

SURVEY DATA CERTIFICATION

OCD Received
Date: 03/19/2020

Job #: 63498
Client: Concho Oil and Gas
County & State: Eddy County
Well: Gissler Federal 17H
API No: 300154491400
Proposed Direction: 89.82°

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
1109.00 ft	1108.95 ft	0.90°	95.14°	5.67 S	2.1 W	Gyro Surveys
Data Source Company:						SDI

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
17-Sep-18	1,310 ft	1.05°	111.69°

Last Survey Date	Last Survey Depth	INC	AZM
27-Sep-18	9,534 ft	89.28°	80.60°

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
27-Sep-18	9,601 ft	89.28°	80.60°

Survey Instrument Type

MWD, Velocity Tool

CORRECTION INFORMATION

Magnetic Declination Used	7.49 degrees
Grid Convergence Used	0.18 degrees
Total Correction	7.31 degrees

Corrected to True/Grid North

Grid North

Joshua Zeigler

Signature

9/27/2018

Date

TO THE BEST OF MY KNOWLEDGE, I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.



CONCHO

NEW MEXICO SHELF

EDDY COUNTY, NM

LOCO HILLS

GISSLER FED #17H

OWB

Design: ACTUAL WELLPATH

Standard Survey Report

03 October, 2018

Company:	NEW MEXICO SHELF	Local Co-ordinate Reference:	Well GISSLER FED #17H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
Site:	LOCO HILLS	MD Reference:	RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
Well:	GISSLER FED #17H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

Project	EDDY COUNTY, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	LOCO HILLS			
Site Position:		Northing:	674,351.30 usft	Latitude: 32° 51' 12.377 N
From:	Map	Easting:	601,657.80 usft	Longitude: 104° 0' 8.270 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.18 °

Well	GISSLER FED #17H			
Well Position	+N/-S	0.0 usft	Northing:	676,345.00 usft
	+E/-W	0.0 usft	Easting:	601,495.80 usft
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft
			Ground Level:	3,689.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	8/13/2018	7.10	60.54	48,132.48821575

Design	ACTUAL WELLPATH			
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	89.82

Survey Program	Date 10/3/2018			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	1,109.0	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
1,310.0	9,601.0	MWD-INTER/CURVE/LATERAL (OWB)	MWD+HRGM+MS	MWD + HRGM + Multi-Station Correction

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (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	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.29	147.95	100.0	-0.2	0.1	0.1	0.29	0.29	0.00
125.0	0.40	146.32	125.0	-0.3	0.2	0.2	0.44	0.44	-6.52
150.0	0.40	122.94	150.0	-0.5	0.3	0.3	0.65	0.00	-93.52
175.0	0.34	137.62	175.0	-0.6	0.5	0.5	0.45	-0.24	58.72
200.0	0.30	160.60	200.0	-0.7	0.5	0.5	0.53	-0.16	91.92
225.0	0.35	149.78	225.0	-0.8	0.6	0.6	0.32	0.20	-43.28
250.0	0.28	135.40	250.0	-0.9	0.7	0.7	0.42	-0.28	-57.52
275.0	0.31	141.96	275.0	-1.0	0.8	0.8	0.18	0.12	26.24
300.0	0.40	158.72	300.0	-1.1	0.8	0.8	0.55	0.36	67.04

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Site:	LOCO HILLS	MD Reference:	RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
Well:	GISSLER FED #17H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
325.0	0.36	160.43	325.0	-1.3	0.9	0.9	0.17	-0.16	6.84
350.0	0.51	173.54	350.0	-1.5	0.9	0.9	0.72	0.60	52.44
375.0	0.56	195.49	375.0	-1.7	0.9	0.9	0.84	0.20	87.80
400.0	0.66	200.17	400.0	-2.0	0.8	0.8	0.45	0.40	18.72
425.0	0.78	207.66	425.0	-2.3	0.7	0.7	0.61	0.48	29.96
450.0	0.82	220.72	450.0	-2.5	0.5	0.5	0.74	0.16	52.24
475.0	0.92	222.22	475.0	-2.8	0.3	0.2	0.41	0.40	6.00
500.0	0.92	228.90	500.0	-3.1	0.0	0.0	0.43	0.00	26.72
525.0	0.92	228.89	525.0	-3.4	-0.3	-0.3	0.00	0.00	-0.04
550.0	0.85	229.90	550.0	-3.6	-0.6	-0.6	0.29	-0.28	4.04
575.0	0.83	234.77	575.0	-3.8	-0.9	-0.9	0.30	-0.08	19.48
600.0	0.82	238.54	600.0	-4.0	-1.2	-1.2	0.22	-0.04	15.08
625.0	0.68	235.63	625.0	-4.2	-1.5	-1.5	0.58	-0.56	-11.64
650.0	0.67	230.62	650.0	-4.4	-1.7	-1.7	0.24	-0.04	-20.04
675.0	0.65	232.61	675.0	-4.6	-2.0	-2.0	0.12	-0.08	7.96
700.0	0.64	235.48	700.0	-4.7	-2.2	-2.2	0.14	-0.04	11.48
725.0	0.63	234.97	725.0	-4.9	-2.4	-2.4	0.05	-0.04	-2.04
750.0	0.65	239.15	750.0	-5.1	-2.6	-2.7	0.20	0.08	16.72
775.0	0.47	238.00	775.0	-5.2	-2.9	-2.9	0.72	-0.72	-4.60
800.0	0.48	240.03	800.0	-5.3	-3.0	-3.1	0.08	0.04	8.12
825.0	0.45	240.41	825.0	-5.4	-3.2	-3.2	0.12	-0.12	1.52
850.0	0.35	234.13	850.0	-5.5	-3.4	-3.4	0.44	-0.40	-25.12
875.0	0.21	234.50	875.0	-5.5	-3.5	-3.5	0.56	-0.56	1.48
900.0	0.16	234.38	900.0	-5.6	-3.5	-3.5	0.20	-0.20	-0.48
925.0	0.06	175.75	925.0	-5.6	-3.5	-3.6	0.55	-0.40	-234.52
950.0	0.13	96.75	950.0	-5.6	-3.5	-3.5	0.53	0.28	-316.00
975.0	0.27	79.10	975.0	-5.6	-3.4	-3.5	0.61	0.56	-70.60
1,000.0	0.53	81.85	1,000.0	-5.6	-3.3	-3.3	1.04	1.04	11.00
1,025.0	0.52	80.68	1,025.0	-5.6	-3.0	-3.1	0.06	-0.04	-4.68
1,050.0	0.49	102.15	1,050.0	-5.6	-2.8	-2.8	0.76	-0.12	85.88
1,075.0	0.70	91.11	1,075.0	-5.6	-2.6	-2.6	0.95	0.84	-44.16
1,100.0	0.79	104.11	1,099.9	-5.7	-2.2	-2.3	0.76	0.36	52.00
1,109.0	0.90	95.14	1,108.9	-5.7	-2.1	-2.1	1.91	1.22	-99.67
1,310.0	1.05	111.69	1,309.9	-6.5	1.2	1.2	0.16	0.07	8.23
1,373.0	0.84	84.84	1,372.9	-6.7	2.2	2.1	0.77	-0.33	-42.62
1,436.0	0.96	90.79	1,435.9	-6.6	3.2	3.1	0.24	0.19	9.44
1,499.0	1.23	72.66	1,498.9	-6.4	4.3	4.3	0.69	0.43	-28.78
1,562.0	0.89	56.07	1,561.9	-6.0	5.4	5.4	0.72	-0.54	-26.33
1,626.0	0.72	61.61	1,625.9	-5.5	6.1	6.1	0.29	-0.27	8.66
1,688.0	0.63	50.94	1,687.9	-5.1	6.8	6.7	0.25	-0.15	-17.21
1,752.0	0.72	47.01	1,751.9	-4.6	7.3	7.3	0.16	0.14	-6.14
1,815.0	0.77	46.68	1,814.9	-4.0	7.9	7.9	0.08	0.08	-0.52
1,879.0	0.53	46.06	1,878.9	-3.5	8.4	8.4	0.38	-0.38	-0.97

Company: NEW MEXICO SHELF
Project: EDDY COUNTY, NM
Site: LOCO HILLS
Well: GISSLER FED #17H
Wellbore: OWB
Design: ACTUAL WELLPATH

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

Well GISSLER FED #17H
 RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
 RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
 Grid
 Minimum Curvature
 EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,942.0	0.53	30.17	1,941.9	-3.1	8.8	8.8	0.23	0.00	-25.22
2,005.0	0.68	30.31	2,004.9	-2.5	9.1	9.1	0.24	0.24	0.22
2,067.0	0.91	27.66	2,066.8	-1.8	9.6	9.5	0.38	0.37	-4.27
2,131.0	0.90	37.88	2,130.8	-0.9	10.1	10.1	0.25	-0.02	15.97
2,194.0	1.16	15.76	2,193.8	0.1	10.6	10.6	0.75	0.41	-35.11
2,258.0	1.13	17.46	2,257.8	1.3	10.9	10.9	0.07	-0.05	2.66
2,321.0	1.13	4.11	2,320.8	2.5	11.2	11.2	0.42	0.00	-21.19
2,384.0	0.96	355.16	2,383.8	3.7	11.2	11.2	0.37	-0.27	-14.21
2,447.0	0.99	4.56	2,446.8	4.7	11.2	11.2	0.26	0.05	14.92
2,508.0	0.97	351.84	2,507.8	5.8	11.1	11.2	0.36	-0.03	-20.85
2,571.0	1.36	325.62	2,570.8	6.9	10.6	10.7	1.03	0.62	-41.62
2,634.0	1.46	305.31	2,633.7	8.0	9.6	9.6	0.80	0.16	-32.24
2,697.0	1.60	311.45	2,696.7	9.1	8.2	8.3	0.34	0.22	9.75
2,760.0	1.32	308.24	2,759.7	10.1	7.0	7.1	0.46	-0.44	-5.10
2,822.0	1.46	311.20	2,821.7	11.0	5.9	5.9	0.25	0.23	4.77
2,885.0	1.41	306.07	2,884.7	12.0	4.6	4.7	0.22	-0.08	-8.14
2,948.0	1.49	308.97	2,947.6	13.0	3.4	3.4	0.17	0.13	4.60
3,011.0	1.72	299.08	3,010.6	14.0	1.9	2.0	0.57	0.37	-15.70
3,074.0	1.48	305.77	3,073.6	14.9	0.4	0.5	0.48	-0.38	10.62
3,137.0	1.80	301.61	3,136.6	15.9	-1.1	-1.0	0.54	0.51	-6.60
3,201.0	0.98	292.44	3,200.5	16.6	-2.4	-2.4	1.32	-1.28	-14.33
3,264.0	0.21	317.71	3,263.5	16.9	-3.0	-3.0	1.26	-1.22	40.11
3,327.0	0.10	153.10	3,326.5	17.0	-3.1	-3.0	0.49	-0.17	-261.29
3,390.0	0.06	308.95	3,389.5	16.9	-3.1	-3.0	0.25	-0.06	247.38
3,454.0	0.32	72.04	3,453.5	17.0	-2.9	-2.9	0.56	0.41	192.33
3,517.0	0.77	178.15	3,516.5	16.7	-2.7	-2.7	1.45	0.71	168.43
3,580.0	1.49	173.44	3,579.5	15.4	-2.6	-2.6	1.15	1.14	-7.48
3,643.0	1.69	168.77	3,642.5	13.7	-2.4	-2.3	0.38	0.32	-7.41
3,707.0	1.49	165.66	3,706.5	12.0	-2.0	-1.9	0.34	-0.31	-4.86
3,770.0	1.50	166.88	3,769.5	10.4	-1.6	-1.6	0.05	0.02	1.94
3,801.0	1.83	146.40	3,800.4	9.6	-1.2	-1.2	2.18	1.06	-66.06
3,833.0	4.10	108.22	3,832.4	8.8	0.1	0.2	9.04	7.09	-119.31
3,864.0	7.47	100.80	3,863.2	8.0	3.2	3.2	11.11	10.87	-23.94
3,896.0	11.16	96.90	3,894.8	7.3	8.3	8.3	11.69	11.53	-12.19
3,959.0	19.02	98.46	3,955.6	5.0	24.5	24.5	12.49	12.48	2.48
4,022.0	27.33	98.81	4,013.5	1.3	49.0	49.0	13.19	13.19	0.56
4,052.0	31.32	100.15	4,039.6	-1.1	63.5	63.5	13.48	13.30	4.47
4,084.0	33.60	101.48	4,066.6	-4.4	80.4	80.4	7.47	7.13	4.16
4,115.0	36.01	101.34	4,092.1	-7.9	97.7	97.7	7.78	7.77	-0.45
4,147.0	38.67	100.94	4,117.5	-11.6	116.8	116.7	8.35	8.31	-1.25
4,178.0	42.07	101.00	4,141.1	-15.4	136.5	136.4	10.97	10.97	0.19
4,210.0	45.34	99.68	4,164.2	-19.4	158.2	158.2	10.61	10.22	-4.13
4,273.0	45.99	98.34	4,208.3	-26.4	202.7	202.6	1.84	1.03	-2.13

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,336.0	45.81	97.72	4,252.1	-32.8	247.5	247.4	0.76	-0.29	-0.98
4,368.0	45.89	97.35	4,274.4	-35.8	270.3	270.2	0.87	0.25	-1.16
4,399.0	45.83	96.73	4,296.0	-38.5	292.4	292.2	1.45	-0.19	-2.00
4,431.0	45.88	96.18	4,318.3	-41.1	315.2	315.0	1.24	0.16	-1.72
4,463.0	46.60	95.68	4,340.4	-43.5	338.2	338.0	2.52	2.25	-1.56
4,494.0	50.24	93.60	4,361.0	-45.3	361.3	361.1	12.77	11.74	-6.71
4,526.0	54.12	91.47	4,380.6	-46.4	386.5	386.4	13.21	12.13	-6.66
4,557.0	56.78	90.41	4,398.2	-46.8	412.0	411.9	9.03	8.58	-3.42
4,589.0	59.38	88.65	4,415.1	-46.6	439.2	439.1	9.37	8.13	-5.50
4,621.0	63.02	87.77	4,430.5	-45.7	467.2	467.1	11.63	11.38	-2.75
4,652.0	66.14	86.91	4,443.8	-44.4	495.2	495.0	10.37	10.06	-2.77
4,683.0	68.14	86.43	4,455.9	-42.8	523.7	523.6	6.61	6.45	-1.55
4,715.0	69.66	86.85	4,467.4	-41.0	553.5	553.4	4.91	4.75	1.31
4,747.0	71.45	87.87	4,478.0	-39.6	583.6	583.5	6.35	5.59	3.19
4,778.0	73.90	89.53	4,487.3	-39.0	613.2	613.1	9.41	7.90	5.35
4,809.0	76.68	90.66	4,495.1	-39.0	643.2	643.1	9.64	8.97	3.65
4,841.0	80.18	91.16	4,501.6	-39.5	674.6	674.4	11.04	10.94	1.56
4,873.0	83.81	91.45	4,506.0	-40.2	706.2	706.1	11.38	11.34	0.91
4,904.0	86.44	91.48	4,508.6	-41.0	737.1	737.0	8.48	8.48	0.10
4,936.0	88.15	91.55	4,510.2	-41.9	769.1	768.9	5.35	5.34	0.22
4,967.0	88.30	91.56	4,511.1	-42.7	800.0	799.9	0.48	0.48	0.03
5,030.0	88.45	91.02	4,512.9	-44.1	863.0	862.8	0.89	0.24	-0.86
5,093.0	88.36	90.76	4,514.7	-45.1	926.0	925.8	0.44	-0.14	-0.41
5,154.0	88.42	90.23	4,516.4	-45.6	986.9	986.8	0.87	0.10	-0.87
5,217.0	88.53	89.91	4,518.0	-45.7	1,049.9	1,049.8	0.54	0.17	-0.51
5,281.0	88.62	89.61	4,519.6	-45.4	1,113.9	1,113.7	0.49	0.14	-0.47
5,345.0	88.52	89.77	4,521.2	-45.1	1,177.9	1,177.7	0.29	-0.16	0.25
5,408.0	88.61	89.14	4,522.8	-44.5	1,240.8	1,240.7	1.01	0.14	-1.00
5,472.0	89.02	89.99	4,524.1	-44.0	1,304.8	1,304.7	1.47	0.64	1.33
5,535.0	89.18	91.06	4,525.1	-44.6	1,367.8	1,367.7	1.72	0.25	1.70
5,598.0	89.18	90.97	4,526.0	-45.7	1,430.8	1,430.6	0.14	0.00	-0.14
5,661.0	89.70	90.98	4,526.6	-46.8	1,493.8	1,493.6	0.83	0.83	0.02
5,723.0	89.78	90.93	4,526.9	-47.8	1,555.8	1,555.6	0.15	0.13	-0.08
5,786.0	90.15	91.00	4,527.0	-48.9	1,618.8	1,618.6	0.60	0.59	0.11
5,848.0	90.12	92.28	4,526.8	-50.6	1,680.7	1,680.6	2.07	-0.05	2.06
5,911.0	90.22	92.14	4,526.6	-53.1	1,743.7	1,743.5	0.27	0.16	-0.22
5,972.0	90.27	92.16	4,526.4	-55.4	1,804.6	1,804.5	0.09	0.08	0.03
6,034.0	90.48	91.92	4,526.0	-57.6	1,866.6	1,866.4	0.51	0.34	-0.39
6,095.0	90.96	92.26	4,525.2	-59.8	1,927.6	1,927.4	0.96	0.79	0.56
6,157.0	90.61	93.44	4,524.3	-62.9	1,989.5	1,989.3	1.99	-0.56	1.90
6,218.0	88.76	93.58	4,524.7	-66.6	2,050.4	2,050.1	3.04	-3.03	0.23
6,279.0	88.55	93.11	4,526.1	-70.2	2,111.2	2,111.0	0.84	-0.34	-0.77
6,341.0	88.72	93.10	4,527.6	-73.5	2,173.1	2,172.9	0.27	0.27	-0.02
6,402.0	88.67	92.42	4,529.0	-76.5	2,234.0	2,233.8	1.12	-0.08	-1.11

Company: NEW MEXICO SHELF
Project: EDDY COUNTY, NM
Site: LOCO HILLS
Well: GISSLER FED #17H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well GISSLER FED #17H
TVD Reference: RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
MD Reference: RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,463.0	88.67	92.53	4,530.4	-79.1	2,295.0	2,294.7	0.18	0.00	0.18
6,524.0	88.67	92.04	4,531.8	-81.5	2,355.9	2,355.6	0.80	0.00	-0.80
6,586.0	89.10	91.82	4,533.0	-83.6	2,417.9	2,417.6	0.78	0.69	-0.35
6,647.0	88.99	92.61	4,534.0	-86.0	2,478.8	2,478.5	1.31	-0.18	1.30
6,708.0	88.07	93.41	4,535.6	-89.2	2,539.7	2,539.4	2.00	-1.51	1.31
6,770.0	88.79	93.57	4,537.3	-93.0	2,601.6	2,601.2	1.19	1.16	0.26
6,831.0	88.56	93.94	4,538.7	-96.9	2,662.4	2,662.1	0.71	-0.38	0.61
6,893.0	87.41	94.41	4,540.9	-101.5	2,724.2	2,723.9	2.00	-1.85	0.76
6,956.0	87.98	94.89	4,543.4	-106.6	2,787.0	2,786.6	1.18	0.90	0.76
7,019.0	88.82	94.50	4,545.2	-111.7	2,849.7	2,849.3	1.47	1.33	-0.62
7,080.0	89.18	93.37	4,546.2	-115.9	2,910.6	2,910.2	1.94	0.59	-1.85
7,143.0	89.13	92.16	4,547.2	-118.9	2,973.5	2,973.1	1.92	-0.08	-1.92
7,206.0	89.30	90.70	4,548.0	-120.5	3,036.5	3,036.1	2.33	0.27	-2.32
7,269.0	89.87	90.70	4,548.5	-121.3	3,099.4	3,099.0	0.90	0.90	0.00
7,332.0	90.04	90.25	4,548.5	-121.8	3,162.4	3,162.0	0.76	0.27	-0.71
7,395.0	89.22	89.76	4,549.0	-121.8	3,225.4	3,225.0	1.52	-1.30	-0.78
7,458.0	89.64	89.41	4,549.6	-121.4	3,288.4	3,288.0	0.87	0.67	-0.56
7,521.0	90.19	89.09	4,549.7	-120.5	3,351.4	3,351.0	1.01	0.87	-0.51
7,584.0	90.56	89.03	4,549.3	-119.5	3,414.4	3,414.0	0.59	0.59	-0.10
7,647.0	89.71	88.58	4,549.1	-118.2	3,477.4	3,477.0	1.53	-1.35	-0.71
7,710.0	90.16	88.61	4,549.2	-116.6	3,540.4	3,540.0	0.72	0.71	0.05
7,773.0	89.25	88.76	4,549.5	-115.2	3,603.4	3,603.0	1.46	-1.44	0.24
7,836.0	89.16	88.44	4,550.4	-113.7	3,666.3	3,666.0	0.53	-0.14	-0.51
7,898.0	88.08	88.60	4,551.9	-112.0	3,728.3	3,727.9	1.76	-1.74	0.26
7,961.0	88.02	89.33	4,554.0	-110.9	3,791.3	3,790.9	1.16	-0.10	1.16
8,024.0	88.24	90.20	4,556.1	-110.7	3,854.2	3,853.8	1.42	0.35	1.38
8,087.0	88.67	90.20	4,557.8	-110.9	3,917.2	3,916.8	0.68	0.68	0.00
8,150.0	88.51	91.01	4,559.3	-111.5	3,980.2	3,979.8	1.31	-0.25	1.29
8,213.0	87.52	91.66	4,561.5	-113.0	4,043.1	4,042.7	1.88	-1.57	1.03
8,276.0	87.75	91.90	4,564.1	-115.0	4,106.0	4,105.6	0.53	0.37	0.38
8,339.0	88.24	92.10	4,566.3	-117.2	4,169.0	4,168.6	0.84	0.78	0.32
8,402.0	88.93	91.39	4,567.9	-119.1	4,231.9	4,231.5	1.57	1.10	-1.13
8,465.0	89.53	91.70	4,568.7	-120.8	4,294.9	4,294.5	1.07	0.95	0.49
8,528.0	89.82	90.39	4,569.1	-121.9	4,357.9	4,357.5	2.13	0.46	-2.08
8,590.0	89.45	88.39	4,569.5	-121.3	4,419.9	4,419.4	3.28	-0.60	-3.23
8,653.0	89.33	86.81	4,570.1	-118.6	4,482.8	4,482.4	2.52	-0.19	-2.51
8,715.0	89.21	85.98	4,570.9	-114.7	4,544.7	4,544.3	1.35	-0.19	-1.34
8,778.0	88.16	84.95	4,572.4	-109.7	4,607.5	4,607.1	2.33	-1.67	-1.63
8,841.0	88.54	82.87	4,574.2	-103.1	4,670.1	4,669.7	3.35	0.60	-3.30
8,904.0	88.51	81.42	4,575.8	-94.5	4,732.5	4,732.1	2.30	-0.05	-2.30
8,968.0	88.82	81.72	4,577.3	-85.1	4,795.7	4,795.4	0.67	0.48	0.47
9,031.0	88.68	81.09	4,578.7	-75.7	4,858.0	4,857.8	1.02	-0.22	-1.00
9,094.0	87.94	80.36	4,580.5	-65.5	4,920.2	4,919.9	1.65	-1.17	-1.16

Company:	NEW MEXICO SHELF	Local Co-ordinate Reference:	Well GISSLER FED #17H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
Site:	LOCO HILLS	MD Reference:	RKB=3689+17 @ 3706.0usft (DOUBLE K 7)
Well:	GISSLER FED #17H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPATH	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
9,157.0	88.22	80.37	4,582.6	-55.0	4,982.2	4,982.0	0.44	0.44	0.02
9,220.0	88.34	80.32	4,584.5	-44.4	5,044.3	5,044.2	0.21	0.19	-0.08
9,282.0	88.45	80.21	4,586.3	-33.9	5,105.4	5,105.3	0.25	0.18	-0.18
9,346.0	88.70	80.25	4,587.9	-23.1	5,168.5	5,168.4	0.40	0.39	0.06
9,408.0	88.85	79.90	4,589.2	-12.4	5,229.5	5,229.5	0.61	0.24	-0.56
9,471.0	88.99	80.30	4,590.4	-1.6	5,291.6	5,291.5	0.67	0.22	0.63
9,534.0	89.28	80.60	4,591.3	8.9	5,353.7	5,353.7	0.66	0.46	0.48
9,601.0	89.28	80.60	4,592.2	19.8	5,419.8	5,419.8	0.00	0.00	0.00

Checked By: _____ Approved By: _____ Date: _____