

DISTRICT I
1025 N. French Dr., Hobbs, NM 88240

DISTRICT II
1901 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

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 30-005-29039	Pool Code /	Pool Name Abo Wildcat
Property Code 37249	Property Name LANGLEY "33" STATE COM	Well Number 1
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 4390'

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	33	15 S	31 E		375	NORTH	375	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	33	15 S	31 E		375	NORTH	375	WEST	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

375' 375' VB-1227-0001 4590.7' EO-5988-0005 B1-0411-0016 375' 375'	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. <i>Zeno Farris</i> 07-07-08 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. MAY 2 2008 Date Surveyed GARY L. JONES Signature & Seal of Professional Surveyor W.O. Jones Certificate No. Gary L. Jones 7977 BASIN SURVEYS
BOTTOM HOLE LOCATION Lat - N33°58'42.82" Long - W103°50'03.72" NMSPCE - N 720099.439 E 694347.078 (NAD-83)	SURFACE LOCATION Lat - N32°58'42.81" Long - W103°49'09.84" NMSPCE - N 720119.7 E 698935.5 (NAD-83)

PROPOSED WELLPATH REPORT (CSV version)

Prepared by Baker Hughes INTEQ

Software System: WellArchitect®2.0

REFERENCE WELLPATH IDENTIFICATION

Operator Cimarex Energy Co. of Colorado
 Area Chaves County, NM
 Field (Langley) Sec 33, T15S, R31E
 Facility Langley 33 St Com No. 1H
 Slot No. 1H SHL
 Well No. 1H
 Wellbore No. 1H PWB
 Wellpath Preliminary
 Sidetrack (none)

REPORT SETUP INFORMATION

Projection : NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
 North Refe Grid
 Scale 0.999938
 Convergen 0.28° East
 Software S WellArchitect®
 User Victor Hernandez
 Report Ger 6/25/2008 at 11:37:38 AM
 DataBase/ WA_Midland/ev8182.xml

WELLPATH	Local North [ft]	Local East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude
Slot Locati	0	0	698936.5	720119.7	32°58'42.8"	103°49'09.839"W
Facility Ref			698936.5	720119.7	32°58'42.8"	103°49'09.839"W
Field Refer			698936.5	720119.7	32°58'42.8"	103°49'09.839"W

WELLPATH DATUM

Calculation Minimum curvature
 Horizontal | Facility Center
 Vertical Re Rig on No. 1H SHL (RT)
 MD Refere Rig on No. 1H SHL (RT)
 Field Vertic Mean Sea Level
 Rig on No. 18.00ft
 Rig on No. 4408.00ft
 Facility Ver 0.00ft
 Section Ori 0.00ft
 Section Ori 0.00ft
 Section Azi 269.75°

WELLPATH DATA	Wellbore: No. 1H PWB	Wellpath: Preliminary	† = interpolated/extrapolate				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0	0	269.747	0	0	0	0	0
8570	0	269.747	8570	0	0	0	0
† 8670	30	269.747	8665.49	25.59	-0.11	-25.59	30
† 8770	60	269.747	8735.4	95.49	-0.42	-95.49	30

	8868.74	89.622	269.747	8760.98	189.73	-0.84	-189.72	30
†	8870	89.622	269.747	8760.99	190.99	-0.84	-190.98	0
†	8970	89.622	269.747	8761.65	290.98	-1.28	-290.98	0
†	9070	89.622	269.747	8762.31	390.98	-1.73	-390.98	0
†	9170	89.622	269.747	8762.97	490.98	-2.17	-490.97	0
†	9270	89.622	269.747	8763.63	590.98	-2.61	-590.97	0
†	9370	89.622	269.747	8764.29	690.98	-3.05	-690.97	0
†	9470	89.622	269.747	8764.95	790.97	-3.49	-790.97	0
†	9570	89.622	269.747	8765.61	890.97	-3.93	-890.96	0
†	9670	89.622	269.747	8766.27	990.97	-4.37	-990.96	0
†	9770	89.622	269.747	8766.93	1090.97	-4.82	-1090.96	0
†	9870	89.622	269.747	8767.58	1190.96	-5.26	-1190.95	0
†	9970	89.622	269.747	8768.24	1290.96	-5.7	-1290.95	0
†	10070	89.622	269.747	8768.9	1390.96	-6.14	-1390.95	0
†	10170	89.622	269.747	8769.56	1490.96	-6.58	-1490.94	0
†	10270	89.622	269.747	8770.22	1590.96	-7.02	-1590.94	0
†	10370	89.622	269.747	8770.88	1690.95	-7.47	-1690.94	0
†	10470	89.622	269.747	8771.54	1790.95	-7.91	-1790.93	0
†	10570	89.622	269.747	8772.2	1890.95	-8.35	-1890.93	0
†	10670	89.622	269.747	8772.86	1990.95	-8.79	-1990.93	0
†	10770	89.622	269.747	8773.52	2090.94	-9.23	-2090.92	0
†	10870	89.622	269.747	8774.18	2190.94	-9.67	-2190.92	0
†	10970	89.622	269.747	8774.84	2290.94	-10.11	-2290.92	0
†	11070	89.622	269.747	8775.5	2390.94	-10.56	-2390.91	0
†	11170	89.622	269.747	8776.16	2490.94	-11	-2490.91	0
†	11270	89.622	269.747	8776.82	2590.93	-11.44	-2590.91	0
†	11370	89.622	269.747	8777.48	2690.93	-11.88	-2690.91	0
†	11470	89.622	269.747	8778.14	2790.93	-12.32	-2790.9	0
†	11570	89.622	269.747	8778.8	2890.93	-12.76	-2890.9	0
†	11670	89.622	269.747	8779.46	2990.93	-13.2	-2990.9	0
†	11770	89.622	269.747	8780.12	3090.92	-13.65	-3090.89	0
†	11870	89.622	269.747	8780.77	3190.92	-14.09	-3190.89	0
†	11970	89.622	269.747	8781.43	3290.92	-14.53	-3290.89	0
†	12070	89.622	269.747	8782.09	3390.92	-14.97	-3390.88	0
†	12170	89.622	269.747	8782.75	3490.91	-15.41	-3490.88	0
†	12270	89.622	269.747	8783.41	3590.91	-15.85	-3590.88	0
†	12370	89.622	269.747	8784.07	3690.91	-16.29	-3690.87	0
†	12470	89.622	269.747	8784.73	3790.91	-16.74	-3790.87	0
†	12570	89.622	269.747	8785.39	3890.91	-17.18	-3890.87	0
†	12670	89.622	269.747	8786.05	3990.9	-17.62	-3990.86	0
†	12770	89.622	269.747	8786.71	4090.9	-18.06	-4090.86	0
†	12870	89.622	269.747	8787.37	4190.9	-18.5	-4190.86	0
†	12970	89.622	269.747	8788.03	4290.9	-18.94	-4290.85	0
†	13070	89.622	269.747	8788.69	4390.89	-19.38	-4390.85	0
†	13170	89.622	269.747	8789.35	4490.89	-19.83	-4490.85	0
	13268.87	89.622	269.747	8790	4589.76	-20.26	-4589.72	0

T A R G E T S

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude
	[ft]	[ft]	[ft]	[ft]	[srv ft]	[srv ft]		
(1) No. 1H	13268.87	8790	-20.26	-4589.72	694347.1	720099.4	32°58'42.8"	103°50'03."

SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Preliminary
Start MD End MD Pos Unc M Log Name/ Wellbore
[ft] [ft]
18 13268.87 NaviTrak (Standard) No. 1H PWB



Planned Wellpath Report

Preliminary
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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No. 1H SHL
Area	Chaves County, NM	Well	No. 1H
Field	(Langley) Sec 33, T15S, R31E	Wellbore	No. 1H PWB
Facility	Langley 33 St 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	0.999938	Report Generated	6/25/2008 at 11:37:36 AM
Convergence at slot	0.28° 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	698936.50	720119.70	32°58'42.805"N	103°49'09.839"W
Facility Reference Pt			698936.50	720119.70	32°58'42.805"N	103°49'09.839"W
Field Reference Pt			698936.50	720119.70	32°58'42.805"N	103°49'09.839"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	4408.00ft
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	269.75°



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	(Langley) Sec 33, T15S, R31E	Wellbore	No. 1H PWB
Facility	Langley 33 St Com No. 1H		

WELLPATH DATA (50 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00	0.000	269.747	0.00	0.00	0.00	0.00	0.00	Tie On
8570.00	0.000	269.747	8570.00	0.00	0.00	0.00	0.00	KOP
8670.00†	30.000	269.747	8665.49	25.59	-0.11	-25.59	30.00	
8770.00†	60.000	269.747	8735.40	95.49	-0.42	-95.49	30.00	
8868.74	89.622	269.747	8760.98	189.73	-0.84	-189.72	30.00	EOC
8870.00†	89.622	269.747	8760.99	190.99	-0.84	-190.98	0.00	
8970.00†	89.622	269.747	8761.65	290.98	-1.28	-290.98	0.00	
9070.00†	89.622	269.747	8762.31	390.98	-1.73	-390.98	0.00	
9170.00†	89.622	269.747	8762.97	490.98	-2.17	-490.97	0.00	
9270.00†	89.622	269.747	8763.63	590.98	-2.61	-590.97	0.00	
9370.00†	89.622	269.747	8764.29	690.98	-3.05	-690.97	0.00	
9470.00†	89.622	269.747	8764.95	790.97	-3.49	-790.97	0.00	
9570.00†	89.622	269.747	8765.61	890.97	-3.93	-890.96	0.00	
9670.00†	89.622	269.747	8766.27	990.97	-4.37	-990.96	0.00	
9770.00†	89.622	269.747	8766.93	1090.97	-4.82	-1090.96	0.00	
9870.00†	89.622	269.747	8767.58	1190.96	-5.26	-1190.95	0.00	
9970.00†	89.622	269.747	8768.24	1290.96	-5.70	-1290.95	0.00	
10070.00†	89.622	269.747	8768.90	1390.96	-6.14	-1390.95	0.00	
10170.00†	89.622	269.747	8769.56	1490.96	-6.58	-1490.94	0.00	
10270.00†	89.622	269.747	8770.22	1590.96	-7.02	-1590.94	0.00	
10370.00†	89.622	269.747	8770.88	1690.95	-7.47	-1690.94	0.00	
10470.00†	89.622	269.747	8771.54	1790.95	-7.91	-1790.93	0.00	
10570.00†	89.622	269.747	8772.20	1890.95	-8.35	-1890.93	0.00	
10670.00†	89.622	269.747	8772.86	1990.95	-8.79	-1990.93	0.00	
10770.00†	89.622	269.747	8773.52	2090.94	-9.23	-2090.92	0.00	
10870.00†	89.622	269.747	8774.18	2190.94	-9.67	-2190.92	0.00	
10970.00†	89.622	269.747	8774.84	2290.94	-10.11	-2290.92	0.00	
11070.00†	89.622	269.747	8775.50	2390.94	-10.56	-2390.91	0.00	
11170.00†	89.622	269.747	8776.16	2490.94	-11.00	-2490.91	0.00	
11270.00†	89.622	269.747	8776.82	2590.93	-11.44	-2590.91	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 **(Langley) Sec 33, T15S, R31E**

Wellbore **No. 1H PWB**

Facility **Langley 33 St Com No. 1H**

WELLPATH DATA (50 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
11370.00†	89.622	269.747	8777.48	2690.93	-11.88	-2690.91	0.00	
11470.00†	89.622	269.747	8778.14	2790.93	-12.32	-2790.90	0.00	
11570.00†	89.622	269.747	8778.80	2890.93	-12.76	-2890.90	0.00	
11670.00†	89.622	269.747	8779.46	2990.93	-13.20	-2990.90	0.00	
11770.00†	89.622	269.747	8780.12	3090.92	-13.65	-3090.89	0.00	
11870.00†	89.622	269.747	8780.77	3190.92	-14.09	-3190.89	0.00	
11970.00†	89.622	269.747	8781.43	3290.92	-14.53	-3290.89	0.00	
12070.00†	89.622	269.747	8782.09	3390.92	-14.97	-3390.88	0.00	
12170.00†	89.622	269.747	8782.75	3490.91	-15.41	-3490.88	0.00	
12270.00†	89.622	269.747	8783.41	3590.91	-15.85	-3590.88	0.00	
12370.00†	89.622	269.747	8784.07	3690.91	-16.29	-3690.87	0.00	
12470.00†	89.622	269.747	8784.73	3790.91	-16.74	-3790.87	0.00	
12570.00†	89.622	269.747	8785.39	3890.91	-17.18	-3890.87	0.00	
12670.00†	89.622	269.747	8786.05	3990.90	-17.62	-3990.86	0.00	
12770.00†	89.622	269.747	8786.71	4090.90	-18.06	-4090.86	0.00	
12870.00†	89.622	269.747	8787.37	4190.90	-18.50	-4190.86	0.00	
12970.00†	89.622	269.747	8788.03	4290.90	-18.94	-4290.85	0.00	
13070.00†	89.622	269.747	8788.69	4390.89	-19.38	-4390.85	0.00	
13170.00†	89.622	269.747	8789.35	4490.89	-19.83	-4490.85	0.00	
13268.87	89.622	269.747	8790.00 ¹	4589.76	-20.26	-4589.72	0.00	No. 1H BHL



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	(Langley) Sec 33, T15S, R31E	Wellbore	No. 1H PWB
Facility	Langley 33 St 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	13268.87	8790.00	-20.26	-4589.72	694347.08	720099.44	32°58'42.823"N	103°50'03.716"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	13268.87	NaviTrak (Standard)		No. 1H PWB



Cimarex Energy Co. of Colorado

Location Chaves County, NM
Field (Langley) Sec 33, T15S, R31E
Facility Langley 33 St Corn 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	269.747	0.00	0.00	0.00	0.00	0.00
KOP	8570.00	0.000	269.747	8570.00	0.00	0.00	0.00	0.00
EOC	8868.74	89.622	269.747	8760.98	-0.84	-189.72	30.00	189.73
No. 1H BHL	13268.87	89.622	269.747	8790.00	-20.26	-4589.72	0.00	4589.76

