

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO 1004-0135
Expires: July 31, 2010

HOBBS OCD

OCD Hobbs

NOV 07 2011

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.**RESUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1 Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		5. Lease Serial No. NMNM27570
2 Name of Operator CIMAREX ENERGY COMPANY OF CO		6 If Indian, Allottee or Tribe Name
Contact ZENO FARRIS E-Mail: zfarris@cimarex.com		7. If Unit or CA/Agreement, Name and/or No.
3a Address 600 NORTH MARIENFELD STREET, SUITE 600 MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-620-1938 Fx: 432-620-1940	8. Well Name and No DIAMANTE FEDERAL 21 01
4 Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 21 T19S R33E NESW 1650FSL 1650FWL Unit K		9 API Well No 30-025-34445-00-S1
		10 Field and Pool, or Exploratory GEM
		11. County or Parish, and State LEA COUNTY, NM

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

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

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

Diamante 21 Fed No. 1 is currently producing through tbq from Morrow perfs @ 13302-13520 pkr set @ 13000 and up 5.5 annulus from Wolfcamp perfs @ 11390-11429. Additional Morrow perfs @ 13570-80 are behind Howco perm pkr w/plug @ 13550.

Per below procedure propose to plug Morrow and sqz Wolfcamp perfs, set CIBP and whipstock, mill window at KOP 13030 and drill 4.75 lateral to 13305 TVD 16177 MD. Run 3.5" 9.3# P-110 Peak liner 0-16177, Frac well and turn to production as Gem; Morrow producer.

NU BOP w/rotating head and test BOP w/test unit on 7.0625" tubing head. Pull rods and tbq. Sqz Wolfcamp perfs @ 11390-11425 w 100 sx CIs H 1.22cf/sk yld, 14.5 ppg. Test to 2000 psi.

Pull/Burnover BWB packer @ 13000 Spot 58 sx CIs H plug on BWB PKR from 13000-13550 across Morrow

**SEE ATTACHED FOR
CONDITIONS OF APPROV**

14 I hereby certify that the foregoing is true and correct Electronic Submission #119521 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Hobbs Committed to AFMSS for processing by KURT SIMMONS on 10/11/2011 (12KMS0041SE)	
Name (Printed/Typed) ZENO FARRIS	Title MANAGER OPERATIONS ADMIN
Signature (Electronic Submission)	Date 10/07/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS	Title PETROLEUM ENGINEER	Date 11/04/2011
Conditions of approval, if any, are attached Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon		
Office Hobbs		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

JAN 23 2012

Additional data for EC transaction #119521 that would not fit on the form

32. Additional remarks, continued

perfs at 13183-13520 15.5 ppg yld 1.19 cf/sk Set CIBP @ 13040, set whipstock, mill window 13025-13035, drill 4 7/8" lateral to 16177 MD Run 3 5/8" 9 3/4" P-110 peak liner with open hole packer system No cement required Frac and complete as Gem Morrow producer

Mud Program

Depth	Mud Wt	Vis	Fluid Loss	Type Mud
13030-16177	9.0-12.5	40-45	NC	OBM

5K BOP will be utilized while drilling 4 7/8" lateral. BOPs will be tested by an independent service company to 250 psi low and 5000 psi high Hydri will be tested to 250 psi low and 2500 psi high

See attached WBD, prelim directional and C-102

HOBBES OGD

NOV 07 2011

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DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

DISTRICT II

1901 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Diazos Rd., Aztec, NM 87410

DISTRICT IV

1920 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised July 16, 2010Submit 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 30-025-34445	Pool Code 77370	Pool Name Gem; Morrow Gas
Property Code 300515	Property Name DIAMANTE "21" FEDERAL	Well Number 1
GRID No. 162483	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3614'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	21	19 S	33 E		1650	SOUTH	1650	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
I	21	19 S	33 E		1980	SOUTH	660	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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

SURFACE LOCATION Lat - N 32°38'34.92" Long - W 103°40'18.82" NADSPCE - N 598301.1 E 745104.8 (NAD-83) PROPOSED BOTTOM HOLE LOCATION Lat - N 32°38'38.13" Long - W 103°39'42.06" NADSPCE - N 598644.66 E 748074.80 (NAD-83) Distances: 3615.8', 3613.4', 2990.7', 660', 1650', 3809.1', 3809.4', 1650', 1980'	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 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 to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Zeno Farris</i> 10-7-11 Signature Date Zeno Farris Printed Name zfarris@cimarex.com Email Address 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. <i>Gary L. Jones</i> Date Surveyed Signature & Seal of Professional Surveyor W.G. Jones Certificate No. Gary L. Jones 7977 BASIN SURVEYS 25081
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Cost

COMPLETION SCHEMATIC		LEASE NAME Diamante Federal 21		Well # 1		API # 30-025-34445		LEASE # 309617-042.01																																																																																																																															
GL 3,615' 13-3/8" 48# w/ 120sx. TOC 0' 8-5/8" 32# W/1760 SX TOC 650' (TS) TUBING DETAIL: 120/107 KB (17) 1 slick pt of 2 7/8 tbg 3 subs 2 7/8" 409 j5 2 7/8" 8rd EUE L80 tbg seal assembly BWD Permanent packer 1 pt 2 7/8" Perf 8 holes FNU nipple w/landing plug set in nipple EOT 13,038' WOLFCAMP PERFS: 11390-410' w/6 SPF 120 holes 11412-15' } 4 SPF 28 holes 11425-29' 13000' Howco BWB pkr w/ plug MORROW PERFS: 13183-89 w/4 SPF 25 holes 13238-59 w/5 JSPF 126 holes sq'd w/128 sz 13302-12' w/4 SPF 40 holes 13320-26' 13349-58' 13365-78' } 6 SPF 291 holes 13404-14' 13510-20' 13550' Howco BWB perm pkr w/ plug 13570-80' 66 holes 1st time Ro-perf w/4 SPF 41 holes 13,750' 5 1/2" 20/17# w/ 555 sx. TOC 3150' (CALC) 13,750' TD	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">TYPE COMPLETION:</td> <td colspan="2">SINGLE</td> <td colspan="2">DUAL</td> </tr> <tr> <td colspan="6">LOCATION: 1650' FSL & 1650' FWL SECTION 21 T-19S, R-33E, Lea, County New Mexico</td> </tr> <tr> <td>TD</td> <td>13,750'</td> <td>PBD</td> <td>13000'</td> <td>Howco BWB pkr w/ plug</td> <td>KB</td> </tr> <tr> <td>COD</td> <td></td> <td>DOD</td> <td></td> <td></td> <td>GL</td> </tr> <tr> <td colspan="4">NO. PROD. WELLS ON LEASE</td> <td>FLOWING</td> <td>PUMPING</td> </tr> <tr> <td colspan="4">1</td> <td colspan="2">M-640-365-144</td> </tr> <tr> <td colspan="4">ZONE TO BE WORKED ON:</td> <td colspan="2">CURRENT COMPLETION ZONE.</td> </tr> <tr> <td colspan="4">CSG. PERFS: Wolfcamp: 11390-410', 11412-15', 11425-29'</td> <td colspan="2">Morrow: 13183-89', 13238-59',</td> </tr> <tr> <td colspan="4">13302-12', 13320-26', 13349-58', 13365-78', 13404-14', 13510-20', 13570-80'</td> <td colspan="2">WOLFCAMP</td> </tr> <tr> <td colspan="4">CURRENT TEST (SHOW DATE)</td> <td colspan="2">OPEN HOLE:</td> </tr> <tr> <td colspan="4">3/18/2007</td> <td colspan="2">0 MCF</td> </tr> <tr> <td colspan="4"></td> <td colspan="2">16.5 BO</td> </tr> <tr> <td colspan="4"></td> <td colspan="2">3 BW</td> </tr> <tr> <td colspan="6">CASING BREAKDOWN</td> </tr> <tr> <td colspan="6">SURF. 17-1/2" hole SIZE. 13-3/8" 48# w/ 120sx. TOC 0'</td> </tr> <tr> <td colspan="6">INTER. 11" hole SIZE. 8-5/8" 32# W/1750 SX TOC 650' (TS)</td> </tr> <tr> <td colspan="6">PROD. 7-7/8" hole SIZE. 6 1/2" 20/17# w/ 555 sx. TOC 3150' (CALC)</td> </tr> <tr> <td colspan="4"></td> <td>DV TOOL 10,484'</td> <td>DEPTH</td> </tr> <tr> <td colspan="4"></td> <td></td> <td>475'</td> </tr> <tr> <td colspan="4"></td> <td>DEPTH</td> <td>4966'</td> </tr> <tr> <td colspan="4"></td> <td></td> <td>13,750'</td> </tr> </table>									TYPE COMPLETION:		SINGLE		DUAL		LOCATION: 1650' FSL & 1650' FWL SECTION 21 T-19S, R-33E, Lea, County New Mexico						TD	13,750'	PBD	13000'	Howco BWB pkr w/ plug	KB	COD		DOD			GL	NO. PROD. WELLS ON LEASE				FLOWING	PUMPING	1				M-640-365-144		ZONE TO BE WORKED ON:				CURRENT COMPLETION ZONE.		CSG. PERFS: Wolfcamp: 11390-410', 11412-15', 11425-29'				Morrow: 13183-89', 13238-59',		13302-12', 13320-26', 13349-58', 13365-78', 13404-14', 13510-20', 13570-80'				WOLFCAMP		CURRENT TEST (SHOW DATE)				OPEN HOLE:		3/18/2007				0 MCF						16.5 BO						3 BW		CASING BREAKDOWN						SURF. 17-1/2" hole SIZE. 13-3/8" 48# w/ 120sx. TOC 0'						INTER. 11" hole SIZE. 8-5/8" 32# W/1750 SX TOC 650' (TS)						PROD. 7-7/8" hole SIZE. 6 1/2" 20/17# w/ 555 sx. TOC 3150' (CALC)										DV TOOL 10,484'	DEPTH						475'					DEPTH	4966'						13,750'
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PREPARED BY: Laci Lulg CREATED: 1/3/2007 UPDATED: 08/24/11																																																																																																																																							



DRILLING PROGNOSIS Cimarex Energy Company

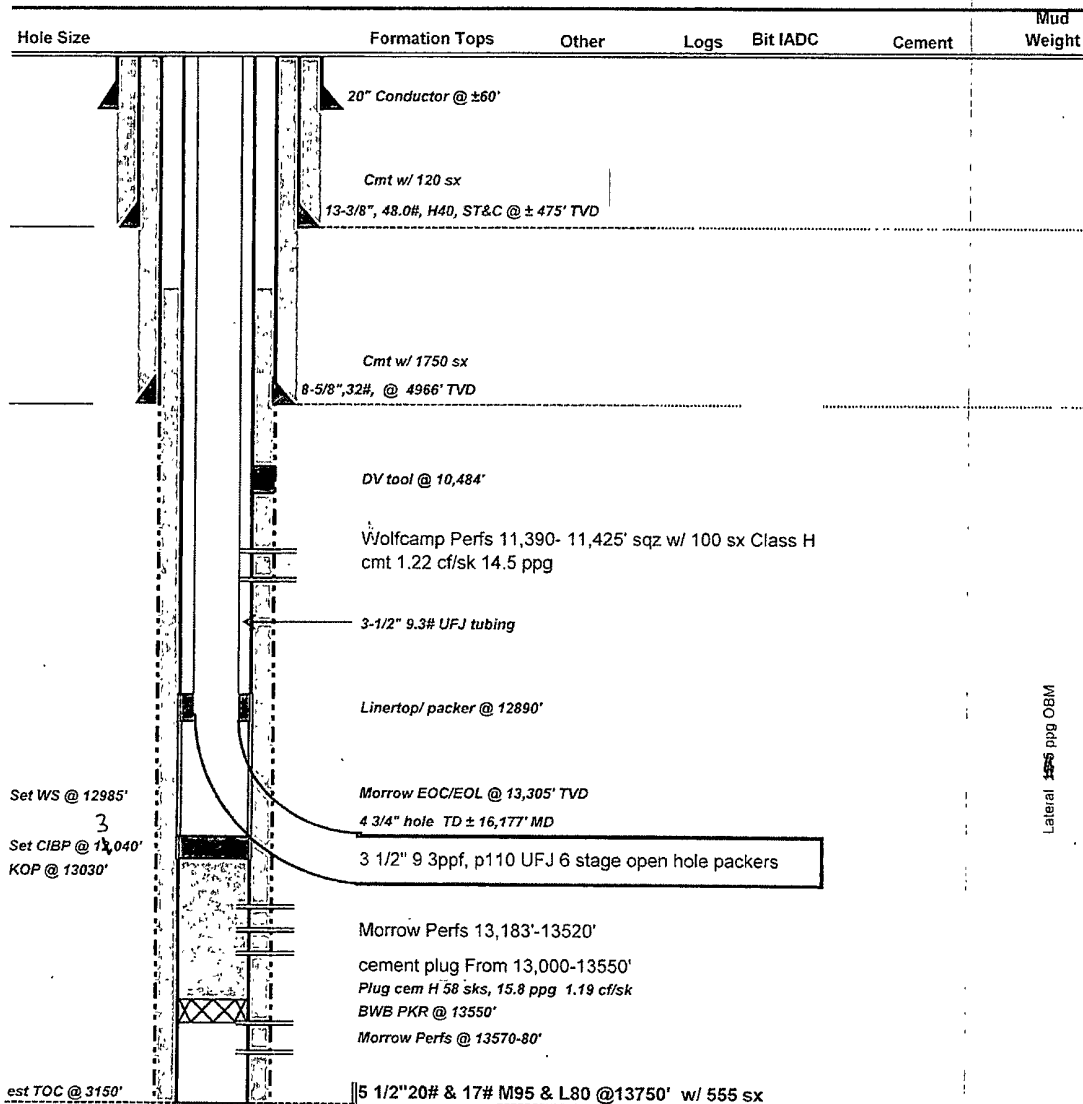
10/6/2011

Well: Diamante Fed 21 1RE
Location: Sec 21 19S-33E
County, State: Lea County, NM
Surface Location: 1650 FSL, 1650 FWL
Bottomhole Loc
E-Mail:
Wellhead:

Lse Serial #:
Field: Maduro
Objective: Morrow
TVD/MD: 9,945' / 14,600'
Cementing: Halliburton
Mud: MI
Motors:
OH Logs: None
Whipstock:
Liner Hanger:
Rig: Key 881
Offset Wells:

Xmas Tree
Tubing: 2 7/8" L80 EUE
Superintendent: Dee Smith
Engineer: Mark Audas (469) 995-1504

PROPOSED



NOTES:

NU BOP w/ rotating head and test BOP w/ test unit on 7-1/16" tubing head. Pull rods and tubing. Squeeze Wolfcamp perfs. Test to 2000 psi. Pull/ Burnover BWB packer @ 13000'. Spot a balanced cement plug across morrow perfs. Tag and dress off plug tp 13,000' apprx. Set CIBP@ 13040'. Set whipstock, mill window. Drill 4-3/4" lateral. Run 3-1/2" UFJ open hole packer system.

ALL INVOICES ARE TO SHOW CIMAREX ENERGY AS OPERATOR AND USE CIMAREX ACCOUNTING CODES.

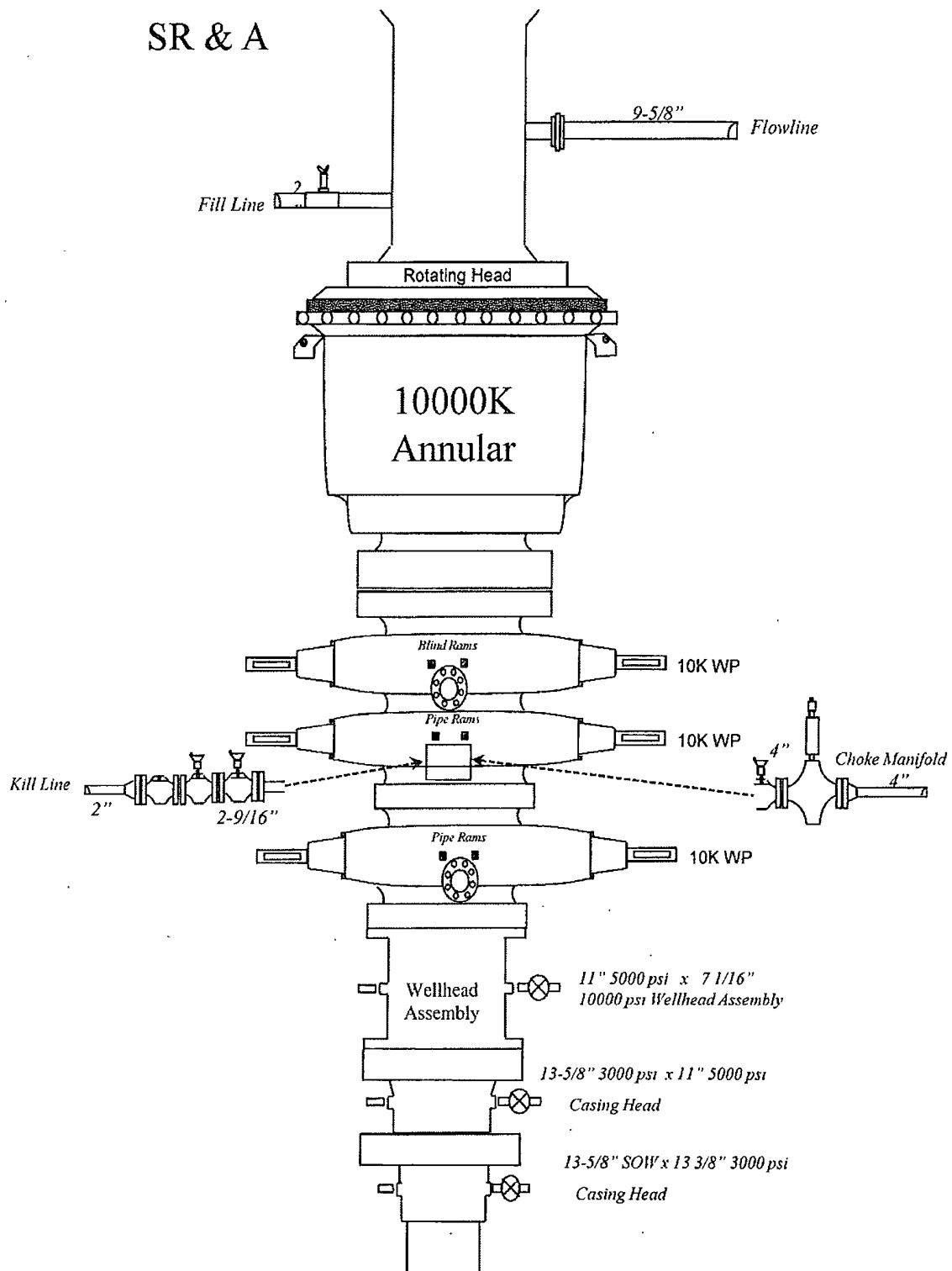
Call BLM 4-Hrs prior to Spudding, Setting & Cmmt Casing, and BOPE test (575) 393-3612

Directional Plan	MD	INC	AZI	TVD	D/S	VS
KOP						

Diamante 21 Fed 1
Cimarex Energy Co. of Colorado
21-19S-33E
1650 FSL & 1650 FWL
Lea County, NM

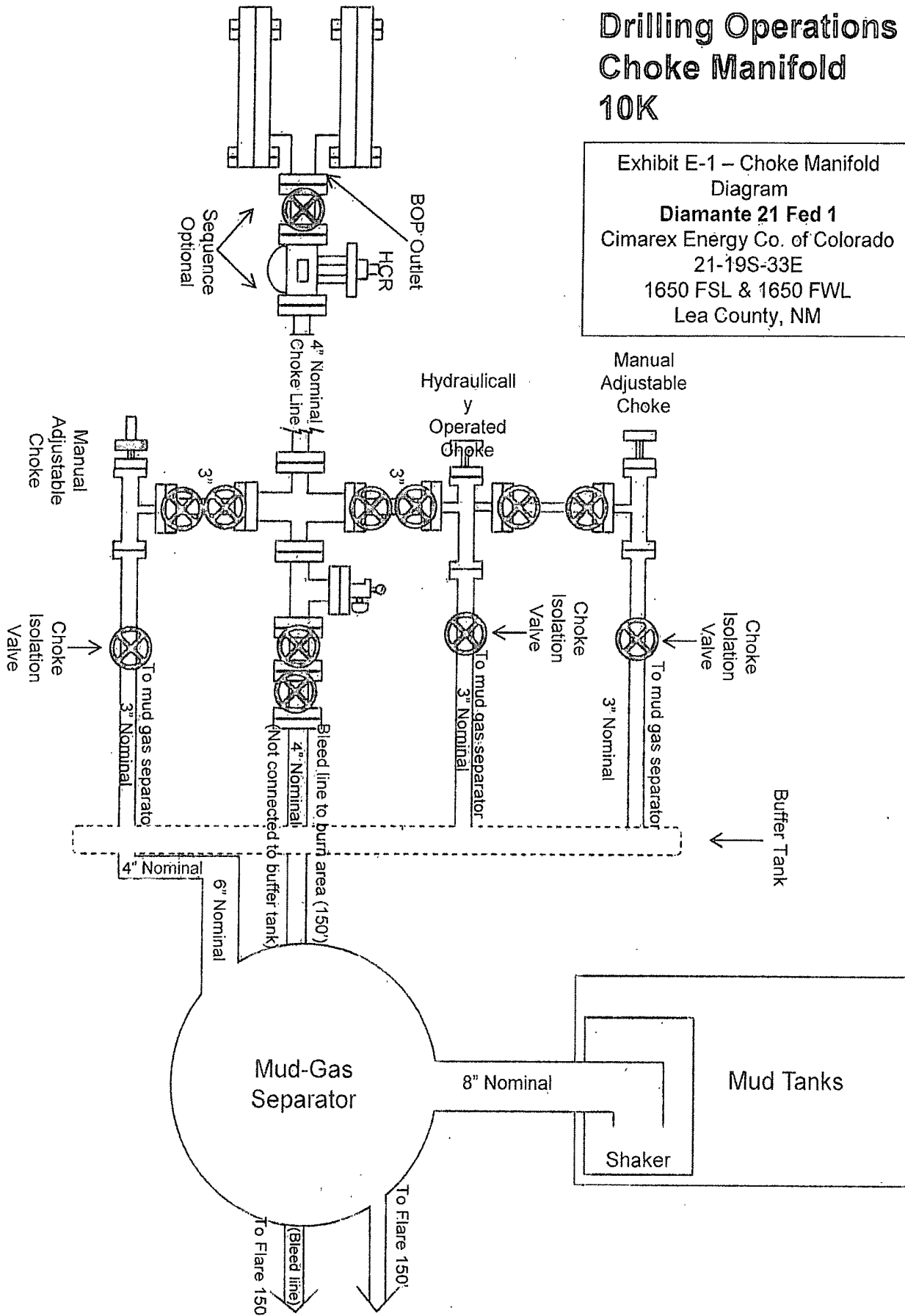
10K BOP will be utilized while drilling 4.75" lateral. BOP will be tested by an independent service company to 250 psi low and 10,000 psi high. Hydril will be tested to 250 psi low and 5000 psi high.

SR & A



Drilling Operations Choke Manifold 10K

Exhibit E-1 – Choke Manifold
Diagram
Diamante 21 Fed 1
Cimarex Energy Co. of Colorado
21-19S-33E
1650 FSL & 1650 FWL
Lea County, NM





Cimarex Energy Co.

Location: Lea County, NM
Field: (Diamante) Sec 21, T19S, R33E
Facility: Diamante 21 Federal 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	83.403	0.00	0.00	0.00	0.00	0.00
Est KOP	13030.07	0.000	83.403	13030.07	0.00	0.00	0.00	0.00
End of Curve	13461.93	90.000	83.403	13305.00	31.59	273.11	20.84	274.93
No. 1H PBHL	16177.13	90.000	83.403	13305.00	343.52	2970.33	0.00	2990.13

Plot reference wellpath is Prelim 1

True vertical depths are referenced to Rig on No. 1H SHL (RKB)

Measured depths are referenced to Rig on No. 1H SHL (RKB)

Rig on No. 1H SHL (RKB) to Mean Sea Level 3614 feet

Mean Sea Level to Mud line (At Slot No. 1H SHL) -3614 feet

Coordinates are in feet referenced to Slot

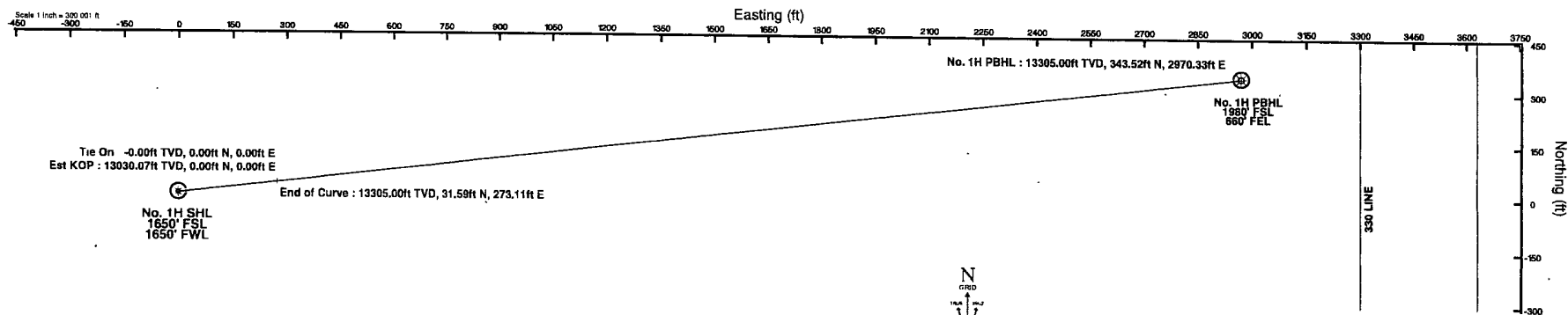
Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet

North Reference: Grid north

Scale: True distance

Depths are in feet

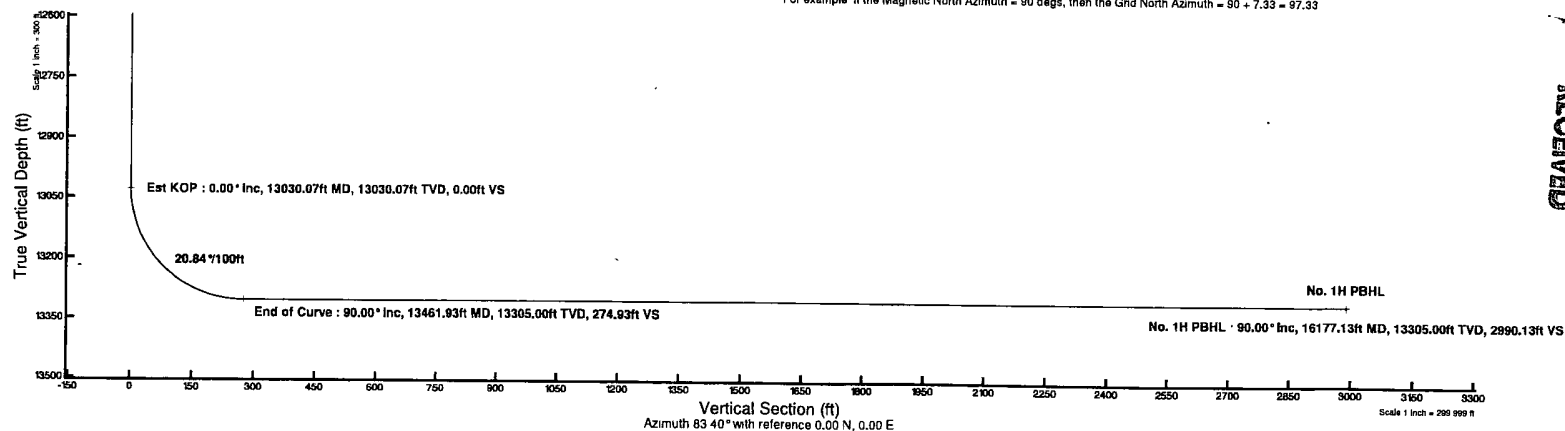
Created by: calphk on 8/18/2011



N
GRID

W E

BGGM (1945 to 2012.0) Dip: 60.56° Field: 48871.2 nT
Magnetic North is 7.69 degrees East of True North (at 8/18/2011)
Grid North is 0.36 degrees East of True North
To correct azimuth from True to Grid subtract 0.36 degrees
To correct azimuth from Magnetic to Grid add 7.33 degrees
For example if the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 7.33 = 97.33



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Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Diamante) Sec 21, T19S, R33E	Wellbore	No. 1H PWB
Facility	Diamante 21 Federal No.1H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Calhphik
Scale	0.999957	Report Generated	8/19/2011 at 9:08:39 AM
Convergence at slot	0.36° East	Database/Source file	WA_Midland/No._1H_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	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W
Facility Reference Pt			745104.60	598301.10	32°38'34.917"N	103°40'16.821"W
Field Reference Pt			748404.60	598645.90	32°38'38.123"N	103°39'38.202"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 1H SHL (RKB) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (RKB) to Mean Sea Level	3614.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RKB)	Rig on No. 1H SHL (RKB) to Mud Line at Slot (No. 1H SHL)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	83.40°



Planned Wellpath Report

Prelim_1

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Diamante) Sec 21, T19S, R33E	Wellbore	No. 1H PWB
Facility	Diamante 21 Federal No.1H		

WELLPATH DATA (170 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	83.403	0.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	Tie On
100.00†	0.000	83.403	100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
200.00†	0.000	83.403	200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
300.00†	0.000	83.403	300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
400.00†	0.000	83.403	400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
500.00†	0.000	83.403	500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
600.00†	0.000	83.403	600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
700.00†	0.000	83.403	700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
800.00†	0.000	83.403	800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
900.00†	0.000	83.403	900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1000.00†	0.000	83.403	1000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1100.00†	0.000	83.403	1100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1200.00†	0.000	83.403	1200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1300.00†	0.000	83.403	1300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1400.00†	0.000	83.403	1400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1500.00†	0.000	83.403	1500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1600.00†	0.000	83.403	1600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1700.00†	0.000	83.403	1700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1800.00†	0.000	83.403	1800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
1900.00†	0.000	83.403	1900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2000.00†	0.000	83.403	2000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2100.00†	0.000	83.403	2100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2200.00†	0.000	83.403	2200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2300.00†	0.000	83.403	2300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2400.00†	0.000	83.403	2400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2500.00†	0.000	83.403	2500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2600.00†	0.000	83.403	2600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2700.00†	0.000	83.403	2700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2800.00†	0.000	83.403	2800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
2900.00†	0.000	83.403	2900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3000.00†	0.000	83.403	3000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3100.00†	0.000	83.403	3100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3200.00†	0.000	83.403	3200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3300.00†	0.000	83.403	3300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3400.00†	0.000	83.403	3400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3500.00†	0.000	83.403	3500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3600.00†	0.000	83.403	3600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3700.00†	0.000	83.403	3700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3800.00†	0.000	83.403	3800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
3900.00†	0.000	83.403	3900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4000.00†	0.000	83.403	4000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4100.00†	0.000	83.403	4100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4200.00†	0.000	83.403	4200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4300.00†	0.000	83.403	4300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4400.00†	0.000	83.403	4400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Diamante) Sec 21, T19S, R33E	Wellbore	No. 1H PWB
Facility	Diamante 21 Federal No.1H		

WELLPATH DATA (170 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
4500.00†	0.000	83.403	4500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4600.00†	0.000	83.403	4600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4700.00†	0.000	83.403	4700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4800.00†	0.000	83.403	4800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
4900.00†	0.000	83.403	4900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5000.00†	0.000	83.403	5000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5100.00†	0.000	83.403	5100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5200.00†	0.000	83.403	5200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5300.00†	0.000	83.403	5300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5400.00†	0.000	83.403	5400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5500.00†	0.000	83.403	5500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5600.00†	0.000	83.403	5600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5700.00†	0.000	83.403	5700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5800.00†	0.000	83.403	5800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
5900.00†	0.000	83.403	5900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6000.00†	0.000	83.403	6000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6100.00†	0.000	83.403	6100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6200.00†	0.000	83.403	6200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6300.00†	0.000	83.403	6300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6400.00†	0.000	83.403	6400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6500.00†	0.000	83.403	6500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6600.00†	0.000	83.403	6600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6700.00†	0.000	83.403	6700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6800.00†	0.000	83.403	6800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
6900.00†	0.000	83.403	6900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7000.00†	0.000	83.403	7000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7100.00†	0.000	83.403	7100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7200.00†	0.000	83.403	7200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7300.00†	0.000	83.403	7300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7400.00†	0.000	83.403	7400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7500.00†	0.000	83.403	7500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7600.00†	0.000	83.403	7600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7700.00†	0.000	83.403	7700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7800.00†	0.000	83.403	7800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
7900.00†	0.000	83.403	7900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8000.00†	0.000	83.403	8000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8100.00†	0.000	83.403	8100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8200.00†	0.000	83.403	8200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8300.00†	0.000	83.403	8300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8400.00†	0.000	83.403	8400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8500.00†	0.000	83.403	8500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8600.00†	0.000	83.403	8600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8700.00†	0.000	83.403	8700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8800.00†	0.000	83.403	8800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
8900.00†	0.000	83.403	8900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Diamante) Sec 21, T19S, R33E	Wellbore	No. 1H PWB
Facility	Diamante 21 Federal No.1H		

WELLPATH DATA (170 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
9000.00†	0.000	83.403	9000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9100.00†	0.000	83.403	9100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9200.00†	0.000	83.403	9200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9300.00†	0.000	83.403	9300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9400.00†	0.000	83.403	9400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9500.00†	0.000	83.403	9500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9600.00†	0.000	83.403	9600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9700.00†	0.000	83.403	9700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9800.00†	0.000	83.403	9800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
9900.00†	0.000	83.403	9900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10000.00†	0.000	83.403	10000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10100.00†	0.000	83.403	10100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10200.00†	0.000	83.403	10200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10300.00†	0.000	83.403	10300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10400.00†	0.000	83.403	10400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10500.00†	0.000	83.403	10500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10600.00†	0.000	83.403	10600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10678.00†	0.000	83.403	10678.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	3rd Bone Spring Shale
10700.00†	0.000	83.403	10700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10800.00†	0.000	83.403	10800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10900.00†	0.000	83.403	10900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
10950.00†	0.000	83.403	10950.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	Wolfcamp
11000.00†	0.000	83.403	11000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11100.00†	0.000	83.403	11100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11200.00†	0.000	83.403	11200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11300.00†	0.000	83.403	11300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11400.00†	0.000	83.403	11400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11500.00†	0.000	83.403	11500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11600.00†	0.000	83.403	11600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11700.00†	0.000	83.403	11700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11800.00†	0.000	83.403	11800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
11900.00†	0.000	83.403	11900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12000.00†	0.000	83.403	12000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12100.00†	0.000	83.403	12100.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12124.00†	0.000	83.403	12124.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	Strawn
12200.00†	0.000	83.403	12200.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12300.00†	0.000	83.403	12300.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12400.00†	0.000	83.403	12400.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12456.00†	0.000	83.403	12456.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	Atoka
12500.00†	0.000	83.403	12500.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12600.00†	0.000	83.403	12600.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12700.00†	0.000	83.403	12700.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12800.00†	0.000	83.403	12800.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
12900.00†	0.000	83.403	12900.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	
13000.00†	0.000	83.403	13000.00	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Diamante) Sec 21, T19S, R33E	Wellbore	No. 1H PWB
Facility	Diamante 21 Federal No.1H		

WELLPATH DATA (170 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
13030.07	0.000	83.403	13030.07	0.00	0.00	0.00	745104.60	598301.10	32°38'34.917"N	103°40'16.821"W	0.00	Est KOP
13060.06†	6.250	83.403	13060.00	1.63	0.19	1.62	745106.22	598301.29	32°38'34.919"N	103°40'16.802"W	20.84	Morrow Clastics
13100.00†	14.574	83.403	13099.25	8.85	1.02	8.79	745113.39	598302.12	32°38'34.926"N	103°40'16.718"W	20.84	
13200.00†	35.414	83.403	13189.38	50.87	5.84	50.53	745155.13	598306.94	32°38'34.972"N	103°40'16.230"W	20.84	
13300.00†	56.254	83.403	13258.68	122.20	14.04	121.39	745225.99	598315.14	32°38'35.048"N	103°40'15.401"W	20.84	
13400.00†	77.094	83.403	13298.05	213.52	24.53	212.11	745316.70	598325.63	32°38'35.146"N	103°40'14.339"W	20.84	
13461.93	90.000	83.403	13305.00	274.93	31.59	273.11	745377.70	598332.68	32°38'35.213"N	103°40'13.625"W	20.84	End of Curve
13500.00†	90.000	83.403	13305.00	313.00	35.96	310.93	745415.52	598337.06	32°38'35.253"N	103°40'13.182"W	0.00	
13600.00†	90.000	83.403	13305.00	413.00	47.45	410.27	745514.85	598348.54	32°38'35.361"N	103°40'12.020"W	0.00	
13700.00†	90.000	83.403	13305.00	513.00	58.94	509.61	745614.18	598360.03	32°38'35.469"N	103°40'10.857"W	0.00	
13800.00†	90.000	83.403	13305.00	613.00	70.42	608.94	745713.52	598371.52	32°38'35.576"N	103°40'09.695"W	0.00	
13900.00†	90.000	83.403	13305.00	713.00	81.91	708.28	745812.85	598383.01	32°38'35.684"N	103°40'08.532"W	0.00	
14000.00†	90.000	83.403	13305.00	813.00	93.40	807.62	745912.18	598394.50	32°38'35.791"N	103°40'07.370"W	0.00	
14100.00†	90.000	83.403	13305.00	913.00	104.89	906.96	746011.52	598405.98	32°38'35.899"N	103°40'06.207"W	0.00	
14200.00†	90.000	83.403	13305.00	1013.00	116.38	1006.29	746110.85	598417.47	32°38'36.006"N	103°40'05.045"W	0.00	
14300.00†	90.000	83.403	13305.00	1113.00	127.87	1105.63	746210.18	598428.96	32°38'36.114"N	103°40'03.882"W	0.00	
14400.00†	90.000	83.403	13305.00	1213.00	139.35	1204.97	746309.52	598440.45	32°38'36.221"N	103°40'02.720"W	0.00	
14500.00†	90.000	83.403	13305.00	1313.00	150.84	1304.31	746408.85	598451.93	32°38'36.329"N	103°40'01.557"W	0.00	
14600.00†	90.000	83.403	13305.00	1413.00	162.33	1403.65	746508.18	598463.42	32°38'36.436"N	103°40'00.394"W	0.00	
14700.00†	90.000	83.403	13305.00	1513.00	173.82	1502.98	746607.52	598474.91	32°38'36.544"N	103°39'59.232"W	0.00	
14800.00†	90.000	83.403	13305.00	1613.00	185.31	1602.32	746706.85	598486.40	32°38'36.651"N	103°39'58.069"W	0.00	
14900.00†	90.000	83.403	13305.00	1713.00	196.79	1701.66	746806.18	598497.89	32°38'36.759"N	103°39'56.907"W	0.00	
15000.00†	90.000	83.403	13305.00	1813.00	208.28	1801.00	746905.52	598509.37	32°38'36.866"N	103°39'55.744"W	0.00	
15100.00†	90.000	83.403	13305.00	1913.00	219.77	1900.34	747004.85	598520.86	32°38'36.974"N	103°39'54.582"W	0.00	
15200.00†	90.000	83.403	13305.00	2013.00	231.26	1999.67	747104.18	598532.35	32°38'37.081"N	103°39'53.419"W	0.00	
15300.00†	90.000	83.403	13305.00	2113.00	242.75	2099.01	747203.52	598543.84	32°38'37.189"N	103°39'52.257"W	0.00	
15400.00†	90.000	83.403	13305.00	2213.00	254.24	2198.35	747302.85	598555.32	32°38'37.296"N	103°39'51.094"W	0.00	
15500.00†	90.000	83.403	13305.00	2313.00	265.72	2297.69	747402.18	598566.81	32°38'37.404"N	103°39'49.932"W	0.00	
15600.00†	90.000	83.403	13305.00	2413.00	277.21	2397.03	747501.52	598578.30	32°38'37.511"N	103°39'48.769"W	0.00	
15700.00†	90.000	83.403	13305.00	2513.00	288.70	2496.36	747600.85	598589.79	32°38'37.618"N	103°39'47.606"W	0.00	
15800.00†	90.000	83.403	13305.00	2613.00	300.19	2595.70	747700.18	598601.28	32°38'37.726"N	103°39'46.444"W	0.00	
15900.00†	90.000	83.403	13305.00	2713.00	311.68	2695.04	747799.52	598612.76	32°38'37.833"N	103°39'45.281"W	0.00	
16000.00†	90.000	83.403	13305.00	2813.00	323.17	2794.38	747898.85	598624.25	32°38'37.941"N	103°39'44.119"W	0.00	
16100.00†	90.000	83.403	13305.00	2913.00	334.65	2893.71	747998.18	598635.74	32°38'38.048"N	103°39'42.956"W	0.00	
16177.13	90.000	83.403	13305.00 ¹	2990.13	343.52	2970.33	748074.80	598644.60	32°38'38.131"N	103°39'42.060"W	0.00	No. 1H PBHL



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Diamante) Sec 21, T19S, R33E	Wellbore	No. 1H PWB
Facility	Diamante 21 Federal No.1H		

HOLE & CASING SECTIONS - Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_1									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
8.75in Open Hole	0.00	13030.00	13030.00	0.00	13030.00	0.00	0.00	0.00	0.00
5.5in Casing	0.00	13030.00	13030.00	0.00	13030.00	0.00	0.00	0.00	0.00
4.75in Open Hole	13030.00	16177.13	3147.13	13030.00	13305.00	0.00	0.00	343.52	2970.33

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No. 1H PBHL	16177.13	13305.00	343.52	2970.33	748074.80	598644.60	32°38'38.131"N	103°39'42.060"W	point

SURVEY PROGRAM - Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	16177.13	NaviTrak (Standard)		No. 1H PWB

Diamante 21 Federal 1
30-025-34445
Cimarex Energy Company of Colorado
November 3, 2011
Conditions of Approval

1. **Contact BLM 575-393-3612 a minimum of 24 hours prior to performing operations.**
2. Tag plug across Morrow perms prior to setting CIBP at 13,040', tag plug at 13,150' or shallower. (Minimum of 50 feet above the top perforation)
3. Surface disturbance beyond the originally approved pad must have prior approval.
4. Closed loop system required.
5. Operator to have H2S monitoring equipment on location as H2S has been reported from wells in the area.
6. A 10M System must be installed and tested as per Onshore Order 2 prior to beginning operations. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17. **10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
7. Subsequent sundry (with actual bottom hole footages), completion report and wellbore schematic required.

CRW 110311