

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED
OMB No 1004-0135
Expires July 31, 1996

LM

MAY 29 2009 NM-0556811

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NM-0556811
2. Name of Operator Cimarex Energy Co. of Colorado		6. If Indian, Allottee or Tribe Name
3a. Address 5215 N. O'Connor Blvd., Ste. 1500; Irving, TX 75039		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) 972-401-3111		8. Well Name and No. High Lonesome 23 Federal No. 1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SHL 2310 FNL & 660 FEL 23-16S-29E BHL 2310 FNL & 330 FWL		9. API Well No. 30-015-35934
		10. Field and Pool, or Exploratory Area County Line Tank; Abo
		11. County or Parish, State Eddy County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☒ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, included estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Please see attached pages for revised casing, cementing, and preliminary survey information.

Please note:

The only casing that is changing is for the 8 3/4" hole. We are setting 7" steel pipe to 7040' and 2 1/2" fiberglass pipe to 7600' instead of only setting 7" steel pipe from 0-7600' as stated on our "Revised Casing" Sundry Notice, sent 03-23-09. Details attached.

Cement amounts and types have changed for all casing strings. Details attached.

Also, our preliminary drilling plan, including KOP, EOC, and TD, has changed. Revised preliminary directional survey attached.

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Natalie Krueger

Signature

Title

Regulatory Analyst

Date

May 14, 2009

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Conditions of Approval, if any, are attached. Approval of this notice 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.

Office

APPROVED

MAY 14 2009

WESLEY W. INGRAM
PETROLEUM ENGINEER

Title 18 U.S.C. Section 1001, makes 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 reverse)

Revised Drilling Plan
High Lonesome 23 Federal No. 1
 Cimarex Energy Co. of Colorado
 23-16S-29E
 SHL 2310 FNL & 660 FEL
 BHL 2310 FNL & 330 FWL
 Eddy County, NM

Revised Drilling Plan

Hole	Hole Size	Depth	Casing OD	Weight	Thread	Collar	Grade
<i>Surface</i>	17½"	0' to 340'	New 13¾"	48#	8-R	STC	H-40
<i>Intermediate</i>	12¼"	0' to 2700'	New 9⅝"	40#	8-R	LTC	J-55
<i>Pilot Hole</i>	8¾"	0' to 7040'	New 7"	26#	8-R	LTC	P-110
<i>Pilot Hole Fiberglass</i>	8¾"	7040' to 7600'	New 2⅞"	2.18#	8-R	EUE	IJ
<i>Lateral (to EOC)</i>	6⅞"	6940' to 7446'	New 4½"	11.6#	8-R	BTC	P-110
<i>Lateral (to TD)</i>	6⅞"	7446' to 11557'	New 4½"	11.6#	8-R	LTC	P-110

For **Lateral**, kick off of fiberglass tubing (de facto cement plug) @ 7140.' Drill to TD of MD 11557' TVD 7263.' Install 4½" Peak Completion Assembly 11.6# P-110 **BTC** casing from Liner Hanger at 6940' to EOC at 7446' and cross over to **LTC** from 7446' to 11557.'

4½" liner will be PEAK completion liner and will not require cement.

Revised Cementing Plan

Surface Casing	<u>Lead:</u> 100 sx Halliburton Light Premium Plus + 1% CaCl ₂ -Flake (accelerator) + 0.125# Poly-e-flake (lost circ additive) (wt 12.5, yld 1.97) <u>Tail:</u> 220 sx Premium Plus + 2% CaCl ₂ (accelerator) (wt 14.8, yld 1.35) TOC <i>Surface</i>

Intermediate Casing	<u>Lead:</u> 425 sx Interfill C + 0.125# Poly-e-flake (lost circ additive) (wt 11.9, yld 2.45) <u>Tail:</u> 200 sx Premium Plus + 1% CaCl ₂ (accelerator) (wt 14.8, yld 1.34) TOC <i>Surface</i>

Pilot Hole (7" steel and 2⅞" fiberglass)	<u>Lead:</u> 255 sx Interfill C + 0.1% HR-800 (retarder) + 0.125# Poly-e-flake (lost circ additive) + 5# Gilsonte (lost circ additive) (wt 11.5, yld 2.79) <u>Tail:</u> 305 sx Super H + 0.5% Halad-344 (gas migration control) + 0.4% CFR-3 (dispersant) + 0.25% D-AIR 3000 (defoamer) + 0.35% HR-800 (retarder) + 1% Salt (accelerator) + 0.125# Poly-e-flake (lost circ additive) + 5# Gilsonte (lost circ additive) (wt 13.2, yld 1.61) TOC 2200'

Lateral	No Cement.



Cimarex Energy Co.

Location: Eddy County, NM
Field: (Lonesome 23) Sec 23, T16S, R29E
Facility: High Lonesome 23 Fed Com No. 1H

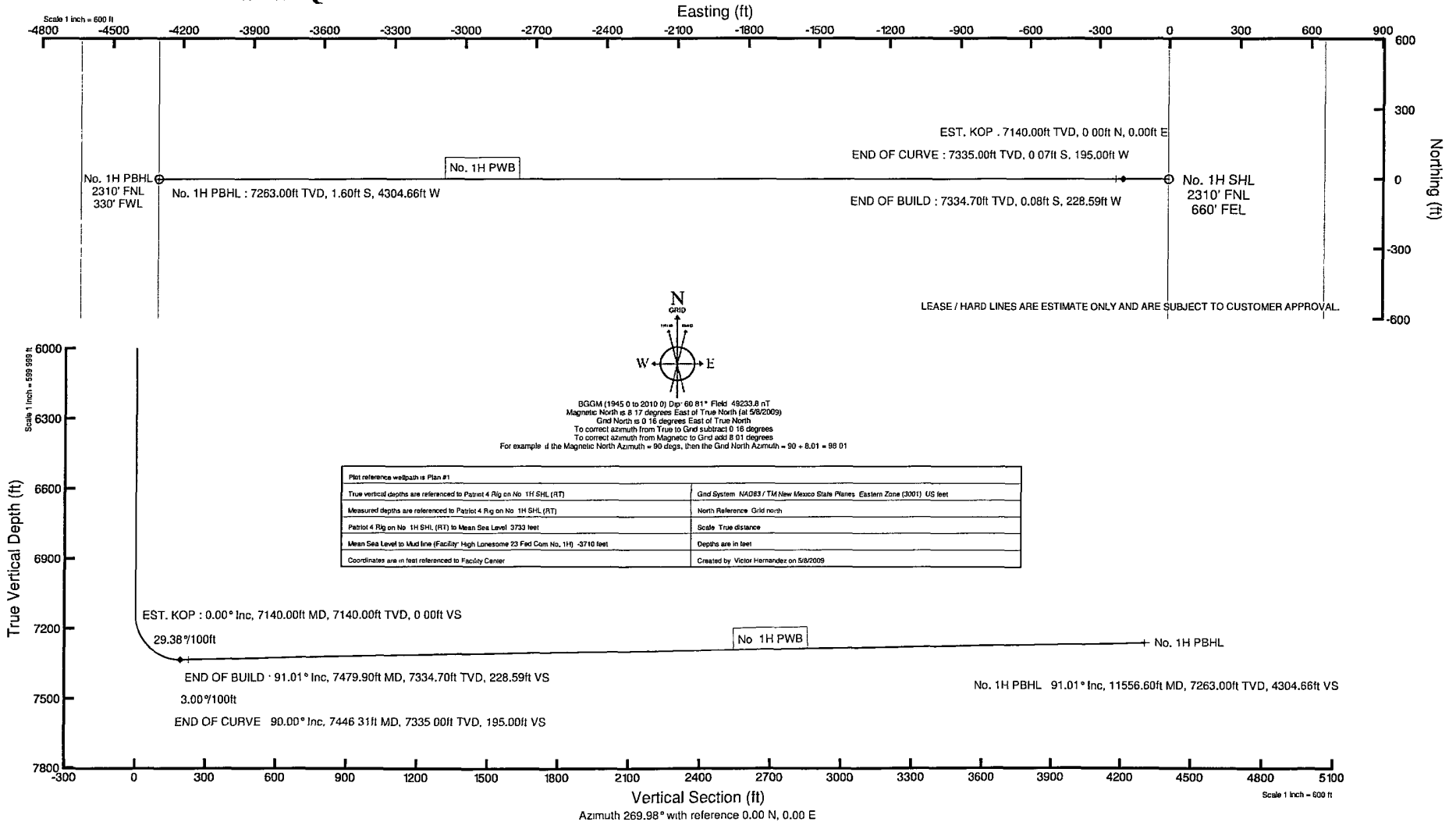
Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB



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	269.979	0.00	0.00	0.00	0.00	0.00
EST. KOP	7140.00	0.000	269.979	7140.00	0.00	0.00	0.00	0.00
END OF CURVE	7446.31	90.000	269.979	7335.00	-0.07	-195.00	29.38	195.00
END OF BUILD	7479.90	91.008	269.979	7334.70	-0.08	-228.59	3.00	228.59
No. 1H PBHL	11556.60	91.008	269.979	7263.00	-1.60	-4304.66	0.00	4304.66





Planned Wellpath Report

Plan #1
Page 1 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Lonesome 23) Sec 23, T16S, R29E	Wellbore	No. 1H PWB
Facility	High Lonesome 23 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	0.999918	Report Generated	5/8/2009 at 10:22:53 AM
Convergence at slot	0.16° 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	631674.50	694207.80	32°54'28.968"N	104°02'20.310"W
Facility Reference Pt			631674.50	694207.80	32°54'28.968"N	104°02'20.310"W
Field Reference Pt			631674.50	694207.80	32°54'28.968"N	104°02'20.310"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patriot 4 Rig on No. 1H SHL (RT) to Facility Vertical Datum	23.00ft
Horizontal Reference Pt	Facility Center	Patriot 4 Rig on No. 1H SHL (RT) to Mean Sea Level	3733.00ft
Vertical Reference Pt	Patriot 4 Rig on No. 1H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Patriot 4 Rig on No. 1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.98°



Planned Wellpath Report

Plan #1
Page 2 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Lonesome 23) Sec 23, T16S, R29E	Wellbore	No. 1H PWB
Facility	High Lonesome 23 Fed Com No. 1H		

WELLPATH DATA (49 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	269.979	0.00	0.00	0.00	0.00	0.00	TIE ON
7140.00	0.000	269.979	7140.00	0.00	0.00	0.00	0.00	EST. KOP
7240.00†	29.382	269.979	7235.67	25.08	-0.01	-25.08	29.38	
7340.00†	58.765	269.979	7306.73	93.88	-0.03	-93.88	29.38	
7440.00†	88.147	269.979	7334.90	188.70	-0.07	-188.70	29.38	
7479.90	91.008	269.979	7334.70	228.59	-0.08	-228.59	3.00	END OF BUILD
7540.00†	91.008	269.979	7333.65	288.68	-0.11	-288.68	0.00	
7640.00†	91.008	269.979	7331.89	388.67	-0.14	-388.67	0.00	
7740.00†	91.008	269.979	7330.13	488.65	-0.18	-488.65	0.00	
7840.00†	91.008	269.979	7328.37	588.64	-0.22	-588.64	0.00	
7940.00†	91.008	269.979	7326.61	688.62	-0.26	-688.62	0.00	
8040.00†	91.008	269.979	7324.85	788.61	-0.29	-788.61	0.00	
8140.00†	91.008	269.979	7323.09	888.59	-0.33	-888.59	0.00	
8240.00†	91.008	269.979	7321.34	988.58	-0.37	-988.58	0.00	
8340.00†	91.008	269.979	7319.58	1088.56	-0.40	-1088.56	0.00	
8440.00†	91.008	269.979	7317.82	1188.54	-0.44	-1188.54	0.00	
8540.00†	91.008	269.979	7316.06	1288.53	-0.48	-1288.53	0.00	
8640.00†	91.008	269.979	7314.30	1388.51	-0.52	-1388.51	0.00	
8740.00†	91.008	269.979	7312.54	1488.50	-0.55	-1488.50	0.00	
8840.00†	91.008	269.979	7310.78	1588.48	-0.59	-1588.48	0.00	
8940.00†	91.008	269.979	7309.02	1688.47	-0.63	-1688.47	0.00	
9040.00†	91.008	269.979	7307.26	1788.45	-0.66	-1788.45	0.00	
9140.00†	91.008	269.979	7305.51	1888.44	-0.70	-1888.44	0.00	
9240.00†	91.008	269.979	7303.75	1988.42	-0.74	-1988.42	0.00	
9340.00†	91.008	269.979	7301.99	2088.41	-0.78	-2088.41	0.00	
9440.00†	91.008	269.979	7300.23	2188.39	-0.81	-2188.39	0.00	
9540.00†	91.008	269.979	7298.47	2288.37	-0.85	-2288.37	0.00	
9640.00†	91.008	269.979	7296.71	2388.36	-0.89	-2388.36	0.00	
9740.00†	91.008	269.979	7294.95	2488.34	-0.92	-2488.34	0.00	



Planned Wellpath Report

Plan #1
Page 3 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Lonesome 23) Sec 23, T16S, R29E	Wellbore	No. 1H PWB
Facility	High Lonesome 23 Fed Com No. 1H		

WELLPATH DATA (49 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
9840.00†	91.008	269.979	7293.19	2588.33	-0.96	-2588.33	0.00	
9940.00†	91.008	269.979	7291.43	2688.31	-1.00	-2688.31	0.00	
10040.00†	91.008	269.979	7289.68	2788.30	-1.04	-2788.30	0.00	
10140.00†	91.008	269.979	7287.92	2888.28	-1.07	-2888.28	0.00	
10240.00†	91.008	269.979	7286.16	2988.27	-1.11	-2988.27	0.00	
10340.00†	91.008	269.979	7284.40	3088.25	-1.15	-3088.25	0.00	
10440.00†	91.008	269.979	7282.64	3188.24	-1.18	-3188.23	0.00	
10540.00†	91.008	269.979	7280.88	3288.22	-1.22	-3288.22	0.00	
10640.00†	91.008	269.979	7279.12	3388.20	-1.26	-3388.20	0.00	
10740.00†	91.008	269.979	7277.36	3488.19	-1.30	-3488.19	0.00	
10840.00†	91.008	269.979	7275.60	3588.17	-1.33	-3588.17	0.00	
10940.00†	91.008	269.979	7273.85	3688.16	-1.37	-3688.16	0.00	
11040.00†	91.008	269.979	7272.09	3788.14	-1.41	-3788.14	0.00	
11140.00†	91.008	269.979	7270.33	3888.13	-1.45	-3888.13	0.00	
11240.00†	91.008	269.979	7268.57	3988.11	-1.48	-3988.11	0.00	
11340.00†	91.008	269.979	7266.81	4088.10	-1.52	-4088.10	0.00	
11440.00†	91.008	269.979	7265.05	4188.08	-1.56	-4188.08	0.00	
11540.00†	91.008	269.979	7263.29	4288.06	-1.59	-4288.06	0.00	
11556.60	91.008	269.979	7263.00†	4304.66	-1.60	-4304.66	0.00	No. 1H PBHL



Planned Wellpath Report

Plan #1
Page 4 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Lonesome 23) Sec 23, T16S, R29E	Wellbore	No. 1H PWB
Facility	High Lonesome 23 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	11556.60	7263.00	-1.60	-4304.66	627370.20	694206.20	32°54'29.068"N	104°03'10.801"W	point

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

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
23.00	11556.60	NaviTrak (Standard)		No. 1H PWB