

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒
Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: <u>Cimarex Energy Co. of Colorado</u> Telephone: <u>972-401-3111</u> e-mail address: <u>zfarris@cimarex.com</u>		
Address: <u>PO Box 140907; Irving, TX 75014-0907</u>		
Facility or well name: <u>Bunker Hill 32 State No. 1</u> API #: <u>30-005-28023</u> U/L or Qtr/Qtr <u>E</u> Sec <u>32</u> T <u>15S</u> R <u>31E</u>		
County: <u>Chaves</u> Latitude <u>32° 58' 27.00 N</u> Longitude <u>103° 51' 05.82 W</u> NAD: 1927 ☐ 1983 ☒		
Surface Owner: Federal ☐ State ☐ Private ☒ Indian ☐		
Pit Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☐ Unlined ☐ Liner type: Synthetic ☐ Thickness <u> </u> mil Clay ☐ Pit Volume <u> </u> bbl closed system, cuttings hauled	Below-grade tank Volume: <u> </u> bbl Type of fluid <u> </u> Construction material: <u> </u> Double-walled, with leak detection? Yes ☐ If not, explain why not. <u> </u>	
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) <u>300'</u>	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) <u>100 feet or more</u> (0 points)	
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) <u>No</u> (0 points)	
Distance to surface water. (horizontal distance to all wetlands, playns, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) <u>1000 feet or more</u> (0 points)	
Ranking Score (Total Points)		0

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if you are burying in place) onsite ☐ offsite ☐ If offsite, name of facility . (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments:

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Date: 05.06.08

Printed Name/Title Zeno Farris - Manager Operations Administration Signature Zeno Farris

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Printed Name/Title Signature Date:

PETROLEUM ENGINEER

MAY 08 2008

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-005-28023	Pool Code	Pool Name Abo Wildcat
Property Code 37155	Property Name BUNKER HILL "32" STATE	Well Number 1
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 4430'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	32	15 S	31 E		1980	NORTH	330	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
H	32	15 S	31 E		1980	NORTH	330	EAST	CHAVES
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.						

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 undivided 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> 05-05-08 Signature Date <u>Zeno Farris</u> Printed Name	
SURFACE LOCATION Lat - N32°58'27.004" Long - W103°51'05.82" NMSPC - N 718476.1 E 689064.1 (NAD-83)				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. APR 11 2008 Date Surveyed <u>Gary L. Jones</u> Signature Professional Surveyor <u>7977</u> Certificate No.	
BOTTOM HOLE LOCATION Lat - N32°58'26.95" Long - W103°50'11.46" NMSPC - N 718491.926 E 693694.892 (NAD-83)				BASIN SURVEYS	



Cimarex Energy Co. of Colorado

5215 North O'Connor Blvd. ♦ Suite 1500 ♦ Irving, TX 75039 ♦ (972) 401-3111 ♦ Fax (972) 443-6486

Mailing Address: P.O. Box 140907 ♦ Irving, TX 75014-0907

A subsidiary of Cimarex Energy Co. ♦ A NYSE Listed Company ♦ "XEC"

May 6, 2008

30-005-28023

Oil Conservation Division
District I Office
1625 N. French Drive
Hobbs, New Mexico 88240
Attn: Ms. Donna Mull

Re: Statewide Rule 118
Hydrogen Sulfide Gas Contingency Plan
Proposed Bunker Hill 32 State No. 1 Well

Dear Ms. Mull:

In accordance with NMAC 19.15.3.118 C. (1) governing the determination of the hydrogen sulfide concentration in gaseous mixtures in each of its operations, Cimarex Energy Co. of Colorado does not anticipate that there will be enough H₂S from the surface to the Abo formations to meet the OCD's minimum requirements for the submission of a contingency plan for the drilling and completion of the following test(s):

Bunker Hill 32 State No. 1
32-15S-31E
SHL 1980' FNL & 330' FWL
BHL 1980' FNL & 330' FEL
Chaves County, NM

If anything further is needed regarding this issue, or if you have any questions, please feel free to contact the undersigned at 972-443-6489.

Yours truly,

Zeno Farris
Manager Operations Administration

PROPOSED WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ
Software System: WellArchitect@2.0

REFERENCE WELLPATH IDENTIFICATION

Operator Cimarex Energy Co
Area Chaves County, NM
Field (Bunker) Section 32, T15S, R31E
Facility Bunker Hill 32 ST COM No 1
Slot No 1 SHL
Well No 1
Wellbore No 1 PWB
Wellpath Preliminary
Sidetrack (none)

REPORT SETUP INFORMATION

Projection NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
North Refe Grid
Scale 0.999934
Convergen 0.26° East
Software S WellArchitect®
User Victor Hernandez
Report Gen 4/23/2008 at 12:51:04 PM
DataBase: WA_Midland/ev7273.xml

WELLPAT	Local North	Local East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]		
Slot Locati	0	0	689064.1	718476.1	32°58'27.0	103°51'05.822"W
Facility Ref			689064.1	718476.1	32°58'27.0	103°51'05.822"W
Field Refer			689064.1	718476.1	32°58'27.0	103°51'05.822"W

WELLPATH DATUM

Calculation Minimum curvature
Horizontal Facility Center
Vertical Re Rig on No 1 SHL (RT)
MD Refere Rig on No 1 SHL (RT)
Field Vertic Mean Sea Level
Rig on No 18.00ft
Rig on No. 4448.00ft
Facility Ver 0.00ft
Section On 0.00ft
Section Or 0.00ft
Section Az 89.80°

WELLPATH DATA	Wellbore. No 1 PWB	Wellpath: Preliminary	† = interpolated/extrapolated station					
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	DLS	Comments
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[°/100ft]	
0	0	89.804	0	0	0	0	0	Tie On
† 100	0	89.804	100	0	0	0	0	
† 200	0	89.804	200	0	0	0	0	
† 300	0	89.804	300	0	0	0	0	
† 400	0	89.804	400	0	0	0	0	
† 500	0	89.804	500	0	0	0	0	
† 600	0	89.804	600	0	0	0	0	
† 700	0	89.804	700	0	0	0	0	
† 800	0	89.804	800	0	0	0	0	
† 900	0	89.804	900	0	0	0	0	
† 1000	0	89.804	1000	0	0	0	0	
† 1100	0	89.804	1100	0	0	0	0	
† 1200	0	89.804	1200	0	0	0	0	
† 1300	0	89.804	1300	0	0	0	0	
† 1400	0	89.804	1400	0	0	0	0	
† 1500	0	89.804	1500	0	0	0	0	
† 1600	0	89.804	1600	0	0	0	0	
† 1700	0	89.804	1700	0	0	0	0	
† 1800	0	89.804	1800	0	0	0	0	
† 1900	0	89.804	1900	0	0	0	0	
† 2000	0	89.804	2000	0	0	0	0	

†	2100	0	89 804	2100	0	0	0	0	
†	2200	0	89 804	2200	0	0	0	0	
†	2300	0	89 804	2300	0	0	0	0	
†	2312	0	89 804	2312	0	0	0	0	YATES
†	2400	0	89 804	2400	0	0	0	0	
†	2500	0	89 804	2500	0	0	0	0	
†	2600	0	89.804	2600	0	0	0	0	
†	2700	0	89 804	2700	0	0	0	0	
†	2800	0	89.804	2800	0	0	0	0	
†	2900	0	89.804	2900	0	0	0	0	
†	3000	0	89.804	3000	0	0	0	0	
†	3090	0	89.804	3090	0	0	0	0	QUEEN
†	3100	0	89 804	3100	0	0	0	0	
†	3200	0	89.804	3200	0	0	0	0	
†	3300	0	89 804	3300	0	0	0	0	
†	3400	0	89 804	3400	0	0	0	0	
†	3500	0	89 804	3500	0	0	0	0	
†	3600	0	89.804	3600	0	0	0	0	
†	3700	0	89 804	3700	0	0	0	0	
†	3800	0	89.804	3800	0	0	0	0	
†	3900	0	89 804	3900	0	0	0	0	
†	3940	0	89 804	3940	0	0	0	0	SAN ANDRES
†	4000	0	89.804	4000	0	0	0	0	
†	4100	0	89 804	4100	0	0	0	0	
†	4200	0	89 804	4200	0	0	0	0	
†	4300	0	89.804	4300	0	0	0	0	
†	4400	0	89 804	4400	0	0	0	0	
†	4500	0	89.804	4500	0	0	0	0	
†	4600	0	89 804	4600	0	0	0	0	
†	4700	0	89 804	4700	0	0	0	0	
†	4800	0	89 804	4800	0	0	0	0	
†	4900	0	89.804	4900	0	0	0	0	
†	5000	0	89 804	5000	0	0	0	0	
†	5100	0	89 804	5100	0	0	0	0	
†	5200	0	89 804	5200	0	0	0	0	
†	5300	0	89.804	5300	0	0	0	0	
†	5400	0	89 804	5400	0	0	0	0	
†	5500	0	89.804	5500	0	0	0	0	
†	5600	0	89 804	5600	0	0	0	0	
†	5700	0	89.804	5700	0	0	0	0	
†	5800	0	89 804	5800	0	0	0	0	
†	5900	0	89.804	5900	0	0	0	0	
†	6000	0	89 804	6000	0	0	0	0	
†	6100	0	89.804	6100	0	0	0	0	
†	6200	0	89 804	6200	0	0	0	0	
†	6300	0	89.804	6300	0	0	0	0	
†	6400	0	89.804	6400	0	0	0	0	
†	6500	0	89.804	6500	0	0	0	0	
†	6600	0	89 804	6600	0	0	0	0	
†	6700	0	89.804	6700	0	0	0	0	
†	6800	0	89 804	6800	0	0	0	0	
†	6900	0	89 804	6900	0	0	0	0	
†	7000	0	89 804	7000	0	0	0	0	
†	7100	0	89.804	7100	0	0	0	0	
†	7200	0	89 804	7200	0	0	0	0	
†	7300	0	89.804	7300	0	0	0	0	
†	7340	0	89 804	7340	0	0	0	0	ABO SHALE
†	7400	0	89.804	7400	0	0	0	0	
†	7500	0	89 804	7500	0	0	0	0	
†	7600	0	89.804	7600	0	0	0	0	
†	7700	0	89 804	7700	0	0	0	0	
†	7800	0	89 804	7800	0	0	0	0	
†	7900	0	89.804	7900	0	0	0	0	
†	8000	0	89 804	8000	0	0	0	0	
†	8100	0	89 804	8100	0	0	0	0	
†	8200	0	89 804	8200	0	0	0	0	
†	8300	0	89 804	8300	0	0	0	0	
	8395	0	89 804	8395	0	0	0	0	KOP
†	8400	1.5	89.804	8400	0 07	0	0 07	30	

†	8500	31.5	89.804	8494.79	28.14	0.1	28.14	30	
†	8600	61.5	89.804	8562.84	99.86	0.34	99.85	30	
†	8675.59	84.176	89.804	8585	171.6	0.59	171.6	30	LOWER ABO DOLOMITE
	8693.75	89.626	89.804	8585.98	189.74	0.65	189.74	30	EOC
†	8700	89.626	89.804	8586.02	195.99	0.67	195.98	0	
†	8800	89.626	89.804	8586.68	295.98	1.01	295.98	0	
†	8900	89.626	89.804	8587.33	395.98	1.35	395.98	0	
†	9000	89.626	89.804	8587.98	495.98	1.7	495.98	0	
†	9100	89.626	89.804	8588.64	595.98	2.04	595.97	0	
†	9200	89.626	89.804	8589.29	695.98	2.38	695.97	0	
†	9300	89.626	89.804	8589.94	795.97	2.72	795.97	0	
†	9400	89.626	89.804	8590.6	895.97	3.06	895.97	0	
†	9500	89.626	89.804	8591.25	995.97	3.4	995.96	0	
†	9600	89.626	89.804	8591.9	1095.97	3.75	1095.96	0	
†	9700	89.626	89.804	8592.56	1195.96	4.09	1195.96	0	
†	9800	89.626	89.804	8593.21	1295.96	4.43	1295.95	0	
†	9900	89.626	89.804	8593.86	1395.96	4.77	1395.95	0	
†	10000	89.626	89.804	8594.52	1495.96	5.11	1495.95	0	
†	10100	89.626	89.804	8595.17	1595.96	5.45	1595.95	0	
†	10200	89.626	89.804	8595.82	1695.95	5.8	1695.94	0	
†	10300	89.626	89.804	8596.48	1795.95	6.14	1795.94	0	
†	10400	89.626	89.804	8597.13	1895.95	6.48	1895.94	0	
†	10500	89.626	89.804	8597.78	1995.95	6.82	1995.94	0	
†	10600	89.626	89.804	8598.44	2095.95	7.16	2095.93	0	
†	10700	89.626	89.804	8599.09	2195.94	7.5	2195.93	0	
†	10800	89.626	89.804	8599.74	2295.94	7.85	2295.93	0	
†	10900	89.626	89.804	8600.4	2395.94	8.19	2395.92	0	
†	11000	89.626	89.804	8601.05	2495.94	8.53	2495.92	0	
†	11100	89.626	89.804	8601.7	2595.93	8.87	2595.92	0	
†	11200	89.626	89.804	8602.36	2695.93	9.21	2695.92	0	
†	11300	89.626	89.804	8603.01	2795.93	9.56	2795.91	0	
†	11400	89.626	89.804	8603.66	2895.93	9.9	2895.91	0	
†	11500	89.626	89.804	8604.32	2995.93	10.24	2995.91	0	
†	11600	89.626	89.804	8604.97	3095.92	10.58	3095.91	0	
†	11700	89.626	89.804	8605.62	3195.92	10.92	3195.9	0	
†	11800	89.626	89.804	8606.28	3295.92	11.26	3295.9	0	
†	11900	89.626	89.804	8606.93	3395.92	11.61	3395.9	0	
†	12000	89.626	89.804	8607.58	3495.92	11.95	3495.89	0	
†	12100	89.626	89.804	8608.24	3595.91	12.29	3595.89	0	
†	12200	89.626	89.804	8608.89	3695.91	12.63	3695.89	0	
†	12300	89.626	89.804	8609.54	3795.91	12.97	3795.89	0	
†	12400	89.626	89.804	8610.2	3895.91	13.31	3895.88	0	
†	12500	89.626	89.804	8610.85	3995.9	13.66	3995.88	0	
†	12600	89.626	89.804	8611.5	4095.9	14	4095.88	0	
†	12700	89.626	89.804	8612.16	4195.9	14.34	4195.88	0	
†	12800	89.626	89.804	8612.81	4295.9	14.68	4295.87	0	
†	12900	89.626	89.804	8613.46	4395.9	15.02	4395.87	0	
†	13000	89.626	89.804	8614.12	4495.89	15.36	4495.87	0	
†	13100	89.626	89.804	8614.77	4595.89	15.71	4595.87	0	
	13135.24	89.626	89.804	8615	4631.13	15.83	4631.11	0	No 1 BHL 1

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape	Comment	Design	Comments
(1) No. 1 B	13135.24	8615	15.83	4631.11	693694.9	718491.9	32°58'26.9	103°50'11	point			

SURVEY PROGRAM Ref Wellbore No. 1 PWB Ref Wellpath Preliminary

Start MD End MD Pos Unc MLog Name/ Wellbore

[ft] [ft]
18 13135.24 NaviTrak (Standard) No 1 PWB



Planned Wellpath Report

Preliminary
Page 1 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator **Cimarex Energy Co.**
Area **Chaves County, NM**
Field **(Bunker) Section 32, T15S, R31E**
Facility **Bunker Hill 32 ST COM No. 1H**

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

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 **0.999934** Report Generated **4/23/2008 at 12:51:05 PM**
Convergence at slot **0.26° 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	689064.10	718476.10	32°58'27.005"N	103°51'05.822"W
Facility Reference Pt			689064.10	718476.10	32°58'27.005"N	103°51'05.822"W
Field Reference Pt			689064.10	718476.10	32°58'27.005"N	103°51'05.822"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (RT) to Facility Vertical Datum	18.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 1H SHL (RT) to Mean Sea Level	4448.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RT)	Facility Vertical Datum 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	89.80°

hug



Planned Wellpath Report

Preliminary

Page 2 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator **Cimarex Energy Co.**

Area **Chaves County, NM**

Field **(Bunker) Section 32, T15S, R31E**

Facility **Bunker Hill 32 ST COM No. 1H**

Slot **No. 1H SHL**

Well **No. 1H**

Wellbore **No. 1H PWB**

WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	89.804	0.00	0.00	0.00	0.00	0.00	Tie On
100.00†	0.000	89.804	100.00	0.00	0.00	0.00	0.00	
200.00†	0.000	89.804	200.00	0.00	0.00	0.00	0.00	
300.00†	0.000	89.804	300.00	0.00	0.00	0.00	0.00	
400.00†	0.000	89.804	400.00	0.00	0.00	0.00	0.00	
500.00†	0.000	89.804	500.00	0.00	0.00	0.00	0.00	
600.00†	0.000	89.804	600.00	0.00	0.00	0.00	0.00	
700.00†	0.000	89.804	700.00	0.00	0.00	0.00	0.00	
800.00†	0.000	89.804	800.00	0.00	0.00	0.00	0.00	
900.00†	0.000	89.804	900.00	0.00	0.00	0.00	0.00	
1000.00†	0.000	89.804	1000.00	0.00	0.00	0.00	0.00	
1100.00†	0.000	89.804	1100.00	0.00	0.00	0.00	0.00	
1200.00†	0.000	89.804	1200.00	0.00	0.00	0.00	0.00	
1300.00†	0.000	89.804	1300.00	0.00	0.00	0.00	0.00	
1400.00†	0.000	89.804	1400.00	0.00	0.00	0.00	0.00	
1500.00†	0.000	89.804	1500.00	0.00	0.00	0.00	0.00	
1600.00†	0.000	89.804	1600.00	0.00	0.00	0.00	0.00	
1700.00†	0.000	89.804	1700.00	0.00	0.00	0.00	0.00	
1800.00†	0.000	89.804	1800.00	0.00	0.00	0.00	0.00	
1900.00†	0.000	89.804	1900.00	0.00	0.00	0.00	0.00	
2000.00†	0.000	89.804	2000.00	0.00	0.00	0.00	0.00	
2100.00†	0.000	89.804	2100.00	0.00	0.00	0.00	0.00	
2200.00†	0.000	89.804	2200.00	0.00	0.00	0.00	0.00	
2300.00†	0.000	89.804	2300.00	0.00	0.00	0.00	0.00	
2312.00†	0.000	89.804	2312.00	0.00	0.00	0.00	0.00	YATES
2400.00†	0.000	89.804	2400.00	0.00	0.00	0.00	0.00	
2500.00†	0.000	89.804	2500.00	0.00	0.00	0.00	0.00	
2600.00†	0.000	89.804	2600.00	0.00	0.00	0.00	0.00	
2700.00†	0.000	89.804	2700.00	0.00	0.00	0.00	0.00	
2800.00†	0.000	89.804	2800.00	0.00	0.00	0.00	0.00	
2900.00†	0.000	89.804	2900.00	0.00	0.00	0.00	0.00	
3000.00†	0.000	89.804	3000.00	0.00	0.00	0.00	0.00	
3090.00†	0.000	89.804	3090.00	0.00	0.00	0.00	0.00	QUEEN
3100.00†	0.000	89.804	3100.00	0.00	0.00	0.00	0.00	
3200.00†	0.000	89.804	3200.00	0.00	0.00	0.00	0.00	
3300.00†	0.000	89.804	3300.00	0.00	0.00	0.00	0.00	
3400.00†	0.000	89.804	3400.00	0.00	0.00	0.00	0.00	
3500.00†	0.000	89.804	3500.00	0.00	0.00	0.00	0.00	
3600.00†	0.000	89.804	3600.00	0.00	0.00	0.00	0.00	
3700.00†	0.000	89.804	3700.00	0.00	0.00	0.00	0.00	
3800.00†	0.000	89.804	3800.00	0.00	0.00	0.00	0.00	
3900.00†	0.000	89.804	3900.00	0.00	0.00	0.00	0.00	
3940.00†	0.000	89.804	3940.00	0.00	0.00	0.00	0.00	SAN ANDRES
4000.00†	0.000	89.804	4000.00	0.00	0.00	0.00	0.00	
4100.00†	0.000	89.804	4100.00	0.00	0.00	0.00	0.00	



Planned Wellpath Report

Preliminary

Page 3 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator **Cimarex Energy Co.**

Area **Chaves County, NM**

Field **(Bunker) Section 32, T15S, R31E**

Facility **Bunker Hill 32 ST COM No. 1H**

Slot **No. 1H SHL**

Well **No. 1H**

Wellbore **No. 1H PWB**

WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4200.00†	0.000	89.804	4200.00	0.00	0.00	0.00	0.00	
4300.00†	0.000	89.804	4300.00	0.00	0.00	0.00	0.00	
4400.00†	0.000	89.804	4400.00	0.00	0.00	0.00	0.00	
4500.00†	0.000	89.804	4500.00	0.00	0.00	0.00	0.00	
4600.00†	0.000	89.804	4600.00	0.00	0.00	0.00	0.00	
4700.00†	0.000	89.804	4700.00	0.00	0.00	0.00	0.00	
4800.00†	0.000	89.804	4800.00	0.00	0.00	0.00	0.00	
4900.00†	0.000	89.804	4900.00	0.00	0.00	0.00	0.00	
5000.00†	0.000	89.804	5000.00	0.00	0.00	0.00	0.00	
5100.00†	0.000	89.804	5100.00	0.00	0.00	0.00	0.00	
5200.00†	0.000	89.804	5200.00	0.00	0.00	0.00	0.00	
5300.00†	0.000	89.804	5300.00	0.00	0.00	0.00	0.00	
5400.00†	0.000	89.804	5400.00	0.00	0.00	0.00	0.00	
5500.00†	0.000	89.804	5500.00	0.00	0.00	0.00	0.00	
5600.00†	0.000	89.804	5600.00	0.00	0.00	0.00	0.00	
5700.00†	0.000	89.804	5700.00	0.00	0.00	0.00	0.00	
5800.00†	0.000	89.804	5800.00	0.00	0.00	0.00	0.00	
5900.00†	0.000	89.804	5900.00	0.00	0.00	0.00	0.00	
6000.00†	0.000	89.804	6000.00	0.00	0.00	0.00	0.00	
6100.00†	0.000	89.804	6100.00	0.00	0.00	0.00	0.00	
6200.00†	0.000	89.804	6200.00	0.00	0.00	0.00	0.00	
6300.00†	0.000	89.804	6300.00	0.00	0.00	0.00	0.00	
6400.00†	0.000	89.804	6400.00	0.00	0.00	0.00	0.00	
6500.00†	0.000	89.804	6500.00	0.00	0.00	0.00	0.00	
6600.00†	0.000	89.804	6600.00	0.00	0.00	0.00	0.00	
6700.00†	0.000	89.804	6700.00	0.00	0.00	0.00	0.00	
6800.00†	0.000	89.804	6800.00	0.00	0.00	0.00	0.00	
6900.00†	0.000	89.804	6900.00	0.00	0.00	0.00	0.00	
7000.00†	0.000	89.804	7000.00	0.00	0.00	0.00	0.00	
7100.00†	0.000	89.804	7100.00	0.00	0.00	0.00	0.00	
7200.00†	0.000	89.804	7200.00	0.00	0.00	0.00	0.00	
7300.00†	0.000	89.804	7300.00	0.00	0.00	0.00	0.00	
7340.00†	0.000	89.804	7340.00	0.00	0.00	0.00	0.00	ABO SHALE
7400.00†	0.000	89.804	7400.00	0.00	0.00	0.00	0.00	
7500.00†	0.000	89.804	7500.00	0.00	0.00	0.00	0.00	
7600.00†	0.000	89.804	7600.00	0.00	0.00	0.00	0.00	
7700.00†	0.000	89.804	7700.00	0.00	0.00	0.00	0.00	
7800.00†	0.000	89.804	7800.00	0.00	0.00	0.00	0.00	
7900.00†	0.000	89.804	7900.00	0.00	0.00	0.00	0.00	
8000.00†	0.000	89.804	8000.00	0.00	0.00	0.00	0.00	
8100.00†	0.000	89.804	8100.00	0.00	0.00	0.00	0.00	
8200.00†	0.000	89.804	8200.00	0.00	0.00	0.00	0.00	
8300.00†	0.000	89.804	8300.00	0.00	0.00	0.00	0.00	
8395.00	0.000	89.804	8395.00	0.00	0.00	0.00	0.00	KOP
8400.00†	1.500	89.804	8400.00	0.07	0.00	0.07	30.00	



Planned Wellpath Report

Preliminary
Page 4 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Bunker) Section 32, T15S, R31E	Wellbore	No. 1H PWB
Facility	Bunker Hill 32 ST COM No. 1H		

WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8500.00†	31.500	89.804	8494.79	28.14	0.10	28.14	30.00	
8600.00†	61.500	89.804	8562.84	99.86	0.34	99.85	30.00	
8675.59†	84.176	89.804	8585.00	171.60	0.59	171.60	30.00	LOWER ABO DOLOMITE
8693.75	89.626	89.804	8585.98	189.74	0.65	189.74	30.00	EOC
8700.00†	89.626	89.804	8586.02	195.99	0.67	195.98	0.00	
8800.00†	89.626	89.804	8586.68	295.98	1.01	295.98	0.00	
8900.00†	89.626	89.804	8587.33	395.98	1.35	395.98	0.00	
9000.00†	89.626	89.804	8587.98	495.98	1.70	495.98	0.00	
9100.00†	89.626	89.804	8588.64	595.98	2.04	595.97	0.00	
9200.00†	89.626	89.804	8589.29	695.98	2.38	695.97	0.00	
9300.00†	89.626	89.804	8589.94	795.97	2.72	795.97	0.00	
9400.00†	89.626	89.804	8590.60	895.97	3.06	895.97	0.00	
9500.00†	89.626	89.804	8591.25	995.97	3.40	995.96	0.00	
9600.00†	89.626	89.804	8591.90	1095.97	3.75	1095.96	0.00	
9700.00†	89.626	89.804	8592.56	1195.96	4.09	1195.96	0.00	
9800.00†	89.626	89.804	8593.21	1295.96	4.43	1295.95	0.00	
9900.00†	89.626	89.804	8593.86	1395.96	4.77	1395.95	0.00	
10000.00†	89.626	89.804	8594.52	1495.96	5.11	1495.95	0.00	
10100.00†	89.626	89.804	8595.17	1595.96	5.45	1595.95	0.00	
10200.00†	89.626	89.804	8595.82	1695.95	5.80	1695.94	0.00	
10300.00†	89.626	89.804	8596.48	1795.95	6.14	1795.94	0.00	
10400.00†	89.626	89.804	8597.13	1895.95	6.48	1895.94	0.00	
10500.00†	89.626	89.804	8597.78	1995.95	6.82	1995.94	0.00	
10600.00†	89.626	89.804	8598.44	2095.95	7.16	2095.93	0.00	
10700.00†	89.626	89.804	8599.09	2195.94	7.50	2195.93	0.00	
10800.00†	89.626	89.804	8599.74	2295.94	7.85	2295.93	0.00	
10900.00†	89.626	89.804	8600.40	2395.94	8.19	2395.92	0.00	
11000.00†	89.626	89.804	8601.05	2495.94	8.53	2495.92	0.00	
11100.00†	89.626	89.804	8601.70	2595.93	8.87	2595.92	0.00	
11200.00†	89.626	89.804	8602.36	2695.93	9.21	2695.92	0.00	
11300.00†	89.626	89.804	8603.01	2795.93	9.56	2795.91	0.00	
11400.00†	89.626	89.804	8603.66	2895.93	9.90	2895.91	0.00	
11500.00†	89.626	89.804	8604.32	2995.93	10.24	2995.91	0.00	
11600.00†	89.626	89.804	8604.97	3095.92	10.58	3095.91	0.00	
11700.00†	89.626	89.804	8605.62	3195.92	10.92	3195.90	0.00	
11800.00†	89.626	89.804	8606.28	3295.92	11.26	3295.90	0.00	
11900.00†	89.626	89.804	8606.93	3395.92	11.61	3395.90	0.00	
12000.00†	89.626	89.804	8607.58	3495.92	11.95	3495.89	0.00	
12100.00†	89.626	89.804	8608.24	3595.91	12.29	3595.89	0.00	
12200.00†	89.626	89.804	8608.89	3695.91	12.63	3695.89	0.00	
12300.00†	89.626	89.804	8609.54	3795.91	12.97	3795.89	0.00	
12400.00†	89.626	89.804	8610.20	3895.91	13.31	3895.88	0.00	
12500.00†	89.626	89.804	8610.85	3995.90	13.66	3995.88	0.00	
12600.00†	89.626	89.804	8611.50	4095.90	14.00	4095.88	0.00	
12700.00†	89.626	89.804	8612.16	4195.90	14.34	4195.88	0.00	



Planned Wellpath Report

Preliminary

Page 5 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator **Cimarex Energy Co.**

Area **Chaves County, NM**

Field **(Bunker) Section 32, T15S, R31E**

Facility **Bunker Hill 32 ST COM No. 1H**

Slot **No. 1H SHL**

Well **No. 1H**

Wellbore **No. 1H PWB**

WELLPATH DATA (140 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
12800.00†	89.626	89.804	8612.81	4295.90	14.68	4295.87	0.00	
12900.00†	89.626	89.804	8613.46	4395.90	15.02	4395.87	0.00	
13000.00†	89.626	89.804	8614.12	4495.89	15.36	4495.87	0.00	
13100.00†	89.626	89.804	8614.77	4595.89	15.71	4595.87	0.00	
13135.24	89.626	89.804	8615.00 ¹	4631.13	15.83	4631.11	0.00	No. 1H BHL

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 1H BHL	13135.24	8615.00 ¹	15.83	4631.11	693694.89	718491.93	32°58'26.948"N	103°50'11.462"W	point

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

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	13135.24	NaviTrak (Standard)		No. 1H PWB



Cimarex Energy Co.

Location Chaves County, NM
Field (Bunker) Section 32, T15S, R31E
Facility Bunker Hill 32 ST COM No. 1H

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

This information is preliminary.

True vertical depths are referenced to Flag on No. 1H SHL (RT).

Measured depths are referenced to Flag on No. 1H SHL (RT).

Flag on No. 1H SHL (RT) to Mean Sea Level: 44.68 feet

Mean Sea Level to Mud line (Facility, Bunker Hill 32 ST COM No. 1H): 44.30 feet

Coordinates are as listed referenced to Facility Center

Grid System: NAD83 / 2011 New Mexico State Plane, Eastern Zone (2001), US feet

North Reference: Grid north

Scale: True distance

Deposits are as listed

Drawn by: Victor Hernandez on 4/23/2008



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	89.804	0.00	0.00	0.00	0.00	0.00
KOP	8395.00	0.000	89.804	8395.00	0.00	0.00	0.00	0.00
EOC	8693.75	89.626	89.804	8585.98	0.65	189.74	30.00	189.74
No. 1H BHL	13135.24	89.626	89.804	8615.00	15.83	4631.11	0.00	4631.13

