

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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.

5. Lease Serial No.
NMNM02127B

6. Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
 Oil Well Gas Well Other

8. Well Name and No.
LEA UNIT 65H

2. Name of Operator
LEGACY RESERVES OPERATING LP
Contact: SHERRY MORROW
E-Mail: smorrow@legacyp.com

9. API Well No.
30-025-45210-00-X1

3a. Address
303 W WALL SUITE 1600
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-221-6339

10. Field and Pool or Exploratory Area
LEA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 12 T20S R34E SWSW 220FSL 785FWL
32.580963 N Lat, 103.519775 W Lon

11. County or Parish, State
LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original APD
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recomplete 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 must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Legacy Reserves is proposing a revised First Take Point (FTP) and Bottom Hole Location (BHL). The revised FTP is located 100' FNL of Section 13 and revised BHL is located 2541' FNL of Section 24. See attached Form C-102 for details. Also attached the updated Directional Plan with Anti-Collision Report to reflect new FTP and BHL.

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #436423 verified by the BLM Well Information System
For LEGACY RESERVES OPERATING LP, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 09/26/2018 (18PP1959SE)

Name (Printed/Typed) MATT DICKSON

Title DRILLING ENGINEER

Signature (Electronic Submission)

Date 09/21/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa Haque

Title Petroleum Engineer
Carlsbad Field Office

Date 10-31-2018

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

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.

(Instructions on page 2)

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

[Handwritten Signature]

DISTRICT I
 1625 N. French Dr., Hobbs, NM 88240
 Phone: (575) 393-8161 Fax: (575) 393-0720

DISTRICT II
 811 S. First St., Artesia, NM 88210
 Phone: (575) 748-1283 Fax: (575) 748-8720

DISTRICT III
 1000 Rio Brazos Rd., Artesia, NM 87410
 Phone: (505) 334-8176 Fax: (505) 334-8170

DISTRICT IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505
 Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
 Energy, Minerals & Natural Resources Department

Form C-102
 Revised August 1, 2011
 Submit one copy to appropriate
 District Office

OIL CONSERVATION DIVISION
 1220 South St. Frances Dr.
 Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-45210	Pool Code 37570	Pool Name Lea; Bone Spring
Property Code 302802	Property Name LEA UNIT	Well Number 65H
OGRID No. 240974	Operator Name LEGACY RESERVES OPERATING LP	Elevation 3654'

Surface Location

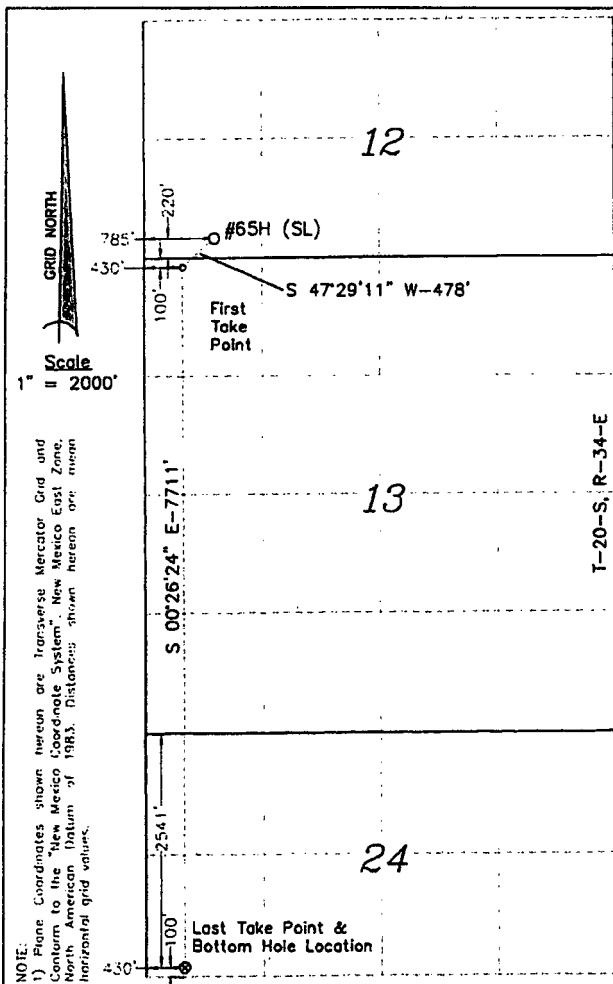
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	12	20 S	34 E		220	SOUTH	785	WEST	LEA

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
E	24	20 S	34 E		2,541	NORTH	430	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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
 Plane Coordinate (NAD '83)
 Y = 576,042.85
 X = 791,930.17
 Geodetic Coordinate (NAD '83)
 Latitude = 32.58096229° N
 Longitude = 103.51977869° W

FIRST TAKE POINT LOCATION
 Plane Coordinate (NAD '83)
 Y = 575,719.73
 X = 791,577.71
 Geodetic Coordinate (NAD '83)
 Latitude = 32.58008160° N
 Longitude = 103.52093085° W

LAST TAKE POINT LOCATION & BOTTOM HOLE LOCATION
 Plane Coordinate (NAD '83)
 Y = 568,008.83
 X = 791,636.91
 Geodetic Coordinate (NAD '83)
 Latitude = 32.55888711° N
 Longitude = 103.52092975° W

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.

Sherry Morrow 9/20/2018
 Signature Date
 Sherry Morrow
 Printed Name
 smorrow@legacylp.com
 E-mail 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.

November 16, 2017

Date of Survey
 Signature & Seal
 Lindsay Gyga
 Professional Surveyor
 NEW MEXICO
 23263
 PROFESSIONAL SURVEYOR
 W.O. Num. 2017-0929

Certificate No. Lindsay Gyga 23263

Legacy Reserves

Lea County, NM (NAD83)

Lea

Lea Unit #65H

Pilot Wellbore

Plan 2

Anticollision Summary Report

20 September, 2018



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #65H
Project:	Lea County, NM (NAD83)	TVD Reference:	RKB @ 3672.01ft
Reference Site:	Lea	MD Reference:	RKB @ 3672.01ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Lea Unit #65H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Pilot Wellbore	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan 2	Offset TVD Reference:	Reference Datum

Reference	Plan 2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 30.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.00ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date		9/20/2018		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	12,223.26	Plan 2 (Pilot Wellbore)	MWD	MWD - Standard	

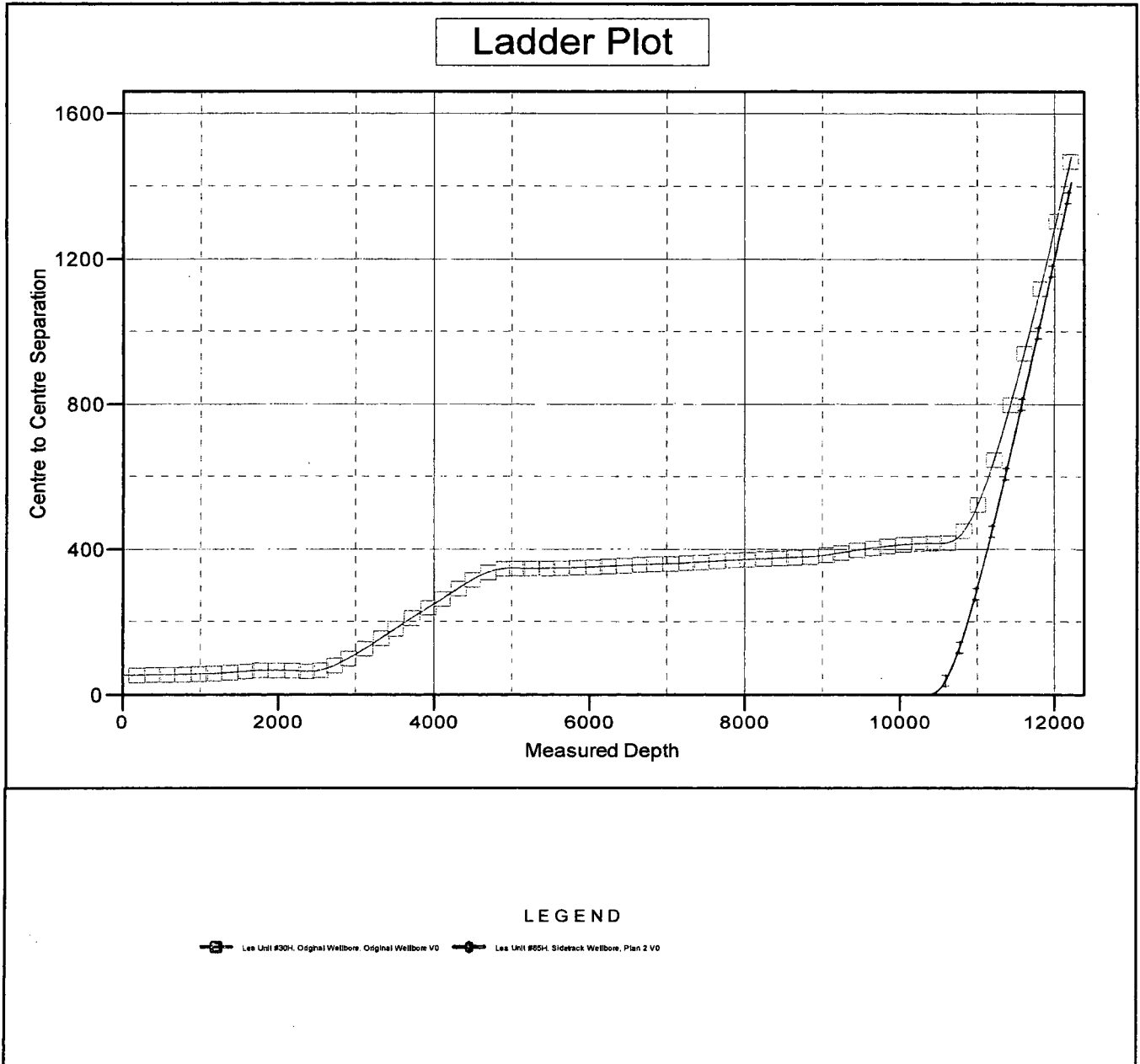
Site Name	Reference	Offset	Distance		Separation Factor	Warning
	Measured Depth (ft)	Measured Depth (ft)	Between Centres (ft)	Between Ellipses (ft)		
Lea						
Lea Unit #30H - Original Wellbore - Original Wellbore	0.00	2.99	52.47			
Lea Unit #30H - Original Wellbore - Original Wellbore	2,430.00	2,432.67	63.75	47.00	3.806	ES
Lea Unit #30H - Original Wellbore - Original Wellbore	2,490.01	2,492.14	64.75	47.58	3.771	SF
Lea Unit #65H - Sidetrack Wellbore - Plan 2	10,700.00	10,666.79	88.40	85.82	34.220	CC, ES, SF

Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Reference Site: Lea
Site Error: 0.00 ft
Reference Well: Lea Unit #65H
Well Error: 0.00 ft
Reference Wellbore: Pilot Wellbore
Reference Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Reference Depths are relative to RKB @ 3672.01ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Lea Unit #65H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.44°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

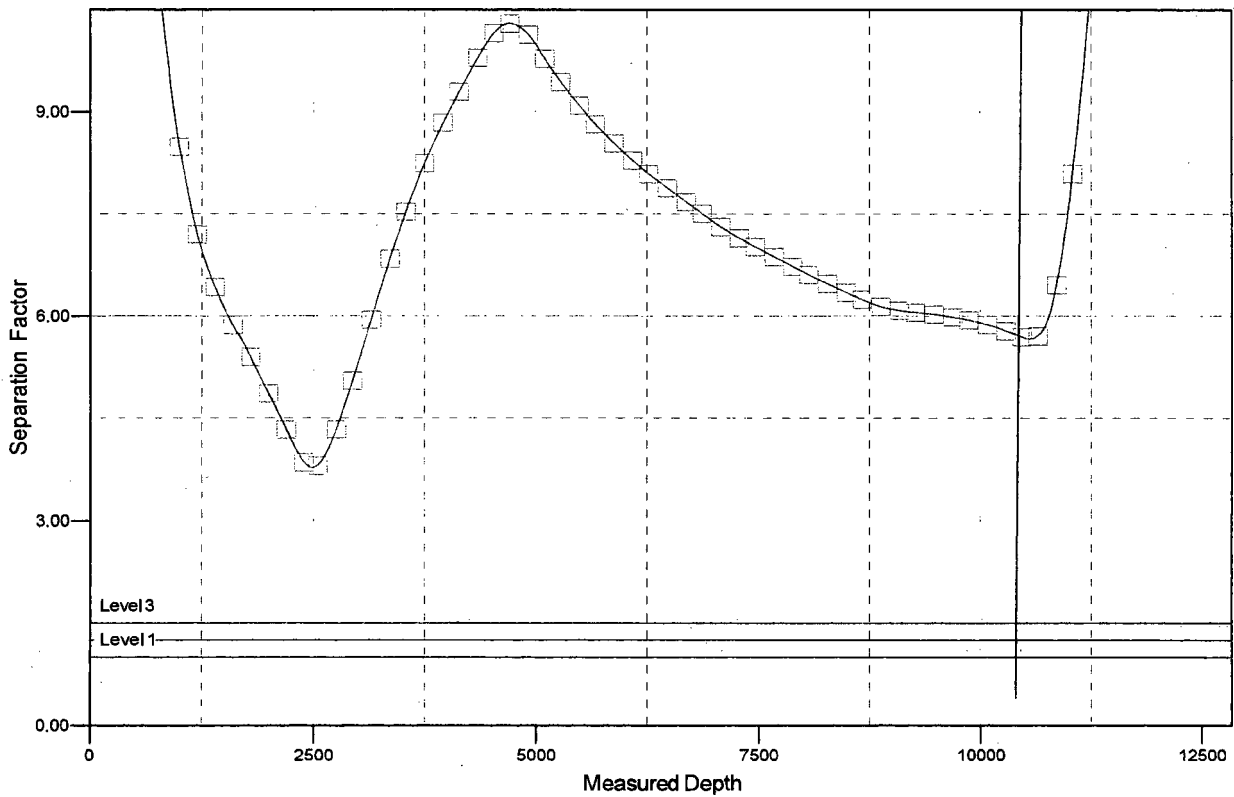
Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Reference Site: Lea
Site Error: 0.00 ft
Reference Well: Lea Unit #65H
Well Error: 0.00 ft
Reference Wellbore: Pilot Wellbore
Reference Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Reference Depths are relative to RKB @ 3672.01ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Lea Unit #65H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.44°

Separation Factor Plot



LEGEND

Lea Unit #30H, Original Wellbore, Original Wellbore V0
 Lea Unit #65H, Sidetrack Wellbore, Plan 2 V0

Legacy Reserves

Lea County, NM (NAD83)

Lea

Lea Unit #65H

Pilot Wellbore

Plan: Plan 2

Standard Planning Report

20 September, 2018



Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Site: Lea
Well: Lea Unit #65H
Wellbore: Pilot Wellbore
Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Lea		
Site Position:	Northing:	567,587.000 usft	Latitude: 32.557609°N
From: Map	Easting:	797,256.100 usft	Longitude: -103.502704
Position Uncertainty:	0.00 ft	Slot Radius: 13-3/16 "	Grid Convergence: 0.45 °

Well	Lea Unit #65H		
Well Position	+N-S	8,455.87 ft	Northing: 576,042.850 usft
	+E-W	-5,325.94 ft	Easting: 791,930.170 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,681.01 ft
		Ground Level:	3,654.01 ft

Wellbore	Pilot Wellbore					
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength	
	IGRF2000	2/12/2018	(°) 6.73	(°) 60.57	(nT) 48,256.00000000	

Design	Plan 2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	270.00

Plan Survey Tool Program	Date 9/20/2018	
Depth From	Depth To	Survey (Wellbore)
(ft)	(ft)	
1	0.00	12,223.26
		Plan 2 (Pilot Wellbore)
		Tool Name
		MWD
		MWD - Standard

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,549.81	8.25	270.00	2,547.92	0.00	-39.50	1.50	1.50	0.00	270.00	
4,473.88	8.25	270.00	4,452.08	0.00	-315.50	0.00	0.00	0.00	0.00	
5,023.69	0.00	0.00	5,000.00	0.00	-355.00	1.50	-1.50	0.00	180.00	
12,223.69	0.00	0.00	12,200.00	0.00	-355.00	0.00	0.00	0.00	0.00	

Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Site: Lea
Well: Lea Unit #65H
Wellbore: Pilot Wellbore
Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	1.50	270.00	2,099.99	0.00	-1.31	1.31	1.50	1.50	0.00
2,200.00	3.00	270.00	2,199.91	0.00	-5.23	5.23	1.50	1.50	0.00
2,300.00	4.50	270.00	2,299.69	0.00	-11.77	11.77	1.50	1.50	0.00
2,400.00	6.00	270.00	2,399.27	0.00	-20.92	20.92	1.50	1.50	0.00
2,500.00	7.50	270.00	2,498.57	0.00	-32.68	32.68	1.50	1.50	0.00
2,549.81	8.25	270.00	2,547.92	0.00	-39.50	39.50	1.50	1.50	0.00
2,600.00	8.25	270.00	2,597.58	0.00	-46.70	46.70	0.00	0.00	0.00
2,700.00	8.25	270.00	2,696.55	0.00	-61.05	61.05	0.00	0.00	0.00
2,800.00	8.25	270.00	2,795.52	0.00	-75.39	75.39	0.00	0.00	0.00
2,900.00	8.25	270.00	2,894.48	0.00	-89.73	89.73	0.00	0.00	0.00
3,000.00	8.25	270.00	2,993.45	0.00	-104.08	104.08	0.00	0.00	0.00
3,100.00	8.25	270.00	3,092.41	0.00	-118.42	118.42	0.00	0.00	0.00
3,200.00	8.25	270.00	3,191.38	0.00	-132.77	132.77	0.00	0.00	0.00
3,300.00	8.25	270.00	3,290.35	0.00	-147.11	147.11	0.00	0.00	0.00
3,400.00	8.25	270.00	3,389.31	0.00	-161.46	161.46	0.00	0.00	0.00
3,500.00	8.25	270.00	3,488.28	0.00	-175.80	175.80	0.00	0.00	0.00
3,600.00	8.25	270.00	3,587.24	0.00	-190.15	190.15	0.00	0.00	0.00
3,700.00	8.25	270.00	3,686.21	0.00	-204.49	204.49	0.00	0.00	0.00
3,800.00	8.25	270.00	3,785.17	0.00	-218.83	218.83	0.00	0.00	0.00
3,900.00	8.25	270.00	3,884.14	0.00	-233.18	233.18	0.00	0.00	0.00
4,000.00	8.25	270.00	3,983.11	0.00	-247.52	247.52	0.00	0.00	0.00
4,100.00	8.25	270.00	4,082.07	0.00	-261.87	261.87	0.00	0.00	0.00
4,200.00	8.25	270.00	4,181.04	0.00	-276.21	276.21	0.00	0.00	0.00
4,300.00	8.25	270.00	4,280.00	0.00	-290.56	290.56	0.00	0.00	0.00
4,400.00	8.25	270.00	4,378.97	0.00	-304.90	304.90	0.00	0.00	0.00
4,473.88	8.25	270.00	4,452.08	0.00	-315.50	315.50	0.00	0.00	0.00
4,500.00	7.86	270.00	4,477.95	0.00	-319.16	319.16	1.50	-1.50	0.00
4,600.00	6.36	270.00	4,577.18	0.00	-331.53	331.53	1.50	-1.50	0.00
4,700.00	4.86	270.00	4,676.70	0.00	-341.29	341.29	1.50	-1.50	0.00
4,800.00	3.36	270.00	4,776.44	0.00	-348.45	348.45	1.50	-1.50	0.00
4,900.00	1.86	270.00	4,876.33	0.00	-353.00	353.00	1.50	-1.50	0.00
5,000.00	0.36	270.00	4,976.31	0.00	-354.93	354.93	1.50	-1.50	0.00
5,023.69	0.00	0.00	5,000.00	0.00	-355.00	355.00	1.50	-1.50	0.00

Database: EDM 5000.1 Single User Db
 Company: Legacy Reserves
 Project: Lea County, NM (NAD83)
 Site: Lea
 Well: Lea Unit #65H
 Wellbore: Pilot Wellbore
 Design: Plan 2

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well Lea Unit #65H
 RKB @ 3672.01ft
 RKB @ 3672.01ft
 Grid
 Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	0.00	0.00	5,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,376.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,376.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,000.00	0.00	0.00	6,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,376.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,000.00	0.00	0.00	7,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,376.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,000.00	0.00	0.00	8,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,376.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,000.00	0.00	0.00	9,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,376.31	0.00	-355.00	355.00	0.00	0.00	0.00

Database: EDM 5000.1 Single User Db
Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Site: Lea
Well: Lea Unit #65H
Wellbore: Pilot Wellbore
Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.00	0.00	0.00	10,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,800.00	0.00	0.00	10,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,000.00	0.00	0.00	10,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,276.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,376.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,500.00	0.00	0.00	11,476.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,600.00	0.00	0.00	11,576.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,700.00	0.00	0.00	11,676.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,800.00	0.00	0.00	11,776.31	0.00	-355.00	355.00	0.00	0.00	0.00
11,900.00	0.00	0.00	11,876.31	0.00	-355.00	355.00	0.00	0.00	0.00
12,000.00	0.00	0.00	11,976.31	0.00	-355.00	355.00	0.00	0.00	0.00
12,100.00	0.00	0.00	12,076.31	0.00	-355.00	355.00	0.00	0.00	0.00
12,200.00	0.00	0.00	12,176.31	0.00	-355.00	355.00	0.00	0.00	0.00
12,223.69	0.00	0.00	12,200.00	0.00	-355.00	355.00	0.00	0.00	0.00

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP-Lea 65H	0.00	0.00	10,824.00	-323.12	-352.46	575,719.730	791,577.710	32.580082°N	-103.520931
- hit/miss target									
- plan misses target center by 323.13ft at 10847.69ft MD (10824.00 TVD, 0.00 N, -355.00 E)									
- Point									
BHL-Lea 65H	0.00	0.00	10,982.00	-8,034.04	-293.26	568,008.830	791,636.910	32.558887°N	-103.520930
- plan misses target center by 8034.27ft at 11005.69ft MD (10982.00 TVD, 0.00 N, -355.00 E)									
- Point									

>

Legacy Reserves
Lea Unit #65H - Plan 2

Lea County, NM (NAD83)
Lea
Your Ref:

Measured Depth (ft)	Incl.	Azim.	Depth (ft)	Vertical Northings (ft)	Eastings (ft)	Vertical Section Rate (dega/100ft)	Dogleg	
0.00		0.000	0.000	0.00	0.00	0.00	0.00	0.00
2000.00		0.000	0.000	2000.00	0.00	0.00	0.00	0.00
2100.00		1.500	270.000	2099.99	0.00	-1.31	1.31	1.50
2200.00		3.000	270.000	2199.91	0.00	-5.23	5.23	1.50
2300.00		4.500	270.000	2299.69	0.00	-11.77	11.77	1.50
2400.00		6.000	270.000	2399.27	0.00	-20.92	20.92	1.50
2500.00		7.500	270.000	2498.57	0.00	-32.68	32.68	1.50
2549.81		8.247	270.000	2547.92	0.00	-39.50	39.50	1.50
2600.00		8.247	270.000	2597.58	0.00	-46.70	46.70	0.00
2700.00		8.247	270.000	2696.55	0.00	-61.05	61.05	0.00
2800.00		8.247	270.000	2795.52	0.00	-75.39	75.39	0.00
2900.00		8.247	270.000	2894.48	0.00	-89.73	89.73	0.00
3000.00		8.247	270.000	2993.45	0.00	-104.08	104.08	0.00
3100.00		8.247	270.000	3092.41	0.00	-118.42	118.42	0.00
3200.00		8.247	270.000	3191.38	0.00	-132.77	132.77	0.00
3300.00		8.247	270.000	3290.35	0.00	-147.11	147.11	0.00
3400.00		8.247	270.000	3389.31	0.00	-161.46	161.46	0.00
3500.00		8.247	270.000	3488.28	0.00	-175.80	175.80	0.00
3600.00		8.247	270.000	3587.24	0.00	-190.15	190.15	0.00
3700.00		8.247	270.000	3686.21	0.00	-204.49	204.49	0.00
3800.00		8.247	270.000	3785.17	0.00	-218.83	218.83	0.00
3900.00		8.247	270.000	3884.14	0.00	-233.18	233.18	0.00
4000.00		8.247	270.000	3983.11	0.00	-247.52	247.52	0.00
4100.00		8.247	270.000	4082.07	0.00	-261.87	261.87	0.00
4200.00		8.247	270.000	4181.04	0.00	-276.21	276.21	0.00
4300.00		8.247	270.000	4280.00	0.00	-290.56	290.56	0.00
4400.00		8.247	270.000	4378.97	0.00	-304.90	304.90	0.00
4473.88		8.247	270.000	4452.08	0.00	-315.50	315.50	0.00
4500.00		7.855	270.000	4477.95	0.00	-319.16	319.16	1.50
4600.00		6.355	270.000	4577.18	0.00	-331.53	331.53	1.50
4700.00		4.855	270.000	4676.70	0.00	-341.29	341.29	1.50
4800.00		3.355	270.000	4776.44	0.00	-348.45	348.45	1.50
4900.00		1.855	270.000	4876.33	0.00	-353.00	353.00	1.50
5000.00		0.355	270.000	4976.31	0.00	-354.93	354.93	1.50
5023.69		0.000	0.000	5000.00	0.00	-355.00	355.00	1.50
5100.00		0.000	0.000	5076.31	0.00	-355.00	355.00	0.00
5200.00		0.000	0.000	5176.31	0.00	-355.00	355.00	0.00
5300.00		0.000	0.000	5276.31	0.00	-355.00	355.00	0.00
5400.00		0.000	0.000	5376.31	0.00	-355.00	355.00	0.00
5500.00		0.000	0.000	5476.31	0.00	-355.00	355.00	0.00
5600.00		0.000	0.000	5576.31	0.00	-355.00	355.00	0.00
5700.00		0.000	0.000	5676.31	0.00	-355.00	355.00	0.00
5800.00		0.000	0.000	5776.31	0.00	-355.00	355.00	0.00
5900.00		0.000	0.000	5876.31	0.00	-355.00	355.00	0.00
6000.00		0.000	0.000	5976.31	0.00	-355.00	355.00	0.00
6100.00		0.000	0.000	6076.31	0.00	-355.00	355.00	0.00
6200.00		0.000	0.000	6176.31	0.00	-355.00	355.00	0.00
6300.00		0.000	0.000	6276.31	0.00	-355.00	355.00	0.00
6400.00		0.000	0.000	6376.31	0.00	-355.00	355.00	0.00
6500.00		0.000	0.000	6476.31	0.00	-355.00	355.00	0.00
6600.00		0.000	0.000	6576.31	0.00	-355.00	355.00	0.00
6700.00		0.000	0.000	6676.31	0.00	-355.00	355.00	0.00
6800.00		0.000	0.000	6776.31	0.00	-355.00	355.00	0.00
6900.00		0.000	0.000	6876.31	0.00	-355.00	355.00	0.00
7000.00		0.000	0.000	6976.31	0.00	-355.00	355.00	0.00
7100.00		0.000	0.000	7076.31	0.00	-355.00	355.00	0.00
7200.00		0.000	0.000	7176.31	0.00	-355.00	355.00	0.00

7300.00	0.000	0.000	7276.31	0.00	-355.00	355.00	0.00
7400.00	0.000	0.000	7376.31	0.00	-355.00	355.00	0.00
7500.00	0.000	0.000	7476.31	0.00	-355.00	355.00	0.00
7600.00	0.000	0.000	7576.31	0.00	-355.00	355.00	0.00
7700.00	0.000	0.000	7676.31	0.00	-355.00	355.00	0.00
7800.00	0.000	0.000	7776.31	0.00	-355.00	355.00	0.00
7900.00	0.000	0.000	7876.31	0.00	-355.00	355.00	0.00
8000.00	0.000	0.000	7976.31	0.00	-355.00	355.00	0.00
8100.00	0.000	0.000	8076.31	0.00	-355.00	355.00	0.00
8200.00	0.000	0.000	8176.31	0.00	-355.00	355.00	0.00
8300.00	0.000	0.000	8276.31	0.00	-355.00	355.00	0.00
8400.00	0.000	0.000	8376.31	0.00	-355.00	355.00	0.00
8500.00	0.000	0.000	8476.31	0.00	-355.00	355.00	0.00
8600.00	0.000	0.000	8576.31	0.00	-355.00	355.00	0.00
8700.00	0.000	0.000	8676.31	0.00	-355.00	355.00	0.00
8800.00	0.000	0.000	8776.31	0.00	-355.00	355.00	0.00
8900.00	0.000	0.000	8876.31	0.00	-355.00	355.00	0.00
9000.00	0.000	0.000	8976.31	0.00	-355.00	355.00	0.00
9100.00	0.000	0.000	9076.31	0.00	-355.00	355.00	0.00
9200.00	0.000	0.000	9176.31	0.00	-355.00	355.00	0.00
9300.00	0.000	0.000	9276.31	0.00	-355.00	355.00	0.00
9400.00	0.000	0.000	9376.31	0.00	-355.00	355.00	0.00
9500.00	0.000	0.000	9476.31	0.00	-355.00	355.00	0.00
9600.00	0.000	0.000	9576.31	0.00	-355.00	355.00	0.00
9700.00	0.000	0.000	9676.31	0.00	-355.00	355.00	0.00
9800.00	0.000	0.000	9776.31	0.00	-355.00	355.00	0.00
9900.00	0.000	0.000	9876.31	0.00	-355.00	355.00	0.00
10000.00	0.000	0.000	9976.31	0.00	-355.00	355.00	0.00
10100.00	0.000	0.000	10076.31	0.00	-355.00	355.00	0.00
10200.00	0.000	0.000	10176.31	0.00	-355.00	355.00	0.00
10300.00	0.000	0.000	10276.31	0.00	-355.00	355.00	0.00
10400.00	0.000	0.000	10376.31	0.00	-355.00	355.00	0.00
10500.00	0.000	0.000	10476.31	0.00	-355.00	355.00	0.00
10600.00	0.000	0.000	10576.31	0.00	-355.00	355.00	0.00
10700.00	0.000	0.000	10676.31	0.00	-355.00	355.00	0.00
10800.00	0.000	0.000	10776.31	0.00	-355.00	355.00	0.00
10900.00	0.000	0.000	10876.31	0.00	-355.00	355.00	0.00
11000.00	0.000	0.000	10976.31	0.00	-355.00	355.00	0.00
11100.00	0.000	0.000	11076.31	0.00	-355.00	355.00	0.00
11200.00	0.000	0.000	11176.31	0.00	-355.00	355.00	0.00
11300.00	0.000	0.000	11276.31	0.00	-355.00	355.00	0.00
11400.00	0.000	0.000	11376.31	0.00	-355.00	355.00	0.00
11500.00	0.000	0.000	11476.31	0.00	-355.00	355.00	0.00
11600.00	0.000	0.000	11576.31	0.00	-355.00	355.00	0.00
11700.00	0.000	0.000	11676.31	0.00	-355.00	355.00	0.00
11800.00	0.000	0.000	11776.31	0.00	-355.00	355.00	0.00
11900.00	0.000	0.000	11876.31	0.00	-355.00	355.00	0.00
12000.00	0.000	0.000	11976.31	0.00	-355.00	355.00	0.00
12100.00	0.000	0.000	12076.31	0.00	-355.00	355.00	0.00
12200.00	0.000	0.000	12176.31	0.00	-355.00	355.00	0.00
12223.69	0.000	0.000	12200.00	0.00	-355.00	355.00	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to RKB. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Slot and calculated along an Azimuth of 270.000° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.438°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 12223.69ft., the Bottom Hole Displacement is 355.00ft., in the Direction of 270.000° (Grid).

Legacy Reserves

Lea County, NM (NAD83)

Lea

Lea Unit #65H

Sidetrack Wellbore

Plan 2

Anticollision Summary Report

20 September, 2018



Company:	Legacy Reserves	Local Co-ordinate Reference:	Well Lea Unit #65H
Project:	Lea County, NM (NAD83)	TVD Reference:	RKB @ 3672.01ft
Reference Site:	Lea	MD Reference:	RKB @ 3672.01ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Lea Unit #65H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Sidetrack Wellbore	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan 2	Offset TVD Reference:	Reference Datum

Reference	Plan 2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 30.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 10,000.00ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	9/20/2018		
From (ft)	To (ft)	Survey (Wellbore):	Tool Name	Description
0.00	10,396.30	Plan 2 (Pilot Wellbore)	MWD	MWD - Standard
10,396.30	18,704.26	Plan 2 (Sidetrack Wellbore)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Lea Offset Well - Wellbore - Design						
Lea Unit #30H - Original Wellbore - Original Wellbore	0.00	2.99	52.47			
Lea Unit #30H - Original Wellbore - Original Wellbore	2,430.00	2,432.67	63.75	47.00	3.806	ES
Lea Unit #30H - Original Wellbore - Original Wellbore	15,840.03	15,702.00	254.03	71.34	1.390	Level 3, SF
Lea Unit #65H - Pilot Wellbore - Plan 2	10,700.00	10,679.93	93.37	92.13	75.349	CC, ES, SF

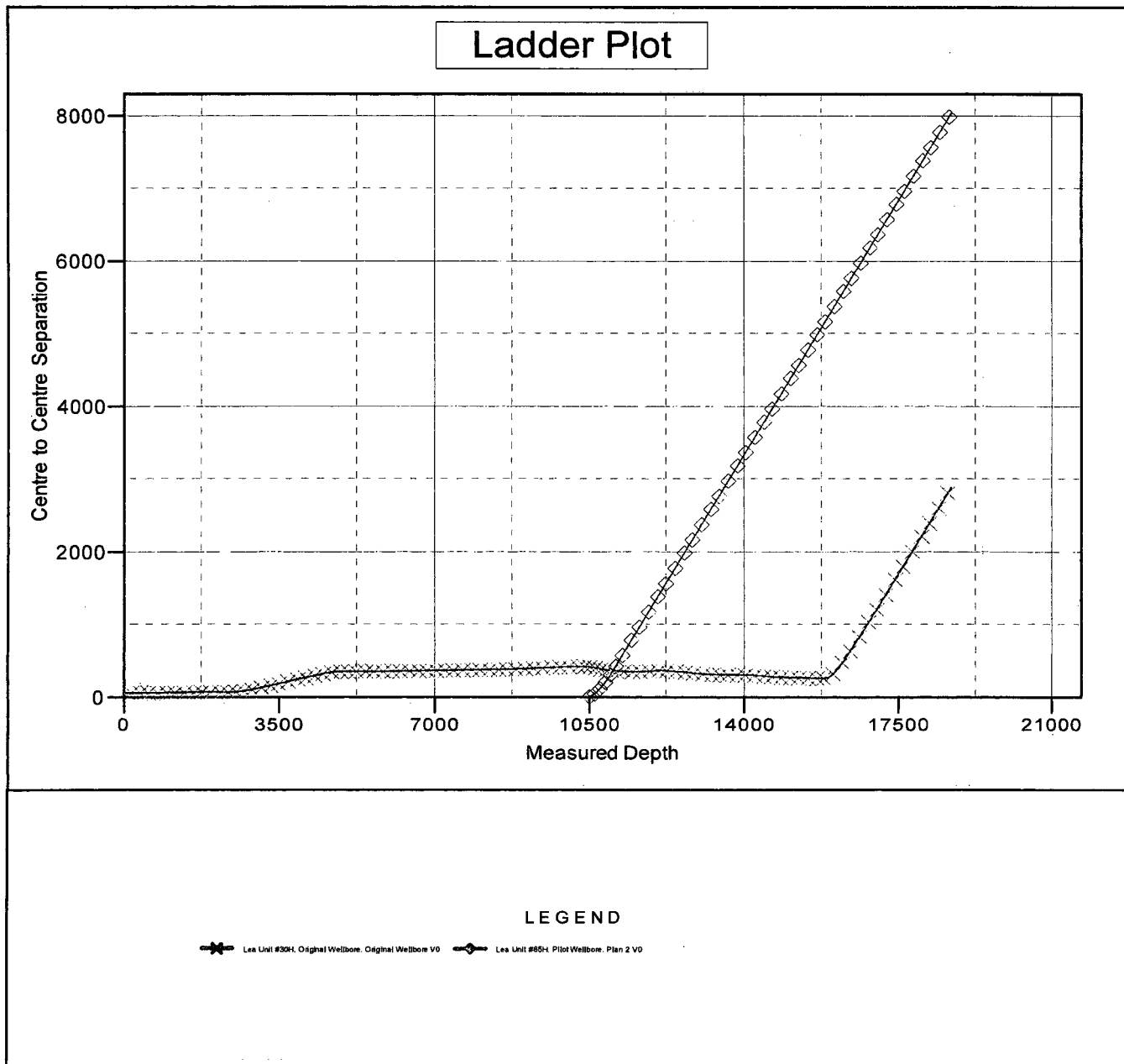
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Reference Site: Lea
Site Error: 0.00 ft
Reference Well: Lea Unit #65H
Well Error: 0.00 ft
Reference Wellbore: Sidetrack Wellbore
Reference Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Reference Depths are relative to RKB @ 3672.01ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Lea Unit #65H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.44°



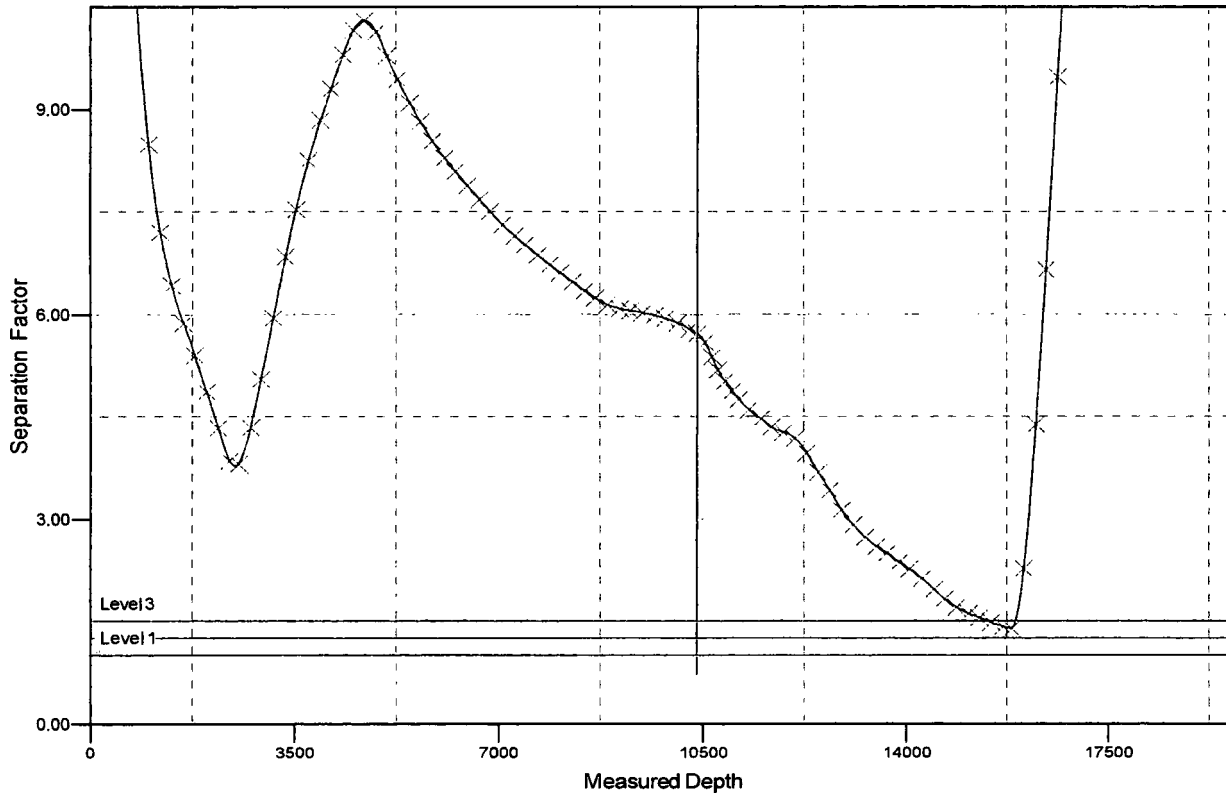
Company: Legacy Reserves
Project: Lea County, NM (NAD83)
Reference Site: Lea
Site Error: 0.00 ft
Reference Well: Lea Unit #65H
Well Error: 0.00 ft
Reference Wellbore: Sidetrack Wellbore
Reference Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
TVD Reference: RKB @ 3672.01ft
MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Reference Datum

Reference Depths are relative to RKB @ 3672.01ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: Lea Unit #65H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.44°

Separation Factor Plot



LEGEND

Lea Unit #65H, Original Wellbore, Original Wellbore VD
 Lea Unit #65H, Pilot Wellbore, Plan 2 VD

Legacy Reserves

Lea County, NM (NAD83)

Lea

Lea Unit #65H

Sidetrack Wellbore

Plan: Plan 2

Standard Planning Report

20 September, 2018



Database: EDM 5000.1 Single User Db
 Company: Legacy Reserves
 Project: Lea County, NM (NAD83)
 Site: Lea
 Well: Lea Unit #65H
 Wellbore: Sidetrack Wellbore
 Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
 TVD Reference: RKB @ 3672.01ft
 MD Reference: RKB @ 3672.01ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Lea				
Site Position:	Northing:	567,587.000 usft	Latitude:	32.557609°N	
From:	Map	Easting:	797,256.100 usft	Longitude:	-103.502704
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	Lea Unit #65H					
Well Position	+N-S	8,455.87 ft	Northing:	576,042.850 usft	Latitude:	32.580962°N
	+E-W	-5,325.94 ft	Easting:	791,930.170 usft	Longitude:	-103.519779
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,681.01 ft	Ground Level:	3,654.01 ft	

Wellbore	Sidetrack Wellbore				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2000	2/12/2018	(°) 6.73	(°) 60.57	(nT) 48,256.00000000

Design	Plan 2				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	10,396.30	
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	182.09	

Plan Survey Tool Program	Date	9/20/2018			
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks	
(ft)	(ft)				
1 10,396.30	18,704.26	Plan 2 (Sidetrack Wellbore)	MWD		
			MWD - Standard		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
10,396.30	0.00	0.00	10,372.61	0.00	-355.00	0.00	0.00	0.00	0.00	
11,137.97	89.00	179.56	10,850.00	-469.12	-351.40	12.00	12.00	0.00	179.56	
18,704.26	89.00	179.56	10,982.00	-8,034.04	-293.26	0.00	0.00	0.00	0.00	BHL-Lea 65H

Database: EDM 5000.1 Single User Db
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 Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
 TVD Reference: RKB @ 3672.01ft
 MD Reference: RKB @ 3672.01ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	1.50	270.00	2,099.99	0.00	-1.31	0.05	1.50	1.50	0.00	
2,200.00	3.00	270.00	2,199.91	0.00	-5.23	0.19	1.50	1.50	0.00	
2,300.00	4.50	270.00	2,299.69	0.00	-11.77	0.43	1.50	1.50	0.00	
2,400.00	6.00	270.00	2,399.27	0.00	-20.92	0.76	1.50	1.50	0.00	
2,500.00	7.50	270.00	2,498.57	0.00	-32.68	1.19	1.50	1.50	0.00	
2,549.81	8.25	270.00	2,547.92	0.00	-39.50	1.44	1.50	1.50	0.00	
2,600.00	8.25	270.00	2,597.58	0.00	-46.70	1.70	0.00	0.00	0.00	
2,700.00	8.25	270.00	2,696.55	0.00	-61.05	2.23	0.00	0.00	0.00	
2,800.00	8.25	270.00	2,795.52	0.00	-75.39	2.75	0.00	0.00	0.00	
2,900.00	8.25	270.00	2,894.48	0.00	-89.73	3.27	0.00	0.00	0.00	
3,000.00	8.25	270.00	2,993.45	0.00	-104.08	3.80	0.00	0.00	0.00	
3,100.00	8.25	270.00	3,092.41	0.00	-118.42	4.32	0.00	0.00	0.00	
3,200.00	8.25	270.00	3,191.38	0.00	-132.77	4.84	0.00	0.00	0.00	
3,300.00	8.25	270.00	3,290.35	0.00	-147.11	5.37	0.00	0.00	0.00	
3,400.00	8.25	270.00	3,389.31	0.00	-161.46	5.89	0.00	0.00	0.00	
3,500.00	8.25	270.00	3,488.28	0.00	-175.80	6.41	0.00	0.00	0.00	
3,600.00	8.25	270.00	3,587.24	0.00	-190.15	6.94	0.00	0.00	0.00	
3,700.00	8.25	270.00	3,686.21	0.00	-204.49	7.46	0.00	0.00	0.00	
3,800.00	8.25	270.00	3,785.17	0.00	-218.83	7.98	0.00	0.00	0.00	
3,900.00	8.25	270.00	3,884.14	0.00	-233.18	8.51	0.00	0.00	0.00	
4,000.00	8.25	270.00	3,983.11	0.00	-247.52	9.03	0.00	0.00	0.00	
4,100.00	8.25	270.00	4,082.07	0.00	-261.87	9.55	0.00	0.00	0.00	
4,200.00	8.25	270.00	4,181.04	0.00	-276.21	10.08	0.00	0.00	0.00	
4,300.00	8.25	270.00	4,280.00	0.00	-290.56	10.60	0.00	0.00	0.00	
4,400.00	8.25	270.00	4,378.97	0.00	-304.90	11.12	0.00	0.00	0.00	
4,473.88	8.25	270.00	4,452.08	0.00	-315.50	11.51	0.00	0.00	0.00	
4,500.00	7.86	270.00	4,477.95	0.00	-319.16	11.64	1.50	-1.50	0.00	
4,600.00	6.36	270.00	4,577.18	0.00	-331.53	12.09	1.50	-1.50	0.00	
4,700.00	4.86	270.00	4,676.70	0.00	-341.29	12.45	1.50	-1.50	0.00	
4,800.00	3.36	270.00	4,776.44	0.00	-348.45	12.71	1.50	-1.50	0.00	
4,900.00	1.86	270.00	4,876.33	0.00	-353.00	12.88	1.50	-1.50	0.00	
5,000.00	0.36	270.00	4,976.31	0.00	-354.93	12.95	1.50	-1.50	0.00	
5,023.69	0.00	0.00	5,000.00	0.00	-355.00	12.95	1.50	-1.50	0.00	

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MD Reference: RKB @ 3672.01ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.00	0.00	0.00	5,076.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,200.00	0.00	0.00	5,176.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,300.00	0.00	0.00	5,276.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,400.00	0.00	0.00	5,376.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,500.00	0.00	0.00	5,476.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,600.00	0.00	0.00	5,576.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,700.00	0.00	0.00	5,676.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,800.00	0.00	0.00	5,776.31	0.00	-355.00	12.95	0.00	0.00	0.00
5,900.00	0.00	0.00	5,876.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,000.00	0.00	0.00	5,976.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,100.00	0.00	0.00	6,076.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,200.00	0.00	0.00	6,176.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,300.00	0.00	0.00	6,276.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,400.00	0.00	0.00	6,376.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,500.00	0.00	0.00	6,476.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,600.00	0.00	0.00	6,576.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,700.00	0.00	0.00	6,676.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,800.00	0.00	0.00	6,776.31	0.00	-355.00	12.95	0.00	0.00	0.00
6,900.00	0.00	0.00	6,876.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,000.00	0.00	0.00	6,976.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,100.00	0.00	0.00	7,076.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,200.00	0.00	0.00	7,176.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,300.00	0.00	0.00	7,276.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,400.00	0.00	0.00	7,376.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,500.00	0.00	0.00	7,476.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,600.00	0.00	0.00	7,576.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,700.00	0.00	0.00	7,676.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,800.00	0.00	0.00	7,776.31	0.00	-355.00	12.95	0.00	0.00	0.00
7,900.00	0.00	0.00	7,876.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,000.00	0.00	0.00	7,976.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,100.00	0.00	0.00	8,076.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,200.00	0.00	0.00	8,176.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,300.00	0.00	0.00	8,276.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,400.00	0.00	0.00	8,376.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,500.00	0.00	0.00	8,476.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,600.00	0.00	0.00	8,576.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,700.00	0.00	0.00	8,676.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,800.00	0.00	0.00	8,776.31	0.00	-355.00	12.95	0.00	0.00	0.00
8,900.00	0.00	0.00	8,876.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,000.00	0.00	0.00	8,976.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,100.00	0.00	0.00	9,076.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,200.00	0.00	0.00	9,176.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,300.00	0.00	0.00	9,276.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,400.00	0.00	0.00	9,376.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,500.00	0.00	0.00	9,476.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,600.00	0.00	0.00	9,576.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,700.00	0.00	0.00	9,676.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,800.00	0.00	0.00	9,776.31	0.00	-355.00	12.95	0.00	0.00	0.00
9,900.00	0.00	0.00	9,876.31	0.00	-355.00	12.95	0.00	0.00	0.00
10,000.00	0.00	0.00	9,976.31	0.00	-355.00	12.95	0.00	0.00	0.00
10,100.00	0.00	0.00	10,076.31	0.00	-355.00	12.95	0.00	0.00	0.00
10,200.00	0.00	0.00	10,176.31	0.00	-355.00	12.95	0.00	0.00	0.00
10,300.00	0.00	0.00	10,276.31	0.00	-355.00	12.95	0.00	0.00	0.00
10,396.30	0.00	0.00	10,372.61	0.00	-355.00	12.95	0.00	0.00	0.00

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 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (%/100usft)	Build Rate (%/100usft)	Turn Rate (%/100usft)
10,400.00	0.44	179.56	10,376.31	-0.01	-355.00	12.96	12.00	12.00	0.00
10,425.00	3.44	179.56	10,401.29	-0.86	-354.99	13.81	12.00	12.00	0.00
10,450.00	6.44	179.56	10,426.20	-3.02	-354.98	15.96	12.00	12.00	0.00
10,475.00	9.44	179.56	10,450.95	-6.47	-354.95	19.41	12.00	12.00	0.00
10,500.00	12.44	179.56	10,475.50	-11.22	-354.91	24.16	12.00	12.00	0.00
10,525.00	15.44	179.56	10,499.76	-17.24	-354.87	30.17	12.00	12.00	0.00
10,550.00	18.44	179.56	10,523.67	-24.53	-354.81	37.45	12.00	12.00	0.00
10,575.00	21.44	179.56	10,547.17	-33.05	-354.75	45.97	12.00	12.00	0.00
10,600.00	24.44	179.56	10,570.19	-42.80	-354.67	55.70	12.00	12.00	0.00
10,625.00	27.44	179.56	10,592.66	-53.73	-354.59	66.63	12.00	12.00	0.00
10,650.00	30.44	179.56	10,614.54	-65.83	-354.49	78.72	12.00	12.00	0.00
10,675.00	33.44	179.56	10,635.75	-79.05	-354.39	91.93	12.00	12.00	0.00
10,700.00	36.44	179.56	10,656.24	-93.37	-354.28	106.23	12.00	12.00	0.00
10,725.00	39.44	179.56	10,675.95	-108.74	-354.16	121.59	12.00	12.00	0.00
10,750.00	42.44	179.56	10,694.84	-125.12	-354.04	137.95	12.00	12.00	0.00
10,775.00	45.44	179.56	10,712.83	-142.47	-353.91	155.28	12.00	12.00	0.00
10,800.00	48.44	179.56	10,729.90	-160.73	-353.77	173.53	12.00	12.00	0.00
10,825.00	51.44	179.56	10,745.99	-179.87	-353.62	192.64	12.00	12.00	0.00
10,850.00	54.44	179.56	10,761.05	-199.81	-353.47	212.57	12.00	12.00	0.00
10,875.00	57.44	179.56	10,775.05	-220.52	-353.31	233.26	12.00	12.00	0.00
10,900.00	60.44	179.56	10,787.94	-241.94	-353.14	254.66	12.00	12.00	0.00
10,925.00	63.44	179.56	10,799.70	-264.00	-352.97	276.70	12.00	12.00	0.00
10,950.00	66.44	179.56	10,810.29	-286.64	-352.80	299.32	12.00	12.00	0.00
10,975.00	69.44	179.56	10,819.67	-309.81	-352.62	322.46	12.00	12.00	0.00
11,000.00	72.44	179.56	10,827.84	-333.43	-352.44	346.07	12.00	12.00	0.00
11,025.00	75.44	179.56	10,834.75	-357.45	-352.25	370.07	12.00	12.00	0.00
11,050.00	78.44	179.56	10,840.40	-381.80	-352.07	394.39	12.00	12.00	0.00
11,075.00	81.44	179.56	10,844.76	-406.42	-351.88	418.98	12.00	12.00	0.00
11,100.00	84.44	179.56	10,847.83	-431.22	-351.69	443.77	12.00	12.00	0.00
11,125.00	87.44	179.56	10,849.60	-456.16	-351.50	468.68	12.00	12.00	0.00
11,137.97	89.00	179.56	10,850.00	-469.12	-351.40	481.63	12.00	12.00	0.00
11,200.00	89.00	179.56	10,851.08	-531.14	-350.92	543.59	0.00	0.00	0.00
11,300.00	89.00	179.56	10,852.83	-631.12	-350.15	643.47	0.00	0.00	0.00
11,400.00	89.00	179.56	10,854.58	-731.10	-349.39	743.36	0.00	0.00	0.00
11,500.00	89.00	179.56	10,856.32	-831.09	-348.62	843.25	0.00	0.00	0.00
11,600.00	89.00	179.56	10,858.07	-931.07	-347.85	943.14	0.00	0.00	0.00
11,700.00	89.00	179.56	10,859.81	-1,031.05	-347.08	1,043.02	0.00	0.00	0.00
11,800.00	89.00	179.56	10,861.56	-1,131.03	-346.31	1,142.91	0.00	0.00	0.00
11,900.00	89.00	179.56	10,863.30	-1,231.01	-345.55	1,242.80	0.00	0.00	0.00
12,000.00	89.00	179.56	10,865.05	-1,330.99	-344.78	1,342.69	0.00	0.00	0.00
12,100.00	89.00	179.56	10,866.79	-1,430.98	-344.01	1,442.57	0.00	0.00	0.00
12,200.00	89.00	179.56	10,868.54	-1,530.96	-343.24	1,542.46	0.00	0.00	0.00
12,300.00	89.00	179.56	10,870.28	-1,630.94	-342.47	1,642.35	0.00	0.00	0.00
12,400.00	89.00	179.56	10,872.03	-1,730.92	-341.71	1,742.23	0.00	0.00	0.00
12,500.00	89.00	179.56	10,873.77	-1,830.90	-340.94	1,842.12	0.00	0.00	0.00
12,600.00	89.00	179.56	10,875.52	-1,930.89	-340.17	1,942.01	0.00	0.00	0.00
12,700.00	89.00	179.56	10,877.26	-2,030.87	-339.40	2,041.90	0.00	0.00	0.00
12,800.00	89.00	179.56	10,879.01	-2,130.85	-338.64	2,141.78	0.00	0.00	0.00
12,900.00	89.00	179.56	10,880.75	-2,230.83	-337.87	2,241.67	0.00	0.00	0.00
13,000.00	89.00	179.56	10,882.50	-2,330.81	-337.10	2,341.56	0.00	0.00	0.00
13,100.00	89.00	179.56	10,884.24	-2,430.79	-336.33	2,441.45	0.00	0.00	0.00
13,200.00	89.00	179.56	10,885.99	-2,530.78	-335.56	2,541.33	0.00	0.00	0.00
13,300.00	89.00	179.56	10,887.73	-2,630.76	-334.80	2,641.22	0.00	0.00	0.00
13,400.00	89.00	179.56	10,889.48	-2,730.74	-334.03	2,741.11	0.00	0.00	0.00

Database: EDM 5000.1 Single User Db
 Company: Legacy Reserves
 Project: Lea County, NM (NAD83)
 Site: Lea
 Well: Lea Unit #65H
 Wellbore: Sidetrack Wellbore
 Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
 TVD Reference: RKB @ 3672.01ft
 MD Reference: RKB @ 3672.01ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,500.00	89.00	179.56	10,891.23	-2,830.72	-333.26	2,840.99	0.00	0.00	0.00	
13,600.00	89.00	179.56	10,892.97	-2,930.70	-332.49	2,940.88	0.00	0.00	0.00	
13,700.00	89.00	179.56	10,894.72	-3,030.69	-331.73	3,040.77	0.00	0.00	0.00	
13,800.00	89.00	179.56	10,896.46	-3,130.67	-330.96	3,140.66	0.00	0.00	0.00	
13,900.00	89.00	179.56	10,898.21	-3,230.65	-330.19	3,240.54	0.00	0.00	0.00	
14,000.00	89.00	179.56	10,899.95	-3,330.63	-329.42	3,340.43	0.00	0.00	0.00	
14,100.00	89.00	179.56	10,901.70	-3,430.61	-328.65	3,440.32	0.00	0.00	0.00	
14,200.00	89.00	179.56	10,903.44	-3,530.59	-327.89	3,540.21	0.00	0.00	0.00	
14,300.00	89.00	179.56	10,905.19	-3,630.58	-327.12	3,640.09	0.00	0.00	0.00	
14,400.00	89.00	179.56	10,906.93	-3,730.56	-326.35	3,739.98	0.00	0.00	0.00	
14,500.00	89.00	179.56	10,908.68	-3,830.54	-325.58	3,839.87	0.00	0.00	0.00	
14,600.00	89.00	179.56	10,910.42	-3,930.52	-324.82	3,939.75	0.00	0.00	0.00	
14,700.00	89.00	179.56	10,912.17	-4,030.50	-324.05	4,039.64	0.00	0.00	0.00	
14,800.00	89.00	179.56	10,913.91	-4,130.49	-323.28	4,139.53	0.00	0.00	0.00	
14,900.00	89.00	179.56	10,915.66	-4,230.47	-322.51	4,239.42	0.00	0.00	0.00	
15,000.00	89.00	179.56	10,917.40	-4,330.45	-321.74	4,339.30	0.00	0.00	0.00	
15,100.00	89.00	179.56	10,919.15	-4,430.43	-320.98	4,439.19	0.00	0.00	0.00	
15,200.00	89.00	179.56	10,920.89	-4,530.41	-320.21	4,539.08	0.00	0.00	0.00	
15,300.00	89.00	179.56	10,922.64	-4,630.39	-319.44	4,638.97	0.00	0.00	0.00	
15,400.00	89.00	179.56	10,924.38	-4,730.38	-318.67	4,738.85	0.00	0.00	0.00	
15,500.00	89.00	179.56	10,926.13	-4,830.36	-317.90	4,838.74	0.00	0.00	0.00	
15,600.00	89.00	179.56	10,927.88	-4,930.34	-317.14	4,938.63	0.00	0.00	0.00	
15,700.00	89.00	179.56	10,929.62	-5,030.32	-316.37	5,038.51	0.00	0.00	0.00	
15,800.00	89.00	179.56	10,931.37	-5,130.30	-315.60	5,138.40	0.00	0.00	0.00	
15,900.00	89.00	179.56	10,933.11	-5,230.29	-314.83	5,238.29	0.00	0.00	0.00	
16,000.00	89.00	179.56	10,934.86	-5,330.27	-314.07	5,338.18	0.00	0.00	0.00	
16,100.00	89.00	179.56	10,936.60	-5,430.25	-313.30	5,438.06	0.00	0.00	0.00	
16,200.00	89.00	179.56	10,938.35	-5,530.23	-312.53	5,537.95	0.00	0.00	0.00	
16,300.00	89.00	179.56	10,940.09	-5,630.21	-311.76	5,637.84	0.00	0.00	0.00	
16,400.00	89.00	179.56	10,941.84	-5,730.19	-310.99	5,737.73	0.00	0.00	0.00	
16,500.00	89.00	179.56	10,943.58	-5,830.18	-310.23	5,837.61	0.00	0.00	0.00	
16,600.00	89.00	179.56	10,945.33	-5,930.16	-309.46	5,937.50	0.00	0.00	0.00	
16,700.00	89.00	179.56	10,947.07	-6,030.14	-308.69	6,037.39	0.00	0.00	0.00	
16,800.00	89.00	179.56	10,948.82	-6,130.12	-307.92	6,137.27	0.00	0.00	0.00	
16,900.00	89.00	179.56	10,950.56	-6,230.10	-307.16	6,237.16	0.00	0.00	0.00	
17,000.00	89.00	179.56	10,952.31	-6,330.09	-306.39	6,337.05	0.00	0.00	0.00	
17,100.00	89.00	179.56	10,954.05	-6,430.07	-305.62	6,436.94	0.00	0.00	0.00	
17,200.00	89.00	179.56	10,955.80	-6,530.05	-304.85	6,536.82	0.00	0.00	0.00	
17,300.00	89.00	179.56	10,957.54	-6,630.03	-304.08	6,636.71	0.00	0.00	0.00	
17,400.00	89.00	179.56	10,959.29	-6,730.01	-303.32	6,736.60	0.00	0.00	0.00	
17,500.00	89.00	179.56	10,961.03	-6,829.99	-302.55	6,836.49	0.00	0.00	0.00	
17,600.00	89.00	179.56	10,962.78	-6,929.98	-301.78	6,936.37	0.00	0.00	0.00	
17,700.00	89.00	179.56	10,964.53	-7,029.96	-301.01	7,036.26	0.00	0.00	0.00	
17,800.00	89.00	179.56	10,966.27	-7,129.94	-300.24	7,136.15	0.00	0.00	0.00	
17,900.00	89.00	179.56	10,968.02	-7,229.92	-299.48	7,236.03	0.00	0.00	0.00	
18,000.00	89.00	179.56	10,969.76	-7,329.90	-298.71	7,335.92	0.00	0.00	0.00	
18,100.00	89.00	179.56	10,971.51	-7,429.89	-297.94	7,435.81	0.00	0.00	0.00	
18,200.00	89.00	179.56	10,973.25	-7,529.87	-297.17	7,535.70	0.00	0.00	0.00	
18,300.00	89.00	179.56	10,975.00	-7,629.85	-296.41	7,635.58	0.00	0.00	0.00	
18,400.00	89.00	179.56	10,976.74	-7,729.83	-295.64	7,735.47	0.00	0.00	0.00	
18,500.00	89.00	179.56	10,978.49	-7,829.81	-294.87	7,835.36	0.00	0.00	0.00	
18,600.00	89.00	179.56	10,980.23	-7,929.79	-294.10	7,935.25	0.00	0.00	0.00	
18,704.26	89.00	179.56	10,982.00	-8,034.04	-293.26	8,039.39	0.00	0.00	0.00	

Database: EDM 5000.1 Single User Db
 Company: Legacy Reserves
 Project: Lea County, NM (NAD83)
 Site: Lea
 Well: Lea Unit #65H
 Wellbore: Sidetrack Wellbore
 Design: Plan 2

Local Co-ordinate Reference: Well Lea Unit #65H
 TVD Reference: RKB @ 3672.01ft
 MD Reference: RKB @ 3672.01ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
FTP-Lea 65H	0.00	0.00	10,824.00	-323.12	-352.46	575,719.730	791,577.710	32.580082°N	-103.520931
- plan misses target center by 0.42ft at 10989.00ft MD (10824.40 TVD, -322.98 N, -352.52 E)									
- Point									
BHL-Lea 65H	0.00	0.00	10,982.00	-8,034.04	-293.26	568,008.830	791,636.910	32.558887°N	-103.520930
- plan hits target center									
- Point									

>

Legacy Reserves
Lea Unit #65H - Plan 2

Lea County, NM (NAD83)
Lea
Your Ref:

Measured Depth (ft)	Incl.	Azim.	Depth (ft)	Vertical Northings (ft)	Eastings (ft)	Vertical Section Rate (dega/100ft)	Dogleg	
0.00		0.000	0.000	0.00	0.00	0.00	0.00	0.00
100.00		0.000	0.000	100.00	0.00	0.00	0.00	0.00
200.00		0.000	0.000	200.00	0.00	0.00	0.00	0.00
300.00		0.000	0.000	300.00	0.00	0.00	0.00	0.00
400.00		0.000	0.000	400.00	0.00	0.00	0.00	0.00
500.00		0.000	0.000	500.00	0.00	0.00	0.00	0.00
600.00		0.000	0.000	600.00	0.00	0.00	0.00	0.00
700.00		0.000	0.000	700.00	0.00	0.00	0.00	0.00
800.00		0.000	0.000	800.00	0.00	0.00	0.00	0.00
900.00		0.000	0.000	900.00	0.00	0.00	0.00	0.00
1000.00		0.000	0.000	1000.00	0.00	0.00	0.00	0.00
1100.00		0.000	0.000	1100.00	0.00	0.00	0.00	0.00
1200.00		0.000	0.000	1200.00	0.00	0.00	0.00	0.00
1300.00		0.000	0.000	1300.00	0.00	0.00	0.00	0.00
1400.00		0.000	0.000	1400.00	0.00	0.00	0.00	0.00
1500.00		0.000	0.000	1500.00	0.00	0.00	0.00	0.00
1600.00		0.000	0.000	1600.00	0.00	0.00	0.00	0.00
1700.00		0.000	0.000	1700.00	0.00	0.00	0.00	0.00
1800.00		0.000	0.000	1800.00	0.00	0.00	0.00	0.00
1900.00		0.000	0.000	1900.00	0.00	0.00	0.00	0.00
2000.00		0.000	0.000	2000.00	0.00	0.00	0.00	0.00
2100.00		1.500	270.000	2099.99	0.00	-1.31	0.05	1.50
2200.00		3.000	270.000	2199.91	0.00	-5.23	0.19	1.50
2300.00		4.500	270.000	2299.69	0.00	-11.77	0.43	1.50
2400.00		6.000	270.000	2399.27	0.00	-20.92	0.76	1.50
2500.00		7.500	270.000	2498.57	0.00	-32.68	1.19	1.50
2549.81		8.247	270.000	2547.92	0.00	-39.50	1.44	1.50
2600.00		8.247	270.000	2597.58	0.00	-46.70	1.70	0.00
2700.00		8.247	270.000	2696.55	0.00	-61.05	2.23	0.00
2800.00		8.247	270.000	2795.52	0.00	-75.39	2.75	0.00
2900.00		8.247	270.000	2894.48	0.00	-89.73	3.27	0.00
3000.00		8.247	270.000	2993.45	0.00	-104.08	3.80	0.00
3100.00		8.247	270.000	3092.41	0.00	-118.42	4.32	0.00
3200.00		8.247	270.000	3191.38	0.00	-132.77	4.84	0.00
3300.00		8.247	270.000	3290.35	0.00	-147.11	5.37	0.00
3400.00		8.247	270.000	3389.31	0.00	-161.46	5.89	0.00
3500.00		8.247	270.000	3488.28	0.00	-175.80	6.41	0.00
3600.00		8.247	270.000	3587.24	0.00	-190.15	6.94	0.00
3700.00		8.247	270.000	3686.21	0.00	-204.49	7.46	0.00
3800.00		8.247	270.000	3785.17	0.00	-218.83	7.98	0.00
3900.00		8.247	270.000	3884.14	0.00	-233.18	8.51	0.00
4000.00		8.247	270.000	3983.11	0.00	-247.52	9.03	0.00
4100.00		8.247	270.000	4082.07	0.00	-261.87	9.55	0.00
4200.00		8.247	270.000	4181.04	0.00	-276.21	10.08	0.00
4300.00		8.247	270.000	4280.00	0.00	-290.56	10.60	0.00
4400.00		8.247	270.000	4378.97	0.00	-304.90	11.12	0.00
4473.88		8.247	270.000	4452.08	0.00	-315.50	11.51	0.00
4500.00		7.855	270.000	4477.95	0.00	-319.16	11.64	1.50
4600.00		6.355	270.000	4577.18	0.00	-331.53	12.09	1.50
4700.00		4.855	270.000	4676.70	0.00	-341.29	12.45	1.50
4800.00		3.355	270.000	4776.44	0.00	-348.45	12.71	1.50
4900.00		1.855	270.000	4876.33	0.00	-353.00	12.88	1.50
5000.00		0.355	270.000	4976.31	0.00	-354.93	12.95	1.50
5023.69		0.000	0.000	5000.00	0.00	-355.00	12.95	1.50
5100.00		0.000	0.000	5076.31	0.00	-355.00	12.95	0.00
5200.00		0.000	0.000	5176.31	0.00	-355.00	12.95	0.00
5300.00		0.000	0.000	5276.31	0.00	-355.00	12.95	0.00

5400.00	0.000	0.000	5376.31	0.00	-355.00	12.95	0.00
5500.00	0.000	0.000	5476.31	0.00	-355.00	12.95	0.00
5600.00	0.000	0.000	5576.31	0.00	-355.00	12.95	0.00
5700.00	0.000	0.000	5676.31	0.00	-355.00	12.95	0.00
5800.00	0.000	0.000	5776.31	0.00	-355.00	12.95	0.00
5900.00	0.000	0.000	5876.31	0.00	-355.00	12.95	0.00
6000.00	0.000	0.000	5976.31	0.00	-355.00	12.95	0.00
6100.00	0.000	0.000	6076.31	0.00	-355.00	12.95	0.00
6200.00	0.000	0.000	6176.31	0.00	-355.00	12.95	0.00
6300.00	0.000	0.000	6276.31	0.00	-355.00	12.95	0.00
6400.00	0.000	0.000	6376.31	0.00	-355.00	12.95	0.00
6500.00	0.000	0.000	6476.31	0.00	-355.00	12.95	0.00
6600.00	0.000	0.000	6576.31	0.00	-355.00	12.95	0.00
6700.00	0.000	0.000	6676.31	0.00	-355.00	12.95	0.00
6800.00	0.000	0.000	6776.31	0.00	-355.00	12.95	0.00
6900.00	0.000	0.000	6876.31	0.00	-355.00	12.95	0.00
7000.00	0.000	0.000	6976.31	0.00	-355.00	12.95	0.00
7100.00	0.000	0.000	7076.31	0.00	-355.00	12.95	0.00
7200.00	0.000	0.000	7176.31	0.00	-355.00	12.95	0.00
7300.00	0.000	0.000	7276.31	0.00	-355.00	12.95	0.00
7400.00	0.000	0.000	7376.31	0.00	-355.00	12.95	0.00
7500.00	0.000	0.000	7476.31	0.00	-355.00	12.95	0.00
7600.00	0.000	0.000	7576.31	0.00	-355.00	12.95	0.00
7700.00	0.000	0.000	7676.31	0.00	-355.00	12.95	0.00
7800.00	0.000	0.000	7776.31	0.00	-355.00	12.95	0.00
7900.00	0.000	0.000	7876.31	0.00	-355.00	12.95	0.00
8000.00	0.000	0.000	7976.31	0.00	-355.00	12.95	0.00
8100.00	0.000	0.000	8076.31	0.00	-355.00	12.95	0.00
8200.00	0.000	0.000	8176.31	0.00	-355.00	12.95	0.00
8300.00	0.000	0.000	8276.31	0.00	-355.00	12.95	0.00
8400.00	0.000	0.000	8376.31	0.00	-355.00	12.95	0.00
8500.00	0.000	0.000	8476.31	0.00	-355.00	12.95	0.00
8600.00	0.000	0.000	8576.31	0.00	-355.00	12.95	0.00
8700.00	0.000	0.000	8676.31	0.00	-355.00	12.95	0.00
8800.00	0.000	0.000	8776.31	0.00	-355.00	12.95	0.00
8900.00	0.000	0.000	8876.31	0.00	-355.00	12.95	0.00
9000.00	0.000	0.000	8976.31	0.00	-355.00	12.95	0.00
9100.00	0.000	0.000	9076.31	0.00	-355.00	12.95	0.00
9200.00	0.000	0.000	9176.31	0.00	-355.00	12.95	0.00
9300.00	0.000	0.000	9276.31	0.00	-355.00	12.95	0.00
9400.00	0.000	0.000	9376.31	0.00	-355.00	12.95	0.00
9500.00	0.000	0.000	9476.31	0.00	-355.00	12.95	0.00
9600.00	0.000	0.000	9576.31	0.00	-355.00	12.95	0.00
9700.00	0.000	0.000	9676.31	0.00	-355.00	12.95	0.00
9800.00	0.000	0.000	9776.31	0.00	-355.00	12.95	0.00
9900.00	0.000	0.000	9876.31	0.00	-355.00	12.95	0.00
10000.00	0.000	0.000	9976.31	0.00	-355.00	12.95	0.00
10100.00	0.000	0.000	10076.31	0.00	-355.00	12.95	0.00
10200.00	0.000	0.000	10176.31	0.00	-355.00	12.95	0.00
10300.00	0.000	0.000	10276.31	0.00	-355.00	12.95	0.00
10396.30	0.000	0.000	10372.61	0.00	-355.00	12.95	0.00
10400.00	0.444	179.560	10376.31	-0.01	-355.00	12.96	12.00
10425.00	3.444	179.560	10401.29	-0.86	-354.99	13.81	12.00
10450.00	6.444	179.560	10426.20	-3.02	-354.98	15.96	12.00
10475.00	9.444	179.560	10450.95	-6.47	-354.95	19.41	12.00
10500.00	12.444	179.560	10475.50	-11.22	-354.91	24.16	12.00
10525.00	15.444	179.560	10499.76	-17.24	-354.87	30.17	12.00
10550.00	18.444	179.560	10523.67	-24.53	-354.81	37.45	12.00
10575.00	21.444	179.560	10547.17	-33.05	-354.75	45.97	12.00
10600.00	24.444	179.560	10570.19	-42.80	-354.67	55.70	12.00
10625.00	27.444	179.560	10592.66	-53.73	-354.59	66.63	12.00
10650.00	30.444	179.560	10614.54	-65.83	-354.49	78.72	12.00
10675.00	33.444	179.560	10635.75	-79.05	-354.39	91.93	12.00
10700.00	36.444	179.560	10656.24	-93.37	-354.28	106.23	12.00
10725.00	39.444	179.560	10675.95	-108.74	-354.16	121.59	12.00
10750.00	42.444	179.560	10694.84	-125.12	-354.04	137.95	12.00
10775.00	45.444	179.560	10712.83	-142.47	-353.91	155.28	12.00
10800.00	48.444	179.560	10729.90	-160.73	-353.77	173.53	12.00
10825.00	51.444	179.560	10745.99	-179.87	-353.62	192.64	12.00
10850.00	54.444	179.560	10761.05	-199.81	-353.47	212.57	12.00
10875.00	57.444	179.560	10775.05	-220.52	-353.31	233.26	12.00
10900.00	60.444	179.560	10787.94	-241.94	-353.14	254.66	12.00
10925.00	63.444	179.560	10799.70	-264.00	-352.97	276.70	12.00
10950.00	66.444	179.560	10810.29	-286.64	-352.80	299.32	12.00

10975.00	69.444	179.560	10819.67	-309.81	-352.62	322.46	12.00
11000.00	72.444	179.560	10827.84	-333.43	-352.44	346.07	12.00
11025.00	75.444	179.560	10834.75	-357.45	-352.25	370.07	12.00
11050.00	78.444	179.560	10840.40	-381.80	-352.07	394.39	12.00
11075.00	81.444	179.560	10844.76	-406.42	-351.88	418.98	12.00
11100.00	84.444	179.560	10847.83	-431.22	-351.69	443.77	12.00
11125.00	87.444	179.560	10849.60	-456.16	-351.50	468.68	12.00
11137.97	89.000	179.560	10850.00	-469.12	-351.40	481.63	12.00
11200.00	89.000	179.560	10851.08	-531.14	-350.92	543.59	0.00
11300.00	89.000	179.560	10852.83	-631.12	-350.15	643.47	0.00
11400.00	89.000	179.560	10854.57	-731.10	-349.39	743.36	0.00
11500.00	89.000	179.560	10856.32	-831.09	-348.62	843.25	0.00
11600.00	89.000	179.560	10858.07	-931.07	-347.85	943.14	0.00
11700.00	89.000	179.560	10859.81	-1031.05	-347.08	1043.02	0.00
11800.00	89.000	179.560	10861.56	-1131.03	-346.31	1142.91	0.00
11900.00	89.000	179.560	10863.30	-1231.01	-345.55	1242.80	0.00
12000.00	89.000	179.560	10865.05	-1330.99	-344.78	1342.69	0.00
12100.00	89.000	179.560	10866.79	-1430.98	-344.01	1442.57	0.00
12200.00	89.000	179.560	10868.54	-1530.96	-343.24	1542.46	0.00
12300.00	89.000	179.560	10870.28	-1630.94	-342.47	1642.35	0.00
12400.00	89.000	179.560	10872.03	-1730.92	-341.71	1742.23	0.00
12500.00	89.000	179.560	10873.77	-1830.90	-340.94	1842.12	0.00
12600.00	89.000	179.560	10875.52	-1930.89	-340.17	1942.01	0.00
12700.00	89.000	179.560	10877.26	-2030.87	-339.40	2041.90	0.00
12800.00	89.000	179.560	10879.01	-2130.85	-338.64	2141.78	0.00
12900.00	89.000	179.560	10880.75	-2230.83	-337.87	2241.67	0.00
13000.00	89.000	179.560	10882.50	-2330.81	-337.10	2341.56	0.00
13100.00	89.000	179.560	10884.24	-2430.79	-336.33	2441.45	0.00
13200.00	89.000	179.560	10885.99	-2530.78	-335.56	2541.33	0.00
13300.00	89.000	179.560	10887.73	-2630.76	-334.80	2641.22	0.00
13400.00	89.000	179.560	10889.48	-2730.74	-334.03	2741.11	0.00
13500.00	89.000	179.560	10891.23	-2830.72	-333.26	2840.99	0.00
13600.00	89.000	179.560	10892.97	-2930.70	-332.49	2940.88	0.00
13700.00	89.000	179.560	10894.72	-3030.69	-331.73	3040.77	0.00
13800.00	89.000	179.560	10896.46	-3130.67	-330.96	3140.66	0.00
13900.00	89.000	179.560	10898.21	-3230.65	-330.19	3240.54	0.00
14000.00	89.000	179.560	10899.95	-3330.63	-329.42	3340.43	0.00
14100.00	89.000	179.560	10901.70	-3430.61	-328.65	3440.32	0.00
14200.00	89.000	179.560	10903.44	-3530.59	-327.89	3540.21	0.00
14300.00	89.000	179.560	10905.19	-3630.58	-327.12	3640.09	0.00
14400.00	89.000	179.560	10906.93	-3730.56	-326.35	3739.98	0.00
14500.00	89.000	179.560	10908.68	-3830.54	-325.58	3839.87	0.00
14600.00	89.000	179.560	10910.42	-3930.52	-324.82	3939.75	0.00
14700.00	89.000	179.560	10912.17	-4030.50	-324.05	4039.64	0.00
14800.00	89.000	179.560	10913.91	-4130.49	-323.28	4139.53	0.00
14900.00	89.000	179.560	10915.66	-4230.47	-322.51	4239.42	0.00
15000.00	89.000	179.560	10917.40	-4330.45	-321.74	4339.30	0.00
15100.00	89.000	179.560	10919.15	-4430.43	-320.98	4439.19	0.00
15200.00	89.000	179.560	10920.89	-4530.41	-320.21	4539.08	0.00
15300.00	89.000	179.560	10922.64	-4630.39	-319.44	4638.97	0.00
15400.00	89.000	179.560	10924.38	-4730.38	-318.67	4738.85	0.00
15500.00	89.000	179.560	10926.13	-4830.36	-317.90	4838.74	0.00
15600.00	89.000	179.560	10927.88	-4930.34	-317.14	4938.63	0.00
15700.00	89.000	179.560	10929.62	-5030.32	-316.37	5038.51	0.00
15800.00	89.000	179.560	10931.37	-5130.30	-315.60	5138.40	0.00
15900.00	89.000	179.560	10933.11	-5230.29	-314.83	5238.29	0.00
16000.00	89.000	179.560	10934.86	-5330.27	-314.07	5338.18	0.00
16100.00	89.000	179.560	10936.60	-5430.25	-313.30	5438.06	0.00
16200.00	89.000	179.560	10938.35	-5530.23	-312.53	5537.95	0.00
16300.00	89.000	179.560	10940.09	-5630.21	-311.76	5637.84	0.00
16400.00	89.000	179.560	10941.84	-5730.19	-310.99	5737.73	0.00
16500.00	89.000	179.560	10943.58	-5830.18	-310.23	5837.61	0.00
16600.00	89.000	179.560	10945.33	-5930.16	-309.46	5937.50	0.00
16700.00	89.000	179.560	10947.07	-6030.14	-308.69	6037.39	0.00
16800.00	89.000	179.560	10948.82	-6130.12	-307.92	6137.27	0.00
16900.00	89.000	179.560	10950.56	-6230.10	-307.16	6237.16	0.00
17000.00	89.000	179.560	10952.31	-6330.09	-306.39	6337.05	0.00
17100.00	89.000	179.560	10954.05	-6430.07	-305.62	6436.94	0.00
17200.00	89.000	179.560	10955.80	-6530.05	-304.85	6536.82	0.00
17300.00	89.000	179.560	10957.54	-6630.03	-304.08	6636.71	0.00
17400.00	89.000	179.560	10959.29	-6730.01	-303.32	6736.60	0.00
17500.00	89.000	179.560	10961.03	-6829.99	-302.55	6836.49	0.00
17600.00	89.000	179.560	10962.78	-6929.98	-301.78	6936.37	0.00
17700.00	89.000	179.560	10964.53	-7029.96	-301.01	7036.26	0.00

17800.00	89.000	179.560	10966.27	-7129.94	-300.24	7136.15	0.00
17900.00	89.000	179.560	10968.02	-7229.92	-299.48	7236.03	0.00
18000.00	89.000	179.560	10969.76	-7329.90	-298.71	7335.92	0.00
18100.00	89.000	179.560	10971.51	-7429.89	-297.94	7435.81	0.00
18200.00	89.000	179.560	10973.25	-7529.87	-297.17	7535.70	0.00
18300.00	89.000	179.560	10975.00	-7629.85	-296.41	7635.58	0.00
18400.00	89.000	179.560	10976.74	-7729.83	-295.64	7735.47	0.00
18500.00	89.000	179.560	10978.49	-7829.81	-294.87	7835.36	0.00
18600.00	89.000	179.560	10980.23	-7929.79	-294.10	7935.25	0.00
18704.26	89.000	179.560	10982.00	-8034.04	-293.26	8039.39	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North. Vertical depths are relative to RKB. Northings and Eastings are relative to Well.

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Slot and calculated along an Azimuth of 182.090° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.438°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 18704.26ft., the Bottom Hole Displacement is 8039.39ft., in the Direction of 182.090° (Grid).