

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

HOBBS OCD

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
May 27, 2004

DEC 16 2011

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

Submit to appropriate District Office

☐ AMENDED REPORT

RECEIVED

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address Cimarex Energy Co. 600 N. Marienfeld, Ste. 600 Midland, TX 79701		OGRID Number 215099
Property Code 309304		API Number 30-025-40107
Property Name Merchant Livestock 19 22 33 State Com		Well No. 001H
Proposed Pool 1 Red Tank; Bone Spring, East		Proposed Pool 2

Surface Location

UL or lot no D	Section 19	Township 22S	Range 33E	Lot Idn 1	Feet from the 660	North/South line North	Feet from the 330	East/West line West	County Lea
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Proposed Bottom Hole Location If Different From Surface

UL or lot no m/4	Section 19	Township 22S	Range 33E	Lot Idn	Feet from the 330	North/South line South	Feet from the 660	East/West line West	County Lea
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Additional Well Information

Work Type Code Recompletion	Well Type Code Oil	Cable/Rotary	Lease Type Code S	Ground Level Elevation 3704 GL
Multiple N	Proposed Depth 15086	Formation Bone Spring	Contractor N/A	Spud Date When Approved
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner: Synthetic ☐ mils thick Clay ☐ Pit Volume: bbls Drilling Method:				
Closed-Loop System ☒ Flowback Tanks Fresh Water ☐ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐				

Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17½	13⅝	48	1204	920	Circ
12¼	9⅝	40	4860	1819	Circ
8 3/4	5½	17	15230	2800	3800
4¾	3½	9.2	10220-15086	220	10220

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Cimarex completed this well laterally in the Bone Spring. Completion was unsuccessful. Cimarex now proposes to plug off the current Bone Spring lateral and recomplete to Bone Spring as shown below:

Plug current BS lateral by setting CIBP @ 10750' and spot 25 sx H cmt on top, TOC @ 10520'. Set whipstock @ 10398' and and CIBP @ 10396'. Kick off 4¾" BS lateral & drill to TD @ 15086 MD, 10900 TVD. Cement with 220 sx H, TOC @ top of liner @ 10220'.

Please see attached C102, directional plan, BOP information, C144 CLEZ and WBD.

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCB-approved plan ☐.

Signature:

Printed name: Terri Stathem

Title: Regulatory

E-mail Address: tstathem@cimarex.com

Date: December 15, 2011

Phone: 432-620-1936

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date

Expiration Date.

DEC 22 2011

DEC 22 2013

Conditions of Approval Attached ☐

**Permit Expires 2 Years From Approval
Date Unless Drilling Underway
Plugback**

DEC 16 2011

Form C-102

Revised July 16, 2010

Submit to Appropriate
District Office

DISTRICT I
1628 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1501 W. GRAND AVENUE, ARTESA, NM 88210

DISTRICT III
1000 RIO BRAZOS RD., AZTEO, NM 87410

DISTRICT IV
11055 E. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 3002540107	Pool Code 51607	Well Name RED TANK; BONE SPRING, EAST
Property Code 309304	Property Name MEROHANT LIVESTOCK 19 22 33 STATE CO. M	Well Number 1H
OSRD No. 215099	Operator Name Cimarex Energy Co.	Elevation 3704'

Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	10	22-S	33-E	1	660	NORTH	330	WEST	LEA.

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
M	10	22-S	33-E						LEA
Dedicated Acres 626.4	Joint or to be	Consolidation Code	Order No.						

NO ALLOWANCE 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 herein is true and complete to the best of my knowledge and belief, and that this organization does not own a working interest or unleased 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division. Signature: <i>Terri Stathem</i> Date: 12/5/11 Printed Name: Terri Stathem Email Address: tstathem@cimarex.com
GEODETIC COORDINATES NAD 27 NNE SURFACE LOCATION Y=503668.3 N X=720749.3 E LAT.=32.382671° N LONG.=103.610249° W BOTTOM HOLE LOCATION		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. MARCH 31, 2011 Date of Survey Signature of Registered Professional Surveyor: <i>Mark J. Eldon</i> NEW MEXICO 3239 Mark J. Eldon 12841 Mark J. Eldon 3239 DSS



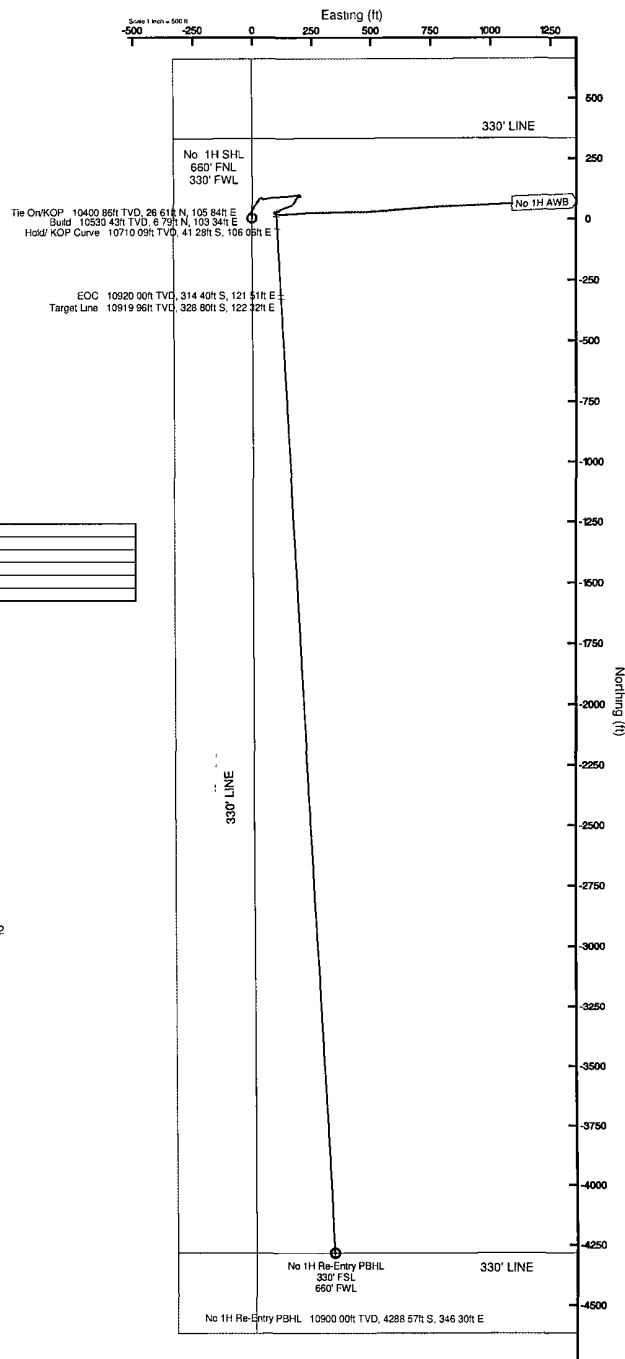
Cimarex Energy Co.

Location Lea County, NM
Field (Merchant Livestock (NAD27)) Sec 19, T22S, R33E
Facility Merchant Livestock 19 State Corn No. 1H

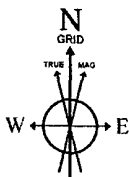
Sit No 1H Re-Entry
Well No 1H Re-Entry
C Wellbore No 1H Re-Entry PWS



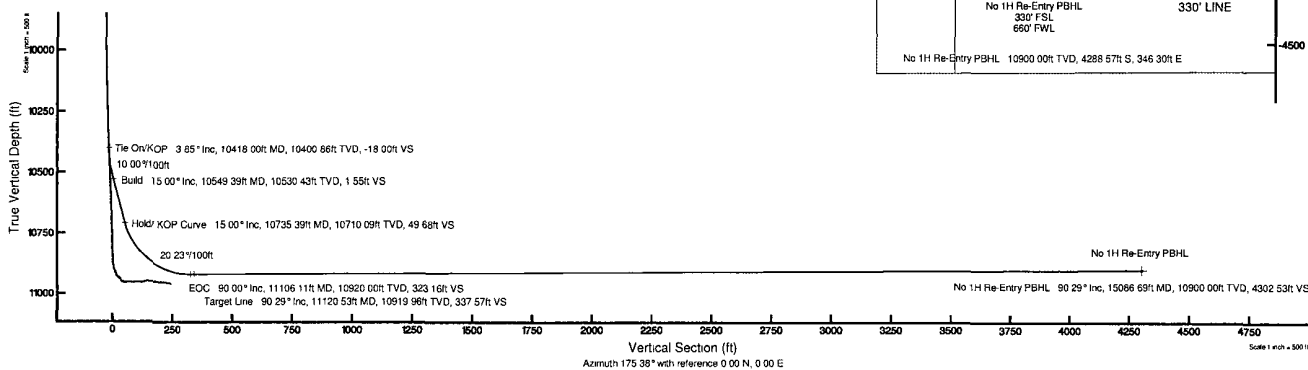
Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On/KOP	10418.00	3.850	231.330	10400.86	26.61	105.84	0.00	18.00
Build	10549.39	15.000	176.763	10530.43	6.79	103.34	10.00	1.55
Hold/ KOP Curve	10735.39	15.000	176.763	10710.09	-41.28	106.06	0.00	49.68
EOC	11106.11	90.000	176.763	10920.00	-314.40	121.51	20.23	323.16
Target Line	11120.53	90.288	176.763	10919.96	-328.80	122.32	2.00	337.57
No 1H Re-Entry PBHL	15086.69	90.288	176.763	10900.00	-4288.57	346.30	0.00	4302.53



Plot reference wellpath is Prelin 1	
True vertical depths are referenced to Rig on No 1H Re-Entry (RT)	Grid System: NAD27 / TM New Mexico SP Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No 1H Re-Entry (RT)	North Reference: Grid north
Rig on No 1H Re-Entry (RT) to Mean Sea Level: 3704 feet	Scale: True distance
Mean Sea Level to Mud line (At Sit, No 1H Re-Entry): -3704 feet	Depths are in feet
Coordinates are in feet referenced to Sit	Created by: gentilly on 12/12/2011



BGGM (1945.0 to 2012.0) Dip: 60.32° Field: 48683.8 nT
Magnetic North is 7.80 degrees East of True North (at 12/12/2011)
Grid North is 0.38 degrees East of True North
To correct azimuth from True to Grid subtract 0.38 degrees
To correct azimuth from Magnetic to Grid add 7.22 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.22 = 97.22





Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999965	Report Generated	12/12/2011 at 11:40:48 AM
Convergence at slot	0.38° East	Database/Source file	WA Midland/No.1H_Re-Entry_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	720749.30	503668.30	32°22'57.615"N	103°37'05.696"W
Facility Reference Pt			720749.30	503668.30	32°22'57.615"N	103°37'05.696"W
Field Reference Pt			720749.30	503668.30	32°22'57.615"N	103°37'05.696"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.1H Re-Entry (RT) to GL	0.00ft
Horizontal Reference Pt	Slot	Rig on No.1H Re-Entry (RT) to Mean Sea Level	3704.00ft
Vertical Reference Pt	Rig on No.1H Re-Entry (RT)	Rig on No.1H Re-Entry (RT) to Mud Line at Slot (No.1H Re-Entry)	0.00ft
MD Reference Pt	Rig on No.1H Re-Entry (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	175.38°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	23.000	0.00	0.00	0.00	0.00	720749.30	503668.30	32°22'57.615"N	103°37'05.696"W	0.00	
116.40	0.700	23.000	116.40	-0.63	0.65	0.28	720749.58	503668.95	32°22'57.621"N	103°37'05.692"W	0.60	
177.90	0.690	20.470	177.89	-1.30	1.35	0.55	720749.85	503669.65	32°22'57.628"N	103°37'05.689"W	0.05	
239.50	0.690	14.710	239.49	-1.98	2.05	0.78	720750.08	503670.35	32°22'57.635"N	103°37'05.686"W	0.11	
298.80	0.720	14.340	298.78	-2.67	2.76	0.96	720750.26	503671.06	32°22'57.642"N	103°37'05.684"W	0.05	
358.20	0.820	0.930	358.18	-3.45	3.55	1.06	720750.36	503671.85	32°22'57.650"N	103°37'05.683"W	0.35	
419.40	0.920	359.480	419.37	-4.38	4.48	1.06	720750.36	503672.78	32°22'57.659"N	103°37'05.683"W	0.17	
480.60	1.110	355.460	480.56	-5.46	5.56	1.01	720750.31	503673.86	32°22'57.670"N	103°37'05.683"W	0.33	
540.00	1.180	353.810	539.95	-6.65	6.74	0.90	720750.20	503675.04	32°22'57.681"N	103°37'05.685"W	0.13	
603.70	1.260	352.090	603.64	-8.00	8.09	0.73	720750.03	503676.38	32°22'57.695"N	103°37'05.687"W	0.14	
667.50	1.440	335.630	667.42	-9.45	9.51	0.31	720749.61	503677.81	32°22'57.709"N	103°37'05.691"W	0.67	
731.30	1.830	347.010	731.19	-11.22	11.23	-0.25	720749.05	503679.53	32°22'57.726"N	103°37'05.698"W	0.79	
795.00	2.100	346.170	794.85	-13.38	13.36	-0.76	720748.54	503681.66	32°22'57.747"N	103°37'05.704"W	0.43	
858.80	2.040	345.870	858.61	-15.65	15.59	-1.32	720747.98	503683.89	32°22'57.769"N	103°37'05.710"W	0.10	
922.10	1.110	338.830	921.89	-17.35	17.26	-1.81	720747.49	503685.56	32°22'57.786"N	103°37'05.716"W	1.50	
1049.60	0.870	344.370	1049.37	-19.48	19.34	-2.52	720746.78	503687.64	32°22'57.806"N	103°37'05.724"W	0.20	
1113.40	0.690	349.240	1113.16	-20.34	20.19	-2.72	720746.58	503688.48	32°22'57.815"N	103°37'05.726"W	0.30	
1125.24†	0.658	349.073	1125.00	-20.48	20.32	-2.75	720746.55	503688.62	32°22'57.816"N	103°37'05.726"W	0.27	Rsutler
1177.10	0.520	348.100	1176.86	-21.01	20.85	-2.86	720746.45	503689.14	32°22'57.821"N	103°37'05.727"W	0.27	
1240.90	0.400	344.030	1240.66	-21.51	21.34	-2.98	720746.32	503689.64	32°22'57.826"N	103°37'05.729"W	0.19	
1304.60	0.320	335.350	1304.36	-21.90	21.72	-3.11	720746.19	503690.02	32°22'57.830"N	103°37'05.730"W	0.15	
1365.20	0.310	350.270	1364.96	-22.22	22.03	-3.21	720746.09	503690.33	32°22'57.833"N	103°37'05.731"W	0.14	
1428.90	0.300	359.740	1428.65	-22.56	22.37	-3.24	720746.06	503690.67	32°22'57.836"N	103°37'05.732"W	0.08	
1492.60	0.280	33.380	1492.35	-22.85	22.67	-3.15	720746.15	503690.97	32°22'57.839"N	103°37'05.731"W	0.27	
1556.30	0.230	29.300	1556.05	-23.08	22.91	-3.01	720746.29	503691.21	32°22'57.842"N	103°37'05.729"W	0.08	
1620.00	0.210	61.130	1619.75	-23.23	23.08	-2.84	720746.46	503691.38	32°22'57.843"N	103°37'05.727"W	0.19	
1683.70	0.230	49.470	1683.45	-23.35	23.22	-2.64	720746.66	503691.51	32°22'57.845"N	103°37'05.725"W	0.08	
1747.40	0.340	56.710	1747.15	-23.52	23.40	-2.39	720746.91	503691.70	32°22'57.846"N	103°37'05.722"W	0.18	
1811.10	0.370	26.710	1810.85	-23.79	23.69	-2.14	720747.16	503691.99	32°22'57.849"N	103°37'05.719"W	0.29	
1874.80	0.400	51.930	1874.55	-24.08	24.01	-1.87	720747.43	503692.31	32°22'57.852"N	103°37'05.716"W	0.27	
1938.50	0.460	27.150	1938.25	-24.42	24.38	-1.58	720747.72	503692.67	32°22'57.856"N	103°37'05.712"W	0.30	
2002.20	0.580	0.630	2001.94	-24.96	24.93	-1.46	720747.84	503693.22	32°22'57.861"N	103°37'05.711"W	0.42	
2065.90	0.710	27.040	2065.64	-25.62	25.60	-1.27	720748.03	503693.90	32°22'57.868"N	103°37'05.709"W	0.50	
2129.60	0.710	22.480	2129.34	-26.31	26.32	-0.94	720748.36	503694.61	32°22'57.875"N	103°37'05.705"W	0.09	
2193.30	0.870	16.170	2193.03	-27.11	27.14	-0.66	720748.64	503695.44	32°22'57.883"N	103°37'05.701"W	0.29	
2257.00	1.110	14.000	2256.72	-28.15	28.21	-0.37	720748.93	503696.51	32°22'57.894"N	103°37'05.698"W	0.38	
2320.70	1.120	13.870	2320.41	-29.32	29.41	-0.08	720749.22	503697.71	32°22'57.906"N	103°37'05.694"W	0.02	
2384.40	1.130	21.990	2384.10	-30.47	30.60	0.31	720749.61	503698.90	32°22'57.917"N	103°37'05.690"W	0.25	
2448.10	1.130	36.550	2447.78	-31.51	31.68	0.92	720750.22	503699.98	32°22'57.928"N	103°37'05.683"W	0.45	
2511.80	1.150	91.950	2511.47	-31.91	32.17	1.93	720751.23	503700.47	32°22'57.933"N	103°37'05.671"W	1.66	
2575.50	1.470	17.700	2575.16	-32.59	32.92	2.82	720752.12	503701.22	32°22'57.940"N	103°37'05.660"W	2.51	
2639.20	1.800	22.930	2638.83	-34.23	34.62	3.46	720752.76	503702.92	32°22'57.957"N	103°37'05.653"W	0.57	
2702.90	1.960	19.850	2702.50	-36.11	36.57	4.22	720753.52	503704.87	32°22'57.976"N	103°37'05.644"W	0.30	
2766.60	1.990	19.240	2766.16	-38.11	38.64	4.95	720754.25	503706.94	32°22'57.997"N	103°37'05.635"W	0.06	
2830.30	2.250	22.300	2829.82	-40.24	40.84	5.79	720755.09	503709.14	32°22'58.018"N	103°37'05.625"W	0.45	



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2894.00	2.720	29.250	2893.46	-42.61	43.32	7.00	720756.30	503711.61	32°22'58.043"N	103°37'05.611"W	0.88	
2957.70	3.260	35.760	2957.07	-45.25	46.10	8.80	720758.10	503714.40	32°22'58.070"N	103°37'05.590"W	1.00	
3021.40	3.470	37.200	3020.66	-48.06	49.11	11.02	720760.32	503717.41	32°22'58.100"N	103°37'05.563"W	0.36	
3085.10	3.360	34.950	3084.25	-50.94	52.17	13.26	720762.56	503720.47	32°22'58.130"N	103°37'05.537"W	0.27	
3148.80	2.950	23.420	3147.85	-53.82	55.21	14.98	720764.28	503723.51	32°22'58.160"N	103°37'05.517"W	1.18	
3212.50	2.340	19.670	3211.48	-56.46	57.94	16.07	720765.37	503726.24	32°22'58.187"N	103°37'05.504"W	0.99	
3276.20	1.920	358.320	3275.14	-58.71	60.23	16.47	720765.77	503728.53	32°22'58.210"N	103°37'05.499"W	1.40	
3339.90	1.890	24.310	3338.81	-60.69	62.25	16.88	720766.18	503730.55	32°22'58.230"N	103°37'05.494"W	1.35	
3403.60	2.120	31.080	3402.47	-62.57	64.22	17.92	720767.22	503732.52	32°22'58.249"N	103°37'05.482"W	0.52	
3467.30	2.790	39.850	3466.11	-64.63	66.42	19.52	720768.82	503734.72	32°22'58.271"N	103°37'05.463"W	1.20	
3531.00	3.360	48.330	3529.72	-66.86	68.85	21.91	720771.21	503737.15	32°22'58.295"N	103°37'05.435"W	1.14	
3594.70	3.280	42.120	3593.31	-69.24	71.44	24.52	720773.82	503739.74	32°22'58.320"N	103°37'05.404"W	0.58	
3658.40	2.920	28.750	3656.92	-71.84	74.22	26.53	720775.82	503742.51	32°22'58.347"N	103°37'05.381"W	1.26	
3722.10	2.850	23.960	3720.54	-74.59	77.09	27.95	720777.25	503745.38	32°22'58.376"N	103°37'05.364"W	0.39	
3785.80	3.130	44.230	3784.15	-77.12	79.78	29.80	720779.10	503748.08	32°22'58.402"N	103°37'05.342"W	1.71	
3849.50	3.980	72.200	3847.73	-78.77	81.70	33.12	720782.42	503750.00	32°22'58.421"N	103°37'05.303"W	2.99	
3913.20	5.180	71.230	3911.23	-79.98	83.30	37.95	720787.25	503751.60	32°22'58.437"N	103°37'05.247"W	1.89	
3976.90	5.950	181.250	3974.76	-77.39	80.92	40.61	720789.91	503749.22	32°22'58.413"N	103°37'05.216"W	14.32	
4040.60	9.070	81.400	4038.11	-74.45	78.36	45.52	720794.81	503746.66	32°22'58.387"N	103°37'05.159"W	18.30	
4104.30	9.070	81.560	4101.02	-75.13	79.85	55.45	720804.75	503748.15	32°22'58.401"N	103°37'05.043"W	0.04	
4168.00	10.010	80.870	4163.83	-75.90	81.47	65.88	720815.18	503749.76	32°22'58.417"N	103°37'04.921"W	1.49	
4231.70	10.590	81.550	4226.51	-76.73	83.21	77.14	720826.43	503751.50	32°22'58.433"N	103°37'04.790"W	0.93	
4295.40	10.640	82.250	4289.12	-77.44	84.86	88.75	720838.05	503753.16	32°22'58.449"N	103°37'04.654"W	0.22	
4359.10	10.970	83.140	4351.69	-78.00	86.38	100.60	720849.89	503754.67	32°22'58.463"N	103°37'04.516"W	0.58	
4422.80	11.230	82.080	4414.20	-78.59	87.95	112.76	720862.05	503756.25	32°22'58.478"N	103°37'04.374"W	0.52	
4486.50	11.250	90.870	4476.68	-78.36	88.71	125.12	720874.41	503757.01	32°22'58.484"N	103°37'04.230"W	2.69	
4550.20	10.610	84.300	4539.23	-77.87	89.20	137.16	720886.46	503757.50	32°22'58.488"N	103°37'04.089"W	2.20	
4613.90	9.270	82.520	4601.97	-78.24	90.45	148.09	720897.38	503758.75	32°22'58.500"N	103°37'03.962"W	2.16	
4677.60	7.650	83.400	4664.97	-78.64	91.61	157.39	720906.68	503759.91	32°22'58.511"N	103°37'03.853"W	2.55	
4741.30	6.360	83.080	4728.20	-78.93	92.52	165.10	720914.40	503760.82	32°22'58.519"N	103°37'03.763"W	2.03	
4805.00	5.030	83.570	4791.58	-79.16	93.26	171.38	720920.67	503761.56	32°22'58.526"N	103°37'03.690"W	2.09	
4932.40	3.620	80.530	4918.61	-79.68	94.55	180.90	720930.19	503762.84	32°22'58.538"N	103°37'03.579"W	1.12	
4988.88†	3.115	91.171	4975.00	-79.68	94.81	184.19	720933.48	503763.10	32°22'58.541"N	103°37'03.541"W	1.42	Delaware
4996.10	3.060	92.770	4982.21	-79.63	94.79	184.58	720933.87	503763.09	32°22'58.541"N	103°37'03.536"W	1.42	
5123.50	2.630	77.300	5109.45	-79.60	95.27	190.83	720940.12	503763.57	32°22'58.545"N	103°37'03.463"W	0.69	
5187.20	2.450	81.460	5173.09	-79.90	95.80	193.60	720942.89	503764.09	32°22'58.550"N	103°37'03.431"W	0.40	
5250.90	2.020	89.170	5236.74	-79.92	96.01	196.07	720945.36	503764.31	32°22'58.552"N	103°37'03.402"W	0.82	
5314.60	1.180	129.400	5300.42	-79.39	95.61	197.70	720946.99	503763.91	32°22'58.548"N	103°37'03.383"W	2.13	
5378.30	1.390	127.220	5364.10	-78.42	94.73	198.82	720948.11	503763.03	32°22'58.539"N	103°37'03.370"W	0.34	
5442.00	1.480	172.210	5427.78	-77.08	93.45	199.55	720948.84	503761.75	32°22'58.526"N	103°37'03.362"W	1.73	
5505.70	1.260	112.000	5491.47	-75.95	92.37	200.31	720949.60	503760.67	32°22'58.516"N	103°37'03.353"W	2.18	
5569.40	1.200	152.460	5555.15	-75.02	91.52	201.26	720950.56	503759.81	32°22'58.507"N	103°37'03.342"W	1.34	
5633.10	1.010	122.240	5618.84	-74.07	90.63	202.05	720951.34	503758.92	32°22'58.498"N	103°37'03.333"W	0.95	
5696.80	0.620	179.760	5682.54	-73.39	89.98	202.52	720951.82	503758.28	32°22'58.492"N	103°37'03.327"W	1.34	
5760.50	0.620	179.720	5746.23	-72.70	89.29	202.53	720951.82	503757.59	32°22'58.485"N	103°37'03.327"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5824.20	0.440	235.230	5809.93	-72.24	88.81	202.33	720951.62	503757.11	32°22'58.480"N	103°37'03.330"W	0.81	
5893.00	0.430	196.960	5878.73	-71.86	88.41	202.04	720951.33	503756.71	32°22'58.476"N	103°37'03.333"W	0.41	
5956.80	0.320	211.890	5942.53	-71.50	88.03	201.87	720951.16	503756.33	32°22'58.472"N	103°37'03.335"W	0.23	
6020.60	0.490	255.670	6006.33	-71.31	87.81	201.51	720950.81	503756.11	32°22'58.470"N	103°37'03.339"W	0.53	
6084.50	0.640	246.490	6070.22	-71.15	87.60	200.92	720950.21	503755.90	32°22'58.468"N	103°37'03.346"W	0.27	
6148.30	0.570	290.990	6134.02	-71.17	87.57	200.30	720949.59	503755.87	32°22'58.468"N	103°37'03.353"W	0.73	
6212.10	0.530	294.770	6197.82	-71.45	87.81	199.73	720949.03	503756.11	32°22'58.470"N	103°37'03.360"W	0.08	
6275.90	0.530	297.290	6261.61	-71.75	88.07	199.20	720948.50	503756.37	32°22'58.473"N	103°37'03.366"W	0.04	
6339.80	0.510	293.530	6325.51	-72.04	88.32	198.68	720947.97	503756.62	32°22'58.476"N	103°37'03.372"W	0.06	
6403.60	0.460	282.570	6389.31	-72.25	88.49	198.17	720947.46	503756.79	32°22'58.477"N	103°37'03.378"W	0.16	
6467.40	0.430	275.270	6453.11	-72.37	88.57	197.68	720946.97	503756.86	32°22'58.478"N	103°37'03.384"W	0.10	
6531.30	0.440	281.530	6517.00	-72.48	88.64	197.20	720946.50	503756.93	32°22'58.479"N	103°37'03.389"W	0.08	
6595.10	0.420	275.330	6580.80	-72.59	88.71	196.73	720946.02	503757.00	32°22'58.479"N	103°37'03.395"W	0.08	
6658.90	0.410	269.850	6644.60	-72.64	88.73	196.27	720945.56	503757.03	32°22'58.480"N	103°37'03.400"W	0.06	
6722.80	0.440	258.680	6708.50	-72.63	88.68	195.80	720945.09	503756.98	32°22'58.479"N	103°37'03.406"W	0.14	
6786.60	0.640	269.270	6772.30	-72.63	88.63	195.20	720944.50	503756.92	32°22'58.479"N	103°37'03.413"W	0.35	
6850.40	0.660	287.230	6836.09	-72.79	88.73	194.50	720943.79	503757.03	32°22'58.480"N	103°37'03.421"W	0.32	
6914.30	0.670	276.050	6899.99	-73.00	88.88	193.77	720943.07	503757.18	32°22'58.481"N	103°37'03.429"W	0.20	
6978.10	0.670	120.700	6963.79	-72.85	88.73	193.72	720943.02	503757.03	32°22'58.480"N	103°37'03.430"W	2.05	
7041.90	0.680	277.970	7027.59	-72.72	88.59	193.67	720942.96	503756.89	32°22'58.479"N	103°37'03.431"W	2.07	
7107.80	0.600	268.470	7093.48	-72.82	88.64	192.94	720942.23	503756.93	32°22'58.479"N	103°37'03.439"W	0.20	
7171.40	0.520	255.460	7157.08	-72.79	88.55	192.32	720941.62	503756.85	32°22'58.478"N	103°37'03.446"W	0.24	
7235.00	0.520	255.460	7220.68	-72.69	88.41	191.77	720941.06	503756.71	32°22'58.477"N	103°37'03.453"W	0.00	
7298.50	0.540	193.360	7284.17	-72.35	88.05	191.42	720940.71	503756.34	32°22'58.473"N	103°37'03.457"W	0.86	
7362.10	0.490	2.110	7347.77	-72.34	88.03	191.36	720940.65	503756.32	32°22'58.473"N	103°37'03.458"W	1.61	
7425.70	0.540	284.340	7411.37	-72.71	88.37	191.08	720940.37	503756.67	32°22'58.477"N	103°37'03.461"W	1.02	
7489.30	0.550	218.950	7474.97	-72.58	88.21	190.60	720939.89	503756.51	32°22'58.475"N	103°37'03.466"W	0.93	
7552.80	0.540	214.430	7538.47	-72.13	87.73	190.23	720939.53	503756.02	32°22'58.470"N	103°37'03.471"W	0.07	
7616.40	0.510	206.110	7602.06	-71.65	87.22	189.94	720939.23	503755.52	32°22'58.465"N	103°37'03.474"W	0.13	
7680.00	0.570	190.180	7665.66	-71.10	86.66	189.76	720939.05	503754.96	32°22'58.460"N	103°37'03.476"W	0.25	
7743.50	0.550	195.490	7729.16	-70.51	86.05	189.62	720938.92	503754.35	32°22'58.454"N	103°37'03.478"W	0.09	
7807.10	0.560	199.170	7792.75	-69.94	85.47	189.44	720938.73	503753.76	32°22'58.448"N	103°37'03.480"W	0.06	
7870.70	0.570	211.530	7856.35	-69.40	84.90	189.17	720938.46	503753.20	32°22'58.442"N	103°37'03.483"W	0.19	
7934.20	0.690	218.580	7919.85	-68.87	84.33	188.77	720938.06	503752.63	32°22'58.437"N	103°37'03.488"W	0.22	
7997.80	0.750	223.540	7983.44	-68.31	83.73	188.24	720937.54	503752.03	32°22'58.431"N	103°37'03.494"W	0.14	
8061.40	0.750	230.470	8047.04	-67.79	83.17	187.63	720936.93	503751.46	32°22'58.425"N	103°37'03.501"W	0.14	
8124.90	0.800	234.870	8110.53	-67.33	82.65	186.95	720936.24	503750.94	32°22'58.420"N	103°37'03.509"W	0.12	
8188.50	1.000	235.870	8174.12	-66.83	82.08	186.13	720935.42	503750.38	32°22'58.415"N	103°37'03.519"W	0.32	
8252.30	1.100	230.040	8237.91	-66.20	81.38	185.20	720934.49	503749.67	32°22'58.408"N	103°37'03.530"W	0.23	
8315.90	1.110	219.610	8301.50	-65.41	80.51	184.34	720933.63	503748.81	32°22'58.399"N	103°37'03.540"W	0.32	
8376.10	1.120	215.390	8361.69	-64.54	79.58	183.63	720932.92	503747.88	32°22'58.390"N	103°37'03.548"W	0.14	
8443.50	1.170	204.250	8429.08	-63.43	78.42	182.96	720932.26	503746.71	32°22'58.379"N	103°37'03.556"W	0.34	
8464.43†	1.196	202.141	8450.00	-63.05	78.02	182.79	720932.08	503746.32	32°22'58.375"N	103°37'03.558"W	0.24	Basal Brushy Canyon
8510.90	1.260	197.790	8496.46	-62.15	77.08	182.45	720931.75	503745.38	32°22'58.365"N	103°37'03.562"W	0.24	
8574.40	1.350	195.330	8559.94	-60.80	75.70	182.04	720931.33	503743.99	32°22'58.352"N	103°37'03.567"W	0.17	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8638.00	1.330	197.660	8623.53	-59.41	74.27	181.62	720930.91	503742.57	32°22'58.338"N	103°37'03.572"W	0.09	
8701.60	1.240	202.030	8687.11	-58.11	72.93	181.14	720930.43	503741.23	32°22'58.324"N	103°37'03.578"W	0.21	
8734.50†	1.218	204.743	8720.00	-57.49	72.28	180.86	720930.15	503740.58	32°22'58.318"N	103°37'03.581"W	0.19	Bone Spring
8765.10	1.200	207.350	8750.60	-56.93	71.70	180.57	720929.87	503740.00	32°22'58.312"N	103°37'03.585"W	0.19	
8828.70	1.450	222.260	8814.18	-55.82	70.51	179.73	720929.02	503738.81	32°22'58.301"N	103°37'03.594"W	0.67	
8892.30	1.980	216.980	8877.75	-54.45	69.04	178.53	720927.82	503737.34	32°22'58.286"N	103°37'03.609"W	0.87	
8955.90	2.150	211.750	8941.31	-52.67	67.15	177.24	720926.53	503735.45	32°22'58.267"N	103°37'03.624"W	0.40	
9019.40	2.200	210.810	9004.76	-50.71	65.09	175.99	720925.28	503733.39	32°22'58.247"N	103°37'03.639"W	0.10	
9083.00	2.090	215.040	9068.32	-48.83	63.09	174.69	720923.99	503731.39	32°22'58.227"N	103°37'03.654"W	0.30	
9114.70†	2.084	213.275	9100.00	-47.93	62.14	174.05	720923.34	503730.43	32°22'58.218"N	103°37'03.661"W	0.20	Upper Bone Spring Shale
9146.60	2.080	211.490	9131.88	-47.00	61.16	173.43	720922.72	503729.46	32°22'58.208"N	103°37'03.669"W	0.20	
9210.10	2.320	211.700	9195.33	-45.03	59.08	172.15	720921.44	503727.38	32°22'58.188"N	103°37'03.684"W	0.38	
9273.70	2.610	219.010	9258.87	-42.95	56.86	170.56	720919.85	503725.16	32°22'58.166"N	103°37'03.702"W	0.67	
9337.30	2.440	231.190	9322.41	-41.14	54.89	168.59	720917.89	503723.19	32°22'58.147"N	103°37'03.726"W	0.88	
9400.90	2.730	231.020	9385.95	-39.52	53.09	166.36	720915.66	503721.38	32°22'58.129"N	103°37'03.752"W	0.46	
9464.40	3.150	238.080	9449.36	-37.88	51.22	163.70	720912.99	503719.52	32°22'58.111"N	103°37'03.783"W	0.89	
9528.00	3.490	245.930	9512.86	-36.44	49.51	160.44	720909.74	503717.81	32°22'58.094"N	103°37'03.821"W	0.87	
9591.60	3.860	253.030	9576.32	-35.34	48.10	156.63	720905.92	503716.40	32°22'58.080"N	103°37'03.866"W	0.92	
9655.10	3.850	253.270	9639.68	-34.43	46.86	152.54	720901.84	503715.16	32°22'58.068"N	103°37'03.913"W	0.03	
9718.70	3.770	253.370	9703.14	-33.55	45.65	148.50	720897.79	503713.95	32°22'58.057"N	103°37'03.961"W	0.13	
9782.30	3.960	250.300	9766.60	-32.54	44.31	144.42	720893.72	503712.61	32°22'58.044"N	103°37'04.008"W	0.44	
9845.80	4.230	254.530	9829.93	-31.53	42.95	140.10	720889.40	503711.25	32°22'58.030"N	103°37'04.059"W	0.64	
9890.99†	4.152	253.853	9875.00	-30.89	42.05	136.93	720886.22	503710.35	32°22'58.022"N	103°37'04.096"W	0.20	1st Bone Spring SS
9909.40	4.120	253.570	9893.37	-30.62	41.67	135.65	720884.95	503709.97	32°22'58.018"N	103°37'04.111"W	0.20	
9973.00	4.030	248.400	9956.80	-29.50	40.21	131.38	720880.68	503708.50	32°22'58.004"N	103°37'04.161"W	0.59	
10036.50	3.930	246.550	10020.15	-28.15	38.52	127.31	720876.61	503706.82	32°22'57.987"N	103°37'04.208"W	0.26	
10100.10	3.660	245.520	10083.61	-26.75	36.81	123.46	720872.76	503705.11	32°22'57.971"N	103°37'04.253"W	0.44	
10163.70	3.550	243.030	10147.09	-25.31	35.08	119.86	720869.16	503703.37	32°22'57.954"N	103°37'04.295"W	0.30	
10227.30	3.630	241.300	10210.56	-23.74	33.22	116.34	720865.64	503701.51	32°22'57.936"N	103°37'04.337"W	0.21	
10290.80	3.780	239.620	10273.93	-22.01	31.19	112.77	720862.07	503699.49	32°22'57.916"N	103°37'04.378"W	0.29	
10354.40	3.690	237.640	10337.39	-20.15	29.04	109.23	720858.53	503697.34	32°22'57.895"N	103°37'04.420"W	0.25	
10418.00	3.850	231.330	10400.86	-18.00	26.61	105.84	720855.13	503694.91	32°22'57.871"N	103°37'04.460"W	0.00	Tie On/KOP
10467.37†	7.304	192.431	10450.00	-14.07	22.50	103.87	720853.16	503690.80	32°22'57.831"N	103°37'04.483"W	10.00	2nd Bone Spring SS
10518.00†	11.976	180.404	10499.91	-5.76	14.10	103.14	720852.43	503682.40	32°22'57.747"N	103°37'04.492"W	10.00	
10549.39	15.000	176.763	10530.43	1.55	6.79	103.34	720852.64	503675.09	32°22'57.675"N	103°37'04.490"W	10.00	Build
10618.00†	15.000	176.763	10596.70	19.30	-10.94	104.35	720853.64	503657.36	32°22'57.500"N	103°37'04.480"W	0.00	
10718.00†	15.000	176.763	10693.29	45.18	-36.78	105.81	720855.10	503631.52	32°22'57.244"N	103°37'04.465"W	0.00	
10735.39	15.000	176.763	10710.09	49.68	-41.28	106.06	720855.36	503627.03	32°22'57.199"N	103°37'04.462"W	0.00	Hold/ KOP Curve
10818.00†	31.713	176.763	10785.66	82.30	-73.86	107.90	720857.20	503594.44	32°22'56.877"N	103°37'04.443"W	20.23	
10918.00†	51.944	176.763	10859.79	148.63	-140.10	111.65	720860.95	503528.21	32°22'56.221"N	103°37'04.405"W	20.23	
11018.00†	72.174	176.763	10906.40	236.49	-227.84	116.61	720865.91	503440.47	32°22'55.353"N	103°37'04.354"W	20.23	
11106.11	90.000	176.763	10920.00	323.16	-314.40	121.51	720870.80	503353.91	32°22'54.496"N	103°37'04.303"W	20.23	EOC
11118.00†	90.238	176.763	10919.98	335.04	-326.27	122.18	720871.48	503342.04	32°22'54.378"N	103°37'04.296"W	2.00	
11120.53	90.288	176.763	10919.96	337.57	-328.80	122.32	720871.62	503339.52	32°22'54.353"N	103°37'04.295"W	2.00	Target Line
11218.00†	90.288	176.763	10919.47	435.01	-426.11	127.83	720877.12	503242.21	32°22'53.390"N	103°37'04.238"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

WELLPATH DATA (219 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11318.00†	90.288	176.763	10918.97	534.98	-525.95	133.47	720882.77	503142.37	32°22'52.402"N	103°37'04.180"W	0.00	
11418.00†	90.288	176.763	10918.47	634.95	-625.79	139.12	720888.42	503042.54	32°22'51.413"N	103°37'04.122"W	0.00	
11518.00†	90.288	176.763	10917.96	734.92	-725.63	144.77	720894.06	502942.70	32°22'50.425"N	103°37'04.064"W	0.00	
11618.00†	90.288	176.763	10917.46	834.89	-825.46	150.42	720899.71	502842.87	32°22'49.437"N	103°37'04.006"W	0.00	
11718.00†	90.288	176.763	10916.96	934.86	-925.30	156.06	720905.36	502743.03	32°22'48.449"N	103°37'03.948"W	0.00	
11818.00†	90.288	176.763	10916.45	1034.83	-1025.14	161.71	720911.01	502643.20	32°22'47.460"N	103°37'03.890"W	0.00	
11918.00†	90.288	176.763	10915.95	1134.80	-1124.98	167.36	720916.65	502543.36	32°22'46.472"N	103°37'03.832"W	0.00	
12018.00†	90.288	176.763	10915.45	1234.77	-1224.82	173.01	720922.30	502443.52	32°22'45.484"N	103°37'03.774"W	0.00	
12118.00†	90.288	176.763	10914.94	1334.74	-1324.66	178.65	720927.95	502343.69	32°22'44.495"N	103°37'03.716"W	0.00	
12218.00†	90.288	176.763	10914.44	1434.71	-1424.50	184.30	720933.59	502243.85	32°22'43.507"N	103°37'03.658"W	0.00	
12318.00†	90.288	176.763	10913.94	1534.68	-1524.34	189.95	720939.24	502144.02	32°22'42.519"N	103°37'03.600"W	0.00	
12418.00†	90.288	176.763	10913.43	1634.65	-1624.18	195.59	720944.89	502044.18	32°22'41.531"N	103°37'03.542"W	0.00	
12518.00†	90.288	176.763	10912.93	1734.62	-1724.02	201.24	720950.53	501944.35	32°22'40.542"N	103°37'03.484"W	0.00	
12618.00†	90.288	176.763	10912.43	1834.59	-1823.86	206.89	720956.18	501844.51	32°22'39.554"N	103°37'03.426"W	0.00	
12718.00†	90.288	176.763	10911.92	1934.56	-1923.70	212.54	720961.83	501744.68	32°22'38.566"N	103°37'03.367"W	0.00	
12818.00†	90.288	176.763	10911.42	2034.53	-2023.53	218.18	720967.48	501644.84	32°22'37.577"N	103°37'03.309"W	0.00	
12918.00†	90.288	176.763	10910.92	2134.50	-2123.37	223.83	720973.12	501545.01	32°22'36.589"N	103°37'03.251"W	0.00	
13018.00†	90.288	176.763	10910.41	2234.47	-2223.21	229.48	720978.77	501445.17	32°22'35.601"N	103°37'03.193"W	0.00	
13118.00†	90.288	176.763	10909.91	2334.44	-2323.05	235.13	720984.42	501345.33	32°22'34.613"N	103°37'03.135"W	0.00	
13218.00†	90.288	176.763	10909.41	2434.41	-2422.89	240.77	720990.06	501245.50	32°22'33.624"N	103°37'03.077"W	0.00	
13318.00†	90.288	176.763	10908.90	2534.38	-2522.73	246.42	720995.71	501145.66	32°22'32.636"N	103°37'03.019"W	0.00	
13418.00†	90.288	176.763	10908.40	2634.35	-2622.57	252.07	721001.36	501045.83	32°22'31.648"N	103°37'02.961"W	0.00	
13518.00†	90.288	176.763	10907.90	2734.32	-2722.41	257.71	721007.01	500945.99	32°22'30.659"N	103°37'02.903"W	0.00	
13618.00†	90.288	176.763	10907.39	2834.29	-2822.25	263.36	721012.65	500846.16	32°22'29.671"N	103°37'02.845"W	0.00	
13718.00†	90.288	176.763	10906.89	2934.26	-2922.09	269.01	721018.30	500746.32	32°22'28.683"N	103°37'02.787"W	0.00	
13818.00†	90.288	176.763	10906.39	3034.23	-3021.93	274.66	721023.95	500646.49	32°22'27.695"N	103°37'02.729"W	0.00	
13918.00†	90.288	176.763	10905.88	3134.20	-3121.76	280.30	721029.59	500546.65	32°22'26.706"N	103°37'02.671"W	0.00	
14018.00†	90.288	176.763	10905.38	3234.17	-3221.60	285.95	721035.24	500446.82	32°22'25.718"N	103°37'02.613"W	0.00	
14118.00†	90.288	176.763	10904.88	3334.14	-3321.44	291.60	721040.89	500346.98	32°22'24.730"N	103°37'02.555"W	0.00	
14218.00†	90.288	176.763	10904.37	3434.11	-3421.28	297.25	721046.53	500247.14	32°22'23.742"N	103°37'02.497"W	0.00	
14318.00†	90.288	176.763	10903.87	3534.08	-3521.12	302.89	721052.18	500147.31	32°22'22.753"N	103°37'02.439"W	0.00	
14418.00†	90.288	176.763	10903.37	3634.05	-3620.96	308.54	721057.83	500047.47	32°22'21.765"N	103°37'02.381"W	0.00	
14518.00†	90.288	176.763	10902.86	3734.02	-3720.80	314.19	721063.48	499947.64	32°22'20.777"N	103°37'02.322"W	0.00	
14618.00†	90.288	176.763	10902.36	3833.99	-3820.64	319.83	721069.12	499847.80	32°22'19.788"N	103°37'02.264"W	0.00	
14718.00†	90.288	176.763	10901.86	3933.96	-3920.48	325.48	721074.77	499747.97	32°22'18.800"N	103°37'02.206"W	0.00	
14818.00†	90.288	176.763	10901.35	4033.93	-4020.32	331.13	721080.42	499648.13	32°22'17.812"N	103°37'02.148"W	0.00	
14918.00†	90.288	176.763	10900.85	4133.90	-4120.16	336.78	721086.06	499548.30	32°22'16.824"N	103°37'02.090"W	0.00	
15018.00†	90.288	176.763	10900.35	4233.86	-4220.00	342.42	721091.71	499448.46	32°22'15.835"N	103°37'02.032"W	0.00	
15086.69	90.288	176.763	10900.00	4302.53	-4288.57	346.30	721095.59	499379.89	32°22'15.156"N	103°37'01.992"W	0.00	No.1H Re-Entry PBHL



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.1H Re-Entry
Area	Lea County, NM	Well	No.1H Re-Entry
Field	(Merchant Livestock(NAD27)) Sec 19, T22S, R33E	Wellbore	No.1H Re-Entry PWB
Facility	Merchant Livestock 19 State Com No. 1H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No.1H Re-Entry PBHL	15086.69	10900.00	-4288.57	346.30	721095.59	499379.89	32°22'15.156"N	103°37'01.992"W	point

SURVEY PROGRAM - Ref Wellbore: No.1H Re-Entry PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	10418.00	Generic gyro - northseeking (Standard)		No.1H Re-Entry AWB
10418.00	15086.69	NaviTrak (Standard)		No.1H Re-Entry PWB

SR & A

Fill Line 2" 9-5/8" Flowline

5000# BOP

Pipe Rams

Blind Rams

Drilling Spool

Kill Line 2"

4"

Choke Manifold 4"

Wellhead Assembly

13 5/8" 3000# psi x 11 1/4" 3000# psi
Wellhead Assembly

13 5/8" 3000# psi

Slip-on Casing Head

5000# BOP

Merchant Livestock 19 22 33 State Com #1H

Cimarex Energy Co.

19-22S-33E

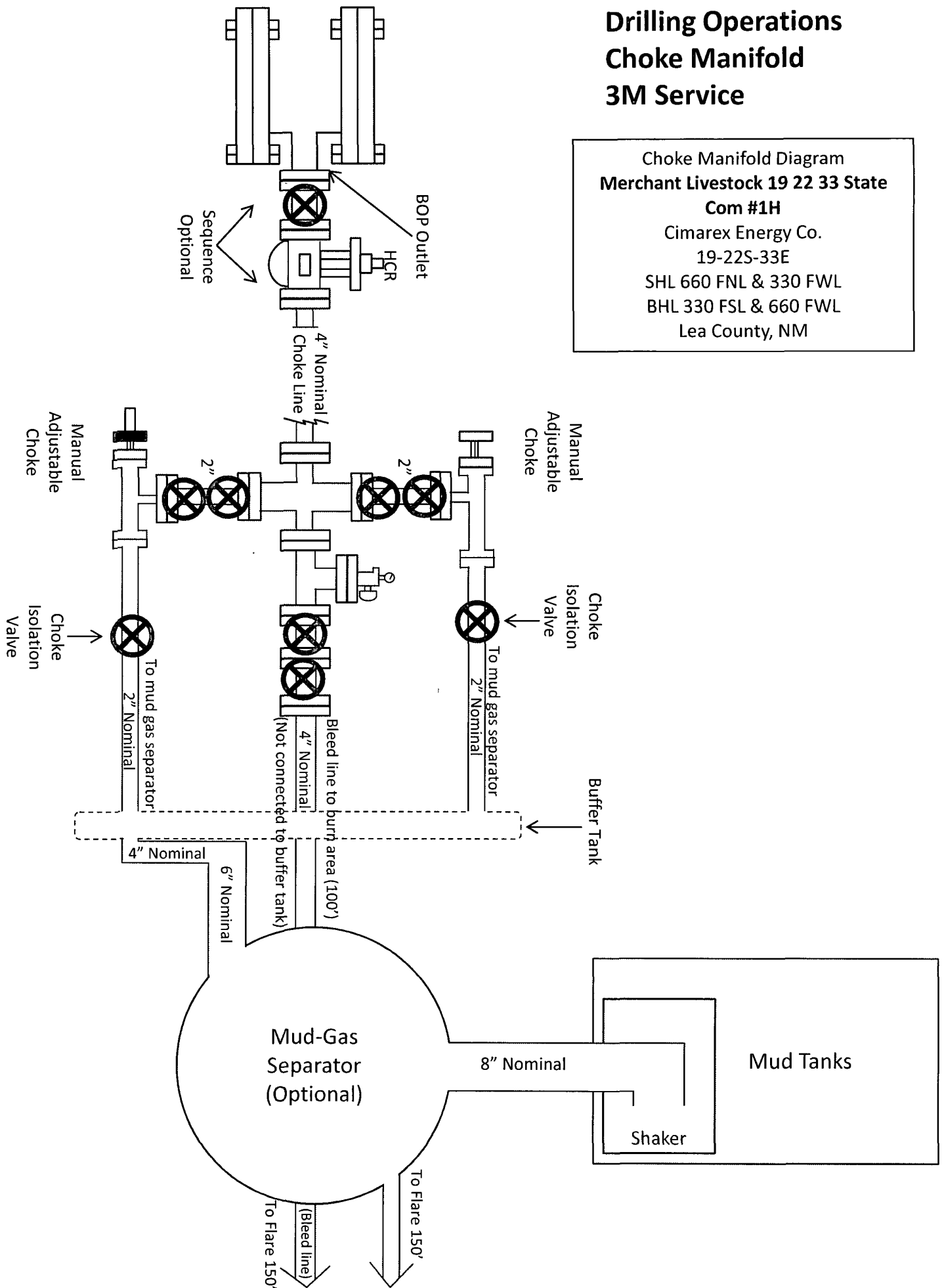
SHL 660 FNL & 330 FWL

BHL 330 FSL & 660 FWL

Lea County, NM

Drilling Operations Choke Manifold 3M Service

Choke Manifold Diagram
Merchant Livestock 19 22 33 State
Com #1H
Cimarex Energy Co.
19-22S-33E
SHL 660 FNL & 330 FWL
BHL 330 FSL & 660 FWL
Lea County, NM





DRILLING PROGNOSIS Cimarex Energy Company

12/15/2011

Well: Merchant Livestock 19 State #1 RE AFE:
Location: sec 19, 22S-3E API:
County, State: Lea County, NM Field: Red Tank Area
Lat / Long: 32° 22' 57.615 / 103° 37' 05.696" Objective: 2nd Bone Spring
Surface Location: 660 FNL, 330 FWL TVD/MD:
Bottomhole Loc: 330 FSL, 375 FWL Cementing:
E-Mail: Mud:
Wellhead: SEC A: 13-3/8" 3M x 13-3/8" SOW Motors:
SEC B: 13-5/8" 3M X 7-1/16" 5M OH Logs
Xmas Tree: 5M Rig:
Tubing: 2 7/8" L80 EUE Offset Wells:
Superintendent:
Engineer:

