

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"

Forming Field Office ☒ AMENDED REPORT
Bureau of Land Management

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-043- 21186	39189	LINDRITH GALLUP-DAKOTA, WEST
22998	Property Name CHACON AMIGOS	Well Number 18
OGRID No. 371838	Operator Name DJR Operating, LLC	Elevation 7195.6

10 Surface Location

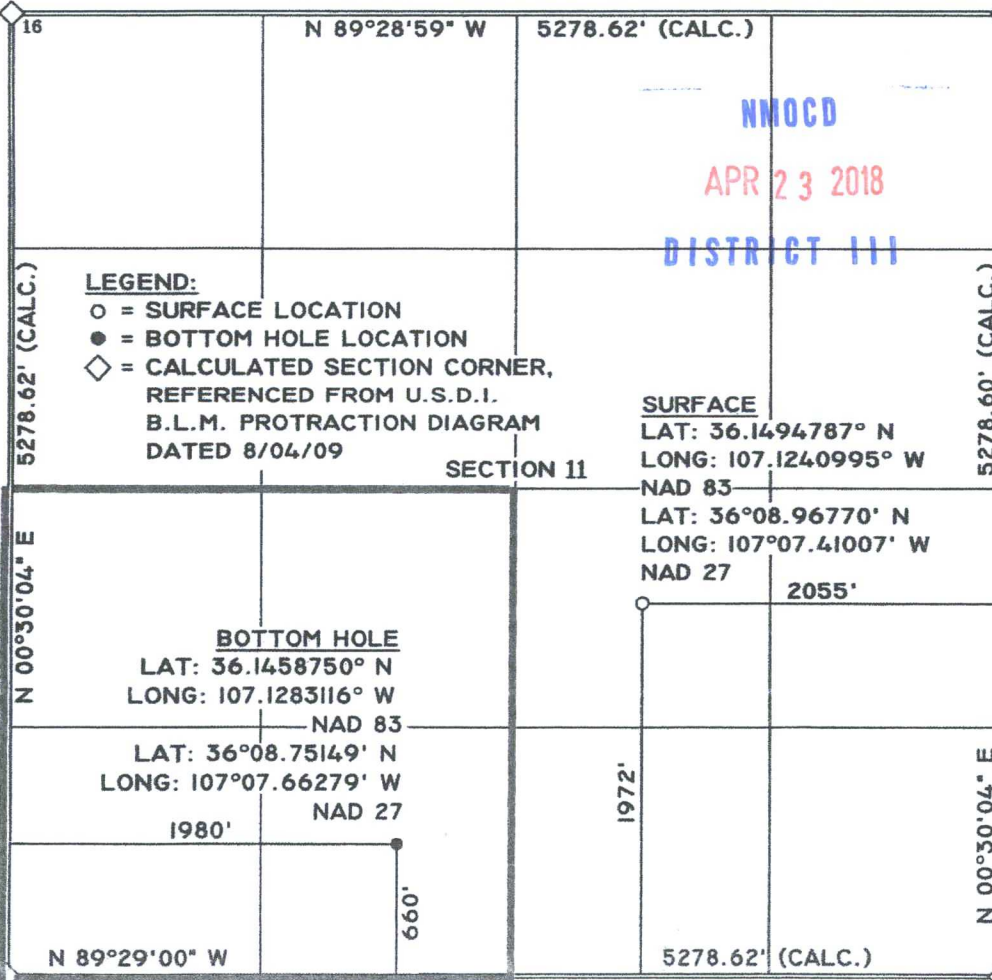
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	11	22 N	3 W		1972	SOUTH	2055	EAST	SANDOVAL

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
N	11	22 N	3 W		664	SOUTH	1980	WEST	SANDOVAL

160	Joint or Infill	Consolidation Code	Order No.
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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@djrlc.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 is true and correct to the best of my knowledge.

07/25/13
Date of Survey
Signature and Seal: *John Vukovich*
Professional Surveyor
14831

Certificate Number: 14831
United Field Services, Inc. 9-6-2013



MESAWEST

DIRECTIONAL

Client: Elm Ridge Exploration
API #: 30-043-21186
Well Name: Chacon Amigos #18
Location: Sec 11, T22N, R3W
Job Number: 1429

Start Date: 20-Dec-14
End Date: 6-Jan-15
Well Type: S-Well

Plan Number: 2

DIRECTIONAL DRILLING REPORT

CONTENTS:

Surveys
Well Plot
EOW Report
Bottom Hole Assemblies
Daily Tower Report
Slide Sheets
Cost Summary

Elm Ridge Exploration Company.

Sandoval County, NM (Nad 83)

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

Chacon Amigos #18

DD-Job #1429

UWI:

WL:

Survey: Final

Standard Survey Report

15 January, 2015



Elm Ridge Exploration Company.

Project: Sandoval County, NM (Nad 83)
Site: Sec 11, T-22-N,R-3-W
Well: Chacon Amigos #18
Wellbore: DD-Job #1429
Plan: Final

Reference Details - V CENTRE

Geodetic System: US State Plane 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Central Zone
 Northing: 1874836.77
 Easting: 1382359.09
 Latitude: 36° 8' 58.123 N
 Longitude: 107° 7' 26.758 W
 Grid Convergence: 0.52° East
 Ground Elevation: 7191.2
 KB Elevation: RKB @ 7207.6usft (Bearcat #7 KB;16.4')

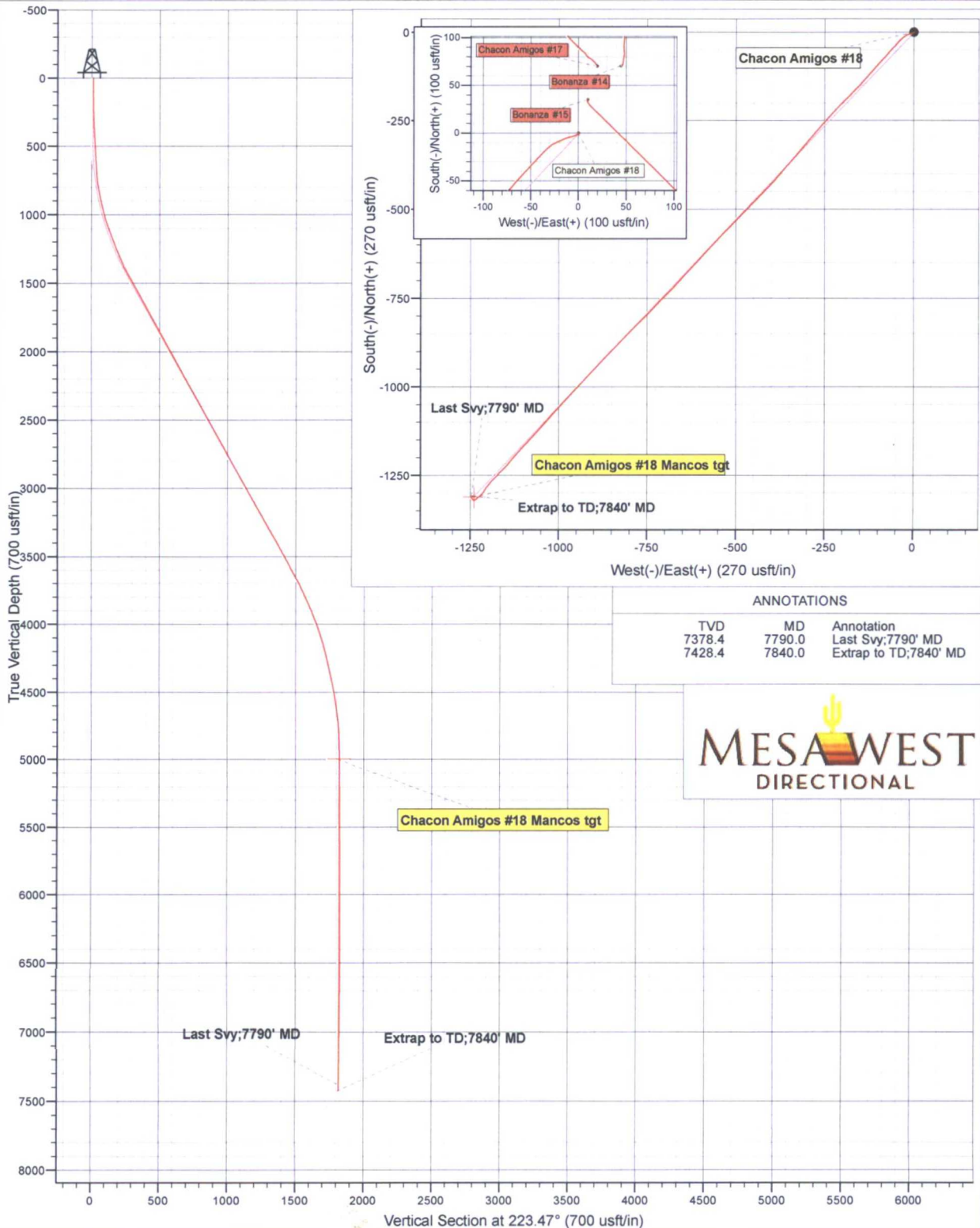


Azimuths to True North
 Magnetic North: 9.27°

Magnetic Field
 Strength: 50249.0snT
 Dip Angle: 63.02°
 Date: 23/09/2013
 Model: IGRF2010

PLAN DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	1476.5	29.29	223.47	1434.5	-177.3	-168.0	3.00	223.47	244.2	
4	3923.1	29.29	223.47	3568.3	-1046.1	-991.6	0.00	0.00	1441.4	
5	5387.9	0.00	0.00	4970.0	-1312.0	-1243.6	2.00	180.00	1807.7	
6	5417.9	0.00	0.00	5000.0	-1312.0	-1243.6	0.00	0.00	1807.7	Chacon Amigos #18 Mancos tgt
7	7817.9	0.00	0.00	7400.0	-1312.0	-1243.6	0.00	0.00	1807.7	



ANNOTATIONS

TVD	MD	Annotation
7378.4	7790.0	Last Svy; 7790' MD
7428.4	7840.0	Extrap to TD; 7840' MD

MESA WEST
 DIRECTIONAL

Mesa West Directional
Survey Report



Company:	Elm Ridge Exploration Company.	Local Co-ordinate Reference:	Well Chacon Amigos #18
Project:	Sandoval County, NM (Nad 83)	TVD Reference:	RKB @ 7207.6usft (Bearcat #7 KB;16.4')
Site:	Sec 11, T-22-N,R-3-W	MD Reference:	RKB @ 7207.6usft (Bearcat #7 KB;16.4')
Well:	Chacon Amigos #18	North Reference:	True
Wellbore:	DD-Job #1429	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	Chacon Amigos #18		
Well Position	+N/-S	0.0 usft	Northing: 1,874,836.77 usft
	+E/-W	0.0 usft	Easting: 1,382,359.09 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	36° 8' 58.123 N
		Longitude:	107° 7' 26.758 W
		Ground Level:	7,191.2 usft

Wellbore	DD-Job #1429				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	23/09/2013	9.27	63.02	50,249

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)	Direction (°)	
	0.0	0.0	0.0	223.47	

Survey Program	Date	15/01/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	7,840.0	Final (DD-Job #1429)	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	-7,207.6	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	-7,107.6	0.0	0.0	0.0	0.00	0.00	0.00
132.0	1.40	222.10	132.0	-7,075.6	-0.3	-0.3	0.4	4.38	4.38	0.00
163.0	1.10	235.00	163.0	-7,044.6	-0.7	-0.8	1.1	1.32	-0.97	41.61
224.0	1.70	244.80	224.0	-6,983.6	-1.5	-2.1	2.5	1.06	0.98	16.07
286.0	2.30	243.30	285.9	-6,921.7	-2.4	-4.0	4.5	0.97	0.97	-2.42
377.0	3.00	257.80	376.8	-6,830.8	-3.7	-8.0	8.2	1.06	0.77	15.93
440.0	3.40	250.20	439.7	-6,767.9	-4.7	-11.3	11.2	0.92	0.63	-12.06
503.0	3.60	251.70	502.6	-6,705.0	-6.0	-15.0	14.6	0.35	0.32	2.38
524.0	4.10	244.80	523.6	-6,684.0	-6.5	-16.3	15.9	3.24	2.38	-32.86

Mesa West Directional
Survey Report



Company:	Elm Ridge Exploration Company.	Local Co-ordinate Reference:	Well Chacon Amigos #18
Project:	Sandoval County, NM (Nad 83)	TVD Reference:	RKB @ 7207.6usft (Bearcat #7 KB;16.4')
Site:	Sec 11, T-22-N,R-3-W	MD Reference:	RKB @ 7207.6usft (Bearcat #7 KB;16.4')
Well:	Chacon Amigos #18	North Reference:	True
Wellbore:	DD-Job #1429	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)
593.0	3.60	246.10	592.4	-6,615.2	-8.4	-20.5	20.2	0.74	-0.72	1.88
624.0	3.80	246.90	623.4	-6,584.2	-9.2	-22.3	22.0	0.67	0.65	2.58
655.0	4.40	246.10	654.3	-6,553.3	-10.1	-24.3	24.1	1.94	1.94	-2.58
686.0	4.80	241.80	685.2	-6,522.4	-11.2	-26.6	26.4	1.70	1.29	-13.87
717.0	6.20	237.00	716.0	-6,491.6	-12.7	-29.1	29.3	4.75	4.52	-15.48
748.0	7.00	230.50	746.8	-6,460.8	-14.8	-32.0	32.8	3.53	2.58	-20.97
778.0	8.40	227.00	776.6	-6,431.0	-17.5	-35.0	36.8	4.92	4.67	-11.67
809.0	8.70	223.70	807.2	-6,400.4	-20.7	-38.3	41.4	1.85	0.97	-10.65
840.0	9.50	223.70	837.8	-6,369.8	-24.3	-41.7	46.3	2.58	2.58	0.00
850.0	10.20	223.70	847.7	-6,359.9	-25.5	-42.8	48.0	7.00	7.00	0.00
871.0	10.60	222.50	868.3	-6,339.3	-28.3	-45.4	51.8	2.17	1.90	-5.71
901.0	11.20	222.90	897.8	-6,309.8	-32.5	-49.3	57.5	2.02	2.00	1.33
932.0	12.30	223.10	928.1	-6,279.5	-37.1	-53.6	63.8	3.55	3.55	0.65
963.0	14.20	223.10	958.3	-6,249.3	-42.3	-58.4	70.9	6.13	6.13	0.00
994.0	15.60	222.60	988.3	-6,219.3	-48.1	-63.9	78.8	4.54	4.52	-1.61
1,025.0	16.60	220.60	1,018.0	-6,189.6	-54.5	-69.6	87.4	3.69	3.23	-6.45
1,057.0	17.70	219.70	1,048.6	-6,159.0	-61.7	-75.6	96.9	3.54	3.44	-2.81
1,089.0	18.60	220.70	1,079.0	-6,128.6	-69.4	-82.1	106.8	2.98	2.81	3.13
1,120.0	19.30	222.10	1,108.4	-6,099.2	-76.9	-88.7	116.9	2.69	2.26	4.52
1,152.0	20.00	223.40	1,138.5	-6,069.1	-84.8	-96.0	127.6	2.58	2.19	4.06
1,184.0	20.50	222.80	1,168.5	-6,039.1	-92.9	-103.6	138.7	1.69	1.56	-1.88
1,215.0	21.20	220.90	1,197.5	-6,010.1	-101.1	-111.0	149.7	3.14	2.26	-6.13
1,247.0	21.50	220.80	1,227.3	-5,980.3	-109.9	-118.6	161.4	0.94	0.94	-0.31
1,278.0	21.90	221.30	1,256.1	-5,951.5	-118.6	-126.1	172.8	1.42	1.29	1.61
1,310.0	22.60	220.30	1,285.7	-5,921.9	-127.7	-134.0	184.9	2.49	2.19	-3.13
1,342.0	23.30	221.90	1,315.2	-5,892.4	-137.1	-142.2	197.4	2.93	2.19	5.00
1,373.0	24.30	221.80	1,343.5	-5,864.1	-146.5	-150.6	209.9	3.23	3.23	-0.32
1,405.0	25.30	224.80	1,372.6	-5,835.0	-156.2	-159.8	223.3	5.02	3.13	9.38
1,436.0	26.90	224.80	1,400.4	-5,807.2	-165.9	-169.4	236.9	5.16	5.16	0.00
1,468.0	28.40	224.90	1,428.8	-5,778.8	-176.4	-179.9	251.8	4.69	4.69	0.31
1,500.0	28.80	224.10	1,456.9	-5,750.7	-187.4	-190.6	267.1	1.73	1.25	-2.50
1,531.0	30.00	223.90	1,483.9	-5,723.7	-198.3	-201.2	282.3	3.88	3.87	-0.65
1,563.0	30.30	223.60	1,511.5	-5,696.1	-209.9	-212.3	298.4	1.05	0.94	-0.94
1,595.0	29.80	222.80	1,539.2	-5,668.4	-221.6	-223.3	314.4	2.00	-1.56	-2.50
1,658.0	28.80	221.60	1,594.2	-5,613.4	-244.4	-244.0	345.2	1.84	-1.59	-1.90
1,721.0	28.10	220.60	1,649.6	-5,558.0	-267.0	-263.7	375.2	1.34	-1.11	-1.59
1,784.0	29.00	220.50	1,704.9	-5,502.7	-289.9	-283.3	405.3	1.43	1.43	-0.16
1,848.0	29.50	220.80	1,760.8	-5,446.8	-313.6	-303.7	436.5	0.81	0.78	0.47
1,911.0	28.40	220.00	1,815.9	-5,391.7	-336.9	-323.4	467.0	1.85	-1.75	-1.27
1,974.0	28.70	220.60	1,871.2	-5,336.4	-359.8	-342.9	497.0	0.66	0.48	0.95
2,038.0	28.60	220.10	1,927.4	-5,280.2	-383.2	-362.8	527.7	0.41	-0.16	-0.78
2,101.0	28.80	220.90	1,982.6	-5,225.0	-406.2	-382.4	557.9	0.69	0.32	1.27
2,165.0	29.00	223.60	2,038.7	-5,168.9	-429.1	-403.2	588.8	2.06	0.31	4.22
2,228.0	29.10	223.60	2,093.7	-5,113.9	-451.3	-424.3	619.4	0.16	0.16	0.00

Mesa West Directional
Survey Report



Company:	Elm Ridge Exploration Company.	Local Co-ordinate Reference:	Well Chacon Amigos #18
Project:	Sandoval County, NM (Nad 83)	TVD Reference:	RKB @ 7207.6usft (Bearcat #7 KB;16.4')
Site:	Sec 11, T-22-N,R-3-W	MD Reference:	RKB @ 7207.6usft (Bearcat #7 KB;16.4')
Well:	Chacon Amigos #18	North Reference:	True
Wellbore:	DD-Job #1429	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)
2,291.0	28.80	223.30	2,148.9	-5,058.7	-473.4	-445.3	649.9	0.53	-0.48	-0.48
2,354.0	29.60	224.30	2,203.9	-5,003.7	-495.6	-466.6	680.6	1.49	1.27	1.59
2,417.0	30.10	224.40	2,258.5	-4,949.1	-518.0	-488.5	712.0	0.80	0.79	0.16
2,481.0	30.10	224.50	2,313.9	-4,893.7	-540.9	-510.9	744.1	0.08	0.00	0.16
2,544.0	29.20	223.60	2,368.6	-4,839.0	-563.3	-532.6	775.2	1.59	-1.43	-1.43
2,607.0	28.80	223.30	2,423.7	-4,783.9	-585.5	-553.6	805.8	0.68	-0.63	-0.48
2,671.0	28.30	222.80	2,480.0	-4,727.6	-607.8	-574.5	836.4	0.87	-0.78	-0.78
2,734.0	28.60	223.30	2,535.3	-4,672.3	-629.8	-595.0	866.4	0.61	0.48	0.79
2,798.0	28.90	223.60	2,591.5	-4,616.1	-652.1	-616.2	897.2	0.52	0.47	0.47
2,861.0	29.00	221.80	2,646.6	-4,561.0	-674.5	-636.8	927.7	1.39	0.16	-2.86
2,924.0	28.90	223.00	2,701.7	-4,505.9	-697.0	-657.4	958.1	0.94	-0.16	1.90
2,987.0	28.70	222.50	2,756.9	-4,450.7	-719.3	-678.0	988.5	0.50	-0.32	-0.79
3,050.0	28.70	225.10	2,812.2	-4,395.4	-741.2	-698.9	1,018.7	1.98	0.00	4.13
3,114.0	29.20	223.50	2,868.2	-4,339.4	-763.3	-720.6	1,049.7	1.44	0.78	-2.50
3,177.0	29.10	224.10	2,923.2	-4,284.4	-785.5	-741.8	1,080.4	0.49	-0.16	0.95
3,240.0	29.90	225.30	2,978.0	-4,229.6	-807.5	-763.6	1,111.4	1.58	1.27	1.90
3,304.0	29.50	224.20	3,033.6	-4,174.0	-830.0	-786.0	1,143.1	1.06	-0.63	-1.72
3,367.0	29.50	224.50	3,088.5	-4,119.1	-852.2	-807.6	1,174.1	0.23	0.00	0.48
3,430.0	28.50	223.40	3,143.6	-4,064.0	-874.2	-828.8	1,204.7	1.80	-1.59	-1.75
3,494.0	29.20	224.10	3,199.6	-4,008.0	-896.5	-850.2	1,235.6	1.21	1.09	1.09
3,557.0	30.10	223.70	3,254.4	-3,953.2	-919.0	-871.8	1,266.7	1.46	1.43	-0.63
3,620.0	29.90	223.30	3,308.9	-3,898.7	-941.8	-893.5	1,298.2	0.45	-0.32	-0.63
3,684.0	29.50	223.40	3,364.5	-3,843.1	-964.9	-915.3	1,329.9	0.63	-0.63	0.16
3,747.0	29.00	223.20	3,419.5	-3,788.1	-987.3	-936.4	1,360.7	0.81	-0.79	-0.32
3,810.0	28.60	222.10	3,474.7	-3,732.9	-1,009.6	-956.9	1,391.1	1.05	-0.63	-1.75
3,873.0	28.10	222.80	3,530.1	-3,677.5	-1,031.7	-977.1	1,421.0	0.95	-0.79	1.11
3,937.0	27.60	222.60	3,586.7	-3,620.9	-1,053.7	-997.4	1,450.9	0.79	-0.78	-0.31
4,000.0	27.30	222.10	3,642.6	-3,565.0	-1,075.1	-1,017.0	1,479.9	0.60	-0.48	-0.79
4,063.0	26.00	221.80	3,698.9	-3,508.7	-1,096.1	-1,035.9	1,508.1	2.07	-2.06	-0.48
4,127.0	25.30	222.10	3,756.6	-3,451.0	-1,116.7	-1,054.4	1,535.8	1.11	-1.09	0.47
4,190.0	25.20	222.90	3,813.6	-3,394.0	-1,136.5	-1,072.5	1,562.7	0.56	-0.16	1.27
4,221.0	24.90	221.90	3,841.7	-3,365.9	-1,146.2	-1,081.4	1,575.8	1.67	-0.97	-3.23
4,253.0	23.80	221.80	3,870.9	-3,336.7	-1,156.1	-1,090.2	1,589.0	3.44	-3.44	-0.31
4,285.0	22.30	223.20	3,900.3	-3,307.3	-1,165.3	-1,098.6	1,601.5	4.99	-4.69	4.38
4,316.0	22.00	222.90	3,929.0	-3,278.6	-1,173.8	-1,106.6	1,613.2	1.03	-0.97	-0.97
4,348.0	21.10	222.00	3,958.8	-3,248.8	-1,182.5	-1,114.6	1,625.0	3.00	-2.81	-2.81
4,379.0	20.00	222.10	3,987.8	-3,219.8	-1,190.6	-1,121.8	1,635.9	3.55	-3.55	0.32
4,411.0	19.90	220.40	4,017.9	-3,189.7	-1,198.8	-1,129.0	1,646.8	1.84	-0.31	-5.31
4,442.0	19.00	220.00	4,047.1	-3,160.5	-1,206.7	-1,135.7	1,657.1	2.93	-2.90	-1.29
4,474.0	18.40	219.90	4,077.4	-3,130.2	-1,214.6	-1,142.3	1,667.3	1.88	-1.88	-0.31
4,506.0	16.60	220.90	4,107.9	-3,099.7	-1,221.9	-1,148.5	1,676.9	5.70	-5.63	3.13
4,538.0	15.60	224.90	4,138.7	-3,068.9	-1,228.4	-1,154.6	1,685.8	4.67	-3.13	12.50
4,569.0	14.60	227.90	4,168.6	-3,039.0	-1,234.0	-1,160.4	1,693.9	4.09	-3.23	9.68

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: Chacon Amigos #18
Wellbore: DD-Job #1429
Design: Final

Local Co-ordinate Reference: Well Chacon Amigos #18
TVD Reference: RKB @ 7207.6usft (Bearcat #7 KB;16.4')
MD Reference: RKB @ 7207.6usft (Bearcat #7 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)
4,601.0	14.30	227.90	4,199.6	-3,008.0	-1,239.3	-1,166.3	1,701.8	0.94	-0.94	0.00
4,632.0	14.20	222.80	4,229.6	-2,978.0	-1,244.7	-1,171.7	1,709.4	4.06	-0.32	-16.45
4,664.0	14.30	222.10	4,260.7	-2,946.9	-1,250.5	-1,177.1	1,717.3	0.62	0.31	-2.19
4,696.0	13.30	222.70	4,291.7	-2,915.9	-1,256.1	-1,182.2	1,724.9	3.16	-3.13	1.88
4,727.0	12.80	224.30	4,321.9	-2,885.7	-1,261.2	-1,187.0	1,731.9	1.99	-1.61	5.16
4,759.0	12.00	222.10	4,353.2	-2,854.4	-1,266.2	-1,191.7	1,738.8	2.90	-2.50	-6.88
4,790.0	12.00	220.30	4,383.5	-2,824.1	-1,271.1	-1,196.0	1,745.3	1.21	0.00	-5.81
4,822.0	11.30	221.90	4,414.9	-2,792.7	-1,275.9	-1,200.2	1,751.7	2.41	-2.19	5.00
4,854.0	10.70	221.40	4,446.3	-2,761.3	-1,280.5	-1,204.3	1,757.8	1.90	-1.88	-1.56
4,886.0	10.80	217.70	4,477.7	-2,729.9	-1,285.1	-1,208.1	1,763.8	2.18	0.31	-11.56
4,917.0	10.90	210.10	4,508.2	-2,699.4	-1,289.9	-1,211.3	1,769.5	4.62	0.32	-24.52
4,949.0	10.10	211.60	4,539.6	-2,668.0	-1,294.9	-1,214.3	1,775.2	2.64	-2.50	4.69
4,980.0	9.50	215.80	4,570.2	-2,637.4	-1,299.3	-1,217.2	1,780.4	3.01	-1.94	13.55
5,012.0	8.40	220.40	4,601.8	-2,605.8	-1,303.2	-1,220.3	1,785.3	4.10	-3.44	14.38
5,044.0	7.90	226.80	4,633.5	-2,574.1	-1,306.5	-1,223.4	1,789.9	3.23	-1.56	20.00
5,075.0	7.00	230.80	4,664.2	-2,543.4	-1,309.2	-1,226.4	1,793.9	3.35	-2.90	12.90
5,107.0	6.20	232.50	4,696.0	-2,511.6	-1,311.5	-1,229.3	1,797.5	2.57	-2.50	5.31
5,139.0	5.70	227.00	4,727.8	-2,479.8	-1,313.6	-1,231.8	1,800.8	2.37	-1.56	-17.19
5,170.0	4.70	227.90	4,758.7	-2,448.9	-1,315.5	-1,233.9	1,803.6	3.24	-3.23	2.90
5,202.0	3.40	228.70	4,790.6	-2,417.0	-1,317.0	-1,235.6	1,805.9	4.07	-4.06	2.50
5,234.0	2.30	227.90	4,822.6	-2,385.0	-1,318.1	-1,236.8	1,807.4	3.44	-3.44	-2.50
5,265.0	1.90	225.10	4,853.5	-2,354.1	-1,318.8	-1,237.6	1,808.6	1.33	-1.29	-9.03
5,297.0	1.40	254.00	4,885.5	-2,322.1	-1,319.3	-1,238.4	1,809.4	2.98	-1.56	90.31
5,328.0	1.70	254.90	4,916.5	-2,291.1	-1,319.5	-1,239.2	1,810.2	0.97	0.97	2.90
5,392.0	0.50	267.40	4,980.5	-2,227.1	-1,319.8	-1,240.4	1,811.2	1.90	-1.88	19.53
5,455.0	0.20	336.70	5,043.5	-2,164.1	-1,319.7	-1,240.7	1,811.3	0.74	-0.48	110.00
5,518.0	0.40	293.40	5,106.5	-2,101.1	-1,319.5	-1,240.9	1,811.4	0.46	0.32	-68.73
5,581.0	0.10	301.80	5,169.5	-2,038.1	-1,319.4	-1,241.2	1,811.4	0.48	-0.48	13.33
5,645.0	0.30	220.00	5,233.5	-1,974.1	-1,319.5	-1,241.3	1,811.6	0.47	0.31	-127.81
5,708.0	0.20	241.20	5,296.5	-1,911.1	-1,319.7	-1,241.5	1,811.9	0.21	-0.16	33.65
5,772.0	0.40	220.50	5,360.5	-1,847.1	-1,319.9	-1,241.8	1,812.2	0.35	0.31	-32.34
5,835.0	0.40	259.30	5,423.5	-1,784.1	-1,320.1	-1,242.1	1,812.6	0.42	0.00	61.59
5,899.0	0.40	246.40	5,487.5	-1,720.1	-1,320.3	-1,242.6	1,813.0	0.14	0.00	-20.16
5,962.0	0.10	298.20	5,550.5	-1,657.1	-1,320.3	-1,242.8	1,813.2	0.55	-0.48	82.22
6,025.0	0.50	251.80	5,613.5	-1,594.1	-1,320.4	-1,243.1	1,813.5	0.69	0.63	-73.65
6,088.0	0.20	249.20	5,676.5	-1,531.1	-1,320.5	-1,243.5	1,813.8	0.48	-0.48	-4.13
6,152.0	0.50	272.50	5,740.5	-1,467.1	-1,320.5	-1,243.9	1,814.1	0.51	0.47	36.41
6,215.0	0.40	212.50	5,803.5	-1,404.1	-1,320.7	-1,244.3	1,814.5	0.73	-0.16	-95.24
6,278.0	0.60	261.60	5,866.5	-1,341.1	-1,320.9	-1,244.7	1,815.0	0.72	0.32	77.94
6,341.0	0.50	214.20	5,929.5	-1,278.1	-1,321.2	-1,245.2	1,815.5	0.72	-0.16	-75.24
6,405.0	0.60	335.60	5,993.5	-1,214.1	-1,321.1	-1,245.5	1,815.7	1.50	0.16	189.69
6,468.0	0.90	331.60	6,056.5	-1,151.1	-1,320.4	-1,245.9	1,815.4	0.48	0.48	-6.35
6,531.0	1.10	324.00	6,119.5	-1,088.1	-1,319.5	-1,246.4	1,815.1	0.38	0.32	-12.06

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: Chacon Amigos #18
Wellbore: DD-Job #1429
Design: Final

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

Well Chacon Amigos #18
 RKB @ 7207.6usft (Bearcat #7 KB;16.4')
 RKB @ 7207.6usft (Bearcat #7 KB;16.4')
 True
 Minimum Curvature
 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)
6,594.0	1.00	330.30	6,182.5	-1,025.1	-1,318.5	-1,247.1	1,814.8	0.24	-0.16	10.00
6,657.0	0.60	320.10	6,245.4	-962.2	-1,317.8	-1,247.6	1,814.6	0.67	-0.63	-16.19
6,721.0	0.70	302.50	6,309.4	-898.2	-1,317.3	-1,248.1	1,814.7	0.35	0.16	-27.50
6,784.0	1.00	325.50	6,372.4	-835.2	-1,316.7	-1,248.7	1,814.6	0.71	0.48	36.51
6,847.0	0.70	300.10	6,435.4	-772.2	-1,316.0	-1,249.4	1,814.6	0.75	-0.48	-40.32
6,910.0	1.10	316.50	6,498.4	-709.2	-1,315.4	-1,250.1	1,814.7	0.75	0.63	26.03
6,973.0	0.60	272.50	6,561.4	-646.2	-1,314.9	-1,250.9	1,814.9	1.25	-0.79	-69.84
7,036.0	0.60	261.00	6,624.4	-583.2	-1,315.0	-1,251.5	1,815.3	0.19	0.00	-18.25
7,100.0	0.60	34.70	6,688.4	-519.2	-1,314.7	-1,251.7	1,815.3	1.72	0.00	208.91
7,163.0	0.80	44.40	6,751.4	-456.2	-1,314.2	-1,251.2	1,814.5	0.37	0.32	15.40
7,226.0	0.60	44.40	6,814.4	-393.2	-1,313.6	-1,250.6	1,813.7	0.32	-0.32	0.00
7,289.0	0.60	67.00	6,877.4	-330.2	-1,313.2	-1,250.1	1,813.1	0.37	0.00	35.87
7,352.0	0.80	62.10	6,940.4	-267.2	-1,312.9	-1,249.4	1,812.4	0.33	0.32	-7.78
7,416.0	0.60	39.10	7,004.4	-203.2	-1,312.4	-1,248.8	1,811.6	0.53	-0.31	-35.94
7,479.0	0.40	81.20	7,067.4	-140.2	-1,312.1	-1,248.4	1,811.1	0.64	-0.32	66.83
7,543.0	0.60	30.30	7,131.4	-76.2	-1,311.8	-1,248.0	1,810.6	0.73	0.31	-79.53
7,606.0	0.80	48.00	7,194.4	-13.2	-1,311.2	-1,247.5	1,809.9	0.46	0.32	28.10
7,669.0	0.70	57.40	7,257.4	49.8	-1,310.7	-1,246.8	1,809.0	0.25	-0.16	14.92
7,733.0	1.00	347.00	7,321.4	113.8	-1,310.0	-1,246.6	1,808.4	1.58	0.47	-110.00
Last Svy;7790' MD										
7,790.0	0.50	9.70	7,378.4	170.8	-1,309.3	-1,246.7	1,807.9	1.00	-0.88	39.82
Extrap to TD;7840' MD										
7,840.0	0.50	9.70	7,428.4	220.8	-1,308.8	-1,246.6	1,807.5	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,790.0	7,378.4	-1,309.3	-1,246.7	Last Svy;7790' MD
7,840.0	7,428.4	-1,308.8	-1,246.6	Extrap to TD;7840' MD

Checked By: _____ Approved By: _____ Date: _____