

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

NOV 21 2013

As Drilled

Pennington Field Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-043- ¹ API Number 21185	39189	LINDRITH GALLUP-DAKOTA, WEST
² 27875	³ Property Name BONANZA	⁴ Well Number 14
⁵ OCRID No. 371838	⁶ Operator Name DJR Operating, LLC MA	⁷ Elevation 7197.6

¹⁰ Surface Location

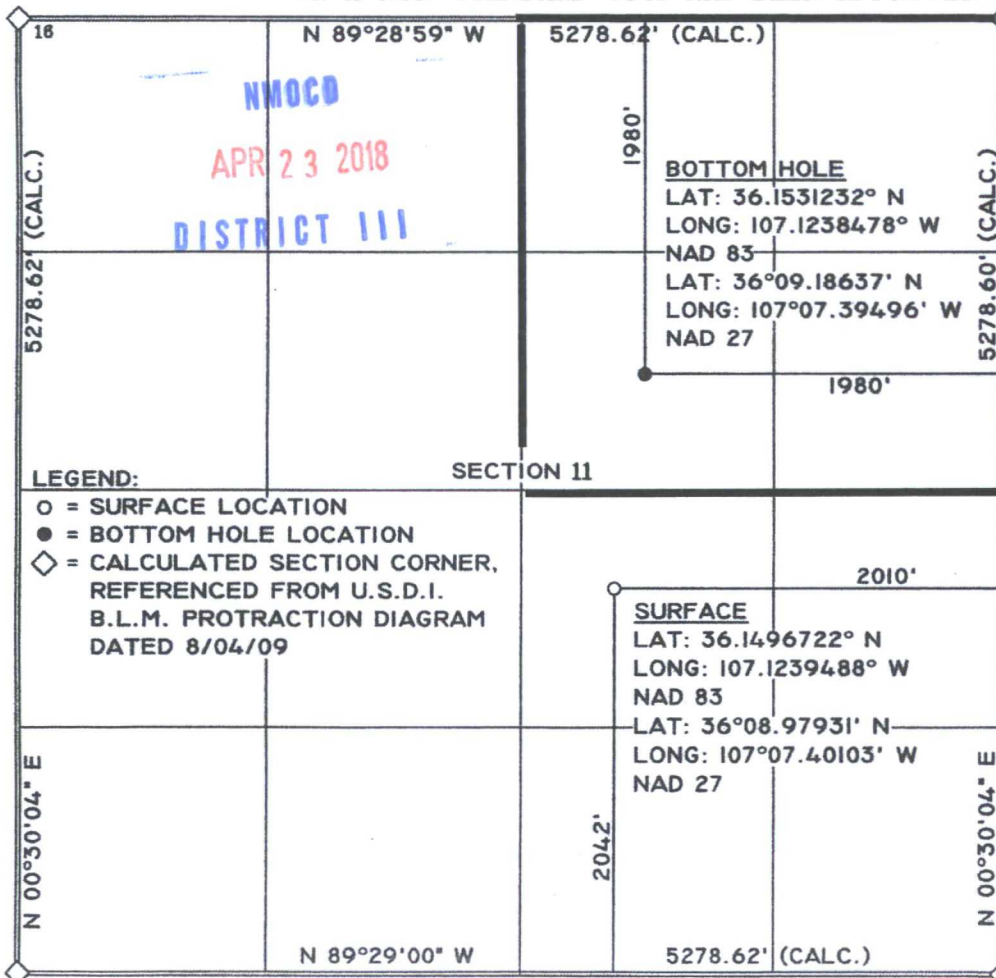
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	11	22 N	3 W		2042	SOUTH	2010	EAST	SANDOVAL

¹¹ 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
G	11	22 N	3 W		1987	NORTH	1984	EAST	SANDOVAL

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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



17 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.

Signature: *Amy Archuleta* Date: 4-23-18

E-mail Address: aarchuleta@drillc.com

18 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 are true and correct to the best of my knowledge.

Date of Survey: 07/25/13

Signature and Seal of Professional Surveyor: *John A. Voronich*

Certificate Number: 14831

United Field Services, Inc. 7-6-2013

Elm Ridge Exploration Company.

Sandoval County, NM (Nad 83)

Sec 11, T-22-N,R-3-W

Bonanza #14

DD

UWI:

WL:

Survey: Final

Standard Survey Report

18 November, 2014



Elm Ridge Exploration Company.

Project: Sandoval County, NM (Nad 83)
Site: Sec 11, T-22-N,R-3-W
Well: Bonanza #14
Wellbore: DD
Plan: Final

Reference Details

Geodetic System: US State Plane 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Central Zone
 Northing: 1874906.81
 Easting: 1382404.22
 Latitude: 36° 8' 58.820 N
 Longitude: 107° 7' 26.216 W
 Grid Convergence: 0.52° East
 Ground Elevation: 7197.6
 KB Elevation: RKB @ 7214.0usft (KB;16.4')

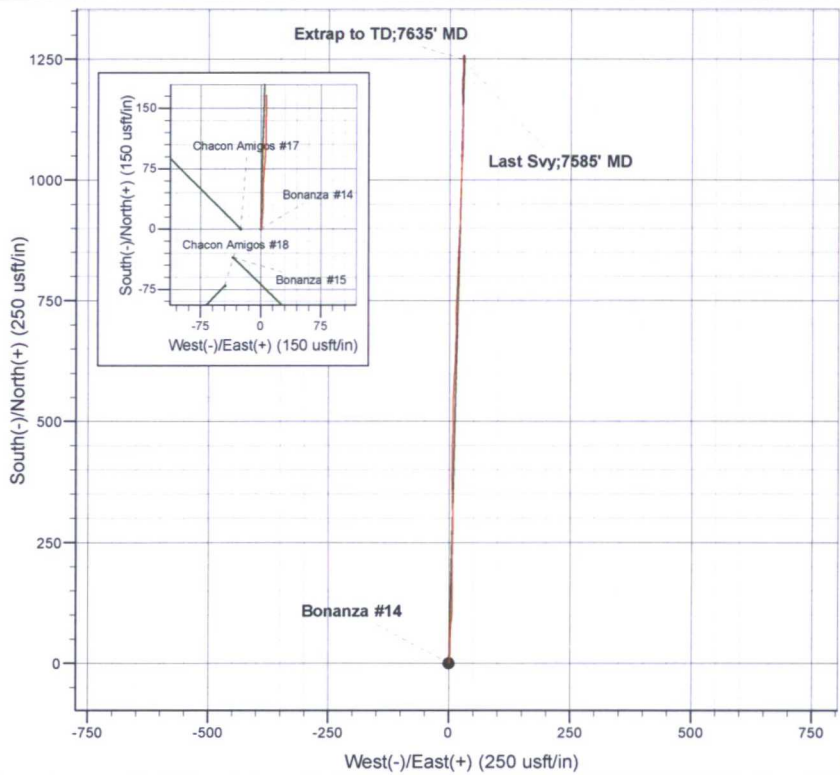
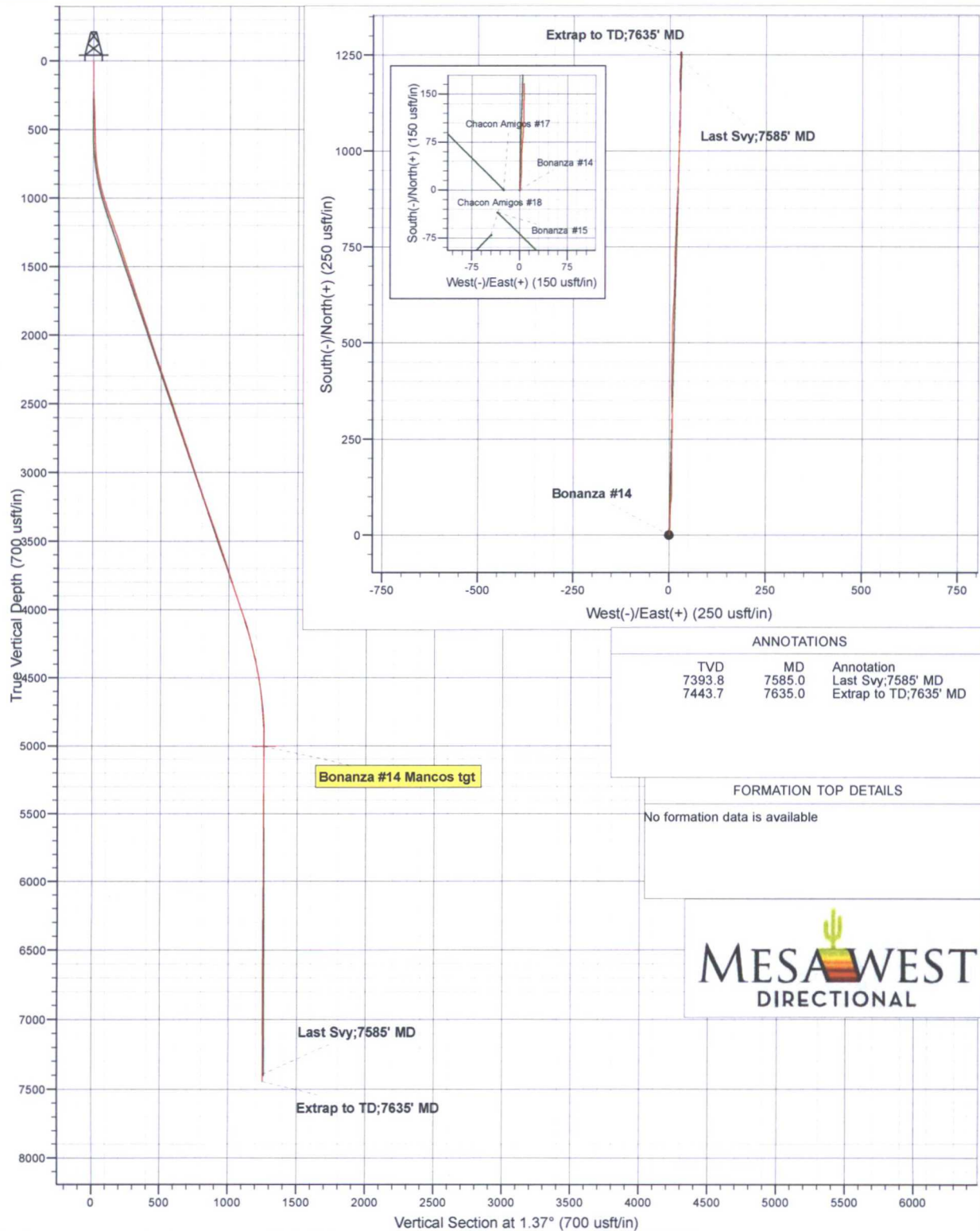


Azimuths to True North
 Magnetic North: 9.27°

Magnetic Field
 Strength: 50249.9nT
 Dip Angle: 63.02°
 Date: 20/09/2013
 Model: IGRF2010

PLAN DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	4.4	0.00	0.00	4.4	0.0	0.0	0.00	0.00	0.0	
2	504.4	0.00	0.00	504.4	0.0	0.0	0.00	0.00	0.0	
3	1133.6	18.88	1.37	1122.3	102.7	2.5	3.00	1.37	102.7	
4	4225.2	18.88	1.37	4047.6	1102.6	26.3	0.00	0.00	1102.9	
5	5169.0	0.00	0.00	4974.4	1256.6	30.0	2.00	180.00	1257.0	
6	5199.0	0.00	0.00	5004.4	1256.6	30.0	0.00	0.00	1257.0	Bonanza #14 Mancos tgt
7	7599.0	0.00	0.00	7404.4	1256.6	30.0	0.00	0.00	1257.0	



ANNOTATIONS

TVD	MD	Annotation
7393.8	7585.0	Last Svy; 7585' MD
7443.7	7635.0	Extrap to TD; 7635' MD

FORMATION TOP DETAILS

No formation data is available



Mesa West Directional

Survey Report



Company:	Elm Ridge Exploration Company.	Local Co-ordinate Reference:	Well Bonanza #14
Project:	Sandoval County, NM (Nad 83)	TVD Reference:	RKB @ 7214.0usft (KB;16.4')
Site:	Sec 11, T-22-N,R-3-W	MD Reference:	RKB @ 7214.0usft (KB;16.4')
Well:	Bonanza #14	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	Final	Database:	WellPlan Services

Project	Sandoval County, NM (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Sec 11, T-22-N,R-3-W		
Site Position:		Northing:	1,874,906.81 usft
From:	Lat/Long	Easting:	1,382,404.22 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	36° 8' 58.820 N
		Longitude:	107° 7' 26.216 W
		Grid Convergence:	-0.52 °

Well	Bonanza #14		
Well Position	+N/-S	0.0 usft	Northing: 1,874,906.81 usft
	+E/-W	0.0 usft	Easting: 1,382,404.22 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36° 8' 58.820 N
		Longitude:	107° 7' 26.216 W
		Ground Level:	7,197.6 usft

Wellbore	DD		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	20/09/2013	9.27
			Dip Angle (°) 63.02
			Field Strength (nT) 50,250

Design	Final		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°) 1.37

Survey Program	Date	18/11/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
57.0	7,635.0	Final (DD)	MWD	MWD - Standard

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	-7,214.0	0.0	0.0	0.0	0.00	0.00	0.00
57.0	0.00	0.00	57.0	-7,157.0	0.0	0.0	0.0	0.00	0.00	0.00
132.0	0.50	36.30	132.0	-7,082.0	0.3	0.2	0.3	0.67	0.67	0.00
193.0	1.10	13.20	193.0	-7,021.0	1.0	0.5	1.1	1.10	0.98	-37.87
255.0	1.90	15.80	255.0	-6,959.0	2.6	0.9	2.6	1.29	1.29	4.19
316.0	1.90	1.70	315.9	-6,898.1	4.6	1.2	4.6	0.76	0.00	-23.11
375.0	2.20	5.40	374.9	-6,839.1	6.7	1.3	6.7	0.56	0.51	6.27
436.0	2.20	6.80	435.9	-6,778.1	9.0	1.6	9.1	0.09	0.00	2.30
498.0	2.20	9.70	497.8	-6,716.2	11.4	1.9	11.4	0.18	0.00	4.68
507.0	2.20	12.20	506.8	-6,707.2	11.7	2.0	11.8	1.07	0.00	27.78

Mesa West Directional

Survey Report



Company: Elm Ridge Exploration Company.
Project: Sandoval County, NM (Nad 83)
Site: Sec 11, T-22-N,R-3-W
Well: Bonanza #14
Wellbore: DD
Design: Final

Local Co-ordinate Reference: Well Bonanza #14
TVD Reference: RKB @ 7214.0usft (KB;16.4')
MD Reference: RKB @ 7214.0usft (KB;16.4')
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: WellPlan Services

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
562.0	2.00	352.60	561.8	-6,652.2	13.7	2.1	13.8	1.35	-0.36	-35.64
593.0	2.10	358.60	592.7	-6,621.3	14.8	2.0	14.9	0.76	0.32	19.35
624.0	2.60	356.10	623.7	-6,590.3	16.1	2.0	16.1	1.65	1.61	-8.06
654.0	3.60	356.40	653.7	-6,560.3	17.7	1.8	17.7	3.33	3.33	1.00
686.0	5.20	2.80	685.6	-6,528.4	20.2	1.9	20.2	5.22	5.00	20.00
717.0	5.80	4.10	716.4	-6,497.6	23.1	2.0	23.2	1.98	1.94	4.19
748.0	6.50	4.60	747.3	-6,466.7	26.4	2.3	26.5	2.26	2.26	1.61
778.0	7.80	1.50	777.0	-6,437.0	30.2	2.5	30.2	4.52	4.33	-10.33
809.0	9.30	359.00	807.7	-6,406.3	34.8	2.5	34.8	4.98	4.84	-8.06
840.0	10.70	0.30	838.2	-6,375.8	40.1	2.5	40.2	4.57	4.52	4.19
870.0	12.10	0.20	867.6	-6,346.4	46.1	2.5	46.1	4.67	4.67	-0.33
901.0	13.00	2.20	897.9	-6,316.1	52.8	2.6	52.9	3.22	2.90	6.45
932.0	14.20	3.50	928.0	-6,286.0	60.1	3.0	60.1	3.99	3.87	4.19
963.0	15.20	3.80	958.0	-6,256.0	67.9	3.5	68.0	3.24	3.23	0.97
993.0	16.40	4.70	986.9	-6,227.1	76.1	4.1	76.2	4.08	4.00	3.00
1,025.0	17.10	4.30	1,017.5	-6,196.5	85.3	4.8	85.4	2.22	2.19	-1.25
1,057.0	17.90	3.10	1,048.0	-6,166.0	94.9	5.4	95.0	2.74	2.50	-3.75
1,089.0	18.00	2.90	1,078.5	-6,135.5	104.7	6.0	104.8	0.37	0.31	-0.63
1,120.0	18.50	359.90	1,107.9	-6,106.1	114.4	6.2	114.5	3.43	1.61	-9.68
1,152.0	18.70	359.50	1,138.2	-6,075.8	124.6	6.1	124.8	0.74	0.63	-1.25
1,183.0	18.70	0.50	1,167.6	-6,046.4	134.6	6.1	134.7	1.03	0.00	3.23
1,215.0	18.90	0.50	1,197.9	-6,016.1	144.9	6.2	145.0	0.63	0.63	0.00
1,247.0	19.20	0.10	1,228.1	-5,985.9	155.3	6.3	155.4	1.02	0.94	-1.25
1,278.0	18.90	359.30	1,257.4	-5,956.6	165.5	6.2	165.6	1.28	-0.97	-2.58
1,342.0	18.00	0.80	1,318.1	-5,895.9	185.7	6.2	185.8	1.59	-1.41	2.34
1,405.0	18.10	0.90	1,378.0	-5,836.0	205.2	6.5	205.3	0.17	0.16	0.16
1,468.0	18.30	0.70	1,437.9	-5,776.1	224.9	6.8	225.0	0.33	0.32	-0.32
1,532.0	18.50	0.70	1,498.6	-5,715.4	245.1	7.1	245.2	0.31	0.31	0.00
1,595.0	18.90	0.30	1,558.3	-5,655.7	265.3	7.2	265.4	0.67	0.63	-0.63
1,658.0	18.20	0.00	1,618.0	-5,596.0	285.3	7.3	285.4	1.12	-1.11	-0.48
1,722.0	19.20	359.80	1,678.6	-5,535.4	305.9	7.2	305.9	1.57	1.56	-0.31
1,785.0	18.60	359.90	1,738.2	-5,475.8	326.3	7.2	326.3	0.95	-0.95	0.16
1,848.0	18.10	359.30	1,798.0	-5,416.0	346.1	7.1	346.2	0.85	-0.79	-0.95
1,912.0	18.50	357.20	1,858.8	-5,355.2	366.2	6.4	366.2	1.20	0.63	-3.28
1,975.0	17.90	359.80	1,918.7	-5,295.3	385.8	5.9	385.9	1.60	-0.95	4.13
2,038.0	17.70	1.10	1,978.6	-5,235.4	405.1	6.1	405.1	0.71	-0.32	2.06
2,101.0	18.10	0.80	2,038.6	-5,175.4	424.5	6.4	424.5	0.65	0.63	-0.48
2,165.0	18.10	0.70	2,099.4	-5,114.6	444.3	6.7	444.4	0.05	0.00	-0.16
2,228.0	18.50	1.50	2,159.2	-5,054.8	464.1	7.0	464.2	0.75	0.63	1.27
2,291.0	18.60	0.70	2,219.0	-4,995.0	484.2	7.4	484.2	0.43	0.16	-1.27
2,355.0	19.30	359.50	2,279.5	-4,934.5	504.9	7.4	505.0	1.25	1.09	-1.88
2,418.0	18.90	0.70	2,339.0	-4,875.0	525.6	7.5	525.6	0.89	-0.63	1.90
2,481.0	18.70	1.20	2,398.7	-4,815.3	545.9	7.8	545.9	0.41	-0.32	0.79
2,544.0	19.00	2.80	2,458.3	-4,755.7	566.2	8.5	566.2	0.95	0.48	2.54

Mesa West Directional
Survey Report



Company: Elm Ridge Exploration Company.
Project: Sandoval County, NM (Nad 83)
Site: Sec 11, T-22-N,R-3-W
Well: Bonanza #14
Wellbore: DD
Design: Final

Local Co-ordinate Reference: Well Bonanza #14
TVD Reference: RKB @ 7214.0usft (KB;16.4')
MD Reference: RKB @ 7214.0usft (KB;16.4')
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: WellPlan Services

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,607.0	18.80	3.60	2,517.9	-4,696.1	586.6	9.7	586.6	0.52	-0.32	1.27
2,671.0	18.70	4.29	2,578.5	-4,635.5	607.1	11.1	607.2	0.38	-0.16	1.08
2,734.0	19.10	1.70	2,638.1	-4,575.9	627.5	12.1	627.6	1.48	0.63	-4.11
2,797.0	19.40	1.50	2,697.6	-4,516.4	648.2	12.7	648.4	0.49	0.48	-0.32
2,860.0	18.40	3.00	2,757.2	-4,456.8	668.6	13.5	668.8	1.76	-1.59	2.38
2,924.0	18.20	359.70	2,817.9	-4,396.1	688.7	14.0	688.8	1.65	-0.31	-5.16
2,987.0	18.20	359.00	2,877.8	-4,336.2	708.4	13.8	708.5	0.35	0.00	-1.11
3,050.0	17.90	1.80	2,937.7	-4,276.3	727.9	13.9	728.0	1.46	-0.48	4.44
3,113.0	18.40	2.60	2,997.6	-4,216.4	747.5	14.7	747.6	0.89	0.79	1.27
3,176.0	19.20	2.00	3,057.2	-4,156.8	767.8	15.5	767.9	1.31	1.27	-0.95
3,239.0	18.70	2.60	3,116.8	-4,097.2	788.2	16.3	788.4	0.85	-0.79	0.95
3,303.0	19.10	1.70	3,177.3	-4,036.7	808.9	17.1	809.1	0.77	0.63	-1.41
3,366.0	18.80	1.20	3,236.9	-3,977.1	829.4	17.6	829.6	0.54	-0.48	-0.79
3,429.0	19.30	3.20	3,296.5	-3,917.5	849.9	18.4	850.1	1.31	0.79	3.17
3,492.0	19.20	3.20	3,355.9	-3,858.1	870.7	19.5	870.9	0.16	-0.16	0.00
3,555.0	19.00	2.20	3,415.5	-3,798.5	891.3	20.5	891.5	0.61	-0.32	-1.59
3,618.0	18.40	2.00	3,475.2	-3,738.8	911.5	21.3	911.7	0.96	-0.95	-0.32
3,682.0	18.90	1.40	3,535.8	-3,678.2	931.9	21.9	932.2	0.84	0.78	-0.94
3,745.0	18.70	1.60	3,595.4	-3,618.6	952.2	22.4	952.5	0.33	-0.32	0.32
3,808.0	18.50	1.60	3,655.1	-3,558.9	972.3	23.0	972.6	0.32	-0.32	0.00
3,871.0	17.90	1.50	3,715.0	-3,499.0	992.0	23.5	992.2	0.95	-0.95	-0.16
3,935.0	17.90	1.70	3,775.9	-3,438.1	1,011.6	24.0	1,011.9	0.10	0.00	0.31
3,998.0	18.60	3.60	3,835.7	-3,378.3	1,031.3	25.0	1,031.6	1.46	1.11	3.02
4,061.0	19.10	2.60	3,895.3	-3,318.7	1,051.7	26.0	1,052.0	0.94	0.79	-1.59
4,125.0	19.10	0.90	3,955.8	-3,258.2	1,072.6	26.7	1,072.9	0.87	0.00	-2.66
4,156.0	18.90	0.70	3,985.1	-3,228.9	1,082.7	26.8	1,083.0	0.68	-0.65	-0.65
4,188.0	18.80	1.40	4,015.4	-3,198.6	1,093.0	27.0	1,093.4	0.77	-0.31	2.19
4,220.0	18.50	0.20	4,045.7	-3,168.3	1,103.2	27.2	1,103.6	1.52	-0.94	-3.75
4,251.0	17.90	0.40	4,075.2	-3,138.8	1,112.9	27.2	1,113.3	1.95	-1.94	0.65
4,283.0	18.20	1.10	4,105.6	-3,108.4	1,122.8	27.3	1,123.2	1.16	0.94	2.19
4,314.0	17.50	0.10	4,135.1	-3,078.9	1,132.3	27.4	1,132.7	2.46	-2.26	-3.23
4,346.0	15.60	359.40	4,165.8	-3,048.2	1,141.5	27.4	1,141.8	5.97	-5.94	-2.19
4,377.0	14.20	359.10	4,195.7	-3,018.3	1,149.4	27.3	1,149.8	4.52	-4.52	-0.97
4,409.0	13.40	358.20	4,226.8	-2,987.2	1,157.1	27.1	1,157.4	2.59	-2.50	-2.81
4,441.0	12.90	357.90	4,258.0	-2,956.0	1,164.3	26.9	1,164.6	1.58	-1.56	-0.94
4,472.0	12.90	357.40	4,288.2	-2,925.8	1,171.3	26.6	1,171.6	0.36	0.00	-1.61
4,504.0	13.00	356.90	4,319.4	-2,894.6	1,178.4	26.2	1,178.7	0.47	0.31	-1.56
4,536.0	12.90	357.40	4,350.6	-2,863.4	1,185.6	25.9	1,185.9	0.47	-0.31	1.56
4,567.0	12.20	0.40	4,380.8	-2,833.2	1,192.3	25.7	1,192.6	3.08	-2.26	9.68
4,599.0	12.10	359.90	4,412.1	-2,801.9	1,199.0	25.8	1,199.3	0.45	-0.31	-1.56
4,631.0	11.30	1.50	4,443.4	-2,770.6	1,205.5	25.8	1,205.8	2.70	-2.50	5.00
4,662.0	10.80	3.90	4,473.9	-2,740.1	1,211.5	26.1	1,211.7	2.19	-1.61	7.74
4,694.0	10.90	4.60	4,505.3	-2,708.7	1,217.5	26.6	1,217.8	0.52	0.31	2.19

Mesa West Directional
Survey Report



Company:	Elm Ridge Exploration Company.	Local Co-ordinate Reference:	Well Bonanza #14
Project:	Sandoval County, NM (Nad 83)	TVD Reference:	RKB @ 7214.0usft (KB;16.4')
Site:	Sec 11, T-22-N,R-3-W	MD Reference:	RKB @ 7214.0usft (KB;16.4')
Well:	Bonanza #14	North Reference:	True
Wellbore:	DD	Survey Calculation Method:	Minimum Curvature
Design:	Final	Database:	WellPlan Services

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,726.0	10.00	5.20	4,536.8	-2,677.2	1,223.3	27.1	1,223.6	2.83	-2.81	1.88
4,757.0	8.80	4.10	4,567.4	-2,646.6	1,228.3	27.5	1,228.6	3.91	-3.87	-3.55
4,789.0	8.10	1.10	4,599.0	-2,615.0	1,233.0	27.7	1,233.3	2.58	-2.19	-9.38
4,820.0	7.80	1.40	4,629.7	-2,584.3	1,237.3	27.8	1,237.6	0.98	-0.97	0.97
4,852.0	7.10	1.00	4,661.4	-2,552.6	1,241.4	27.9	1,241.7	2.19	-2.19	-1.25
4,883.0	6.30	358.40	4,692.2	-2,521.8	1,245.0	27.9	1,245.4	2.76	-2.58	-8.39
4,915.0	5.40	355.30	4,724.1	-2,489.9	1,248.3	27.7	1,248.6	2.98	-2.81	-9.69
4,947.0	4.80	357.00	4,755.9	-2,458.1	1,251.1	27.5	1,251.4	1.93	-1.88	5.31
4,978.0	3.50	3.60	4,786.9	-2,427.1	1,253.4	27.5	1,253.7	4.46	-4.19	21.29
5,010.0	2.50	9.50	4,818.8	-2,395.2	1,255.0	27.7	1,255.3	3.27	-3.13	18.44
5,042.0	1.40	15.30	4,850.8	-2,363.2	1,256.1	27.9	1,256.4	3.49	-3.44	18.13
5,073.0	0.40	14.90	4,881.8	-2,332.2	1,256.6	28.0	1,256.9	3.23	-3.23	-1.29
5,105.0	0.30	175.90	4,913.8	-2,300.2	1,256.6	28.0	1,256.9	2.16	-0.31	503.13
5,136.0	0.50	200.50	4,944.8	-2,269.2	1,256.4	28.0	1,256.7	0.84	0.65	79.35
5,199.0	0.40	226.40	5,007.8	-2,206.2	1,256.0	27.7	1,256.3	0.36	-0.16	41.11
5,263.0	0.30	220.10	5,071.8	-2,142.2	1,255.7	27.5	1,256.0	0.17	-0.16	-9.84
5,326.0	0.60	214.90	5,134.8	-2,079.2	1,255.3	27.2	1,255.6	0.48	0.48	-8.25
5,389.0	0.50	200.90	5,197.8	-2,016.2	1,254.8	26.9	1,255.1	0.26	-0.16	-22.22
5,452.0	0.10	262.30	5,260.8	-1,953.2	1,254.5	26.7	1,254.8	0.73	-0.63	97.46
5,515.0	0.10	58.60	5,323.8	-1,890.2	1,254.5	26.7	1,254.8	0.31	0.00	248.10
5,578.0	0.20	217.10	5,386.8	-1,827.2	1,254.5	26.7	1,254.8	0.47	0.16	251.59
5,642.0	0.30	187.90	5,450.8	-1,763.2	1,254.2	26.6	1,254.5	0.25	0.16	-45.63
5,705.0	0.30	202.10	5,513.8	-1,700.2	1,253.9	26.5	1,254.2	0.12	0.00	22.54
5,768.0	0.30	92.50	5,576.8	-1,637.2	1,253.7	26.6	1,254.0	0.78	0.00	-173.97
5,831.0	0.40	78.00	5,639.8	-1,574.2	1,253.8	27.0	1,254.1	0.21	0.16	-23.02
5,894.0	0.20	119.10	5,702.8	-1,511.2	1,253.8	27.3	1,254.1	0.45	-0.32	65.24
5,958.0	0.10	154.00	5,766.8	-1,447.2	1,253.7	27.5	1,254.0	0.20	-0.16	54.53
6,022.0	0.20	230.70	5,830.8	-1,383.2	1,253.6	27.4	1,253.9	0.32	0.16	119.84
6,085.0	0.20	188.90	5,893.8	-1,320.2	1,253.4	27.3	1,253.7	0.23	0.00	-66.35
6,148.0	0.30	205.70	5,956.8	-1,257.2	1,253.1	27.2	1,253.4	0.20	0.16	26.67
6,212.0	0.30	211.60	6,020.8	-1,193.2	1,252.8	27.0	1,253.1	0.05	0.00	9.22
6,275.0	0.30	201.20	6,083.8	-1,130.2	1,252.5	26.9	1,252.8	0.09	0.00	-16.51
6,339.0	0.40	200.60	6,147.8	-1,066.2	1,252.2	26.8	1,252.4	0.16	0.16	-0.94
6,402.0	0.30	175.00	6,210.8	-1,003.2	1,251.8	26.7	1,252.1	0.29	-0.16	-40.63
6,465.0	0.30	200.60	6,273.8	-940.2	1,251.5	26.6	1,251.8	0.21	0.00	40.63
6,560.0	0.30	178.80	6,368.8	-845.2	1,251.0	26.6	1,251.3	0.12	0.00	-22.95
6,624.0	0.50	162.70	6,432.8	-781.2	1,250.6	26.7	1,250.8	0.36	0.31	-25.16
6,687.0	0.40	153.90	6,495.8	-718.2	1,250.1	26.8	1,250.4	0.19	-0.16	-13.97
6,750.0	0.60	183.80	6,558.8	-655.2	1,249.6	26.9	1,249.9	0.51	0.32	47.46
6,814.0	0.50	154.50	6,622.8	-591.2	1,249.0	27.0	1,249.3	0.46	-0.16	-45.78
6,877.0	0.30	98.60	6,685.8	-528.2	1,248.7	27.3	1,249.0	0.66	-0.32	-88.73
6,941.0	0.30	22.20	6,749.8	-464.2	1,248.8	27.5	1,249.1	0.58	0.00	-119.38
7,004.0	0.10	278.30	6,812.8	-401.2	1,249.0	27.5	1,249.3	0.54	-0.32	-164.92

Mesa West Directional

Survey Report



Company: Elm Ridge Exploration Company.
Project: Sandoval County, NM (Nad 83)
Site: Sec 11, T-22-N,R-3-W
Well: Bonanza #14
Wellbore: DD
Design: Final

Local Co-ordinate Reference: Well Bonanza #14
TVD Reference: RKB @ 7214.0usft (KB;16.4')
MD Reference: RKB @ 7214.0usft (KB;16.4')
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: WellPlan Services

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,067.0	0.10	164.90	6,875.8	-338.2	1,249.0	27.5	1,249.3	0.27	0.00	-180.00
7,131.0	0.10	236.60	6,939.8	-274.2	1,248.9	27.5	1,249.2	0.18	0.00	112.03
7,194.0	0.10	268.30	7,002.8	-211.2	1,248.8	27.3	1,249.1	0.09	0.00	50.32
7,257.0	0.10	312.00	7,065.8	-148.2	1,248.9	27.3	1,249.2	0.12	0.00	69.37
7,321.0	0.10	18.10	7,129.8	-84.2	1,249.0	27.2	1,249.3	0.17	0.00	103.28
7,384.0	0.20	347.80	7,192.8	-21.2	1,249.1	27.2	1,249.4	0.20	0.16	-48.10
7,447.0	0.20	15.50	7,255.8	41.8	1,249.3	27.2	1,249.6	0.15	0.00	43.97
7,509.0	0.10	229.50	7,317.8	103.8	1,249.4	27.2	1,249.7	0.47	-0.16	-235.48
7,573.0	0.10	283.40	7,381.8	167.8	1,249.4	27.1	1,249.7	0.14	0.00	84.22
Last Svy;7585' MD										
7,585.0	0.30	231.60	7,393.8	179.8	1,249.4	27.1	1,249.7	2.09	1.67	-431.67
Extrap to TD;7635' MD										
7,635.0	0.30	231.60	7,443.7	229.7	1,249.2	26.9	1,249.5	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,585.0	7,393.8	1,249.4	27.1	Last Svy;7585' MD
7,635.0	7,443.7	1,249.2	26.9	Extrap to TD;7635' MD

Checked By: _____ Approved By: _____ Date: _____