

JUL 18 2011

Form C-102
Revised October 15, 2009DISTRICT I
1025 N. French Dr., Hobbs, NM 88240DISTRICT II
1501 W. Grand Avenue, Artesia, NM 88210DISTRICT III
1000 Rio Grande Rd., Antec, NM 87410DISTRICT IV
1820 S. St. Francis Dr., Santa Fe, NM 87505State of New Mexico
Energy, Minerals and Natural Resources DepartmentOIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-40134	Pool Code 41442	Pool Name Lusk; Bone Spring, East
Property Code 38371	Property Name EAST LUSK "15" FEDERAL COM	Well Number 1
OCRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3618'

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	15	19 S	32 E		660	SOUTH	330	EAST	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	15	19 S	32 E		660	SOUTH	330	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320		P	NSL PENDING

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

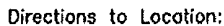
PROPOSED BOTTOM HOLE LOCATION Lat - N 32°39'17.84" Long - W 103°45'41.65" NMSPCE - N 602477.76 E 717306.98 (NAD-83)		SURFACE LOCATION Lat - N 32°39'17.82" Long - W 103°44'47.48" NMSPCE - N 602500.3 E 721938.7 (NAD-83)		OPERATOR CERTIFICATION I hereby certify that the information contained herein is true 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>Natalie Krueger</i> 5/19/2011 Signature Date Natalie Krueger 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.		Basin Survey Date Surveyed: 5/19/2011 Signature & Seal of Professional Surveyor 7977 Certificate No. Gary L. Jones 7977 BASIN SURVEYS		

EOC 660 FSL & 624 FEL

NM-063530 NM-025497

330' B.H. 660' 3617.7' 362' 330' S.L. 3612.8' 660' 3617.0'

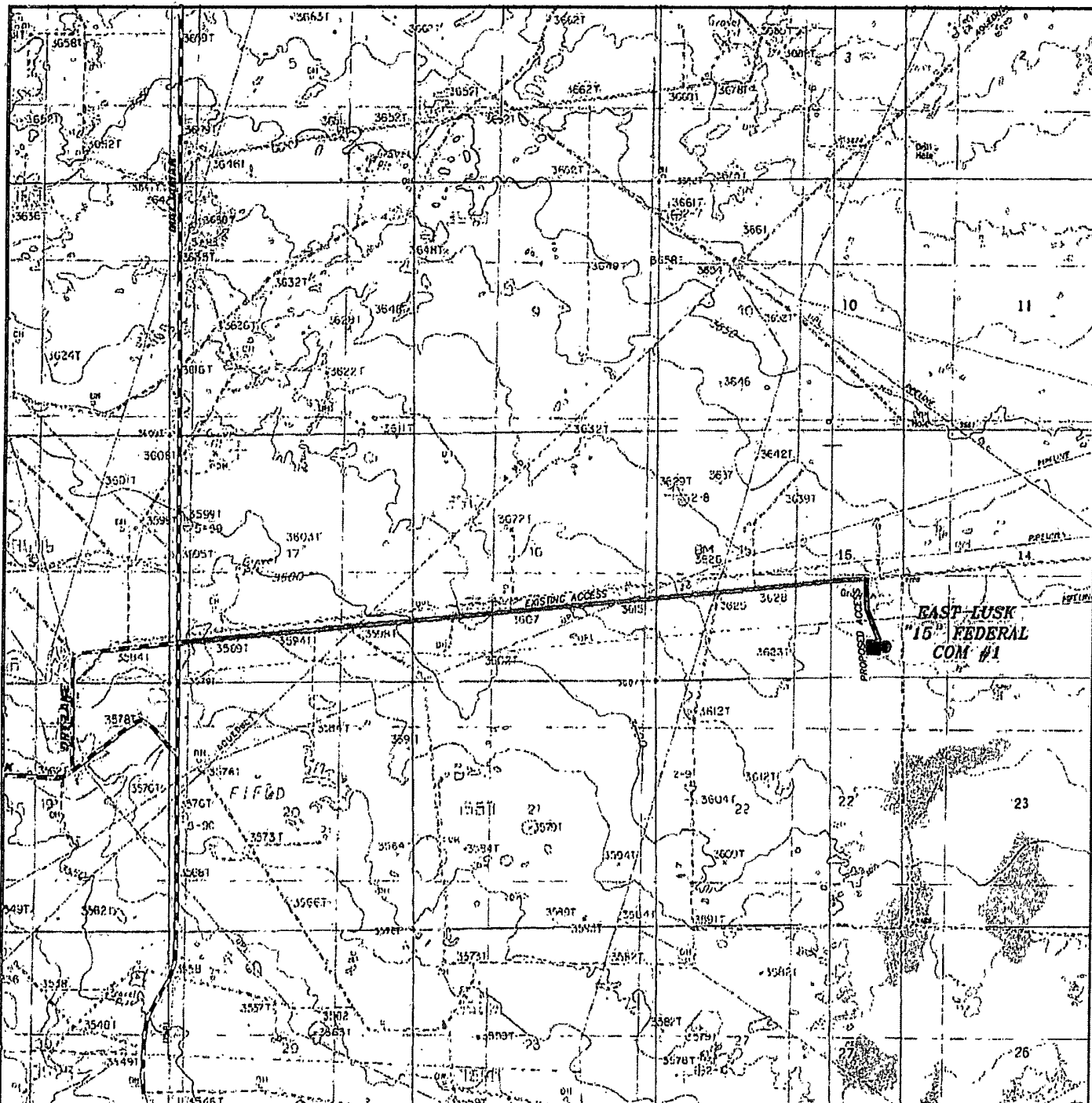
N



CIMAREX ENERGY CO. OF COLORADO

N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 05-12-2010 Sheet 1 of 1 Sheets



EAST LUSK "15" FEDERAL COM #1

Located 660' FSL and 330' FEL

Section 15, Township 19 South, Range 32 East,
N.M.P.M., Lea County, New Mexico.

 Battery

basin
surveys

focused on excellence
in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

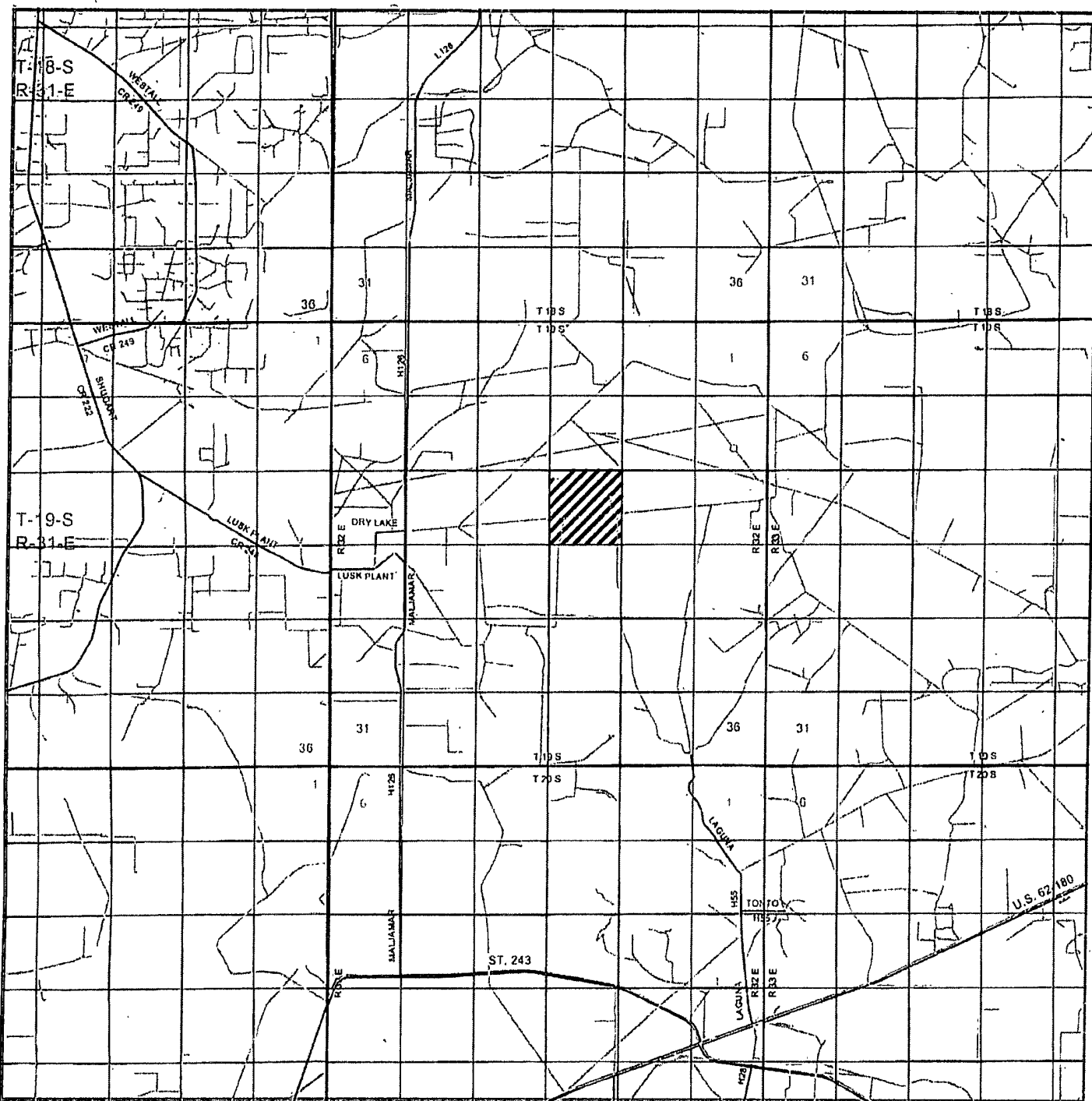
W.O. Number: JMS 22773

Survey Date: 05-12-2010

Scale: 1" = 3000'

Date: 05-13-2010

CIMAREX
ENERGY CO.
OF COLORADO



EAST LUSK "15" FEDERAL COM #1
 Located 660' FSL and 330' FEL
 Section 15, Township 19 South, Range 32 East,
 N.M.P.M., Lea County, New Mexico.

basin
surveys

focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (575) 393-7316 - Office
 (575) 392-2206 - Fax
 basinsurveys.com

W.O. Number: JMS 22773

Survey Date: 05-12-2010

Scale: 1" = 2 Miles

Date: 05-13-2010

CIMAREX
ENERGY CO.
OF COLORADO



Cimarex Energy Co.

Location: Lea County, NM
Field: (East 15) Sec 15, T19S, R32E
Facility: East Lusk 15 Fed Com No. 1H

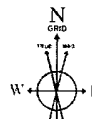
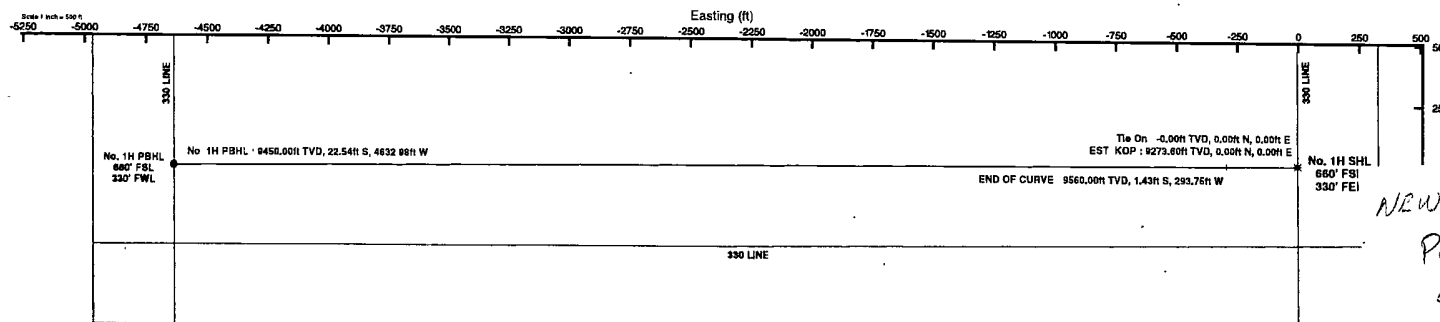
Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB



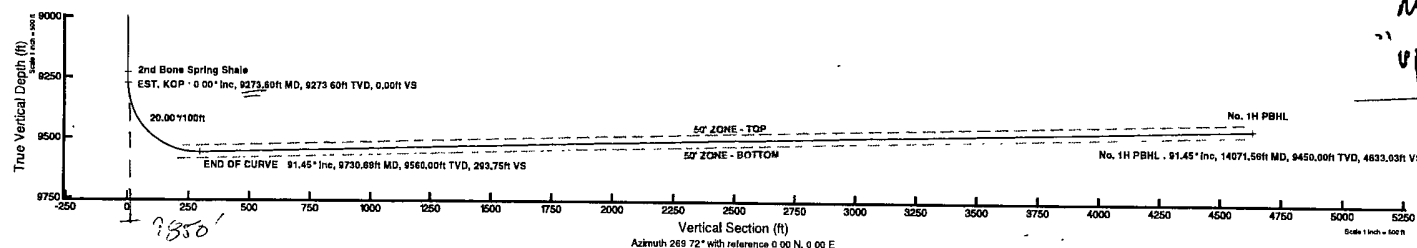
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	269.721	0.00	0.00	0.00	0.00	0.00
EST. KOP	9273.60	0.000	269.721	9273.60	0.00	0.00	0.00	0.00
END OF CURVE	9730.88	91.452	269.721	9560.00	-1.43	-293.75	20.00	293.75
No. 1H PBHL	14071.56	91.452	269.721	9450.00	-22.54	-4632.98	0.00	4633.03

Plot reference wellpath is Prelim_3	
True vertical depths are referenced to Rig on No. 1H SHL (KB)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 1H SHL (KB)	North Reference: Grid north
Rig on No. 1H SHL (KB) to Mean Sea Level: 3618 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No. 1H SHL): -3618 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: calphik on 5/17/2011



BGM (1945 G to 2012 G) Dip: 80.57° Field: 49897.2 ± T
Magnetic North is 7.76 degrees East of True North (at 5/17/2011)
Grid North is 0.32 degrees East of True North
To correct azimuth from True to Grid subtract 0.32 degrees
To correct azimuth from Magnetic to Grid add 7.44 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.44 = 97.44



NEW
Pilot hole to
9850' No change
577' x 8 3/4"
ORIGINAL
Pilot hole to
10100' - 9800'
300' x 8-3/4"
Old TD 13862'
New 14071'
"uphill" 189' / original



Planned Wellpath Report

JUL 18 2011

Prelim_3

Page 1 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(East 15) Sec 15, T19S, R32E	Wellbore	No. 1H PWB
Facility	East Lusk 15 Fed Com 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	0.999946	Report Generated	5/17/2011 at 4:49:37 PM
Convergence at slot	0.32° 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	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W
Facility Reference Pt			721939.70	602500.30	32°39'17.815"N	103°44'47.464"W
Field Reference Pt			721939.70	602500.30	32°39'17.815"N	103°44'47.464"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (KB) to GL	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (KB) to Mean Sea Level	3618.00ft
Vertical Reference Pt	Rig on No. 1H SHL (KB)	Rig on No. 1H SHL (KB) to Mud Line at Slot (No. 1H SHL)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.72°



Planned Wellpath Report

Prelim 3
Page 2 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(East 15) Sec 15, T19S, R32E	Wellbore	No. 1H PWB
Facility	East Lusk 15 Fed Com No. 1H		

WELLPATH DATA (145 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	269.721	0.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	Tie On
100.00†	0.000	269.721	100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
200.00†	0.000	269.721	200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
300.00†	0.000	269.721	300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
400.00†	0.000	269.721	400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
500.00†	0.000	269.721	500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
600.00†	0.000	269.721	600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
700.00†	0.000	269.721	700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
800.00†	0.000	269.721	800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
900.00†	0.000	269.721	900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1000.00†	0.000	269.721	1000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1100.00†	0.000	269.721	1100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1200.00†	0.000	269.721	1200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1300.00†	0.000	269.721	1300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1400.00†	0.000	269.721	1400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1500.00†	0.000	269.721	1500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1600.00†	0.000	269.721	1600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1700.00†	0.000	269.721	1700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1800.00†	0.000	269.721	1800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
1900.00†	0.000	269.721	1900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2000.00†	0.000	269.721	2000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2100.00†	0.000	269.721	2100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2200.00†	0.000	269.721	2200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2300.00†	0.000	269.721	2300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2400.00†	0.000	269.721	2400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2500.00†	0.000	269.721	2500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2600.00†	0.000	269.721	2600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2700.00†	0.000	269.721	2700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2800.00†	0.000	269.721	2800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
2900.00†	0.000	269.721	2900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3000.00†	0.000	269.721	3000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3100.00†	0.000	269.721	3100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3200.00†	0.000	269.721	3200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3300.00†	0.000	269.721	3300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3400.00†	0.000	269.721	3400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3500.00†	0.000	269.721	3500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3600.00†	0.000	269.721	3600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3700.00†	0.000	269.721	3700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3800.00†	0.000	269.721	3800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
3900.00†	0.000	269.721	3900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4000.00†	0.000	269.721	4000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4100.00†	0.000	269.721	4100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4200.00†	0.000	269.721	4200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4300.00†	0.000	269.721	4300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4400.00†	0.000	269.721	4400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	



Planned Wellpath Report

Prelim_3

Page 3 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(East 15) Sec 15, T19S, R32E	Wellbore	No. 1H PWB
Facility	East Lusk 15 Fed Com No. 1H		

WELLPATH DATA (145 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	269.721	4500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4600.00†	0.000	269.721	4600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4700.00†	0.000	269.721	4700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4800.00†	0.000	269.721	4800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
4900.00†	0.000	269.721	4900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5000.00†	0.000	269.721	5000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5100.00†	0.000	269.721	5100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5200.00†	0.000	269.721	5200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5300.00†	0.000	269.721	5300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5400.00†	0.000	269.721	5400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5500.00†	0.000	269.721	5500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5600.00†	0.000	269.721	5600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	Cherry Canyon
5700.00†	0.000	269.721	5700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5800.00†	0.000	269.721	5800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
5900.00†	0.000	269.721	5900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6000.00†	0.000	269.721	6000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6100.00†	0.000	269.721	6100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6200.00†	0.000	269.721	6200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6300.00†	0.000	269.721	6300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6400.00†	0.000	269.721	6400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6500.00†	0.000	269.721	6500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6600.00†	0.000	269.721	6600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6700.00†	0.000	269.721	6700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6800.00†	0.000	269.721	6800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
6900.00†	0.000	269.721	6900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7000.00†	0.000	269.721	7000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7100.00†	0.000	269.721	7100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7120.00†	0.000	269.721	7120.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	Bone Spring
7200.00†	0.000	269.721	7200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7300.00†	0.000	269.721	7300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7400.00†	0.000	269.721	7400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7500.00†	0.000	269.721	7500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7600.00†	0.000	269.721	7600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7700.00†	0.000	269.721	7700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
7800.00†	0.000	269.721	7800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	Upper Bone Spring Shale
7900.00†	0.000	269.721	7900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8000.00†	0.000	269.721	8000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8100.00†	0.000	269.721	8100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8200.00†	0.000	269.721	8200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8300.00†	0.000	269.721	8300.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8400.00†	0.000	269.721	8400.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8440.00†	0.000	269.721	8440.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	1st Bone Spring Shale
8500.00†	0.000	269.721	8500.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8600.00†	0.000	269.721	8600.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8700.00†	0.000	269.721	8700.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	



Planned Wellpath Report

Prelim_3
Page 4 of 5



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(East 15) Sec 15, T19S, R32E	Wellbore	No. 1H PWB
Facility	East Lusk 15 Fed Com No. 1H		

WELLPATH DATA (145 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
8800.00†	0.000	269.721	8800.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
8900.00†	0.000	269.721	8900.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
9000.00†	0.000	269.721	9000.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
9100.00†	0.000	269.721	9100.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
9200.00†	0.000	269.721	9200.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	
9230.00†	0.000	269.721	9230.00	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	2nd Bone Spring Shale
9273.60	0.000	269.721	9273.60	0.00	0.00	0.00	721939.70	602500.30	32°39'17.815"N	103°44'47.464"W	0.00	EST. KOP
9300.00†	5.280	269.721	9299.96	1.22	-0.01	-1.22	721938.48	602500.29	32°39'17.815"N	103°44'47.478"W	20.00	
9400.00†	25.279	269.721	9395.94	27.43	-0.13	-27.43	721912.27	602500.17	32°39'17.815"N	103°44'47.785"W	20.00	
9500.00†	45.278	269.721	9477.16	84.90	-0.41	-84.90	721854.81	602499.89	32°39'17.815"N	103°44'48.457"W	20.00	
9600.00†	65.277	269.721	9533.83	166.67	-0.81	-166.67	721773.04	602499.49	32°39'17.816"N	103°44'49.414"W	20.00	
9700.00†	85.276	269.721	9559.12	262.90	-1.28	-262.89	721676.82	602499.02	32°39'17.816"N	103°44'50.539"W	20.00	
9730.88	91.452	269.721	9560.00	293.75	-1.43	-293.75	721645.97	602498.87	32°39'17.817"N	103°44'50.900"W	20.00	END OF CURVE
9800.00†	91.452	269.721	9558.25	362.85	-1.77	-362.84	721576.88	602498.53	32°39'17.817"N	103°44'51.708"W	0.00	
9900.00†	91.452	269.721	9555.72	462.82	-2.25	-462.81	721476.92	602498.05	32°39'17.818"N	103°44'52.877"W	0.00	
10000.00†	91.452	269.721	9553.18	562.78	-2.74	-562.78	721376.95	602497.56	32°39'17.818"N	103°44'54.047"W	0.00	
10100.00†	91.452	269.721	9550.65	662.75	-3.22	-662.74	721276.99	602497.08	32°39'17.819"N	103°44'55.216"W	0.00	
10200.00†	91.452	269.721	9548.11	762.72	-3.71	-762.71	721177.03	602496.59	32°39'17.820"N	103°44'56.385"W	0.00	
10300.00†	91.452	269.721	9545.58	862.69	-4.20	-862.68	721077.07	602496.10	32°39'17.820"N	103°44'57.554"W	0.00	
10400.00†	91.452	269.721	9543.04	962.66	-4.68	-962.64	720977.11	602495.62	32°39'17.821"N	103°44'58.724"W	0.00	
10500.00†	91.452	269.721	9540.51	1062.62	-5.17	-1062.61	720877.15	602495.13	32°39'17.822"N	103°44'59.893"W	0.00	
10600.00†	91.452	269.721	9537.98	1162.59	-5.66	-1162.58	720777.19	602494.64	32°39'17.822"N	103°45'01.062"W	0.00	
10700.00†	91.452	269.721	9535.44	1262.56	-6.14	-1262.54	720677.23	602494.16	32°39'17.823"N	103°45'02.231"W	0.00	
10800.00†	91.452	269.721	9532.91	1362.53	-6.63	-1362.51	720577.27	602493.67	32°39'17.823"N	103°45'03.401"W	0.00	
10900.00†	91.452	269.721	9530.37	1462.49	-7.12	-1462.48	720477.30	602493.18	32°39'17.824"N	103°45'04.570"W	0.00	
11000.00†	91.452	269.721	9527.84	1562.46	-7.60	-1562.44	720377.34	602492.70	32°39'17.825"N	103°45'05.739"W	0.00	
11100.00†	91.452	269.721	9525.31	1662.43	-8.09	-1662.41	720277.38	602492.21	32°39'17.825"N	103°45'06.908"W	0.00	
11200.00†	91.452	269.721	9522.77	1762.40	-8.57	-1762.38	720177.42	602491.73	32°39'17.826"N	103°45'08.078"W	0.00	
11300.00†	91.452	269.721	9520.24	1862.37	-9.06	-1862.34	720077.46	602491.24	32°39'17.826"N	103°45'09.247"W	0.00	
11400.00†	91.452	269.721	9517.70	1962.33	-9.55	-1962.31	719977.50	602490.75	32°39'17.827"N	103°45'10.416"W	0.00	
11500.00†	91.452	269.721	9515.17	2062.30	-10.03	-2062.28	719877.54	602490.27	32°39'17.828"N	103°45'11.585"W	0.00	
11600.00†	91.452	269.721	9512.63	2162.27	-10.52	-2162.24	719777.58	602489.78	32°39'17.828"N	103°45'12.754"W	0.00	
11700.00†	91.452	269.721	9510.10	2262.24	-11.01	-2262.21	719677.61	602489.29	32°39'17.829"N	103°45'13.924"W	0.00	
11800.00†	91.452	269.721	9507.57	2362.21	-11.49	-2362.18	719577.65	602488.81	32°39'17.829"N	103°45'15.093"W	0.00	
11900.00†	91.452	269.721	9505.03	2462.17	-11.98	-2462.14	719477.69	602488.32	32°39'17.830"N	103°45'16.262"W	0.00	
12000.00†	91.452	269.721	9502.50	2562.14	-12.47	-2562.11	719377.73	602487.84	32°39'17.831"N	103°45'17.431"W	0.00	
12100.00†	91.452	269.721	9499.96	2662.11	-12.95	-2662.08	719277.77	602487.35	32°39'17.831"N	103°45'18.601"W	0.00	
12200.00†	91.452	269.721	9497.43	2762.08	-13.44	-2762.04	719177.81	602486.86	32°39'17.832"N	103°45'19.770"W	0.00	
12300.00†	91.452	269.721	9494.89	2862.04	-13.92	-2862.01	719077.85	602486.38	32°39'17.832"N	103°45'20.939"W	0.00	
12400.00†	91.452	269.721	9492.36	2962.01	-14.41	-2961.98	718977.89	602485.89	32°39'17.833"N	103°45'22.108"W	0.00	
12500.00†	91.452	269.721	9489.83	3061.98	-14.90	-3061.94	718877.93	602485.40	32°39'17.833"N	103°45'23.278"W	0.00	
12600.00†	91.452	269.721	9487.29	3161.95	-15.38	-3161.91	718777.96	602484.92	32°39'17.834"N	103°45'24.447"W	0.00	
12700.00†	91.452	269.721	9484.76	3261.92	-15.87	-3261.88	718678.00	602484.43	32°39'17.835"N	103°45'25.616"W	0.00	
12800.00†	91.452	269.721	9482.22	3361.88	-16.36	-3361.84	718578.04	602483.94	32°39'17.835"N	103°45'26.785"W	0.00	
12900.00†	91.452	269.721	9479.69	3461.85	-16.84	-3461.81	718478.08	602483.46	32°39'17.836"N	103°45'27.955"W	0.00	



Planned Wellpath Report

Prelim_3

Page 5 of 5



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(East 15) Sec 15, T19S, R32E	Wellbore	No. 1H PWB
Facility	East Lusk 15 Fed Com No. 1H		

WELLPATH DATA (145 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
13000.00†	91.452	269.721	9477.16	3561.82	-17.33	-3561.78	718378.12	602482.97	32°39'17.836"N	103°45'29.124"W	0.00	
13100.00†	91.452	269.721	9474.62	3661.79	-17.82	-3661.74	718278.16	602482.49	32°39'17.837"N	103°45'30.293"W	0.00	
13200.00†	91.452	269.721	9472.09	3761.76	-18.30	-3761.71	718178.20	602482.00	32°39'17.837"N	103°45'31.462"W	0.00	
13300.00†	91.452	269.721	9469.55	3861.72	-18.79	-3861.68	718078.24	602481.51	32°39'17.838"N	103°45'32.632"W	0.00	
13400.00†	91.452	269.721	9467.02	3961.69	-19.27	-3961.64	717978.28	602481.03	32°39'17.838"N	103°45'33.801"W	0.00	
13500.00†	91.452	269.721	9464.48	4061.66	-19.76	-4061.61	717878.31	602480.54	32°39'17.839"N	103°45'34.970"W	0.00	
13600.00†	91.452	269.721	9461.95	4161.63	-20.25	-4161.58	717778.35	602480.05	32°39'17.839"N	103°45'36.139"W	0.00	
13700.00†	91.452	269.721	9459.42	4261.60	-20.73	-4261.54	717678.39	602479.57	32°39'17.840"N	103°45'37.309"W	0.00	
13741.55†	91.452	269.721	9458.36	4303.14	-20.94	-4303.08	717636.85	602479.36	32°39'17.840"N	103°45'37.794"W	0.00	
14071.56	91.452	269.721	9450.00	4633.03	-22.54	-4632.98	717306.98	602477.76	32°39'17.842"N	103°45'41.653"W	0.00	No. 1H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_3

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]
12.25in Open Hole	0.00	4800.00	4800.00	0.00	4800.00	0.00	0.00	0.00	0.00
9.625in Casing	0.00	4800.00	4800.00	0.00	4800.00	0.00	0.00	0.00	0.00
8.75in Open Hole	4800.00	14071.56	9271.56	4800.00	9450.00	0.00	0.00	-22.54	-4632.98
5.5in Casing	0.00	14071.56	14071.56	0.00	9450.00	0.00	0.00	-22.54	-4632.98

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	14071.56	9450.00	-22.54	-4632.98	717306.98	602477.76	32°39'17.842"N	103°45'41.653"W	point

SURVEY PROGRAM - Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_3

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	14071.56	NaviTrak (Standard)		No. 1H PWB