

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 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

Form C-102
Revised October 15, 2009

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37632	Pool Code 49622 5550	Pool Name Scarlton Draw Parkway; Bone Spring
Property Code 26354	Property Name MAGNUM STATE "16"	Well Number 3
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3349'

Surface Location

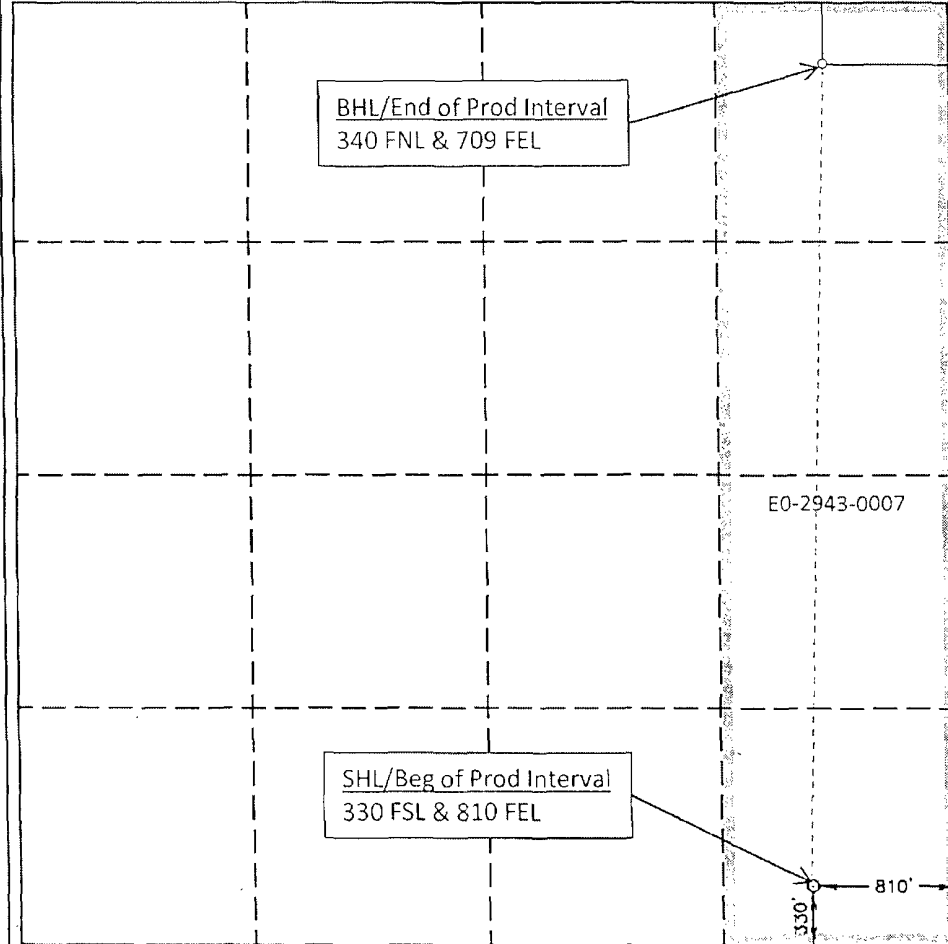
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	16	19 S	29 E		330	SOUTH	810	EAST	EDDY

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
A	16	19 S	29 E		340	NORTH	709	EAST	EDDY

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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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 released mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or is a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Zeno Farris</i> Signature 9/9/2010 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. DECEMBER 15 2009 Date Surveyed Signature & Seal of Professional Surveyor Certificate No. Gary L. Jones 7977 BASIN SURVEYS
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Submit To Appropriate District Office State Lease - 6 copies Fee Lease - 5 copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 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 CONFIDENTIAL Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	Form C-105 Revised June 10, 2003 WELL API NO. 30-015-37632 5. Indicate Type of Lease STATE ☒ FEE ☐ State Oil & Gas Lease No.					
WELL COMPLETION OR RECOMPLETION REPORT AND LOG							
1a. Type of Well: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER _____ b. Type of Completion: NEW ☒ WORK ☐ DEEPEN ☐ PLUG ☐ DIFF. WELL OVER BACK RESVR. ☐ OTHER		7. Lease Name or Unit Agreement Name Magnum 16 State					
2. Name of Operator Cimarex Energy Co. of Colorado		8. Well No. 003					
3. Address of Operator 600 N. Marienfeld St., Ste 600 Midland, Texas 79701		9. Pool name or Wildcat Scanlon Draw Parkway; Bone Spring (5551D)					
4. Well Location SHL: Unit Letter <u>P</u> : <u>330</u> Feet From The <u>South</u> Line and <u>810</u> Feet From The <u>East</u> Line Section <u>16</u> Township <u>19S</u> Range <u>29E</u> NMPM County <u>Eddy</u>							
10. Date Spudded 04-08-10	11. Date T.D. Reached 05-04-10	12. Date Compl. (Ready to Prod.) 06-15-10					
13. Elevations (DF& RKB, RT, GR, etc.) 3349' GR		14. Elev. Casinghead					
15. Total Depth MD 12340' TVD 7857'	16. Plug Back T.D. MD 12340' TVD 7857'	17. If Multiple Compl. How Many Zones? 18. Intervals Drilled By Rotary Tools Cable Tools Rotary					
19. Producing Interval(s), of this completion - Top, Bottom, Name Parkway; Bone Spring 7506-12340' (MD)		20. Was Directional Survey Made Yes					
21. Type Electric and Other Logs Run SDL-DLL-MGRD- MSCT-GR		22. Was Well Cored No					
23. CASING RECORD (Report all strings set in well)							
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED		
13 7/8"	48#	450'	17 1/2"	540 sx, 1" w/ 342 sx			
9 5/8"	40#	2520'	12 1/4"	815 sx			
7"	26#	0-7600'	8 3/4"	970 sx			
2 7/8"	2.18#	7600-7977'	8 3/4"				
24. LINER RECORD			25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
4 1/2"	7491'	12205'	0 (PEAK)		2 7/8"	7439'	
26. Perforation record (interval, size, and number) See Attachment...				27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED			
28. PRODUCTION							
Date First Production 06-15-10		Production Method (Flowing, gas lift, pumping - Size and type pump) Pumping - BH Centrilift 4" 228 HP 418 stage sub pump			Well Status (Prod. or Shut-in) Producing		
Date of Test 06-30-10	Hours Tested 24	Choke Size 13/64	Prod'n For Test Period	Oil - Bbl 228	Gas - MCF 661	Water - Bbl 59	
Flow Tubing Press. 160	Casing Pressure 700	Calculated 24-Hour Rate	Oil - Bbl	Gas - MCF	Water - Bbl	Oil Gravity - API - (Corr.) 39.64	
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold						Test Witnessed By	
30. List Attachments							
31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief							
Signature <u>Natalie Krueger</u>		Printed Name <u>Natalie Krueger</u>		Title <u>Regulatory</u>		Date <u>9/9/2010</u>	
E-mail Address <u>nkrueger@cimarex.com</u>							

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico			Northwestern New Mexico	
T. Anhy	T. Cisco (Bough C)		T. Ojo Alamo	T. Penn. "B"
T. Salt	T. Canyon		T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	T. Strawn		T. Pictured Cliffs	T. Penn. "D"
T. Yates	T. Atoka		T. Cliff House	T. Leadville
T. 7 Rivers	T. Miss		T. Menefee	T. Madison
T. Queen	T. Devonian		T. Point Lookout	T. Elbert
T. Grayburg	T. Silurian		T. Mancos	T. McCracken
T. San Andres	T. Montoya		T. Gallup	T. Ignacio Otzte
T. Glorieta	T. Simpson		Base Greenhorn	T. Granite
T. Paddock	T. McKee		T. Dakota	T.
T. Blinebry	T. Ellenburger		T. Morrison	T.
T. Tubb	T. Gr. Wash		T. Todilto	T.
T. Drinkard	T. Brushy Canyon		T. Entrada	T.
T. Abo	T. 2 nd Bone Spring	7689	T. Wingate	T.
B. Anhydrite	T. TBSC	8001	T. Chinle	T.
T. Wolfcamp	T. Basal 2 nd Bone Spring	7870	T. Permian	T.
T. Penn	B. Basal 2 nd Bone Spring	7917	T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, fromto.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

C-105 – Magnum 16 State No. 3
Perforation & Stimulation Record
16-19S-29E
330 FSL & 810 FEL
Eddy County, NM

Stage	Depth	Materials Used
1	11986-12340	1260 gal 15% HCL, 18,270 gal slickwater and 95,340 gal 20# XL Borate carrying 69,940# 20/40 white sand and 32,371# 20/40 SB Excel sand
2	11764-11986	1680 gal 15% HCL, 16,842 gal slickwater and 100,590 gal 20# XL Borate carrying 69,580# 20/40 white sand and 29,420# 20/40 SB Excel sand
3	11460-11764	1008 gal 15% HCL, 13,524 gal slickwater and 99,352 gal 20# XL Borate carrying 71,210# 20/40 white sand and 32,500# 20/40 SB Excel sand
4	11157-11460	1008 gal 15% HCL, 16,968 gal slickwater and 98,868 gal 20# XL Borate carrying 70,330# 20/40 white sand and 29,210# 20/40 SB Excel sand
5	10853-11157	1002 gal 15% HCL, 15,853 gal slickwater and 102,605 gal 20# XL Borate carrying 69,010# 20/40 white sand and 33,350# 20/40 SB Excel sand
6	10548-10853	1457 gal 15% HCL, 14,198 gal slickwater and 102,380 gal 20# XL Borate carrying 71,211# 20/40 white sand and 30,800# 20/40 SB Excel sand
7	10246-10546	747 gal 15% HCL, 15,246 gal slickwater and 101,294 gal 20# XL Borate carrying 69,783# 20/40 white sand and 32,359# 20/40 SB Excel sand
8	9942-10246	2097 gal 15% HCL, 13,264 gal slickwater and 98,193 gal 20# XL Borate carrying 69,853# 20/40 white sand and 30,573# 20/40 SB Excel sand
9	9639-9942	1241 gal 15% HCL, 13,951 gal slickwater and 97,448 gal 20# XL Borate carrying 70,900# 20/40 white sand and 32,388# 20/40 SB Excel sand
10	9378-9639	1008 gal 15% HCL, Flush with 13,925 gal slickwater, 1008 gal 15% HCL, 13,398 gal slickwater and 117,956 gal 20# XL Borate carrying 71,210# 20/40 white sand and 27,427# 20/40 SB Excel sand
11	9074-9378	974 gal 15% HCL, 13,179 gal slickwater and 101,434 gal 20# XL Borate carrying 69,710# 20/40 white sand and 28,328# 20/40 SB Excel sand
12	8771-9074	989 gal 15% HCL, 13091 gal slickwater and 100,935 gal 20# XL Borate carrying 69,860# 20/40 white sand and 25,367# 20/40 SB Excel sand
13	8468-8771	874 gal 15% HCL, 13,327 gal slickwater and 98,974 gal 20# XL Borate carrying 68,160# 20/40 white sand and 25,680# 20/40 SB Excel sand
14	8166-8468	1275 gal 15% HCL, 12,833 gal slickwater and 99,262 gal 20# XL Borate carrying 70,180# 20/40 white sand and 28,348# 20/40 SB Excel sand
15	7506-8166	1168 gal 15% HCL, 13,335 gal slickwater and 96,315 gal 20# XL Borate carrying 46,170# 20/40 white sand and 11,518# 20/40 SB Excel sand

Operator: Cimarex Energy Co. of Colorado
Well/Lease: Magnum 16 State No. 3
County: Eddy, NM

State of New Mexico
Deviation Report

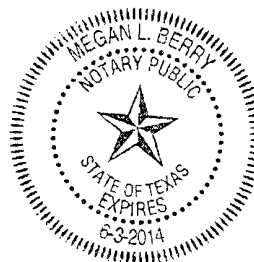
30-015-37632

335'	1.00	7525'	0.78
740'	2.00	7588'	0.75
1169'	2.00	7652'	0.87
1543'	1.00	7715'	1.01
1979'	1.00	7778'	0.96
2411'	1.00	7842'	0.78
2874'	1.00	7905'	0.85
3365'	1.00	7968'	0.64
3765'	0.00	8032'	0.60
4210'	1.00		
4710'	1.00		
5210'	1.00		
5665'	1.00		
6210'	5.00		
6507'	5.00		
6648'	6.00		
6763'	5.00		
6829'	3.05		
6892'	2.68		
6955'	2.27		
7018'	2.25		
7082'	2.56		
7145'	2.42		
7208'	2.03		
7272'	1.83		
7335'	1.58		
7398'	1.01		
7461'	0.84		

State of: NM
County of: EDDY

The foregoing instrument was acknowledged before me on 9/15/10 by
GREGG MUNGER on behalf of Cimarex Energy Co. of Colorado

Megan Berry
Notary Public For:
My Commission Expires:



30-015-37632



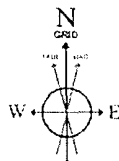
Cimarex Energy Co.

Location: Eddy County, NM
Field: (Magnum) Site 16, T19S, R29E
Facility: Magnum State 15 No. 211

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

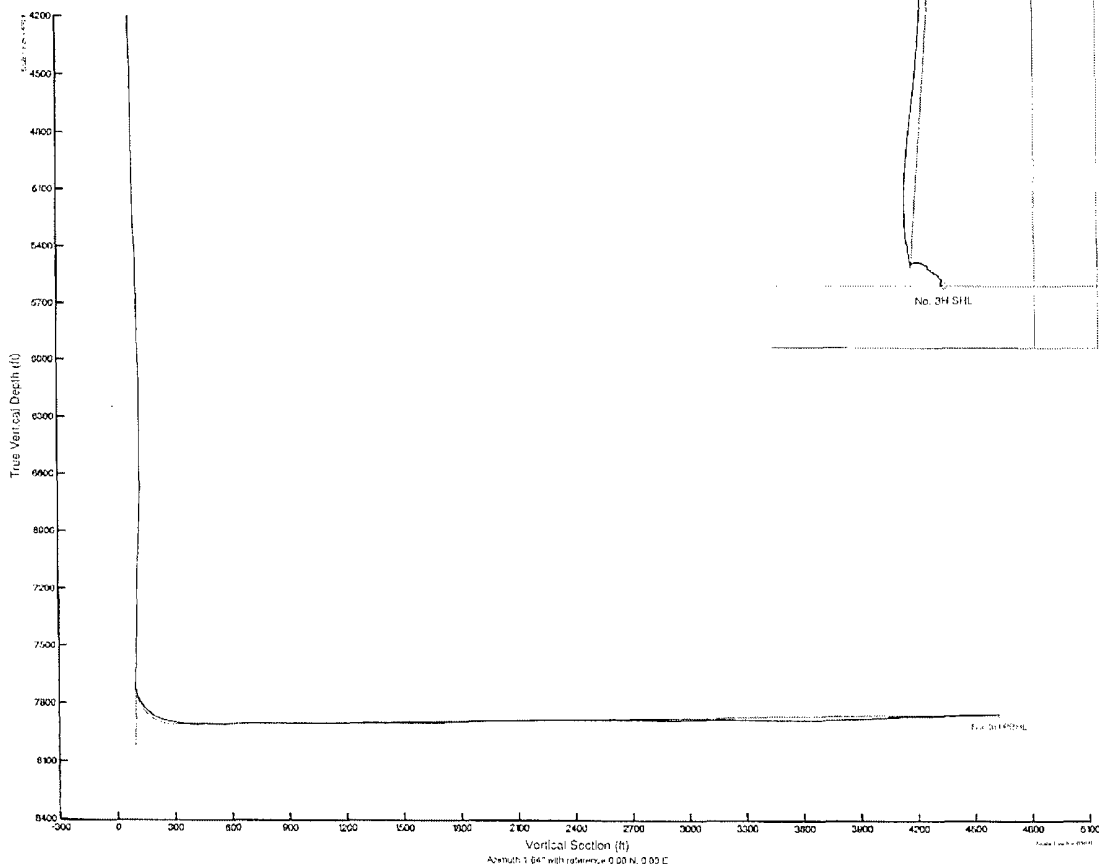
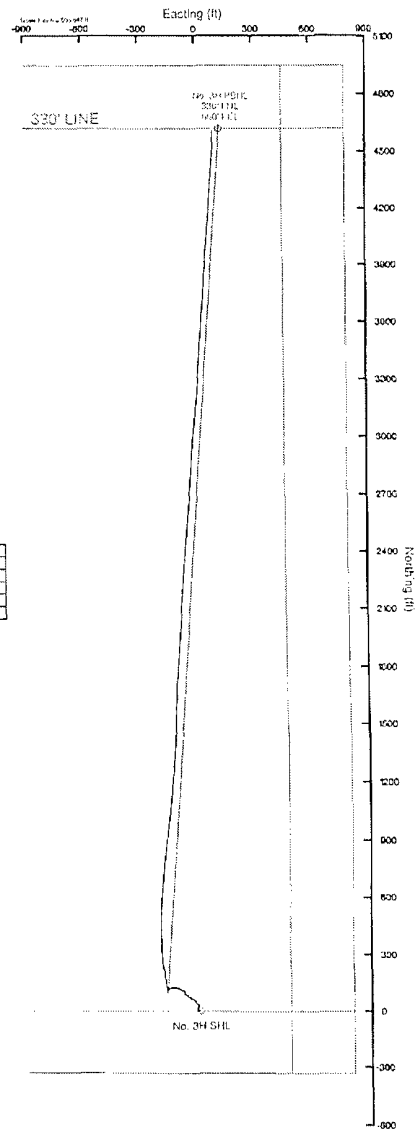


Bottom Hole Location									
MD (ft)	194.17	ΔZ (ft)	TVDS (ft)	Local M (ft)	194.17 (ft)	Graticule (ft)	Grid North (ft)	Latitude	Longitude
MD (ft)	54.200	553.470	294.540	194.74	194.00	419.0517	42011.527	35°29'12.041"N	104°54'27.000"W



BGCM (1945.0 to 2011.0) Dip: 60.54° Field: 49011.3 nT
Magnetic North is 8.86 degrees East of True North (at 2/17/2010)
Grid North is 0.14 degrees East of True North
To correct azimuth from True to Grid subtract 0.14 degrees
To correct azimuth from Magnetic to Grid add 7.92 degrees
For example: If the Magnetic North Azimuth = 90, then the Grid Azimuth = 90 + 7.92 = 97.92

Borehole depth is to the 3H AWA (ft) =	
True vertical depth as measured up to the 3H SHL (ft)	Grid depth: 42011.527 ft (see Magnetic Field Station, Eddy County, NM)
Magnetic depth, as measured up to the 3H SHL (ft)	Grid depth: 42011.527 ft
True depth, the 3H SHL to the 3H AWA (ft)	Grid depth: 42011.527 ft
Magnetic depth, the 3H SHL to the 3H AWA (ft)	Grid depth: 42011.527 ft
True depth, the 3H SHL to the 3H AWA (ft)	Grid depth: 42011.527 ft





Actual Wellpath Report

No. 3H AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

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	0.999916	Report Generated	5/4/2010 at 4:52:32 PM
Convergence at slot	0.14° East	Database/Source file	WA_Midland/No. 3H_AWB.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	621207.50	601919.00	32°39'16.035"N	104°04'25.746"W
Facility Reference Pt			621207.50	601919.00	32°39'16.035"N	104°04'25.746"W
Field Reference Pt			621207.50	601919.00	32°39'16.035"N	104°04'25.746"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 3H SHL (RT) to GL	22.00ft
Horizontal Reference Pt	Surface Location	Rig on No. 3H SHL (RT) to Mean Sea Level	3371.00ft
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	1.64°



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
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Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)

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]
0.00	0.000	292.010	0.00	0.00	0.00	0.00	621207.50	601919.00	32°39'16.035"N	104°04'25.746"W	0.00
61.70	1.110	292.010	61.70	0.21	0.22	-0.55	621206.95	601919.22	32°39'16.037"N	104°04'25.753"W	1.80
124.20	1.430	293.890	124.18	0.71	0.77	-1.83	621205.67	601919.77	32°39'16.043"N	104°04'25.767"W	0.52
186.60	1.710	298.720	186.56	1.43	1.53	-3.36	621204.14	601920.53	32°39'16.050"N	104°04'25.785"W	0.50
249.10	1.740	298.510	249.03	2.29	2.43	-5.01	621202.49	601921.43	32°39'16.059"N	104°04'25.805"W	0.05
311.50	1.760	304.390	311.40	3.23	3.42	-6.63	621200.87	601922.42	32°39'16.069"N	104°04'25.824"W	0.29
374.00	1.720	308.100	373.87	4.31	4.54	-8.16	621199.34	601923.54	32°39'16.080"N	104°04'25.841"W	0.19
436.50	1.840	303.940	436.34	5.40	5.68	-9.73	621197.77	601924.68	32°39'16.091"N	104°04'25.860"W	0.28
498.90	1.830	307.780	498.71	6.53	6.85	-11.35	621196.15	601925.85	32°39'16.103"N	104°04'25.879"W	0.20
561.40	1.790	309.180	561.18	7.71	8.08	-12.90	621194.60	601927.08	32°39'16.115"N	104°04'25.897"W	0.10
623.80	1.850	313.050	623.55	8.97	9.38	-14.39	621193.11	601928.38	32°39'16.128"N	104°04'25.914"W	0.22
687.10	1.860	329.320	686.81	10.51	10.97	-15.66	621191.84	601929.96	32°39'16.144"N	104°04'25.929"W	0.83
750.50	1.950	341.240	750.18	12.39	12.87	-16.53	621190.97	601931.87	32°39'16.163"N	104°04'25.939"W	0.64
813.90	2.070	1.550	813.54	14.55	15.04	-16.85	621190.65	601934.04	32°39'16.184"N	104°04'25.943"W	1.13
877.30	2.090	16.960	876.90	16.81	17.29	-16.48	621191.02	601936.29	32°39'16.206"N	104°04'25.938"W	0.88
940.60	2.160	36.960	940.16	18.90	19.35	-15.42	621192.08	601938.34	32°39'16.227"N	104°04'25.926"W	1.17
1003.90	2.220	34.310	1003.41	20.90	21.31	-14.02	621193.49	601940.31	32°39'16.246"N	104°04'25.909"W	0.19
1067.20	2.210	33.550	1066.66	22.97	23.34	-12.65	621194.85	601942.34	32°39'16.266"N	104°04'25.893"W	0.05
1130.60	1.800	29.360	1130.02	24.89	25.23	-11.49	621196.01	601944.23	32°39'16.285"N	104°04'25.880"W	0.69
1193.70	1.490	22.070	1193.10	26.53	26.85	-10.69	621196.81	601945.85	32°39'16.301"N	104°04'25.870"W	0.59
1256.90	1.270	13.670	1256.28	27.99	28.29	-10.22	621197.28	601947.29	32°39'16.315"N	104°04'25.865"W	0.47
1320.70	1.190	7.470	1320.07	29.34	29.64	-9.97	621197.54	601948.64	32°39'16.329"N	104°04'25.862"W	0.24
1384.20	1.000	354.010	1383.55	30.55	30.84	-9.94	621197.56	601949.84	32°39'16.340"N	104°04'25.861"W	0.50
1447.40	0.990	340.730	1446.74	31.60	31.91	-10.17	621197.33	601950.90	32°39'16.351"N	104°04'25.864"W	0.36
1510.90	0.980	331.220	1510.23	32.58	32.90	-10.62	621196.88	601951.90	32°39'16.361"N	104°04'25.869"W	0.26
1574.10	0.890	326.390	1573.43	33.45	33.78	-11.15	621196.35	601952.78	32°39'16.370"N	104°04'25.876"W	0.19
1637.40	0.950	320.090	1636.72	34.24	34.59	-11.76	621195.74	601953.59	32°39'16.378"N	104°04'25.883"W	0.19
1700.70	0.850	315.030	1700.01	34.96	35.33	-12.43	621195.07	601954.33	32°39'16.385"N	104°04'25.890"W	0.20
1764.20	0.790	301.030	1763.50	35.50	35.89	-13.13	621194.37	601954.89	32°39'16.390"N	104°04'25.899"W	0.33
1827.40	0.730	290.690	1826.70	35.84	36.26	-13.88	621193.62	601955.25	32°39'16.394"N	104°04'25.907"W	0.24



Actual Wellpath Report

No. 3H AWP

Page 3 of 9



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)

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]
1890.50	0.700	305.130	1889.79	36.19	36.62	-14.58	621192.93	601955.62	32°39'16.398"N	104°04'25.916"W	0.29
1954.20	0.770	309.070	1953.49	36.66	37.11	-15.23	621192.27	601956.11	32°39'16.403"N	104°04'25.923"W	0.14
2017.40	0.890	306.610	2016.68	37.20	37.67	-15.95	621191.55	601956.67	32°39'16.408"N	104°04'25.932"W	0.20
2080.80	1.050	308.340	2080.07	37.83	38.33	-16.80	621190.70	601957.32	32°39'16.415"N	104°04'25.942"W	0.26
2144.10	1.000	313.830	2143.36	38.55	39.07	-17.65	621189.85	601958.07	32°39'16.422"N	104°04'25.951"W	0.17
2207.60	1.030	318.110	2206.85	39.33	39.88	-18.44	621189.07	601958.87	32°39'16.430"N	104°04'25.961"W	0.13
2271.30	0.950	318.190	2270.54	40.13	40.70	-19.17	621188.33	601959.69	32°39'16.438"N	104°04'25.969"W	0.13
2334.50	1.000	330.350	2333.73	40.98	41.57	-19.79	621187.71	601960.56	32°39'16.447"N	104°04'25.976"W	0.34
2397.80	1.000	331.130	2397.02	41.93	42.53	-20.33	621187.17	601961.53	32°39'16.456"N	104°04'25.983"W	0.02
2461.30	1.090	333.420	2460.51	42.94	43.56	-20.87	621186.63	601962.55	32°39'16.466"N	104°04'25.989"W	0.16
2524.80	1.110	335.690	2524.00	44.03	44.66	-21.39	621186.11	601963.65	32°39'16.477"N	104°04'25.995"W	0.08
2588.30	1.060	333.650	2587.49	45.10	45.74	-21.91	621185.60	601964.74	32°39'16.488"N	104°04'26.001"W	0.10
2651.60	1.150	330.180	2650.78	46.16	46.82	-22.48	621185.02	601965.82	32°39'16.499"N	104°04'26.008"W	0.18
2715.00	1.320	328.910	2714.16	47.31	48.00	-23.18	621184.33	601966.99	32°39'16.510"N	104°04'26.016"W	0.27
2778.40	1.360	330.370	2777.55	48.57	49.28	-23.92	621183.58	601968.27	32°39'16.523"N	104°04'26.025"W	0.08
2841.90	1.280	325.160	2841.03	49.79	50.51	-24.70	621182.80	601969.51	32°39'16.535"N	104°04'26.034"W	0.23
2904.80	1.270	325.430	2903.91	50.91	51.66	-25.50	621182.00	601970.66	32°39'16.547"N	104°04'26.043"W	0.02
2968.30	1.170	326.900	2967.40	52.01	52.79	-26.25	621181.25	601971.78	32°39'16.558"N	104°04'26.052"W	0.17
3031.60	1.110	323.210	3030.69	53.02	53.82	-26.97	621180.53	601972.81	32°39'16.568"N	104°04'26.060"W	0.15
3094.80	1.140	326.370	3093.88	54.02	54.83	-27.69	621179.81	601973.83	32°39'16.578"N	104°04'26.068"W	0.11
3158.00	1.180	328.560	3157.06	55.08	55.91	-28.38	621179.13	601974.91	32°39'16.589"N	104°04'26.076"W	0.09
3221.20	1.470	325.340	3220.25	56.27	57.13	-29.18	621178.33	601976.13	32°39'16.601"N	104°04'26.086"W	0.47
3284.60	1.860	320.280	3283.62	57.70	58.59	-30.30	621177.21	601977.59	32°39'16.616"N	104°04'26.099"W	0.66
3347.90	1.910	307.640	3346.88	59.09	60.03	-31.79	621175.72	601979.02	32°39'16.630"N	104°04'26.116"W	0.66
3411.20	2.050	297.780	3410.15	60.21	61.20	-33.62	621173.88	601980.20	32°39'16.641"N	104°04'26.138"W	0.58
3474.70	2.110	292.690	3473.61	61.13	62.18	-35.71	621171.80	601981.18	32°39'16.651"N	104°04'26.162"W	0.31
3537.90	2.070	293.300	3536.76	61.97	63.08	-37.83	621169.67	601982.08	32°39'16.660"N	104°04'26.187"W	0.07
3601.60	2.110	292.020	3600.42	62.80	63.98	-39.97	621167.53	601982.97	32°39'16.669"N	104°04'26.212"W	0.10
3664.90	2.050	292.180	3663.68	63.61	64.84	-42.10	621165.40	601983.83	32°39'16.678"N	104°04'26.237"W	0.10
3728.40	1.980	292.080	3727.14	64.39	65.68	-44.17	621163.33	601984.68	32°39'16.686"N	104°04'26.261"W	0.11



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)

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]
3791.80	1.870	295.970	3790.50	65.20	66.55	-46.12	621161.39	601985.54	32°39'16.695"N	104°04'26.284"W	0.27
3855.10	1.720	298.920	3853.77	66.06	67.46	-47.88	621159.63	601986.45	32°39'16.704"N	104°04'26.304"W	0.28
3918.60	1.870	297.610	3917.24	66.95	68.40	-49.63	621157.88	601987.39	32°39'16.713"N	104°04'26.325"W	0.24
3982.20	1.860	297.170	3980.81	67.85	69.35	-51.47	621156.04	601988.34	32°39'16.722"N	104°04'26.346"W	0.03
4045.30	1.910	298.370	4043.87	68.76	70.32	-53.30	621154.20	601989.31	32°39'16.732"N	104°04'26.368"W	0.10
4108.70	1.950	308.360	4107.24	69.88	71.49	-55.08	621152.43	601990.48	32°39'16.744"N	104°04'26.388"W	0.53
4171.60	2.180	312.050	4170.10	71.30	72.95	-56.80	621150.70	601991.95	32°39'16.758"N	104°04'26.408"W	0.42
4235.10	2.370	309.150	4233.55	72.88	74.59	-58.72	621148.79	601993.59	32°39'16.774"N	104°04'26.431"W	0.35
4298.40	2.260	310.080	4296.80	74.45	76.22	-60.69	621146.82	601995.22	32°39'16.791"N	104°04'26.454"W	0.18
4361.80	2.180	313.910	4360.15	76.04	77.86	-62.51	621144.99	601996.86	32°39'16.807"N	104°04'26.475"W	0.27
4424.80	2.270	314.290	4423.10	77.69	79.57	-64.27	621143.23	601998.56	32°39'16.824"N	104°04'26.496"W	0.14
4488.10	2.390	313.140	4486.35	79.42	81.34	-66.13	621141.37	602000.34	32°39'16.841"N	104°04'26.517"W	0.20
4551.10	2.420	308.840	4549.29	81.09	83.08	-68.13	621139.38	602002.07	32°39'16.859"N	104°04'26.541"W	0.29
4613.10	2.460	303.550	4611.24	82.58	84.63	-70.25	621137.25	602003.63	32°39'16.874"N	104°04'26.565"W	0.37
4676.60	2.390	297.860	4674.68	83.89	86.00	-72.56	621134.95	602005.00	32°39'16.888"N	104°04'26.592"W	0.39
4740.00	2.150	289.340	4738.03	84.84	87.02	-74.85	621132.65	602006.01	32°39'16.898"N	104°04'26.619"W	0.65
4803.30	2.140	287.960	4801.29	85.53	87.77	-77.10	621130.41	602006.77	32°39'16.905"N	104°04'26.645"W	0.08
4866.50	1.900	291.000	4864.45	86.21	88.51	-79.20	621128.31	602007.51	32°39'16.913"N	104°04'26.670"W	0.42
4929.60	1.700	299.510	4927.52	86.99	89.35	-80.99	621126.52	602008.34	32°39'16.921"N	104°04'26.691"W	0.53
4993.10	1.580	314.460	4990.99	88.03	90.43	-82.43	621125.07	602009.42	32°39'16.932"N	104°04'26.708"W	0.70
5056.60	1.700	323.690	5054.46	89.36	91.80	-83.62	621123.89	602010.79	32°39'16.945"N	104°04'26.721"W	0.46
5119.70	1.780	337.310	5117.54	91.00	93.46	-84.55	621122.96	602012.45	32°39'16.962"N	104°04'26.732"W	0.67
5183.20	1.930	344.660	5181.00	92.92	95.40	-85.21	621122.30	602014.39	32°39'16.981"N	104°04'26.740"W	0.44
5246.70	2.080	8.730	5244.46	95.08	97.57	-85.32	621122.19	602016.56	32°39'17.002"N	104°04'26.741"W	1.34
5310.00	1.910	4.130	5307.73	97.28	99.76	-85.07	621122.44	602018.75	32°39'17.024"N	104°04'26.738"W	0.37
5373.40	1.940	1.420	5371.09	99.41	101.88	-84.97	621122.54	602020.87	32°39'17.045"N	104°04'26.737"W	0.15
5436.70	1.760	335.260	5434.36	101.35	103.84	-85.35	621122.16	602022.83	32°39'17.064"N	104°04'26.741"W	1.35
5499.90	2.020	312.790	5497.52	102.95	105.47	-86.57	621120.94	602024.47	32°39'17.081"N	104°04'26.756"W	1.23
5563.30	2.220	304.880	5560.88	104.36	106.94	-88.40	621119.11	602025.93	32°39'17.095"N	104°04'26.777"W	0.56
5626.60	2.680	301.480	5624.12	105.77	108.41	-90.66	621116.84	602027.40	32°39'17.110"N	104°04'26.803"W	0.76



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [serv ft]	Grid North [serv ft]	Latitude	Longitude	DLS [°/100ft]
5689.90	2.760	302.700	5687.35	107.29	110.01	-93.21	621114.30	602029.00	32°39'17.126"N	104°04'26.833"W	0.16
5753.10	2.820	298.470	5750.48	108.78	111.57	-95.86	621111.65	602030.56	32°39'17.141"N	104°04'26.864"W	0.34
5816.30	3.230	295.070	5813.59	110.19	113.06	-98.84	621108.67	602032.05	32°39'17.156"N	104°04'26.899"W	0.71
5878.50	3.710	298.070	5875.67	111.78	114.75	-102.20	621105.31	602033.74	32°39'17.173"N	104°04'26.938"W	0.82
5941.70	4.220	295.210	5938.72	113.62	116.71	-106.11	621101.40	602035.70	32°39'17.192"N	104°04'26.984"W	0.87
6004.80	4.520	292.420	6001.64	115.43	118.64	-110.51	621097.00	602037.63	32°39'17.212"N	104°04'27.035"W	0.58
6098.30	5.020	287.680	6094.82	117.87	121.29	-117.81	621089.70	602040.28	32°39'17.238"N	104°04'27.121"W	0.68
6131.60	4.810	282.060	6127.99	118.52	122.03	-120.56	621086.95	602041.01	32°39'17.245"N	104°04'27.153"W	1.58
6194.80	4.720	278.880	6190.98	119.33	122.98	-125.72	621081.79	602041.97	32°39'17.255"N	104°04'27.213"W	0.44
6258.30	4.380	275.570	6254.28	119.82	123.62	-130.72	621076.79	602042.61	32°39'17.261"N	104°04'27.271"W	0.68
6321.70	3.740	267.300	6317.52	119.83	123.76	-135.19	621072.32	602042.75	32°39'17.263"N	104°04'27.324"W	1.37
6385.10	3.300	267.200	6380.80	119.53	123.57	-139.08	621068.43	602042.56	32°39'17.261"N	104°04'27.369"W	0.69
6448.40	3.170	270.440	6444.00	119.36	123.49	-142.65	621064.86	602042.48	32°39'17.260"N	104°04'27.411"W	0.35
6511.90	3.280	274.690	6507.40	119.42	123.66	-146.22	621061.30	602042.65	32°39'17.262"N	104°04'27.453"W	0.41
6575.40	3.130	272.510	6570.80	119.54	123.88	-149.76	621057.75	602042.87	32°39'17.264"N	104°04'27.494"W	0.30
6638.50	3.010	265.040	6633.81	119.37	123.81	-153.13	621054.38	602042.80	32°39'17.264"N	104°04'27.534"W	0.66
6702.00	2.810	255.090	6697.22	118.74	123.27	-156.30	621051.22	602042.26	32°39'17.258"N	104°04'27.571"W	0.85
6765.10	2.770	243.250	6760.25	117.57	122.18	-159.15	621048.36	602041.17	32°39'17.248"N	104°04'27.604"W	0.91
6828.50	3.050	231.770	6823.57	115.76	120.45	-161.85	621045.67	602039.44	32°39'17.231"N	104°04'27.636"W	1.02
6891.50	2.680	225.830	6886.49	113.63	118.39	-164.22	621043.30	602037.38	32°39'17.210"N	104°04'27.663"W	0.75
6955.00	2.270	214.040	6949.93	111.51	116.31	-165.99	621041.53	602035.30	32°39'17.190"N	104°04'27.684"W	1.03
7018.20	2.250	215.740	7013.08	109.42	114.27	-167.41	621040.10	602033.26	32°39'17.170"N	104°04'27.701"W	0.11
7081.80	2.560	221.390	7076.63	107.30	112.19	-169.08	621038.43	602031.18	32°39'17.149"N	104°04'27.721"W	0.61
7144.80	2.420	221.350	7139.57	105.19	110.13	-170.89	621036.63	602029.12	32°39'17.129"N	104°04'27.742"W	0.22
7208.20	2.030	226.940	7202.92	103.37	108.36	-172.59	621034.92	602027.35	32°39'17.111"N	104°04'27.762"W	0.70
7271.50	1.830	209.120	7266.18	101.69	106.71	-173.91	621033.61	602025.70	32°39'17.095"N	104°04'27.777"W	0.99
7334.70	1.580	191.900	7329.36	99.93	104.98	-174.58	621032.94	602023.97	32°39'17.078"N	104°04'27.785"W	0.90
7397.80	1.010	179.290	7392.44	98.52	103.57	-174.75	621032.77	602022.56	32°39'17.064"N	104°04'27.787"W	1.00
7461.30	0.840	176.930	7455.93	97.50	102.55	-174.72	621032.80	602021.54	32°39'17.054"N	104°04'27.787"W	0.27
7524.70	0.780	148.950	7519.33	96.67	101.71	-174.47	621033.05	602020.71	32°39'17.046"N	104°04'27.784"W	0.62



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)

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]
7588.00	0.750	161.700	7582.62	95.92	100.95	-174.12	621033.40	602019.94	32°39'17.038"N	104°04'27.780"W	0.27
7651.50	0.870	148.590	7646.11	95.13	100.15	-173.74	621033.78	602019.14	32°39'17.030"N	104°04'27.775"W	0.35
7715.00	1.010	128.980	7709.60	94.38	99.38	-173.05	621034.47	602018.37	32°39'17.023"N	104°04'27.767"W	0.55
7748.00	14.600	353.500	7742.26	98.35	103.36	-173.30	621034.22	602022.35	32°39'17.062"N	104°04'27.770"W	46.47
7780.00	24.500	352.100	7772.38	108.91	113.96	-174.67	621032.85	602032.95	32°39'17.167"N	104°04'27.786"W	30.97
7811.00	33.700	349.800	7799.44	123.70	128.82	-177.08	621030.44	602047.81	32°39'17.314"N	104°04'27.814"W	29.89
7843.00	42.500	350.400	7824.60	143.03	148.26	-180.46	621027.06	602067.25	32°39'17.506"N	104°04'27.853"W	27.52
7874.00	50.400	352.400	7845.94	165.12	170.46	-183.79	621023.72	602089.44	32°39'17.726"N	104°04'27.891"W	25.91
7906.00	58.200	353.800	7864.60	190.80	196.24	-186.90	621020.62	602115.22	32°39'17.981"N	104°04'27.926"W	24.63
7935.00	66.600	351.700	7878.03	216.16	221.70	-190.15	621017.36	602140.69	32°39'18.233"N	104°04'27.964"W	29.67
7967.00	75.400	353.200	7888.43	246.00	251.67	-194.11	621013.40	602170.65	32°39'18.530"N	104°04'28.009"W	27.85
7999.00	80.500	355.200	7895.11	277.02	282.79	-197.27	621010.25	602201.77	32°39'18.838"N	104°04'28.045"W	17.07
8030.00	82.500	357.800	7899.70	307.56	313.39	-199.14	621008.38	602232.36	32°39'19.141"N	104°04'28.066"W	10.51
8062.00	84.500	358.200	7903.32	339.28	345.16	-200.25	621007.27	602264.13	32°39'19.455"N	104°04'28.078"W	6.37
8093.00	85.900	358.300	7905.91	370.12	376.04	-201.19	621006.32	602295.01	32°39'19.761"N	104°04'28.089"W	4.53
8125.00	87.300	358.500	7907.81	402.01	407.97	-202.08	621005.43	602326.94	32°39'20.077"N	104°04'28.098"W	4.42
8157.00	89.200	359.900	7908.79	433.97	439.95	-202.53	621004.99	602358.91	32°39'20.393"N	104°04'28.102"W	7.37
8189.00	89.400	0.200	7909.18	465.95	471.95	-202.50	621005.01	602390.91	32°39'20.710"N	104°04'28.101"W	1.13
8220.00	89.100	0.100	7909.58	496.94	502.94	-202.42	621005.10	602421.90	32°39'21.016"N	104°04'28.099"W	1.02
8283.00	91.100	4.100	7909.47	559.92	565.89	-200.11	621007.40	602484.84	32°39'21.639"N	104°04'28.071"W	7.10
8347.00	91.200	4.000	7908.19	623.85	629.71	-195.59	621011.92	602548.66	32°39'22.270"N	104°04'28.016"W	0.22
8410.00	91.400	4.300	7906.76	686.77	692.53	-191.04	621016.48	602611.47	32°39'22.892"N	104°04'27.961"W	0.57
8474.00	90.800	6.000	7905.53	750.64	756.26	-185.29	621022.22	602675.19	32°39'23.522"N	104°04'27.892"W	2.82
8537.00	90.300	6.400	7904.93	813.44	818.89	-178.49	621029.03	602737.82	32°39'24.142"N	104°04'27.810"W	1.02
8600.00	89.900	6.400	7904.82	876.22	881.49	-171.47	621036.05	602800.42	32°39'24.761"N	104°04'27.726"W	0.63
8664.00	89.500	7.300	7905.15	939.95	945.04	-163.83	621043.68	602863.96	32°39'25.390"N	104°04'27.635"W	1.54
8727.00	89.000	6.900	7905.98	1002.66	1007.55	-156.05	621051.47	602926.46	32°39'26.008"N	104°04'27.543"W	1.02
8791.00	89.800	5.300	7906.65	1066.46	1071.18	-149.25	621058.27	602990.09	32°39'26.637"N	104°04'27.461"W	2.79
8854.00	90.000	5.400	7906.76	1129.33	1133.90	-143.37	621064.14	603052.81	32°39'27.258"N	104°04'27.391"W	0.35
8918.00	89.600	5.300	7906.98	1193.20	1197.63	-137.41	621070.11	603116.52	32°39'27.888"N	104°04'27.319"W	0.64



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)

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]
8981.00	90.400	5.100	7906.98	1256.07	1260.37	-131.70	621075.81	603179.26	32°39'28.509"N	104°04'27.250"W	1.31
9044.00	90.400	4.000	7906.54	1318.99	1323.16	-126.70	621080.81	603242.05	32°39'29.130"N	104°04'27.190"W	1.75
9108.00	90.000	4.100	7906.32	1382.93	1387.00	-122.18	621085.33	603305.89	32°39'29.762"N	104°04'27.136"W	0.64
9171.00	89.900	2.200	7906.37	1445.91	1449.91	-118.72	621088.79	603368.78	32°39'30.384"N	104°04'27.093"W	3.02
9235.00	91.000	2.200	7905.87	1509.90	1513.86	-116.26	621091.25	603432.73	32°39'31.017"N	104°04'27.063"W	1.72
9298.00	91.200	2.100	7904.66	1572.89	1576.80	-113.90	621093.61	603495.66	32°39'31.639"N	104°04'27.033"W	0.35
9361.00	91.200	1.600	7903.34	1635.87	1639.75	-111.86	621095.65	603558.61	32°39'32.262"N	104°04'27.008"W	0.79
9425.00	91.900	3.300	7901.61	1699.84	1703.67	-109.13	621098.38	603622.52	32°39'32.894"N	104°04'26.974"W	2.87
9488.00	92.600	4.000	7899.14	1762.75	1766.49	-105.12	621102.39	603685.34	32°39'33.516"N	104°04'26.925"W	1.57
9551.00	91.300	4.500	7896.99	1825.65	1829.28	-100.46	621107.05	603748.12	32°39'34.137"N	104°04'26.869"W	2.21
9615.00	91.200	4.700	7895.60	1889.55	1893.06	-95.32	621112.18	603811.90	32°39'34.768"N	104°04'26.807"W	0.35
9678.00	90.900	4.400	7894.44	1952.46	1955.85	-90.33	621117.18	603874.68	32°39'35.389"N	104°04'26.747"W	0.67
9741.00	91.100	3.800	7893.34	2015.39	2018.68	-85.82	621121.68	603937.51	32°39'36.011"N	104°04'26.692"W	1.00
9805.00	91.100	3.300	7892.11	2079.34	2082.54	-81.86	621125.65	604001.37	32°39'36.643"N	104°04'26.644"W	0.78
9868.00	91.300	4.100	7890.79	2142.29	2145.40	-77.80	621129.71	604064.21	32°39'37.264"N	104°04'26.595"W	1.31
9931.00	91.400	3.700	7889.31	2205.22	2208.23	-73.51	621133.99	604127.05	32°39'37.886"N	104°04'26.543"W	0.65
9994.00	91.300	4.200	7887.82	2268.15	2271.07	-69.17	621138.33	604189.87	32°39'38.508"N	104°04'26.490"W	0.81
10058.00	91.100	4.200	7886.48	2332.07	2334.88	-64.49	621143.02	604253.68	32°39'39.139"N	104°04'26.434"W	0.31
10121.00	90.100	4.400	7885.82	2395.00	2397.70	-59.77	621147.74	604316.49	32°39'39.760"N	104°04'26.377"W	1.62
10185.00	90.500	4.600	7885.49	2458.92	2461.50	-54.74	621152.76	604380.29	32°39'40.392"N	104°04'26.316"W	0.70
10248.00	90.500	4.600	7884.94	2521.84	2524.30	-49.69	621157.81	604443.08	32°39'41.013"N	104°04'26.255"W	0.00
10311.00	89.500	5.100	7884.94	2584.74	2587.07	-44.37	621163.14	604505.85	32°39'41.634"N	104°04'26.191"W	1.77
10375.00	89.400	4.600	7885.55	2648.63	2650.84	-38.95	621168.55	604569.61	32°39'42.264"N	104°04'26.126"W	0.80
10438.00	89.300	4.600	7886.27	2711.54	2713.63	-33.90	621173.60	604632.40	32°39'42.886"N	104°04'26.065"W	0.16
10502.00	89.100	3.600	7887.16	2775.48	2777.46	-29.33	621178.18	604696.22	32°39'43.517"N	104°04'26.010"W	1.59
10565.00	90.000	3.600	7887.66	2838.44	2840.33	-25.37	621182.13	604759.09	32°39'44.139"N	104°04'25.962"W	1.43
10628.00	90.000	3.600	7887.66	2901.40	2903.21	-21.42	621186.09	604821.96	32°39'44.761"N	104°04'25.914"W	0.00
10692.00	91.100	5.500	7887.04	2965.31	2967.00	-16.34	621191.16	604885.75	32°39'45.392"N	104°04'25.852"W	3.43
10755.00	90.800	5.200	7886.00	3028.17	3029.72	-10.47	621197.04	604948.46	32°39'46.013"N	104°04'25.782"W	0.67
10818.00	91.200	5.400	7884.90	3091.03	3092.44	-4.65	621202.85	605011.17	32°39'46.633"N	104°04'25.712"W	0.71



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

WELLPATH DATA (204 stations)											
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]
10882.00	90.700	5.300	7883.84	3154.89	3156.15	1.32	621208.82	605074.88	32°39'47.263"N	104°04'25.640"W	0.80
10945.00	89.200	5.000	7883.89	3217.77	3218.89	6.97	621214.47	605137.62	32°39'47.884"N	104°04'25.573"W	2.43
11008.00	88.600	3.600	7885.10	3280.69	3281.70	11.70	621219.20	605200.42	32°39'48.505"N	104°04'25.515"W	2.42
11071.00	89.100	3.100	7886.37	3343.65	3344.58	15.38	621222.88	605263.30	32°39'49.127"N	104°04'25.471"W	1.12
11135.00	89.700	3.500	7887.04	3407.62	3408.47	19.06	621226.56	605327.18	32°39'49.759"N	104°04'25.426"W	1.13
11198.00	90.200	3.900	7887.09	3470.58	3471.34	23.13	621230.62	605390.04	32°39'50.381"N	104°04'25.376"W	1.02
11261.00	90.600	4.000	7886.65	3533.52	3534.19	27.47	621234.96	605452.89	32°39'51.003"N	104°04'25.324"W	0.65
11324.00	91.000	4.100	7885.77	3596.46	3597.03	31.92	621239.41	605515.72	32°39'51.625"N	104°04'25.270"W	0.65
11387.00	91.000	4.600	7884.67	3659.38	3659.83	36.69	621244.19	605578.52	32°39'52.246"N	104°04'25.212"W	0.79
11450.00	91.200	4.100	7883.46	3722.30	3722.64	41.47	621248.97	605641.32	32°39'52.867"N	104°04'25.155"W	0.85
11514.00	91.500	3.800	7881.96	3786.23	3786.47	45.88	621253.37	605705.15	32°39'53.499"N	104°04'25.101"W	0.66
11577.00	91.900	3.600	7880.09	3849.16	3849.31	49.94	621257.44	605767.98	32°39'54.121"N	104°04'25.052"W	0.71
11641.00	92.500	4.200	7877.63	3913.06	3913.12	54.29	621261.79	605831.78	32°39'54.752"N	104°04'24.999"W	1.33
11704.00	92.300	4.600	7874.99	3975.94	3975.87	59.12	621266.62	605894.53	32°39'55.373"N	104°04'24.941"W	0.71
11768.00	92.700	4.200	7872.20	4039.80	4039.63	64.03	621271.52	605958.28	32°39'56.003"N	104°04'24.882"W	0.88
11831.00	92.900	4.500	7869.12	4102.66	4102.37	68.80	621276.29	606021.02	32°39'56.624"N	104°04'24.824"W	0.57
11895.00	90.700	3.700	7867.11	4166.56	4166.17	73.37	621280.87	606084.81	32°39'57.255"N	104°04'24.769"W	3.66
11958.00	90.900	3.900	7866.23	4229.51	4229.02	77.55	621285.04	606147.66	32°39'57.877"N	104°04'24.718"W	0.45
12021.00	91.400	3.600	7864.97	4292.45	4291.88	81.67	621289.16	606210.51	32°39'58.499"N	104°04'24.668"W	0.93
12085.00	91.800	3.800	7863.18	4356.39	4355.72	85.79	621293.29	606274.35	32°39'59.130"N	104°04'24.618"W	0.70
12148.00	91.700	4.100	7861.26	4419.31	4418.54	90.13	621297.62	606337.16	32°39'59.752"N	104°04'24.565"W	0.50
12211.00	91.300	3.200	7859.61	4482.25	4481.39	94.14	621301.63	606400.01	32°40'00.374"N	104°04'24.517"W	1.56
12275.00	91.200	3.200	7858.21	4546.21	4545.27	97.71	621305.21	606463.88	32°40'01.006"N	104°04'24.473"W	0.16
12340.00	91.200	3.200	7856.85	4611.17	4610.16	101.34	621308.83	606528.76	32°40'01.647"N	104°04'24.429"W	0.00



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Magnum) Sec 16, T19S, R29E	Wellbore	No. 3H AWB
Facility	Magnum State 16 No. 3H	Sidetrack from	No. 3 AWB at 7715.00 MD

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 3H PBHL		7852.33	4619.21	132.42	621339.91	606537.81	32°40'01.736"N	104°04'24.065"W	point

WELLPATH COMPOSITION

Ref Wellbore: No. 3H AWB

Ref Wellpath: No. 3H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	7715.00	Generic gyro - northseeking (Standard)	GYRO <61.7 - 8032>	No. 3 AWB
7715.00	12275.00	NaviTrak (Standard)	MWD <7748 - 12275>	No. 3H AWB
12275.00	12340.00	Blind Drilling (std)	Projection to bit	No. 3H AWB



Predator Open Hole Packer #11 @ 5930'

top of liner top @ 7491

peak gen III strataport #14
w/ 2.5853 ID @ 7352
2051 psi use ball 3.75

peak predator packer
@ 8166

peak gen III strataport #13
w/ 2.5813 ID @ 8254
2051 psi use ball 3.625

peak predator packer
@ 8463

peak gen III strataport #12
w/ 2.4063 ID @ 8597
2051 psi use ball 3.50

peak predator packer
@ 8771

peak gen III strataport #11
w/ 3.2213 ID @ 8851
2051 psi use ball 3.75

peak predator packer
@ 9074

peak gen III strataport #10
w/ 3.1563 ID @ 9204
2051 psi use ball 3.25

peak predator packer
@ 9378

peak gen III strataport #9
w/ 3.0813 ID @ 9503
2051 psi use ball 3.25

peak predator packer
@ 9639

peak gen III strataport #8
w/ 2.9813 ID @ 9689
2051 psi use ball 3.25

peak predator packer
@ 9942

peak gen III strataport #7
w/ 2.7813 ID @ 10716
2051 psi use ball 2.875

peak predator packer
@ 10245

peak gen III strataport #6
w/ 2.6563 ID @ 10945
2051 psi use ball 2.75

peak predator packer
@ 10549

peak gen III strataport #5
w/ 2.5313 ID @ 10716
2051 psi use ball 2.625

peak predator packer
@ 10853

peak gen III strataport #4
w/ 2.4063 ID @ 10702
2051 psi use ball 2.50

peak predator packer
@ 11157

peak gen III strataport #3
w/ 2.2813 ID @ 11023
2051 psi use ball 2.375

peak predator packer
@ 11460

peak gen III strataport #2
w/ 2.1563 ID @ 11389
2051 psi use ball 2.25

peak predator packer
@ 11764

peak gen III strataport #1
w/ 2.0313 ID @ 11152
2051 psi use ball 2.125

peak predator packer
@ 11986

Peak Hydro Pak
Anchor @ 12119'

3 1/2 pump out plug

15 STAGE DOWN HOLE WELL PROFILE				
WELL NAME	MAGNUM 16 STATE COM #3H		DATE	5/5/10
SUPERVISOR	GARY HUTCHINGS/ FLOYD LUCERO		TOOL HAND	VICTOR SAUCEDO
PHONE #	303-285-5946		PHONE #	432-425-7995
RIG #	Key #881		FIELD TICKET #	8604
ELEVATIONS				
	GL ELEV	KB ELEV	RIG KBD	TVD
	X	X	0	9321.00
CASING / OPEN HOLE LAYOUT	OO (IN)	LANDED DEPTH	WEIGHT (LB/FT)	TOP OF (FTKB)
	7	7600.00	26	0
CASING DESCRIPTION				
WINDOW DESCRIPTION	5 1/8			9,055.00
OPEN HOLE DESCRIPTION	6 1/8	12340.00	JUNCTION @	9055.00
DESCRIPTION				
Liner Placement Schematic				
DOWNHOLE DESCRIPTION FROM BOTTOM UP				
BOTTOM @	DESCRIPTION		LENGTH	ID OD
12205.00	Peak Pump-Out Circ Sub Floated w/ 3-1/2" aux box 1		0.83	2.990 4.550
12204.17	Swedge w/ 3-1/2" aux pin x 4-1/2" LTC collar		1.01	2.990 5.030
12203.16	2 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 1-2		80.86	4.000 4.500
12122.30	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.10	4.000 4.500
12120.20	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.58	3.995 5.940
12119.62	Peak Hydro Pak Anchor SS 4-1/2" LTC box x pin 2		2.80	3.992 5.880
12116.82	4-1/2" LTC collar x 4-1/2" LTC pin 11.6# P-110 pup jt.		6.05	4.000 4.500
12110.77	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 3-5		121.15	4.000 4.500
11989.62	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.10	4.000 4.500
11987.52	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
11986.92	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
11982.89	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
11976.79	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 6-8		124.30	4.000 4.500
11952.49	Strata-Port III Ball Activated Frac Sleeve 2.0313" id 4		3.55	2.031 5.875
11848.94	2 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 9-10		82.15	4.000 4.500
11766.79	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
11764.68	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
11764.08	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 5		4.03	3.996 5.690
11760.05	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
11753.95	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 11-14		164.21	4.000 4.500
11589.74	Strata-Port III Ball Activated Frac Sleeve 2.1563" id 6		3.55	2.156 5.875
11586.19	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 15-17		123.43	4.000 4.500
11462.76	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
11460.65	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
11460.05	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 7		4.03	3.996 5.690
11456.02	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
11449.92	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 18-21		162.97	4.000 4.500
11286.95	Strata-Port III Ball Activated Frac Sleeve 2.2813" id 8		3.55	2.281 5.875
11283.40	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 22-24		123.67	4.000 4.500
11159.73	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
11157.62	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
11157.02	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
11152.99	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
11146.89	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 25-28		164.02	4.000 4.500
10982.87	Strata-Port III Ball Activated Frac Sleeve 2.4063" id 9		3.55	2.406 5.875
10979.32	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 29-31		123.31	4.000 4.500
10856.01	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
10853.90	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
10853.30	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
10849.27	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
10643.17	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 32-34		123.58	4.000 4.500
10719.59	Strata-Port III Ball Activated Frac Sleeve 2.5313" id 12		3.55	2.531 5.875
10716.04	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 35-38		164.52	4.000 4.500
10551.52	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
10549.41	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
10548.81	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
10544.78	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
10538.68	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 39-41		123.58	4.000 4.500
10415.10	Strata-Port III Ball Activated Frac Sleeve 2.6563" id		3.55	2.656 5.875
10411.55	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 42-45		162.43	4.000 4.500
10249.12	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
10247.01	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
10246.41	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
10242.38	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
10236.28	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 46-48		121.54	4.000 4.500
10114.74	Strata-Port III Ball Activated Frac Sleeve 2.7813" id		3.55	2.781 5.875
10111.19	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 49-52		165.58	4.000 4.500
9945.61	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
9943.50	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
9942.90	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
9938.87	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
9932.77	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 53-55		123.26	4.000 4.500
9809.51	Strata-Port III Ball Activated Frac Sleeve 2.9063" id 18		3.55	2.906 5.875
9805.96	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 56-59		163.52	4.000 4.500
9642.43	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
9640.32	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	3.995 5.940
9639.72	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.996 5.690
9635.69	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
9629.59	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 60-62		121.58	4.000 4.500
9508.01	Strata-Port III Ball Activated Frac Sleeve 3.0313" id		3.55	3.031 5.875
9504.46	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 63-65		122.93	4.000 4.500
9381.53	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
9379.42	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	4.000 4.500
9378.82	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	4.000 4.500
9374.79	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	4.000 4.500
9368.69	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 66-69		164.35	3.996 6.000
9294.34	Strata-Port III Ball Activated Frac Sleeve 3.1563" id		3.55	3.156 5.875
9280.79	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 70-72		123.36	4.000 5.375
9077.43	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
9075.32	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	4.000 5.940
9074.72	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.995 5.690
9070.69	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	3.996 4.500
9064.59	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 73-76		162.93	4.000 3.500
8991.66	Strata-Port III Ball Activated Frac Sleeve 3.2813" id		3.55	3.281 5.875
8938.11	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 77-79		123.43	4.000 4.500
8774.63	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
8772.57	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	4.000 5.940
8771.97	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.995 5.690
8767.94	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	3.996 4.500
8761.84	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 80-83		164.03	4.000 4.500
8597.81	Strata-Port III Ball Activated Frac Sleeve 3.4063" id		3.55	3.406 5.875
8594.76	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 84-86		122.72	4.000 4.500
8471.54	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.10	4.000 4.500
8469.44	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	4.000 5.940
8468.84	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.995 5.690
8464.81	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	3.996 4.500
8458.71	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 87-90		163.77	4.000 4.500
8294.94	Strata-Port III Ball Activated Frac Sleeve 3.5313" id		3.55	3.531 5.875
8291.39	3 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 91-93		122.21	4.000 4.500
8169.18	4-1/2" LTC pin x 4-1/2" LTC collar 11.6# P-110 pup jt.		2.11	4.000 4.500
8167.07	Peak Rot Centralizer 4-1/2" LTC pin x collar		0.60	4.000 5.940
8166.47	Peak Extreme Predator Packer 4-1/2" LTC pin x pin 3		4.03	3.995 5.690
8162.44	4-1/2" LTC collar x 4-1/2" LTC collar 11.6# P-110 pup jt.		6.10	2.996 4.500
8156.34	4 Jts 4-1/2" LTC 11.6# P-110 Casing Jt# 94-97		164.32	4.000 4.500
7992.02	Strata-Port III Ball Activated Frac Sleeve 3.6563" id		3.55	3.656 5.875
7988.47	4 1/2 LTC PIN X 4 1/2 BTC BOX		1.00	4.000 4.500
7987.47	11-JTS 4 1/2" BTC 11.6# P-110 CASING		478.19	4.000 4.500
7509.28	4 1/2 BTC PIN X 4 1/2 LTC BOX		1.00	4.000 4.500
7508.28	4-1/2" LTC pin x 4-1/2" LTC collar pup jt.		2.10	4.500 4.500
4:37 PM 9/16/2010				

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30-015-37632

600 North Maricfield St., Ste. 600
Midland, TX 79701
Phone 432-571-7800
Fax 432-620-1940

Cimarex Energy Co. of Colorado

Camp 6/15/10
Out 9/15/10

September 16, 2010

New Mexico Oil Conservation Division
1301 West Grand Avenue
Artesia, NM 88210
Attn: Ms. Jacqui Reeves

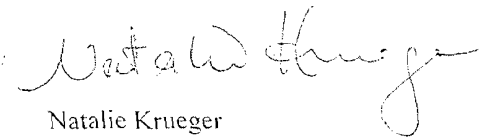
RE: Completion and Logs – Magnum 16 State No. 3 – Confidentiality Request
30-015-37632
Eddy County, NM

Dear Ms. Reeves,

Enclosed, please find the documents listed above for the well above. Cimarex requests that these documents be kept confidential for as long as possible, including the logs.

Thank you for your time and have a good day.

Sincerely,



Natalie Krueger
Regulatory

nkrueger@cimarex.com

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