

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

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MAY 25 2010
HOBSOCD

Form 3160-3
(April 2004)

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 SHL Fee, BHL NM-0153471
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 Pending
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701	3b. Phone No. (include area code) 432-571-7800	8. Lease Name and Well No. <u><37526></u> Franklin 18 Federal Com No. 1 <u>H</u>
4 Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FSL & 660 FWL <u>Unit M</u> At proposed prod Zone 330 FNL & 660 FWL <u>Unit D</u> Horizontal Abo/Wolfcamp test		9. API Well No 30-005- <u>29140</u>
14. Distance in miles and direction from nearest town or post office*		10 Field and Pool, or Exploratory Abo/Wolfcamp Wildcat <u><97722></u>
15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 330		11. Sec., T. R. M. or Blk. and Survey or Area 18-15S-31E
16 No of acres in lease 753.62		12. County or Parish Chaves
17 Spacing Unit dedicated to this well W2W2 156.84 acres		13. State NM
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A		
19 Proposed Depth Pilot Hole 9500' MD 13163' TVD 8625'		20. BLM/BIA Bond No. on File NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4458' GR	22. Approximate date work will start* 04.15.10	23. Estimated duration 25-30 days

24. Attachments ROSWELL CONTROLLED WATER BASIN

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 <u>Zeno Farris</u>	Name (Printed/Typed) Zeno Farris	Date 02.17.10
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Title

Manager Operations Administration

Approved By (Signature) <u>/s/ Angel Mayes</u>	Name (Printed/Typed) <u>Angel Mayes</u>	Date <u>MAY 19 2010</u>
Title Assistant Field Manager, Lands And Minerals	Office ROSWELL 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

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)

DECLARED WATER BASIN

COPIES BEHIND THE 138"
CASING MUST BE CIRCULATED

WITNESS

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS ATTACHED

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

DISTRICT II
1301 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

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 15, 2008

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

RECEIVED
MAY 25 2010
HOBBSDO

Submit one copy to appropriate District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-005-29140	Pool Code 97722	Pool Name Abo/Wolfcamp Wildcat
Property Code 37526	Property Name FRANKLIN "18" FEDERAL COM	Well Number 1H
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 4458'

Surface Location

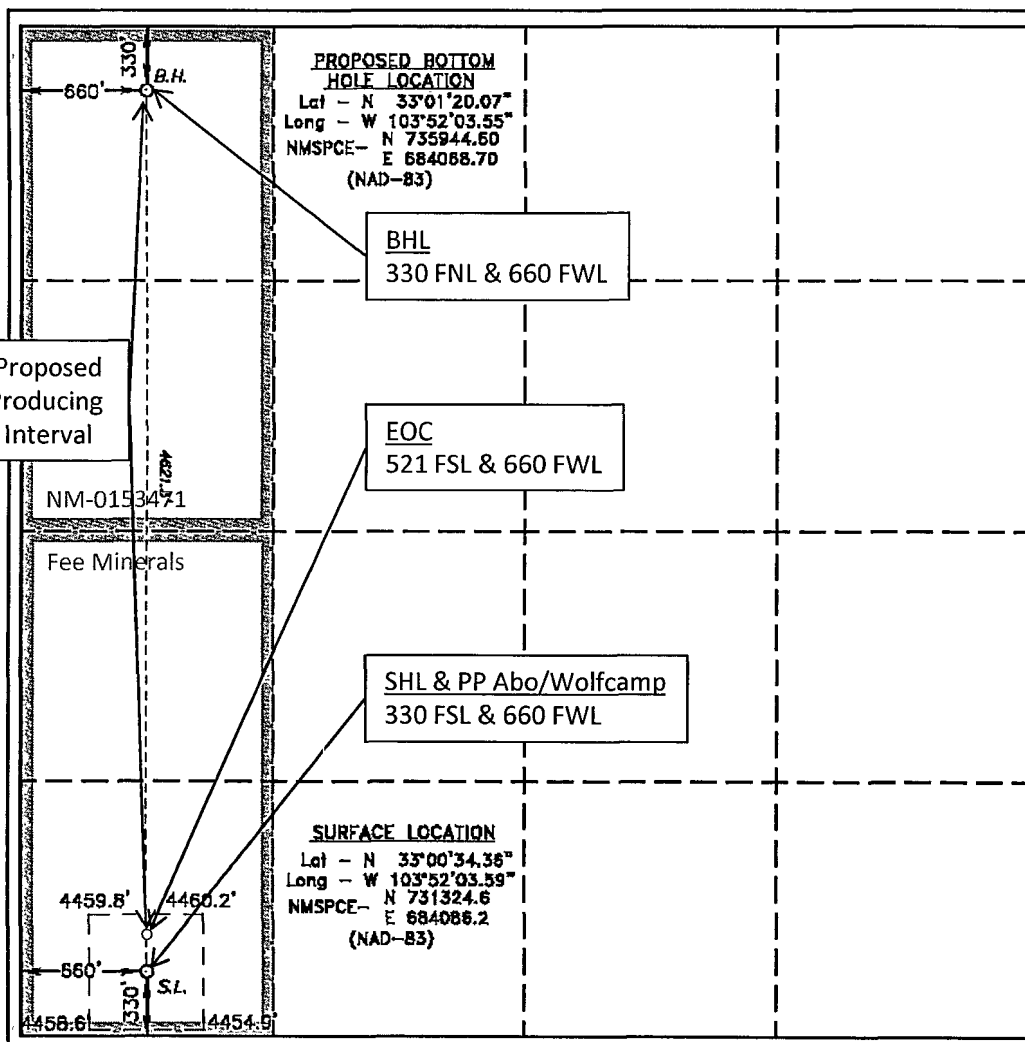
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
DM	18	15 S	31 E		330	SOUTH	660	WEST	CHAVES

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
MD	18	15 S	31 E		330	NORTH	660	WEST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
156.84		P	

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

	PROPOSED BOTTOM HOLE LOCATION Lat - N 33°01'20.07" Long - W 103°52'03.55" NMSPCE - N 735944.60 E 684088.70 (NAD-83) BHL 330 FNL & 660 FWL EOC 521 FSL & 660 FWL SHL & PP Abo/Wolfcamp 330 FSL & 660 FWL SURFACE LOCATION Lat - N 33°00'34.36" Long - W 103°52'03.59" NMSPCE - N 731324.6 E 684086.2 (NAD-83)	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 undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this 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> 2/17/2010 Signature Date Zeno Farris Printed Name 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. FEBRUARY 08, 2010 Date Surveyed Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 BASIN SURVEYS
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Cimarex Energy Co.

Location: Chaves County, NM
Field: (Franklin) Sec 18, T15S, R31E
Facility: Franklin 18 Fed Corn No. 1H

Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB

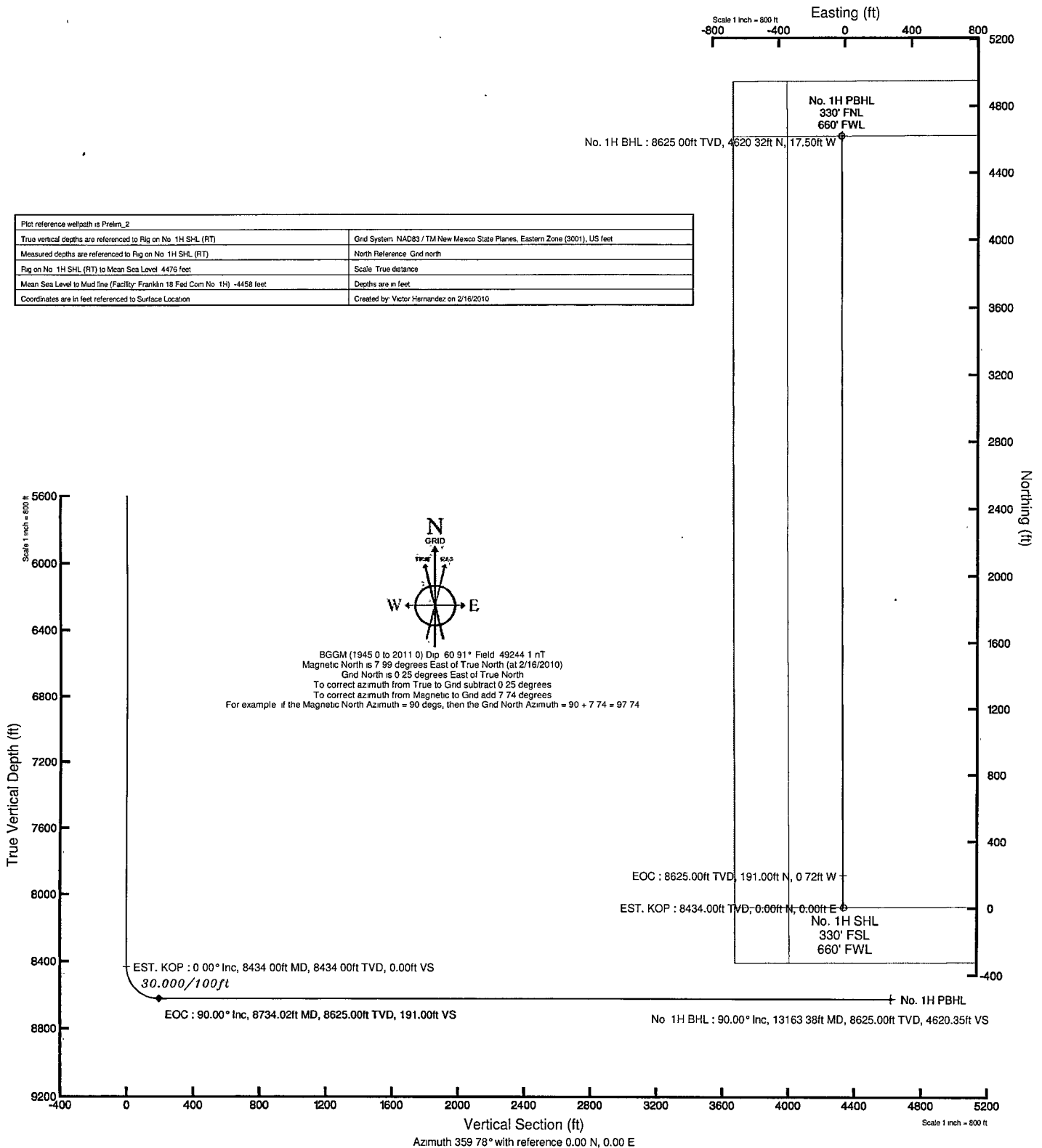


INTEQ

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	359.783	0.00	0.00	0.00	0.00	0.00
EST. KOP	8434.00	0.000	359.783	8434.00	0.00	0.00	0.00	0.00
EOC	8734.02	90.000	359.783	8625.00	191.00	-0.72	30.00	191.00
No. 1H BHL	13163.38	90.000	359.783	8625.00	4620.32	-17.50	0.00	4620.35

Plot reference wellpath is Prelim_2	
True vertical depths are referenced to Rig on No. 1H SHL (RT)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 1H SHL (RT)	North Reference: Grid north
Rig on No. 1H SHL (RT) to Mean Sea Level: 4476 feet	Scale: True distance
Mean Sea Level to Mud Line (Facility: Franklin 18 Fed Corn No. 1H) -4458 feet	Depths are in feet
Coordinates are in feet referenced to Surface Location	Created by: Victor Hernandez on 2/16/2010





Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 1H PWB
Facility	Franklin 18 Fed Com No. 1H		

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	0.999932	Report Generated	2/16/2010 at 4:58:36 PM
Convergence at slot	0.25° East	Database/Source file	WA_Midland/No. 1H_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	684086.20	731324.60	33°00'34.356"N	103°52'03.589"W
Facility Reference Pt			684086.20	731324.60	33°00'34.356"N	103°52'03.589"W
Field Reference Pt			688326.60	735962.00	33°01'20.052"N	103°51'13.544"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (RT) to GL	18.00ft
Horizontal Reference Pt	Surface Location	Rig on No. 1H SHL (RT) to Mean Sea Level	4476.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.78°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

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Area	Chaves County, NM	Well	No. 1H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 1H PWB
Facility	Franklin 18 Fed Com No. 1H		

WELLPATH DATA (51 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	359.783	0.00	0.00	0.00	0.00	684086.20	731324.60	33°00'34.356"N	103°52'03.589"W	0.00	Tie On
8434.00	0.000	359.783	8434.00	0.00	0.00	0.00	684086.20	731324.60	33°00'34.356"N	103°52'03.589"W	0.00	EST. KOP
8534.00†	29.998	359.783	8529.49	25.59	25.59	-0.10	684086.10	731350.18	33°00'34.609"N	103°52'03.589"W	30.00	
8634.00†	59.996	359.783	8599.40	95.49	95.49	-0.36	684085.84	731420.08	33°00'35.301"N	103°52'03.588"W	30.00	
8734.00†	89.993	359.783	8625.00	190.98	190.98	-0.72	684085.48	731515.56	33°00'36.245"N	103°52'03.587"W	30.00	
8734.02	90.000	359.783	8625.00	191.00	191.00	-0.72	684085.48	731515.59	33°00'36.246"N	103°52'03.587"W	30.00	EOC
8834.00†	90.000	359.783	8625.00	290.98	290.98	-1.10	684085.10	731615.56	33°00'37.235"N	103°52'03.587"W	0.00	
8934.00†	90.000	359.783	8625.00	390.98	390.98	-1.48	684084.72	731715.55	33°00'38.224"N	103°52'03.586"W	0.00	
9034.00†	90.000	359.783	8625.00	490.98	490.97	-1.86	684084.34	731815.54	33°00'39.214"N	103°52'03.585"W	0.00	
9134.00†	90.000	359.783	8625.00	590.98	590.97	-2.24	684083.96	731915.53	33°00'40.203"N	103°52'03.584"W	0.00	
9234.00†	90.000	359.783	8625.00	690.98	690.97	-2.62	684083.58	732015.52	33°00'41.192"N	103°52'03.584"W	0.00	
9334.00†	90.000	359.783	8625.00	790.98	790.97	-3.00	684083.20	732115.52	33°00'42.182"N	103°52'03.583"W	0.00	
9434.00†	90.000	359.783	8625.00	890.98	890.97	-3.37	684082.83	732215.51	33°00'43.171"N	103°52'03.582"W	0.00	
9534.00†	90.000	359.783	8625.00	990.98	990.97	-3.75	684082.45	732315.50	33°00'44.161"N	103°52'03.581"W	0.00	
9634.00†	90.000	359.783	8625.00	1090.98	1090.97	-4.13	684082.07	732415.49	33°00'45.150"N	103°52'03.581"W	0.00	
9734.00†	90.000	359.783	8625.00	1190.98	1190.97	-4.51	684081.69	732515.49	33°00'46.139"N	103°52'03.580"W	0.00	
9834.00†	90.000	359.783	8625.00	1290.98	1290.97	-4.89	684081.31	732615.48	33°00'47.129"N	103°52'03.579"W	0.00	
9934.00†	90.000	359.783	8625.00	1390.98	1390.97	-5.27	684080.93	732715.47	33°00'48.118"N	103°52'03.578"W	0.00	
10034.00†	90.000	359.783	8625.00	1490.98	1490.97	-5.65	684080.55	732815.46	33°00'49.108"N	103°52'03.578"W	0.00	
10134.00†	90.000	359.783	8625.00	1590.98	1590.97	-6.03	684080.17	732915.46	33°00'50.097"N	103°52'03.577"W	0.00	
10234.00†	90.000	359.783	8625.00	1690.98	1690.97	-6.41	684079.80	733015.45	33°00'51.086"N	103°52'03.576"W	0.00	
10334.00†	90.000	359.783	8625.00	1790.98	1790.97	-6.78	684079.42	733115.44	33°00'52.076"N	103°52'03.575"W	0.00	
10434.00†	90.000	359.783	8625.00	1890.98	1890.96	-7.16	684079.04	733215.43	33°00'53.065"N	103°52'03.575"W	0.00	
10534.00†	90.000	359.783	8625.00	1990.98	1990.96	-7.54	684078.66	733315.43	33°00'54.054"N	103°52'03.574"W	0.00	
10634.00†	90.000	359.783	8625.00	2090.98	2090.96	-7.92	684078.28	733415.42	33°00'55.044"N	103°52'03.573"W	0.00	
10734.00†	90.000	359.783	8625.00	2190.98	2190.96	-8.30	684077.90	733515.41	33°00'56.033"N	103°52'03.572"W	0.00	
10834.00†	90.000	359.783	8625.00	2290.98	2290.96	-8.68	684077.52	733615.40	33°00'57.023"N	103°52'03.572"W	0.00	
10934.00†	90.000	359.783	8625.00	2390.98	2390.96	-9.06	684077.14	733715.39	33°00'58.012"N	103°52'03.571"W	0.00	
11034.00†	90.000	359.783	8625.00	2490.98	2490.96	-9.44	684076.77	733815.39	33°00'59.001"N	103°52'03.570"W	0.00	
11134.00†	90.000	359.783	8625.00	2590.98	2590.96	-9.81	684076.39	733915.38	33°00'59.991"N	103°52'03.569"W	0.00	



Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 1H PWB
Facility	Franklin 18 Fed Com No. 1H		

WELLPATH DATA (51 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
11234.00†	90.000	359.783	8625.00	2690.98	2690.96	-10.19	684076.01	734015.37	33°01'00.980"N	103°52'03.569"W	0.00	
11334.00†	90.000	359.783	8625.00	2790.98	2790.96	-10.57	684075.63	734115.36	33°01'01.970"N	103°52'03.568"W	0.00	
11434.00†	90.000	359.783	8625.00	2890.98	2890.96	-10.95	684075.25	734215.36	33°01'02.959"N	103°52'03.567"W	0.00	
11534.00†	90.000	359.783	8625.00	2990.98	2990.96	-11.33	684074.87	734315.35	33°01'03.948"N	103°52'03.566"W	0.00	
11634.00†	90.000	359.783	8625.00	3090.98	3090.96	-11.71	684074.49	734415.34	33°01'04.938"N	103°52'03.566"W	0.00	
11734.00†	90.000	359.783	8625.00	3190.98	3190.96	-12.09	684074.11	734515.33	33°01'05.927"N	103°52'03.565"W	0.00	
11834.00†	90.000	359.783	8625.00	3290.98	3290.95	-12.47	684073.74	734615.33	33°01'06.917"N	103°52'03.564"W	0.00	
11934.00†	90.000	359.783	8625.00	3390.98	3390.95	-12.84	684073.36	734715.32	33°01'07.906"N	103°52'03.563"W	0.00	
12034.00†	90.000	359.783	8625.00	3490.98	3490.95	-13.22	684072.98	734815.31	33°01'08.895"N	103°52'03.563"W	0.00	
12134.00†	90.000	359.783	8625.00	3590.98	3590.95	-13.60	684072.60	734915.30	33°01'09.885"N	103°52'03.562"W	0.00	
12234.00†	90.000	359.783	8625.00	3690.98	3690.95	-13.98	684072.22	735015.29	33°01'10.874"N	103°52'03.561"W	0.00	
12334.00†	90.000	359.783	8625.00	3790.98	3790.95	-14.36	684071.84	735115.29	33°01'11.863"N	103°52'03.560"W	0.00	
12434.00†	90.000	359.783	8625.00	3890.98	3890.95	-14.74	684071.46	735215.28	33°01'12.853"N	103°52'03.560"W	0.00	
12534.00†	90.000	359.783	8625.00	3990.98	3990.95	-15.12	684071.08	735315.27	33°01'13.842"N	103°52'03.559"W	0.00	
12634.00†	90.000	359.783	8625.00	4090.98	4090.95	-15.50	684070.71	735415.26	33°01'14.832"N	103°52'03.558"W	0.00	
12734.00†	90.000	359.783	8625.00	4190.98	4190.95	-15.87	684070.33	735515.26	33°01'15.821"N	103°52'03.557"W	0.00	
12834.00†	90.000	359.783	8625.00	4290.98	4290.95	-16.25	684069.95	735615.25	33°01'16.810"N	103°52'03.557"W	0.00	
12934.00†	90.000	359.783	8625.00	4390.98	4390.95	-16.63	684069.57	735715.24	33°01'17.800"N	103°52'03.556"W	0.00	
13034.00†	90.000	359.783	8625.00	4490.98	4490.95	-17.01	684069.19	735815.23	33°01'18.789"N	103°52'03.555"W	0.00	
13134.00†	90.000	359.783	8625.00	4590.98	4590.94	-17.39	684068.81	735915.23	33°01'19.779"N	103°52'03.554"W	0.00	
13163.38	90.000	359.783	8625.00	4620.35	4620.32	-17.50	684068.70	735944.60	33°01'20.069"N	103°52'03.554"W	0.00	No. 1H BHL



Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 1H PWB
Facility	Franklin 18 Fed Com No. 1H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 1H PBHL	13163.38	8625.00	4620.32	-17.50	684068.70	735944.60	33°01'20.069"N	103°52'03.554"W	point

SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_2

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	13163.38	NaviTrak (Standard)		No. 1H PWB

Application to Drill
Franklin 18 Federal Com No. 1
Cimarex Energy Co. of Colorado
Unit D, Section 18
T15S-R31E, Chaves 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 330 FSL & 660 FWL
 BHL 330 FNL & 660 FWL
- 2 Elevation above sea level: 4458' 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: Pilot Hole 9500' MD 13163' TVD 8625'
- 6 Estimated tops of geological markers:
Yates 2470' Abo Shale 7500'
Queen 3050' Lower Abo Dolomite 8695'
SanAndres 3745' Wolfcamp LS 8785'
- 7 Possible mineral bearing formation:
Abo/Wolfcamp Oil

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 340'	8.4 - 8.6	28	NC	FW
340' to 9500'	8.4-9.5	30-32	NC	FW, Brine
8274' to 13163'	9.0	28-32	May lose circ	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.

Proposed drilling Plan

Drill 8¾" hole to 9500' (pilot hole) and set 7" and 2½" fiberglass and cement as shown on page 2. Kick off 6½" lateral @ 8434.' Drill 6½" hole to MD 13163' and TVD 8625.' Install 4½" Peak Completion Liner.

Application to Drill
Franklin 18 Federal Com No. 1
 Cimarex Energy Co. of Colorado
 Unit D, Section 18
 T15S-R31E, Chaves County, NM

9 Casing & Cementing Program:

String	Hole Size	Depth			Casing OD		Weight	Collar	Grade
Surface	17½"	0'	to	340'	New	13⅝"	48#	STC	H-40
Pilot Hole	8¾"	0'	to	8374'	New	7"	26#	LTC	P-110
Fiberglass	8¾"	8374'	to	9500'	New	2⅞"	2.18#		IJ
Lateral Pt. 1	6⅝"	8274'	to	8734'	New	4½"	11.6#	BTC	P-110
Lateral Pt. 2	6⅝"	8734'	to	13163'	New	4½"	11.6#	LTC	P-110

10 Cementing:

Surface Lead: 110 sx Premium Plus + 1% CaCl₂ + 0.125# Poly-e-flake (wt 12.5, yld 1.97)
Tail: 220 sx Premium Plus + 2% CaCl₂ (wt 14.8, yld 1.35)
TOC Surface

Pilot Hole Lead: 370 sx Interfill H + 0.1% HR-7 + 0.125# Poly-e-flake (wt 11.9, yld 2.49)
Tail: 270 sx Super H + 0.5% Halad-344 + 0.4% CFR-3 + 1# Salt + 5# Gilsonite + 0.125# Poly-e-flake +
 0.35% HR-7 (wt 13.2, yld 1.61)
TOC Surface

Lateral No cement needed. Peak completion assembly.

Fresh water zones will be protected by setting 13⅝" casing at 340' and cementing to surface. Hydrocarbon zones will be protected by setting 7" casing at 8469' and fiberglass to 9500' and cementing to surface.

Intermediate Contingency:

If wellbore integrity cannot be maintained while drilling the 8¾" hole, it will be reamed out to 12¼" and new 9⅝" casing contingency string will be run as follows:

Hole Size	Depth			Casing OD		Weight	Thread	Collar	Grade
12¼"	0'	to	3950'	New	9⅝"	40#	8-R	LTC	J-55

Contingency Cementing Plan:

Lead: 950 sx Econocem + 3% Salt + 2% CaCl₂ + 3# Gilsonite (wt 11.7, yld 2.06)
Tail: 215 sx Premium Plus + 1% CaCl₂ (wt 14.8, yld 1.34)

TOC Surface

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

Application to Drill
Franklin 18 Federal Com No. 1
Cimarex Energy Co. of Colorado
Unit D, Section 18
T15S-R31E, Chaves County, NM

11 Pressure control Equipment:

Exhibit "E". A 13 $\frac{5}{8}$ " 5000 PSI working pressure B.O.P. 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 below 6000.' A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be 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.

The BOP will be tested to 3000 psi by an independent service company.

12 Testing, Logging and Coring Program:

- A. Mud logging 2 man unit from 3950' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR
- 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 Abo 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 **2300 psi** Estimated BHT **110°**

14 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.

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.

Abo/Wolfcamp pay will be perforated and stimulated.

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