

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-9720

District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

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

RECEIVED
State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT
As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45606	² Pool Code 96415 96217	³ Pool Name WILLOW LAKE, WEST (BONE SPRING)
⁴ Property Code 326256	Property Name SWEET TEA 31 SB FEDERAL	
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	
		⁶ Well Number 7H
		⁹ Elevation 2906'

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
K	31	T24S	R29E		2400	SOUTH	2153	WEST	EDDY

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	6	T25S	R29E		331	SOUTH	1980	WEST	EDDY

¹² Dedicated Acres 239.77	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

¹⁶ CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 635808.14' / Y: 427103.85' B - X: 637143.80' / Y: 427110.00' C - X: 637140.02' / Y: 419151.27' D - X: 635815.52' / Y: 419128.51' CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 594624.02' / Y: 427045.37' B - X: 595959.65' / Y: 427051.51' C - X: 595955.69' / Y: 419092.94' D - X: 594631.22' / Y: 419070.19'	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: <i>[Signature]</i> Date: 1/14/2020 Adrian Covarrubias Printed Name E-mail Address 18 SURVEYOR CERTIFICATION I hereby certify that the well surface location shown on this plat was plotted from field notes of the as-staked surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Data used for underground measurements were provided by others for reference only and does not constitute field measurements performed by R-Squared Global. DECEMBER 18, 2019 Date of Survey Signature and Seal of Professional Surveyor: <i>[Signature]</i> Certificate Number LLOYD P. SHORT 21653
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DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.999919502
CONVERGENCE: 0.1640810884; NOTE: ALL DIMENSIONS IN U.S. FEET

1	12/18/19	DEF
REV.	DATE	BY



PRODIRECTIONAL

RECEIVED

JAN 15 2020



Marathon Oil Corporation

Sweet Tea Fed 24-29-31 SB No. 7H
Eddy County, NM

May 20, 2019

Job# LNM1445219
API# 30-015-45606

Survey Completion Report



PRODIRECTIONAL

Survey Certification Letter

May 20, 2019



Marathon Oil
Corporation

Operator Name: Marathon Oil
Well Name: Sweet Tea Fed 24-29-31 SB No. 7H
County/Parish: Eddy County,
State: NM
Rig Name: Precision 498
Job Number: LNM1445219

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

<u>Surveyor</u>	<u>Surveyed Depths</u>	<u>Projection to Bit</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
ProDirectional	451' MD – 15,628' MD	15,692' MD	04/16/19 – 04/25/19	MWD

Sincerely,

Mike Coats
Regulatory Specialist
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

prodirectional.com

The Standard of Excellence in Directional Supervision



Marathon Oil

Eddy County, NM

Sweet Tea Federal 24-29-31 SB

No. 7H

OH

Survey: ProDirectional

Survey Report

20 May, 2019



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 7H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 2932.50usft
Site:	Sweet Tea Federal 24-29-31 SB	MD Reference:	Well @ 2932.50usft
Well:	No. 7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-90'-15628', PTB: 15692'	Database:	WellPlanner1

Project	Eddy 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 Eastern Zone		

Site	Sweet Tea Federal 24-29-31 SB		
Site Position:		Northing:	426,836.54 usft
From:	Map	Easting:	636,648.75 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.173077
		Longitude:	-104.025286
		Grid Convergence:	0.16 °

Well	No. 7H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty		0.00 usft	Wellhead Elevation:
			usft
			Latitude:
			32.173077
			Longitude:
			-104.025286
			Ground Level:
			2,906.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	4/10/2019	7.02
			Dip Angle
			(°)
			59.90
			Field Strength
			(nT)
			47,903.30

Design	Gyro-MWD-90'-15628', PTB: 15692'		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			180.01

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 7H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 2932.50usft
Site:	Sweet Tea Federal 24-29-31 SB	MD Reference:	Well @ 2932.50usft
Well:	No. 7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-90'-15628', PTB: 15692'	Database:	WellPlanner1

Survey Program		Date 5/20/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
90.00	367.00	Survey #1 (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s
451.00	15,692.00	Survey #2 (OH)	MWD+HDGM	OWSG MWD + HRGM

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	426,836.54	636,648.75	
90.00	0.40	351.27	90.00	-0.31	0.31	-0.05	0.31	351.27	426,836.85	636,648.70	
181.00	0.60	66.27	181.00	-0.82	0.82	0.34	0.88	22.63	426,837.36	636,649.09	
263.00	0.80	64.27	262.99	-1.24	1.24	1.25	1.76	45.26	426,837.78	636,650.00	
367.00	1.20	65.27	366.97	-2.01	2.01	2.89	3.52	55.22	426,838.55	636,651.64	
451.00	1.20	60.80	450.96	-2.81	2.81	4.46	5.27	57.82	426,839.35	636,653.21	
Pro MWD First Survey: 451'-MD											
512.00	1.30	66.80	511.94	-3.39	3.39	5.65	6.59	59.05	426,839.93	636,654.40	
603.00	0.30	196.30	602.93	-3.57	3.57	6.53	7.44	61.37	426,840.11	636,655.28	
693.00	1.50	226.80	692.92	-2.54	2.54	5.61	6.16	65.68	426,839.08	636,654.36	
784.00	1.70	231.00	783.89	-0.87	0.87	3.69	3.79	76.74	426,837.41	636,652.44	
875.00	1.10	231.20	874.86	0.53	-0.53	1.96	2.03	105.02	426,836.01	636,650.71	
936.00	0.40	251.30	935.85	0.96	-0.96	1.30	1.62	126.40	426,835.58	636,650.05	
1,030.00	0.30	255.10	1,029.85	1.13	-1.13	0.76	1.36	146.22	426,835.41	636,649.51	
1,124.00	0.90	255.80	1,123.85	1.37	-1.37	-0.20	1.39	188.18	426,835.17	636,648.55	
1,219.00	1.10	246.50	1,218.83	1.92	-1.92	-1.76	2.60	222.44	426,834.62	636,646.99	
1,313.00	1.40	236.90	1,312.81	2.91	-2.91	-3.55	4.59	230.65	426,833.63	636,645.20	
1,407.00	0.30	270.90	1,406.80	3.53	-3.53	-4.75	5.92	233.40	426,833.01	636,644.00	
1,501.00	0.30	32.30	1,500.80	3.32	-3.32	-4.87	5.89	235.72	426,833.22	636,643.88	
1,595.00	0.20	307.90	1,594.80	3.01	-3.01	-4.87	5.72	238.26	426,833.53	636,643.88	
1,689.00	0.90	237.20	1,688.79	3.31	-3.31	-5.62	6.52	239.49	426,833.23	636,643.13	



ProDirectional Survey Report



Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 7H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 2932.50usft
Site:	Sweet Tea Federal 24-29-31 SB	MD Reference:	Well @ 2932.50usft
Well:	No. 7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-90'-15628', PTB: 15692'	Database:	WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
6,874.00	0.30	85.30	6,862.54	-186.49	186.52	-174.00	255.08	316.99	427,023.06	636,474.75	
6,969.00	0.40	64.90	6,957.54	-186.65	186.68	-173.45	254.82	317.10	427,023.22	636,475.30	
7,063.00	0.80	279.90	7,051.54	-186.90	186.93	-173.80	255.24	317.08	427,023.47	636,474.95	
7,158.00	0.30	284.70	7,146.53	-187.08	187.11	-174.69	255.98	316.97	427,023.65	636,474.06	
7,253.00	0.00	299.90	7,241.53	-187.14	187.17	-174.93	256.19	316.94	427,023.71	636,473.82	
7,347.00	1.10	173.50	7,335.53	-186.25	186.28	-174.83	255.47	316.82	427,022.82	636,473.92	
7,442.00	1.20	184.30	7,430.51	-184.35	184.38	-174.80	254.07	316.53	427,020.92	636,473.95	
7,536.00	1.10	184.10	7,524.49	-182.47	182.50	-174.94	252.80	316.21	427,019.04	636,473.81	
7,630.00	1.40	185.60	7,618.47	-180.42	180.45	-175.12	251.46	315.86	427,016.99	636,473.63	
7,726.00	1.70	167.30	7,714.43	-177.87	177.90	-174.92	249.49	315.48	427,014.44	636,473.83	
7,820.00	2.20	153.30	7,808.38	-174.89	174.92	-173.80	246.59	315.18	427,011.46	636,474.95	
7,914.00	16.30	168.70	7,900.93	-160.27	160.30	-170.39	233.94	313.25	426,996.84	636,478.36	
8,008.00	22.30	172.40	7,989.61	-129.63	129.66	-165.44	210.20	308.09	426,966.20	636,483.31	
8,102.00	28.40	179.20	8,074.53	-89.56	89.58	-162.77	185.79	298.83	426,926.12	636,485.98	
8,196.00	35.70	181.20	8,154.15	-39.71	39.74	-163.03	167.80	283.70	426,876.28	636,485.72	
8,291.00	48.40	176.30	8,224.57	23.72	-23.69	-161.31	163.04	261.64	426,812.85	636,487.44	
8,385.00	55.40	174.50	8,282.54	97.40	-97.37	-155.33	183.32	237.92	426,739.17	636,493.42	
8,479.00	58.80	176.20	8,333.59	176.05	-176.02	-148.95	230.59	220.24	426,660.52	636,499.80	
8,573.00	65.80	179.80	8,377.27	259.15	-259.13	-146.13	297.49	209.42	426,577.41	636,502.62	
8,668.00	73.50	182.00	8,410.29	348.14	-348.11	-147.57	378.10	202.97	426,488.43	636,501.18	
8,762.00	78.20	181.70	8,433.26	439.22	-439.19	-150.51	464.26	198.92	426,397.35	636,498.24	
8,857.00	92.00	181.80	8,441.36	533.60	-533.57	-153.40	555.18	196.04	426,302.97	636,495.35	
8,882.00	93.00	182.00	8,440.27	558.56	-558.53	-154.23	579.43	195.44	426,278.01	636,494.52	
8,976.00	91.70	183.00	8,436.41	652.39	-652.36	-158.32	671.30	193.64	426,184.18	636,490.43	
9,071.00	89.40	182.60	8,435.50	747.26	-747.24	-162.96	764.80	192.30	426,089.30	636,485.79	
9,165.00	89.70	183.10	8,436.24	841.15	-841.12	-167.64	857.66	191.27	425,995.42	636,481.11	
9,259.00	88.30	181.20	8,437.88	935.06	-935.03	-171.16	950.57	190.37	425,901.51	636,477.59	

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 7H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 2932.50usft
Site:	Sweet Tea Federal 24-29-31 SB	MD Reference:	Well @ 2932.50usft
Well:	No. 7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-90'-15628', PTB: 15692'	Database:	WellPlanner1

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)	
9,354.00	88.20	181.20	8,440.78	1,029.99	-1,029.96	-173.15	1,044.42	189.54	425,806.58	636,475.60	
9,448.00	88.80	181.40	8,443.24	1,123.94	-1,123.91	-175.28	1,137.49	188.86	425,712.63	636,473.47	
9,543.00	88.80	180.50	8,445.23	1,218.90	-1,218.87	-176.86	1,231.64	188.26	425,617.67	636,471.89	
9,637.00	89.30	179.80	8,446.79	1,312.89	-1,312.86	-177.10	1,324.75	187.68	425,523.68	636,471.65	
9,732.00	89.70	180.30	8,447.62	1,407.88	-1,407.85	-177.19	1,418.96	187.17	425,428.69	636,471.56	
9,826.00	90.00	180.40	8,447.86	1,501.88	-1,501.85	-177.76	1,512.33	186.75	425,334.69	636,470.99	
9,921.00	90.50	180.50	8,447.45	1,596.88	-1,596.85	-178.51	1,606.79	186.38	425,239.69	636,470.24	
10,015.00	90.90	180.30	8,446.30	1,690.87	-1,690.84	-179.16	1,700.30	186.05	425,145.70	636,469.59	
10,109.00	91.40	180.50	8,444.41	1,784.85	-1,784.82	-179.82	1,793.85	185.75	425,051.72	636,468.93	
10,203.00	89.60	180.40	8,443.59	1,878.84	-1,878.81	-180.56	1,887.46	185.49	424,957.73	636,468.19	
10,298.00	89.70	180.40	8,444.17	1,973.83	-1,973.80	-181.22	1,982.10	185.25	424,862.74	636,467.53	
10,392.00	88.40	178.10	8,445.73	2,067.80	-2,067.77	-179.99	2,075.59	184.97	424,768.77	636,468.76	
10,487.00	88.70	178.40	8,448.14	2,162.73	-2,162.70	-177.09	2,169.94	184.68	424,673.84	636,471.66	
10,581.00	89.10	177.80	8,449.94	2,256.66	-2,256.63	-173.98	2,263.32	184.41	424,579.91	636,474.77	
10,676.00	89.90	179.50	8,450.77	2,351.62	-2,351.59	-171.74	2,357.86	184.18	424,484.95	636,477.01	
10,770.00	90.10	179.10	8,450.77	2,445.62	-2,445.59	-170.59	2,451.53	183.99	424,390.95	636,478.16	
10,864.00	90.60	179.00	8,450.20	2,539.60	-2,539.57	-169.03	2,545.19	183.81	424,296.97	636,479.72	
10,959.00	90.30	178.50	8,449.45	2,634.57	-2,634.55	-166.96	2,639.83	183.63	424,201.99	636,481.79	
11,053.00	89.70	180.40	8,449.45	2,728.57	-2,728.54	-166.06	2,733.58	183.48	424,108.00	636,482.69	
11,147.00	91.30	180.80	8,448.63	2,822.55	-2,822.52	-167.04	2,827.46	183.39	424,014.02	636,481.71	
11,242.00	89.60	181.70	8,447.88	2,917.52	-2,917.49	-169.11	2,922.39	183.32	423,919.05	636,479.64	
11,337.00	87.90	181.10	8,449.96	3,012.47	-3,012.44	-171.43	3,017.31	183.26	423,824.10	636,477.32	
11,431.00	88.30	180.70	8,453.07	3,106.41	-3,106.38	-172.91	3,111.18	183.19	423,730.16	636,475.84	
11,526.00	88.70	179.70	8,455.56	3,201.37	-3,201.34	-173.24	3,206.03	183.10	423,635.20	636,475.51	
11,620.00	89.00	179.60	8,457.45	3,295.35	-3,295.32	-172.67	3,299.84	183.00	423,541.22	636,476.08	
11,715.00	89.40	179.50	8,458.77	3,390.34	-3,390.31	-171.92	3,394.66	182.90	423,446.23	636,476.83	
11,809.00	90.00	179.60	8,459.27	3,484.33	-3,484.30	-171.18	3,488.51	182.81	423,352.24	636,477.57	

Company: Marathon Oil
Project: Eddy County, NM(NAD 83)
Site: Sweet Tea Federal 24-29-31 SB
Well: No. 7H
Wellbore: OH
Design: Gyro-MWD-90'-15628', PTB: 15692'

Local Co-ordinate Reference:
TVD Reference: Well No. 7H
MD Reference: Well @ 2932.50usft
North Reference: Well @ 2932.50usft
Survey Calculation Method: Grid
Database: Minimum Curvature
 WellPlanner1

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
11,903.00	90.50	180.20	8,458.86	3,578.33	-3,578.30	-171.02	3,582.39	182.74	423,258.24	636,477.73
11,998.00	91.10	180.20	8,457.53	3,673.32	-3,673.29	-171.35	3,677.29	182.67	423,163.25	636,477.40
12,092.00	91.70	180.10	8,455.23	3,767.29	-3,767.26	-171.60	3,771.17	182.61	423,069.28	636,477.15
12,187.00	89.90	180.40	8,453.91	3,862.28	-3,862.25	-172.01	3,866.08	182.55	422,974.29	636,476.74
12,281.00	89.80	180.40	8,454.15	3,956.28	-3,956.25	-172.67	3,960.01	182.50	422,880.29	636,476.08
12,376.00	90.30	180.40	8,454.07	4,051.27	-4,051.24	-173.33	4,054.95	182.45	422,785.30	636,475.42
12,471.00	90.20	180.10	8,453.65	4,146.27	-4,146.24	-173.74	4,149.88	182.40	422,690.30	636,475.01
12,566.00	90.60	179.70	8,452.99	4,241.27	-4,241.24	-173.58	4,244.79	182.34	422,595.30	636,475.17
12,660.00	88.30	180.00	8,453.89	4,335.26	-4,335.23	-173.33	4,338.69	182.29	422,501.31	636,475.42
12,755.00	89.20	180.20	8,455.97	4,430.23	-4,430.20	-173.50	4,433.60	182.24	422,406.34	636,475.25
12,849.00	90.40	180.40	8,456.29	4,524.23	-4,524.20	-173.99	4,527.54	182.20	422,312.34	636,474.76
12,944.00	90.20	180.20	8,455.80	4,619.23	-4,619.20	-174.49	4,622.49	182.16	422,217.34	636,474.26
13,038.00	88.50	179.70	8,456.86	4,713.22	-4,713.19	-174.41	4,716.41	182.12	422,123.35	636,474.34
13,132.00	88.80	179.60	8,459.08	4,807.19	-4,807.16	-173.83	4,810.30	182.07	422,029.38	636,474.92
13,227.00	89.10	179.60	8,460.82	4,902.17	-4,902.14	-173.17	4,905.20	182.02	421,934.40	636,475.58
13,321.00	89.40	179.70	8,462.05	4,996.16	-4,996.13	-172.59	4,999.11	181.98	421,840.41	636,476.16
13,416.00	87.60	179.60	8,464.54	5,091.12	-5,091.09	-172.01	5,094.00	181.94	421,745.45	636,476.74
13,510.00	88.00	179.40	8,468.14	5,185.05	-5,185.02	-171.19	5,187.85	181.89	421,651.52	636,477.56
13,604.00	88.50	179.30	8,471.01	5,279.00	-5,278.97	-170.13	5,281.71	181.85	421,557.57	636,478.62
13,699.00	89.10	179.20	8,473.00	5,373.97	-5,373.94	-168.89	5,376.59	181.80	421,462.60	636,479.86
13,793.00	90.10	179.00	8,473.66	5,467.95	-5,467.93	-167.41	5,470.49	181.75	421,368.61	636,481.34
13,888.00	90.60	178.90	8,473.08	5,562.94	-5,562.91	-165.67	5,565.37	181.71	421,273.63	636,483.08
13,983.00	91.40	178.70	8,471.42	5,657.90	-5,657.87	-163.68	5,660.24	181.66	421,178.67	636,485.07
14,077.00	92.10	179.10	8,468.55	5,751.84	-5,751.81	-161.88	5,754.09	181.61	421,084.73	636,486.87
14,171.00	91.70	179.90	8,465.43	5,845.78	-5,845.75	-161.06	5,847.97	181.58	420,990.79	636,487.69
14,265.00	90.10	180.60	8,463.96	5,939.76	-5,939.74	-161.47	5,941.93	181.56	420,896.80	636,487.28
14,360.00	90.50	180.60	8,463.46	6,034.76	-6,034.73	-162.46	6,036.92	181.54	420,801.81	636,486.29

Company:	Marathon Oil	Local Co-ordinate Reference:	Well No. 7H
Project:	Eddy County, NM(NAD 83)	TVD Reference:	Well @ 2932.50usft
Site:	Sweet Tea Federal 24-29-31 SB	MD Reference:	Well @ 2932.50usft
Well:	No. 7H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Gyro-MWD-90'-15628', PTB: 15692'	Database:	WellPlanner1

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
14,454.00	91.60	180.80	8,461.74	6,128.73	-6,128.71	-163.61	6,130.89	181.53	420,707.83	636,485.14
14,549.00	89.90	181.90	8,460.49	6,223.70	-6,223.67	-165.85	6,225.88	181.53	420,612.87	636,482.90
14,643.00	90.00	182.10	8,460.58	6,317.64	-6,317.61	-169.13	6,319.87	181.53	420,518.93	636,479.62
14,738.00	88.10	182.40	8,462.15	6,412.55	-6,412.52	-172.86	6,414.85	181.54	420,424.02	636,475.89
14,832.00	85.80	181.80	8,467.15	6,506.35	-6,506.32	-176.30	6,508.70	181.55	420,330.22	636,472.45
14,927.00	87.40	180.50	8,472.79	6,601.15	-6,601.12	-178.20	6,603.53	181.55	420,235.42	636,470.55
15,021.00	89.80	179.60	8,475.08	6,695.12	-6,695.09	-178.28	6,697.46	181.53	420,141.45	636,470.47
15,116.00	90.60	179.30	8,474.75	6,790.11	-6,790.08	-177.37	6,792.40	181.50	420,046.46	636,471.38
15,211.00	91.40	179.30	8,473.09	6,885.09	-6,885.06	-176.21	6,887.31	181.47	419,951.48	636,472.54
15,305.00	92.00	178.90	8,470.31	6,979.04	-6,979.01	-174.73	6,981.19	181.43	419,857.53	636,474.02
15,400.00	90.00	178.20	8,468.65	7,073.99	-7,073.96	-172.33	7,076.05	181.40	419,762.58	636,476.42
15,494.00	90.00	178.00	8,468.65	7,167.93	-7,167.90	-169.21	7,169.90	181.35	419,668.64	636,479.54
15,589.00	90.60	177.90	8,468.15	7,262.87	-7,262.84	-165.81	7,264.73	181.31	419,573.70	636,482.94
15,628.00	91.00	178.10	8,467.61	7,301.84	-7,301.81	-164.45	7,303.67	181.29	419,534.73	636,484.30
Last Survey: 15628' MD										
15,692.00	91.00	178.10	8,466.49	7,365.80	-7,365.77	-162.33	7,367.56	181.26	419,470.77	636,486.42
PTB: 15692' MD										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
451.00	450.96	2.81	4.46	Pro MWD First Survey: 451' MD
15,628.00	8,467.61	-7,301.81	-164.45	Last Survey: 15628' MD
15,692.00	8,466.49	-7,365.77	-162.33	PTB: 15692' MD