

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

MAY 25 2010

HOBBSOCD

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

1b. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

Cimarex Energy Co. of Colorado

3a. Address

600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b. Phone No. (include area code)

432-571-7800

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

At Surface

330 FNL & 2270 FEL

At proposed prod Zone

330 FSL & 2270 FEL

Unit B

Unit Horizontal Abo/Wolfcamp test

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

5. Lease Serial No

NM-0153471

6. If Indian, Allottee or Tribe Name

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

Pending

8. Lease Name and Well No.

Franklin 18 Federal Com No. 3 H

9. API Well No.

30-005- 2939

10. Field and Pool, or Exploratory

Abo/Wolfcamp Wildcat

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

18-15S-31E

12. County or Parish

Chaves

13. State

NM

15. Distance from proposed*

location to nearest
property or lease line, ft
(Also to nearest drig unit line if
any)

330

16. No of acres in lease

753.62

17. Spacing Unit dedicated to this well

W2E2 160 acres

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 13259'

TVD 8720'

20. BLM/BIA Bond No on File

NM-2575

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

4449' GR

22. Approximate date work will start*

03.15.10

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
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

Natalie Krueger

Name (Printed/Typed)

Natalie Krueger

Date

02.05.10

Regulatory

Approved By (Signature)

IS/ Angel Mayes

Name (Printed/Typed)

Angel Mayes

Date

MAY 19 2010

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

APPROVED FOR 2 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)

DECLARED WATER BASIN

COPIES BEHIND THE 133"
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., Artesia, NM 87410

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

RECEIVED

MAY 25 2010
HOBBS

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-005-29139	Pool Code 97722	Pool Name Abo/Wolfcamp Wildcat
Property Code 37520	Property Name FRANKLIN "18" FEDERAL COM	Well Number 3
OGRD No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 4449'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	18	15 S	31 E		330	NORTH	2270	EAST	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
O	18	15 S	31 E		330	SOUTH	2270	EAST	CHAVES

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160		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

SURFACE LOCATION Lat - N 33°01'20.07" Long - W 103°51'36.32" NMSPCE- N 735955.2 E 686387.2 (NAD-83) SHL & PP Abo/Wolfcamp 330 FNL & 2270 FEL EOC 521 FNL & 2269 FEL BHL 330 FSL & 2270 FEL PROPOSED BOTTOM HOLE LOCATION Lat - N 33°00'34.35" Long - W 103°51'36.33" NMSPCE- N 731334.2 E 686407.8 (NAD-83)	330' 2270' 4450.1' 4449.5' NM 153471 Fee Surface & Minerals 330' 2270' Proposed Producing Interval	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>Natalie Krueger</u> 2/5/2010 Signature Date Natalie Krueger 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. NOV 16 2009 Date Surveyed Signature & Seal of Professional Surveyor W. L. Jones Certificate No. Gary L. Jones 7977 HASIN SURVEYS
--	--	---

Application to Drill
Franklin 18 Federal Com No. 3
Cimarex Energy Co. of Colorado
Unit B, 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 FNL & 2270 FEL
 BHL 330 FSL & 2270 FEL
- 2 Elevation above sea level: 4449' 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 13259' TVD 8720'
- 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
8369' to 13259'	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 2⅞" fiberglass and cement as shown on page 2. Kick off 6⅞" lateral @ 8529.' Drill 6⅞" hole to MD 13259' and TVD 8720.' Install 4½" Peak Completion Liner.

Application to Drill
Franklin 18 Federal Com No. 3
 Cimarex Energy Co. of Colorado
 Unit B, 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 8469'	New	7"	26#	LTC	P-110
Fiberglass	8¾"	8469'	to 9500'	New	2⅞"	2.18#		IJ
Lateral Pt. 1	6⅞"	8369'	to 8829'	New	4½"	11.6#	BTC	P-110
Lateral Pt. 2	6⅞"	8829'	to 13259'	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# Gilsomite + 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 9⅞" casing contingency string will be run as follows:

Hole Size	Depth		Casing OD		Weight	Thread	Collar	Grade
12¼"	0'	to 3950'	New	9⅞"	40#	8-R	LTC	J-55

Contingency Cementing Plan:

Lead: 950 sx Econocem + 3% Salt + 2% CaCl₂ + 3# Gilsomite (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. 3
Cimarex Energy Co. of Colorado
Unit B, Section 18
T15S-R31E, Chaves County, NM

11 Pressure control Equipment:

Exhibit "E". A 13 $\frac{3}{8}$ " 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.**



Cimarex Energy Co.

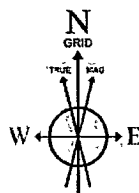
Location: Chaves County, NM
Field: (Franklin) Sec 18, T15S, R31E
Facility: Franklin 18 Fed Com No. 3H

Slot: No. 3H SHL
Well: No. 3H
Wellbore: No. 3H PWB



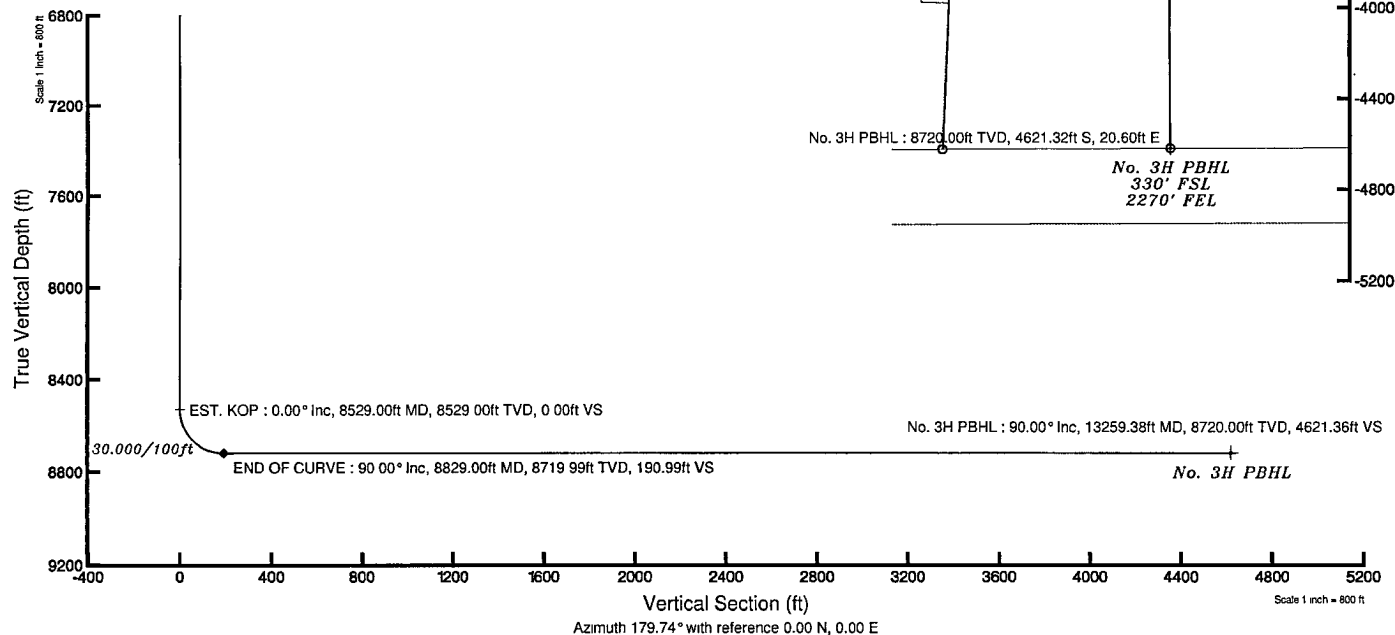
INTEQ

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	179 745	0 00	0 00	0 00	0 00	0 00
EST. KOP	8529 00	0 000	179 745	8529 00	0 00	0 00	0 00	0 00
END OF CURVE	8829 00	90 000	179 745	8719 99	-190 98	0 85	30 00	190 99
No. 3H PBHL	13259 38	90 000	179 745	8720 00	-4621 32	20 60	0 00	4621 36



BGGM (1945 0 to 2011 0) Dip: 60.93° Field: 49255.5 nT
Magnetic North is 7.99 degrees East of True North (at 2/5/2010)
Grid North is 0.26 degrees East of True North
To correct azimuth from True to Grid subtract 0.26 degrees
To correct azimuth from Magnetic to Grid add 7.73 degrees
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.73 = 97.73

Plot reference wellpath to Plan #1	
True vertical depths are referenced to Rig on No. 3H SHL (RT)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No. 3H SHL (RT)	North Reference: Grid north
Rig on No. 3H SHL (RT) to Mean Sea Level: 4449 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: Franklin 18 Fed Com No. 3H): -4449 feet	Depths are in feet
Coordinates are in feet referenced to Surface Location	Created by Victor Hernandez on 2/5/2010





Planned Wellpath Report

Plan #1
Page 1 of 4



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H PWB
Facility	Franklin 18 Fed Com No. 3H		

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	0.999933	Report Generated	2/5/2010 at 11:47:30 AM
Convergence at slot	0.26° East	Database/Source file	WA_Midland/No. 3H_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	686387.20	735955.20	33°01'20.072"N	103°51'36.322"W
Facility Reference Pt			686387.20	735955.20	33°01'20.072"N	103°51'36.322"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. 3H SHL (RT) to GL	0.00ft
Horizontal Reference Pt	Surface Location	Rig on No. 3H SHL (RT) to Mean Sea Level	4449.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.74°



Planned Wellpath Report

Plan #1
Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H PWB
Facility	Franklin 18 Fed Com No. 3H		

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	179.745	0.00	0.00	0.00	0.00	686387.20	735955.20	33°01'20.072"N	103°51'36.322"W	0.00	Tie On
8529.00	0.000	179.745	8529.00	0.00	0.00	0.00	686387.20	735955.20	33°01'20.072"N	103°51'36.322"W	0.00	EST. KOP
8629.00†	30.000	179.745	8624.49	25.59	-25.59	0.11	686387.31	735929.61	33°01'19.819"N	103°51'36.322"W	30.00	
8729.00†	60.000	179.745	8694.40	95.49	-95.49	0.43	686387.63	735859.71	33°01'19.127"N	103°51'36.323"W	30.00	
8829.00†	90.000	179.745	8719.99	190.99	-190.98	0.85	686388.05	735764.23	33°01'18.182"N	103°51'36.323"W	30.00	END OF CURVE
8829.00†	90.000	179.745	8719.99	190.99	-190.98	0.85	686388.05	735764.23	33°01'18.182"N	103°51'36.323"W	0.00	
8929.00†	90.000	179.745	8719.99	290.99	-290.98	1.30	686388.50	735664.24	33°01'17.193"N	103°51'36.323"W	0.00	
9029.00†	90.000	179.745	8719.99	390.99	-390.98	1.74	686388.94	735564.24	33°01'16.203"N	103°51'36.323"W	0.00	
9129.00†	90.000	179.745	8719.99	490.99	-490.98	2.19	686389.39	735464.25	33°01'15.214"N	103°51'36.323"W	0.00	
9229.00†	90.000	179.745	8719.99	590.99	-590.98	2.63	686389.83	735364.26	33°01'14.225"N	103°51'36.323"W	0.00	
9329.00†	90.000	179.745	8719.99	690.99	-690.98	3.08	686390.28	735264.27	33°01'13.235"N	103°51'36.323"W	0.00	
9429.00†	90.000	179.745	8719.99	790.99	-790.98	3.53	686390.73	735164.28	33°01'12.246"N	103°51'36.323"W	0.00	
9529.00†	90.000	179.745	8719.99	890.99	-890.98	3.97	686391.17	735064.28	33°01'11.256"N	103°51'36.323"W	0.00	
9629.00†	90.000	179.745	8719.99	990.99	-990.98	4.42	686391.62	734964.29	33°01'10.267"N	103°51'36.323"W	0.00	
9729.00†	90.000	179.745	8719.99	1090.99	-1090.98	4.86	686392.06	734864.30	33°01'09.278"N	103°51'36.323"W	0.00	
9829.00†	90.000	179.745	8719.99	1190.99	-1190.97	5.31	686392.51	734764.31	33°01'08.288"N	103°51'36.323"W	0.00	
9929.00†	90.000	179.745	8719.99	1290.99	-1290.97	5.76	686392.95	734664.32	33°01'07.299"N	103°51'36.323"W	0.00	
10029.00†	90.000	179.745	8719.99	1390.99	-1390.97	6.20	686393.40	734564.32	33°01'06.309"N	103°51'36.323"W	0.00	
10129.00†	90.000	179.745	8719.99	1490.99	-1490.97	6.65	686393.85	734464.33	33°01'05.320"N	103°51'36.323"W	0.00	
10229.00†	90.000	179.745	8719.99	1590.99	-1590.97	7.09	686394.29	734364.34	33°01'04.331"N	103°51'36.323"W	0.00	
10329.00†	90.000	179.745	8719.99	1690.99	-1690.97	7.54	686394.74	734264.35	33°01'03.341"N	103°51'36.323"W	0.00	
10429.00†	90.000	179.745	8719.99	1790.99	-1790.97	7.98	686395.18	734164.36	33°01'02.352"N	103°51'36.323"W	0.00	
10529.00†	90.000	179.745	8719.99	1890.99	-1890.97	8.43	686395.63	734064.36	33°01'01.362"N	103°51'36.323"W	0.00	
10629.00†	90.000	179.745	8719.99	1990.99	-1990.97	8.88	686396.07	733964.37	33°01'00.373"N	103°51'36.323"W	0.00	
10729.00†	90.000	179.745	8719.99	2090.99	-2090.97	9.32	686396.52	733864.38	33°00'59.384"N	103°51'36.324"W	0.00	
10829.00†	90.000	179.745	8719.99	2190.99	-2190.96	9.77	686396.97	733764.39	33°00'58.394"N	103°51'36.324"W	0.00	
10929.00†	90.000	179.745	8719.99	2290.99	-2290.96	10.21	686397.41	733664.39	33°00'57.405"N	103°51'36.324"W	0.00	
11029.00†	90.000	179.745	8719.99	2390.99	-2390.96	10.66	686397.86	733564.40	33°00'56.416"N	103°51'36.324"W	0.00	
11129.00†	90.000	179.745	8719.99	2490.99	-2490.96	11.10	686398.30	733464.41	33°00'55.426"N	103°51'36.324"W	0.00	
11229.00†	90.000	179.745	8719.99	2590.99	-2590.96	11.55	686398.75	733364.42	33°00'54.437"N	103°51'36.324"W	0.00	



Planned Wellpath Report

Plan #1
Page 3 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H PWB
Facility	Franklin 18 Fed Com No. 3H		

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
11329.00†	90.000	179.745	8719.99	2690.99	-2690.96	12.00	686399.20	733264.43	33°00'53.447"N	103°51'36.324"W	0.00	
11429.00†	90.000	179.745	8719.99	2790.99	-2790.96	12.44	686399.64	733164.43	33°00'52.458"N	103°51'36.324"W	0.00	
11529.00†	90.000	179.745	8719.99	2890.99	-2890.96	12.89	686400.09	733064.44	33°00'51.469"N	103°51'36.324"W	0.00	
11629.00†	90.000	179.745	8719.99	2990.99	-2990.96	13.33	686400.53	732964.45	33°00'50.479"N	103°51'36.324"W	0.00	
11729.00†	90.000	179.745	8720.00	3090.99	-3090.96	13.78	686400.98	732864.46	33°00'49.490"N	103°51'36.324"W	0.00	
11829.00†	90.000	179.745	8720.00	3190.99	-3190.95	14.22	686401.42	732764.47	33°00'48.500"N	103°51'36.324"W	0.00	
11929.00†	90.000	179.745	8720.00	3290.99	-3290.95	14.67	686401.87	732664.47	33°00'47.511"N	103°51'36.324"W	0.00	
12029.00†	90.000	179.745	8720.00	3390.99	-3390.95	15.12	686402.32	732564.48	33°00'46.522"N	103°51'36.324"W	0.00	
12129.00†	90.000	179.745	8720.00	3490.99	-3490.95	15.56	686402.76	732464.49	33°00'45.532"N	103°51'36.324"W	0.00	
12229.00†	90.000	179.745	8720.00	3590.99	-3590.95	16.01	686403.21	732364.50	33°00'44.543"N	103°51'36.324"W	0.00	
12329.00†	90.000	179.745	8720.00	3690.99	-3690.95	16.45	686403.65	732264.50	33°00'43.553"N	103°51'36.324"W	0.00	
12429.00†	90.000	179.745	8720.00	3790.99	-3790.95	16.90	686404.10	732164.51	33°00'42.564"N	103°51'36.324"W	0.00	
12529.00†	90.000	179.745	8720.00	3890.99	-3890.95	17.35	686404.54	732064.52	33°00'41.575"N	103°51'36.324"W	0.00	
12629.00†	90.000	179.745	8720.00	3990.99	-3990.95	17.79	686404.99	731964.53	33°00'40.585"N	103°51'36.324"W	0.00	
12729.00†	90.000	179.745	8720.00	4090.99	-4090.95	18.24	686405.44	731864.54	33°00'39.596"N	103°51'36.325"W	0.00	
12829.00†	90.000	179.745	8720.00	4190.99	-4190.94	18.68	686405.88	731764.54	33°00'38.606"N	103°51'36.325"W	0.00	
12929.00†	90.000	179.745	8720.00	4290.99	-4290.94	19.13	686406.33	731664.55	33°00'37.617"N	103°51'36.325"W	0.00	
13029.00†	90.000	179.745	8720.00	4390.99	-4390.94	19.57	686406.77	731564.56	33°00'36.628"N	103°51'36.325"W	0.00	
13129.00†	90.000	179.745	8720.00	4490.99	-4490.94	20.02	686407.22	731464.57	33°00'35.638"N	103°51'36.325"W	0.00	
13229.00†	90.000	179.745	8720.00	4590.99	-4590.94	20.47	686407.66	731364.58	33°00'34.649"N	103°51'36.325"W	0.00	
13259.38	90.000	179.745	8720.00	4621.36	-4621.32	20.60	686407.80	731334.20	33°00'34.348"N	103°51'36.325"W	0.00	No. 3H PBHL



Planned Wellpath Report

Plan #1
Page 4 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H PWB
Facility	Franklin 18 Fed Com No. 3H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 3H PBHL	13259.38	8720.00	-4621.32	20.60	686407.80	731334.20	33°00'34.348"N	103°51'36.325"W	point

SURVEY PROGRAM Ref Wellbore: No. 3H PWB Ref Wellpath: Plan #1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13259.38	NaviTrak (Standard)		No. 3H PWB