616.84	32°37'06.394"N	103°32'47.582"W	0.00	
12349.00†	90.000	270.636	10940.00	1490.98	16.55	-1490.89	783482.75	589617.95	32°37'06.412"N	103°32'48.751"W	0.00	
12449.00†	90.000	270.636	10940.00	1590.98	17.66	-1590.88	783382.76	589619.06	32°37'06.430"N	103°32'49.920"W	0.00	
12549.00†	90.000	270.636	10940.00	1690.98	18.77	-1690.87	783282.77	589620.17	32°37'06.449"N	103°32'51.089"W	0.00	
12649.00†	90.000	270.636	10940.00	1790.98	19.88	-1790.87	783182.78	589621.28	32°37'06.467"N	103°32'52.258"W	0.00	
12749.00†	90.000	270.636	10940.00	1890.98	20.99	-1890.86	783082.79	589622.39	32°37'06.485"N	103°32'53.427"W	0.00	
12849.00†	90.000	270.636	10940.00	1990.98	22.10	-1990.86	782982.79	589623.50	32°37'06.503"N	103°32'54.596"W	0.00	
12949.00†	90.000	270.636	10940.00	2090.98	23.21	-2090.85	782882.80	589624.61	32°37'06.522"N	103°32'55.764"W	0.00	
13049.00†	90.000	270.636	10940.00	2190.98	24.32	-2190.84	782782.81	589625.72	32°37'06.540"N	103°32'56.933"W	0.00	
13149.00†	90.000	270.636	10940.00	2290.98	25.43	-2290.84	782682.82	589626.83	32°37'06.558"N	103°32'58.102"W	0.00	
13249.00†	90.000	270.636	10940.00	2390.98	26.54	-2390.83	782582.83	589627.94	32°37'06.577"N	103°32'59.271"W	0.00	
13349.00†	90.000	270.636	10940.00	2490.98	27.65	-2490.82	782482.84	589629.05	32°37'06.595"N	103°33'00.440"W	0.00	
13449.00†	90.000	270.636	10940.00	2590.98	28.76	-2590.82	782382.85	589630.16	32°37'06.613"N	103°33'01.609"W	0.00	



Planned Wellpath Report

Prelim_1
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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 19H SHL
Area	Lea County, NM	Well	No. 19H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 19H PWB
Facility	Mallon 34 Fed No. 19H		

WELLPATH DATA (46 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
13549.00†	90.000	270.636	10940.00	2690.98	29.87	-2690.81	782282.85	589631.27	32°37'06.631"N	103°33'02.778"W	0.00	
13649.00†	90.000	270.636	10940.00	2790.98	30.98	-2790.81	782182.86	589632.38	32°37'06.650"N	103°33'03.947"W	0.00	
13749.00†	90.000	270.636	10940.00	2890.98	32.09	-2890.80	782082.87	589633.49	32°37'06.668"N	103°33'05.116"W	0.00	
13849.00†	90.000	270.636	10940.00	2990.98	33.20	-2990.79	781982.88	589634.60	32°37'06.686"N	103°33'06.285"W	0.00	
13949.00†	90.000	270.636	10940.00	3090.98	34.31	-3090.79	781882.89	589635.71	32°37'06.704"N	103°33'07.454"W	0.00	
14049.00†	90.000	270.636	10940.00	3190.98	35.42	-3190.78	781782.90	589636.82	32°37'06.723"N	103°33'08.623"W	0.00	
14149.00†	90.000	270.636	10940.00	3290.98	36.53	-3290.78	781682.91	589637.93	32°37'06.741"N	103°33'09.792"W	0.00	
14249.00†	90.000	270.636	10940.00	3390.98	37.64	-3390.77	781582.92	589639.04	32°37'06.759"N	103°33'10.961"W	0.00	
14349.00†	90.000	270.636	10940.00	3490.98	38.75	-3490.76	781482.92	589640.15	32°37'06.777"N	103°33'12.130"W	0.00	
14449.00†	90.000	270.636	10940.00	3590.98	39.86	-3590.76	781382.93	589641.26	32°37'06.796"N	103°33'13.299"W	0.00	
14549.00†	90.000	270.636	10940.00	3690.98	40.97	-3690.75	781282.94	589642.37	32°37'06.814"N	103°33'14.468"W	0.00	
14649.00†	90.000	270.636	10940.00	3790.98	42.08	-3790.74	781182.95	589643.48	32°37'06.832"N	103°33'15.637"W	0.00	
14749.00†	90.000	270.636	10940.00	3890.98	43.19	-3890.74	781082.96	589644.59	32°37'06.850"N	103°33'16.806"W	0.00	
14849.00†	90.000	270.636	10940.00	3990.98	44.30	-3990.73	780982.97	589645.70	32°37'06.869"N	103°33'17.974"W	0.00	
14949.00†	90.000	270.636	10940.00	4090.98	45.41	-4090.73	780882.98	589646.81	32°37'06.887"N	103°33'19.143"W	0.00	
15021.14	90.000	270.636	10940.00†	4163.12	46.21	-4162.86	780810.84	589647.61	32°37'06.900"N	103°33'19.987"W	0.00	No. 19H PBHL



Planned Wellpath Report

Prelim_1

Page 4 of 4

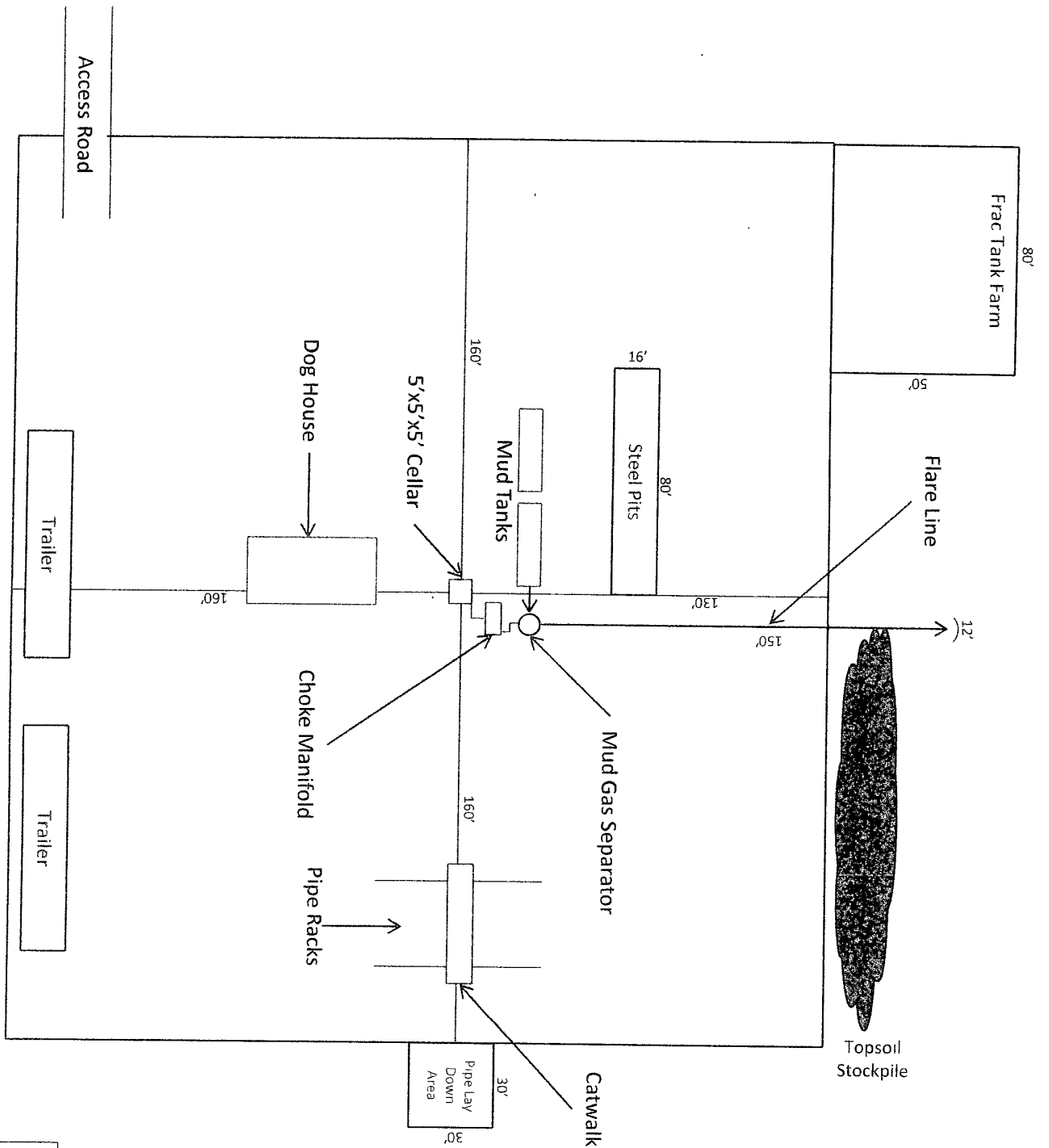


INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 19H SHL
Area	Lea County, NM	Well	No. 19H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 19H PWB
Facility	Mallon 34 Fed No. 19H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 19H PBHL	15021.14	10940.00	46.21	-4162.86	780810.84	589647.61	32°37'06.900"N	103°33'19.987"W	point

SURVEY PROGRAM Ref Wellbore: No. 19H PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	15021.14	NaviTrak (Standard)		No. 19H PWB



1"=50'

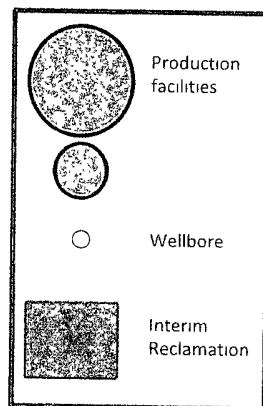
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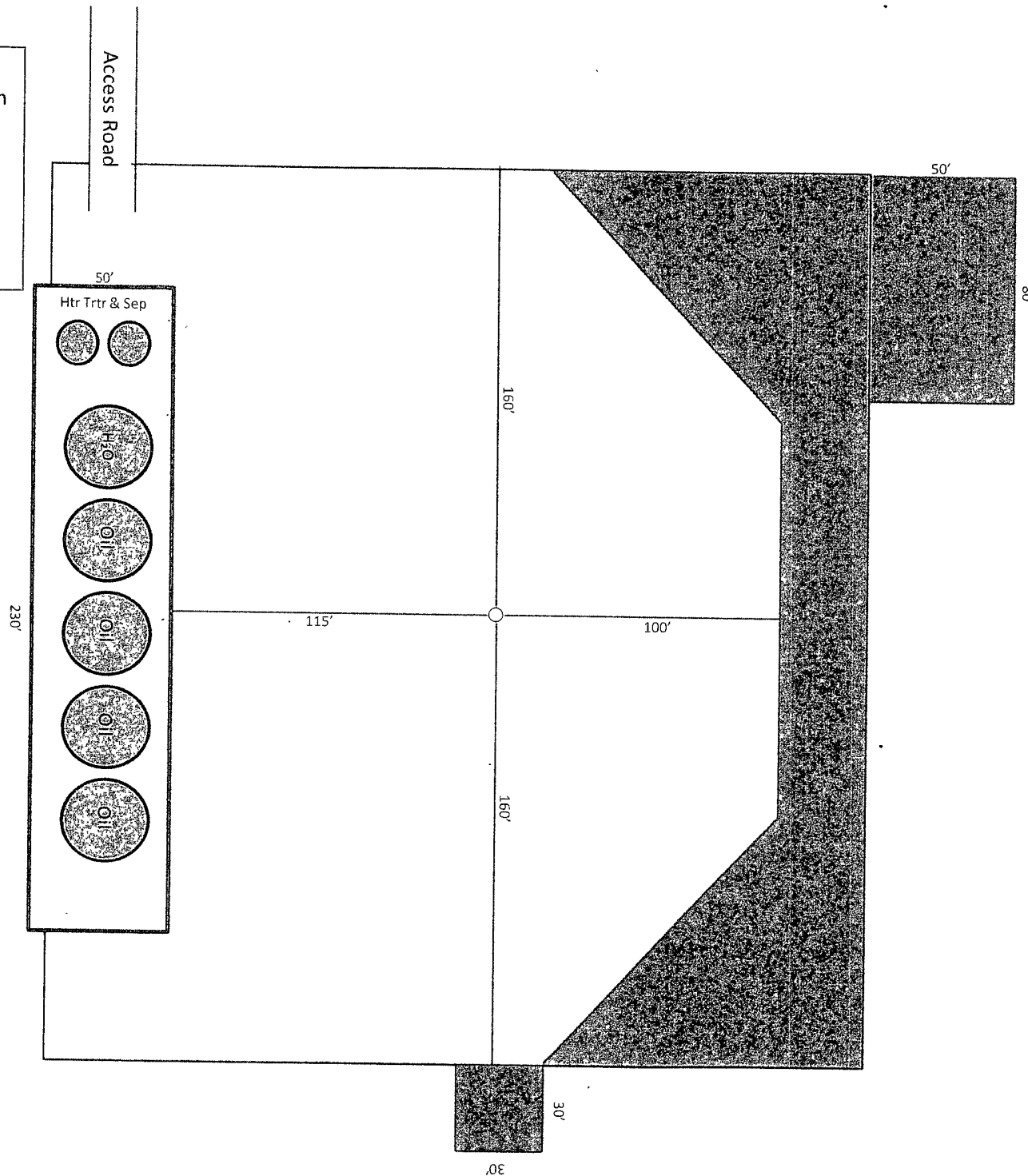
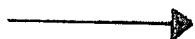
Exhibit D – Rig Diagram
Mallon 34 Federal No. 19
 Cimarex Energy Co. of Colorado
 34-19S-34E
 SHL 2055 FNL & 790 FEL
 BHL 1980 FNL & 330 FWL
 Lea County, NM

Exhibit D-1
 Production Facilities Layout Diagram
Mallon 34 Federal No. 19
 Cimarex Energy Co. of Colorado
 34-19S-34E
 SHL 2055 FNL & 790 FEL
 BHL 1980 FNL & 330 FWL
 Lea County, NM

1"=50'



N



SR & A

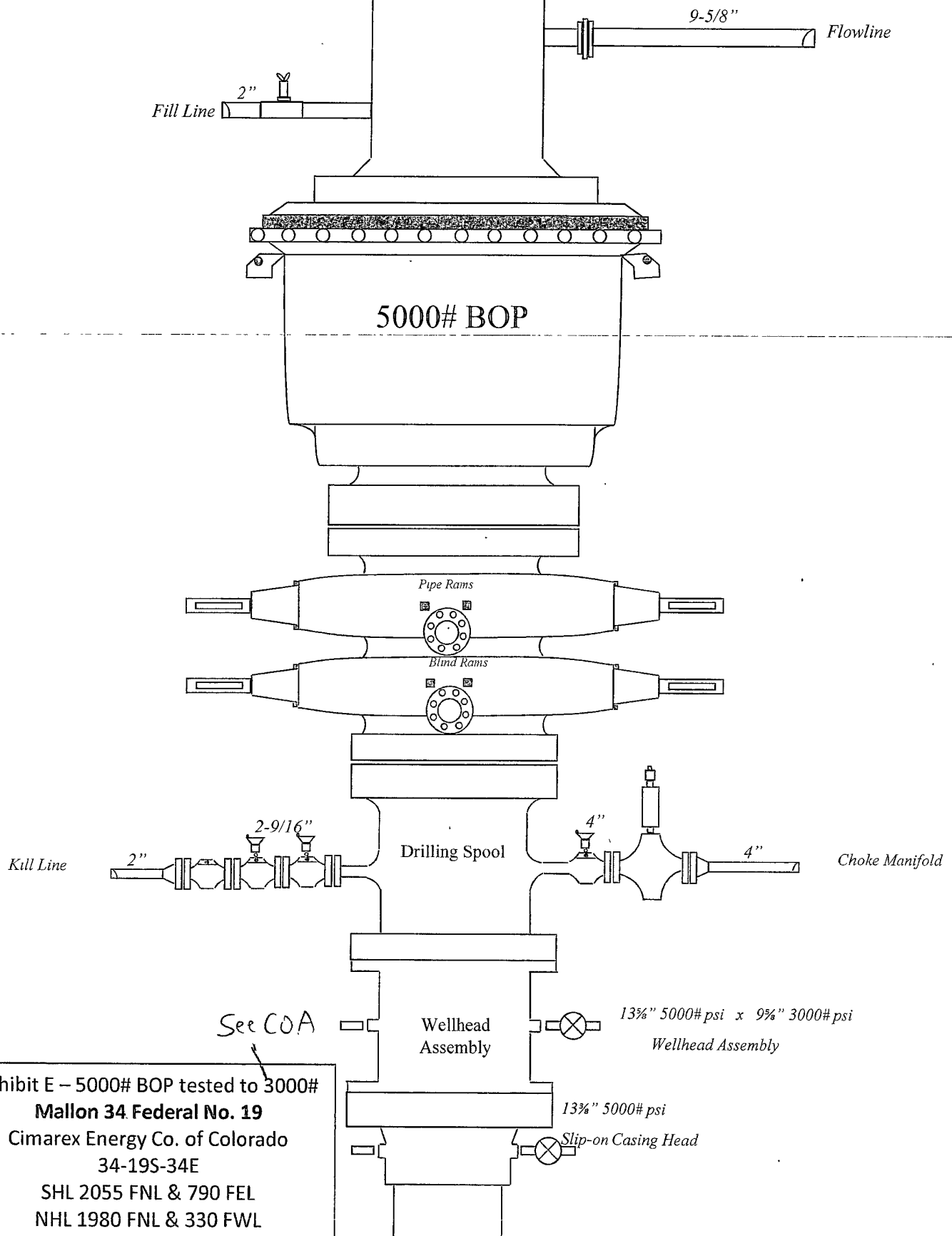


Exhibit E – 5000# BOP tested to 3000#

Mallon 34 Federal No. 19

Cimarex Energy Co. of Colorado

34-19S-34E

SHL 2055 FNL & 790 FEL

NHL 1980 FNL & 330 FWL

Lea County, NM

Drilling Operations
Choke Manifold *See COA*
5M Service (tested to 3M)

Exhibit E-1 – Choke Manifold Diagram
Mallon 34 Federal No. 19
Cimarex Energy Co. of Colorado
34-19S-34E
SHL 2055 FNL & 790 FEL
BHL 1980 FNL & 330 FWL
Lea County, NM

