

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

Form C-144 CLEZ  
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

**Closed-Loop System Permit or Closure Plan Application**

*(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)*

Type of action: ☒ Permit ☐ Closure

**Instructions:** Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1. Operator: Cimarex Energy Co. of Colorado OGRID #: 162683  
Address: PO Box 140907; Irving, TX 75014-0907  
Facility or well name: Monterey 23 State Com No. 1  
API Number: 30-005-29055 OCD Permit Number: PI-00475  
U/L or Qtr/Qtr A Section 23 Township 15S Range 31E County: Chaves  
Center of Proposed Design: Latitude 33° 00' 27.69" Longitude 103° 47' 08.10" NAD: ☐ 1927 ☒ 1983  
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2. ☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A  
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3. **Signs:** Subsection C of 19.15.17.11 NMAC  
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers  
☐ Signed in compliance with 19.15.3.103 NMAC

4. **Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC  
**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.  
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC  
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC  
☐ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC  
☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_  
☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_

5. **Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)  
**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.  
Disposal Facility Name: CRI Disposal Facility Permit Number: 2-9166 NM-01-0006  
Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?  
☐ Yes (If yes, please provide the information below) ☒ No  
**Required for impacted areas which will not be used for future service and operations:**  
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6. **Operator Application Certification:**  
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.  
Name (Print): Zeno Farris Title: Manager Operations Administration  
Signature: Zeno Farris Date: 9.5.2008  
e-mail address: zfarris@cimarex.com Telephone: 972-443-6489

7. **OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only)  
OCD Representative Signature: [Signature] Approval Date: 9/19/08  
Title: Geologist OCD Permit Number: PI-00475

8. **Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC  
*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*  
☐ Closure Completion Date: \_\_\_\_\_

9. **Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**  
*Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*  
Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?  
☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No  
*Required for impacted areas which will not be used for future service and operations:*  
☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

10. **Operator Closure Certification:**  
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.  
Name (Print): \_\_\_\_\_ Title: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

## **Cimarex Energy Co. of Colorado – Closed-Loop System Design Plan**

### **Equipment List**

- Primary Shakers
- Mud Cleaner – hydro-cyclones
- 1 or 2 Centrifuges (depending on well depth)
- De-watering system with pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing (may not be necessary for shallower wells)
- Drying Augur
- Sump Drying Augur
- Sump
- Cuttings Boxes
- Reserve Fluids Tank Farm
- Wire Mesh Trash Enclosure (spent motor oils kept in separate containers and later sent to approved landfill)

### **Operation and Maintenance**

The Cimarex Zero Discharge system is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This ensures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

These closed loop operations can be monitored by our service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

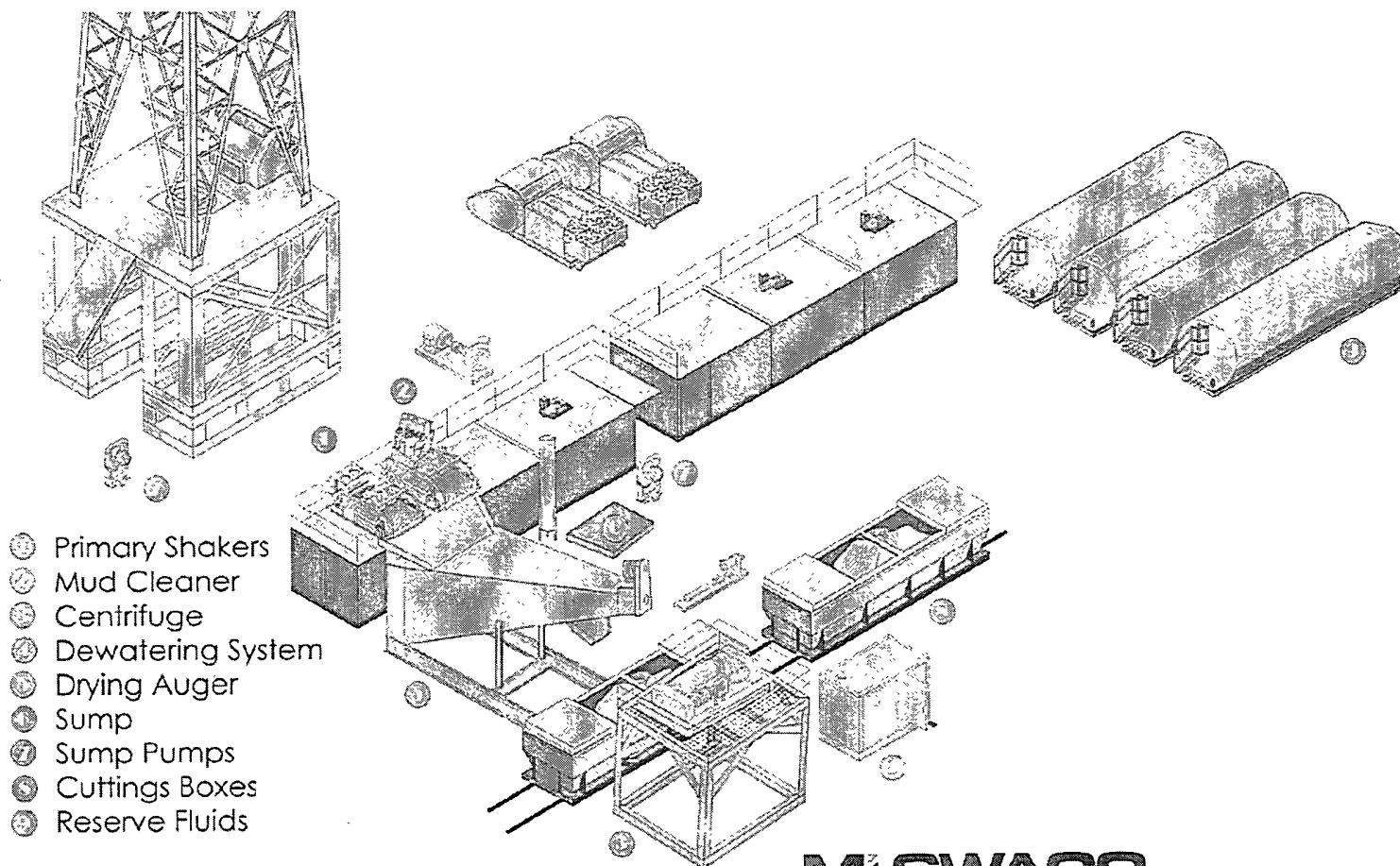
Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and tested for all regulated toxic materials. If found they are removed and disposed of per regulatory requirements.

### **Closure Plan**

During drilling operations, all liquids, drilling fluids, and cuttings will be hauled off via CRI (Controlled Recovery Incorporated, Permit R-9166).



## Closed Loop with Drying Auger and Dewatering System



**Mi SWACO**

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1820 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 <b>30-005-29055</b>		Pool Code <b>/</b>	Pool Name <b>Abo Wildcat</b>
Property Code <b>37375</b>	Property Name <b>MONTEREY "23" STATE COM</b>		Well Number <b>1</b>
OGRID No. <b>162683</b>	Operator Name <b>CIMAREX ENERGY CO. OF COLORADO</b>		Elevation <b>4369'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	15 S	31 E		375	NORTH	575	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
D	23	15 S	31 E		375	NORTH	375	WEST	CHAVES
Dedicated Acres <b>160</b>	Joint or Infill	Consolidation Code <b>C</b>	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

			<p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><i>Zeno Farris</i> 09-05-08 Signature Date</p> <p>Zeno Farris Printed Name</p>
<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>SEPTEMBER 4, 2008 Date Surveyed</p> <p><i>Gary L. Jones</i> Signature Professional Surveyor</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>			



# Planned Wellpath Report

Preliminary

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30-005-29055 INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Monterey) Sec 23, T15S, R31E	Wellbore	No. 1H PWB
Facility	Monterey 23 State 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	0.999941	Report Generated	9/5/2008 at 8:28:29 AM
Convergence at slot	0.30° 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	709251.20	730772.20	33°00'27.691"N	103°47'08.101"W
Facility Reference Pt			709251.20	730772.20	33°00'27.691"N	103°47'08.101"W
Field Reference Pt			709251.20	730772.20	33°00'27.691"N	103°47'08.101"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	4387.00ft
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	269.48°



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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
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Field	(Monterey) Sec 23, T15S, R31E	Wellbore	No. 1H PWB
Facility	Monterey 23 State Com No. 1H		

WELLPATH DATA (49 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]	DLS [°/100ft]	Comments
0.00	0.000	269.476	0.00	0.00	0.00	0.00	709251.20	730772.20	0.00	Tie On
8425.00	0.000	269.476	8425.00	0.00	0.00	0.00	709251.20	730772.20	0.00	EST. KOP
8525.00†	19.099	269.476	8523.16	16.51	-0.15	-16.51	709234.69	730772.05	19.10	
8625.00†	38.197	269.476	8610.51	64.23	-0.59	-64.23	709186.97	730771.61	19.10	
8725.00†	57.296	269.476	8677.44	137.91	-1.26	-137.90	709113.31	730770.94	19.10	
8825.00†	76.394	269.476	8716.58	229.43	-2.10	-229.42	709021.80	730770.10	19.10	
8895.13	89.787	269.476	8725.00	298.89	-2.73	-298.87	708952.34	730769.47	19.10	EOC
8925.00†	89.787	269.476	8725.11	328.76	-3.01	-328.75	708922.47	730769.19	0.00	
9025.00†	89.787	269.476	8725.48	428.76	-3.92	-428.74	708822.48	730768.28	0.00	
9125.00†	89.787	269.476	8725.85	528.76	-4.83	-528.74	708722.50	730767.37	0.00	
9225.00†	89.787	269.476	8726.23	628.76	-5.75	-628.73	708622.51	730766.45	0.00	
9325.00†	89.787	269.476	8726.60	728.76	-6.66	-728.73	708522.52	730765.54	0.00	
9425.00†	89.787	269.476	8726.97	828.76	-7.58	-828.72	708422.53	730764.62	0.00	
9525.00†	89.787	269.476	8727.34	928.76	-8.49	-928.72	708322.54	730763.71	0.00	
9625.00†	89.787	269.476	8727.71	1028.76	-9.41	-1028.71	708222.55	730762.79	0.00	
9725.00†	89.787	269.476	8728.08	1128.75	-10.32	-1128.71	708122.56	730761.88	0.00	
9825.00†	89.787	269.476	8728.46	1228.75	-11.24	-1228.70	708022.57	730760.97	0.00	
9925.00†	89.787	269.476	8728.83	1328.75	-12.15	-1328.70	707922.58	730760.05	0.00	
10025.00†	89.787	269.476	8729.20	1428.75	-13.06	-1428.69	707822.59	730759.14	0.00	
10125.00†	89.787	269.476	8729.57	1528.75	-13.98	-1528.69	707722.60	730758.22	0.00	
10225.00†	89.787	269.476	8729.94	1628.75	-14.89	-1628.68	707622.62	730757.31	0.00	
10325.00†	89.787	269.476	8730.31	1728.75	-15.81	-1728.68	707522.63	730756.39	0.00	
10425.00†	89.787	269.476	8730.69	1828.75	-16.72	-1828.67	707422.64	730755.48	0.00	
10525.00†	89.787	269.476	8731.06	1928.75	-17.64	-1928.67	707322.65	730754.57	0.00	
10625.00†	89.787	269.476	8731.43	2028.75	-18.55	-2028.66	707222.66	730753.65	0.00	
10725.00†	89.787	269.476	8731.80	2128.75	-19.46	-2128.66	707122.67	730752.74	0.00	
10825.00†	89.787	269.476	8732.17	2228.75	-20.38	-2228.65	707022.68	730751.82	0.00	
10925.00†	89.787	269.476	8732.54	2328.75	-21.29	-2328.65	706922.69	730750.91	0.00	
11025.00†	89.787	269.476	8732.92	2428.75	-22.21	-2428.64	706822.70	730749.99	0.00	
11125.00†	89.787	269.476	8733.29	2528.74	-23.12	-2528.64	706722.71	730749.08	0.00	



# Planned Wellpath Report

Preliminary

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INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Monterey) Sec 23, T15S, R31E	Wellbore	No. 1H PWB
Facility	Monterey 23 State Com No. 1H		

## WELLPATH DATA (49 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]	DLS [°/100ft]	Comments
11225.00†	89.787	269.476	8733.66	2628.74	-24.04	-2628.63	706622.73	730748.17	0.00	
11325.00†	89.787	269.476	8734.03	2728.74	-24.95	-2728.63	706522.74	730747.25	0.00	
11425.00†	89.787	269.476	8734.40	2828.74	-25.86	-2828.62	706422.75	730746.34	0.00	
11525.00†	89.787	269.476	8734.77	2928.74	-26.78	-2928.62	706322.76	730745.42	0.00	
11625.00†	89.787	269.476	8735.15	3028.74	-27.69	-3028.61	706222.77	730744.51	0.00	
11725.00†	89.787	269.476	8735.52	3128.74	-28.61	-3128.61	706122.78	730743.59	0.00	
11825.00†	89.787	269.476	8735.89	3228.74	-29.52	-3228.61	706022.79	730742.68	0.00	
11925.00†	89.787	269.476	8736.26	3328.74	-30.44	-3328.60	705922.80	730741.77	0.00	
12025.00†	89.787	269.476	8736.63	3428.74	-31.35	-3428.60	705822.81	730740.85	0.00	
12125.00†	89.787	269.476	8737.00	3528.74	-32.26	-3528.59	705722.82	730739.94	0.00	
12225.00†	89.787	269.476	8737.38	3628.74	-33.18	-3628.59	705622.83	730739.02	0.00	
12325.00†	89.787	269.476	8737.75	3728.74	-34.09	-3728.58	705522.85	730738.11	0.00	
12425.00†	89.787	269.476	8738.12	3828.74	-35.01	-3828.58	705422.86	730737.19	0.00	
12525.00†	89.787	269.476	8738.49	3928.74	-35.92	-3928.57	705322.87	730736.28	0.00	
12625.00†	89.787	269.476	8738.86	4028.73	-36.84	-4028.57	705222.88	730735.37	0.00	
12725.00†	89.787	269.476	8739.23	4128.73	-37.75	-4128.56	705122.89	730734.45	0.00	
12825.00†	89.787	269.476	8739.61	4228.73	-38.67	-4228.56	705022.90	730733.54	0.00	
12925.00†	89.787	269.476	8739.98	4328.73	-39.58	-4328.55	704922.91	730732.62	0.00	
12931.23	89.787	269.476	8740.00 <sup>1</sup>	4334.96	-39.64	-4334.78	704916.68	730732.57	0.00	No 1H BHL





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Preliminary

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INTEQ

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Area	Chaves County, NM	Well	No. 1H
Field	(Monterey) Sec 23, T15S, R31E	Wellbore	No. 1H PWB
Facility	Monterey 23 State 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 BHL	12931.23	8740.00	-39.64	-4334.78	704916.68	730732.57	33°00'27.519"N	103°47'59.004"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	12931.23	NaviTrak (Standard)		No. 1H PWB



# Cimarex Energy Co. of Colorado

Location Chaves County, NM  
Field (Monterey) Sec 23, T15S, R31E  
Facility Monterey 23 State Com No 1H

Slot No 1H SHL  
Well No 1H  
Wellbore No 1H 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	269.476	0.00	0.00	0.00	0.00	0.00
EST. KOP	8425.00	0.000	269.476	8425.00	0.00	0.00	0.00	0.00
EOC	8895.13	89.787	269.476	8725.00	-2.73	-298.87	19.10	298.89
No. 1H BHL	12931.23	89.787	269.476	8740.00	-39.64	-4334.78	0.00	4334.96

