



METEORITE
energy services

Meteorite Energy Services Survey Report

03 May, 2021

PIONEER NATURAL RESOURCES

Midland Permian South

Upton County

UNIVERSITY-RATLIFF W58-7E #5H

API:

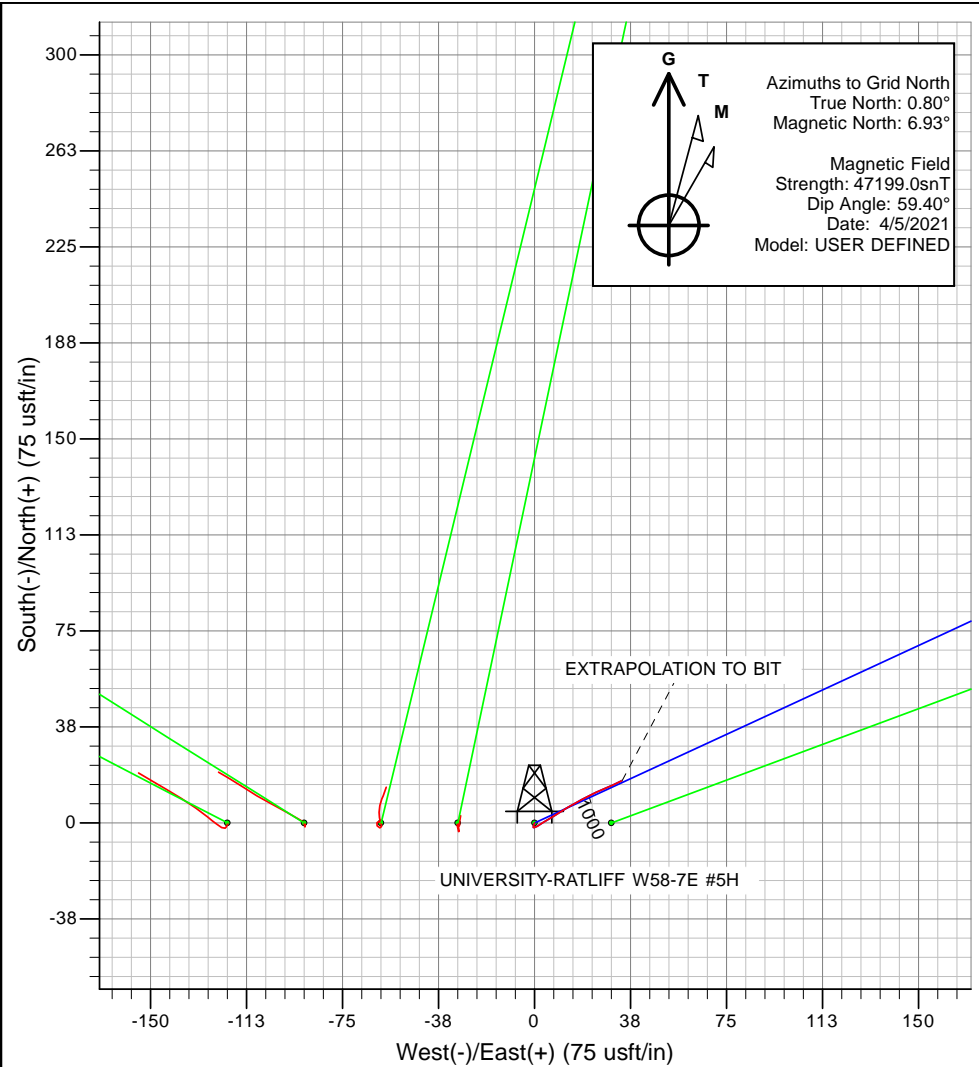
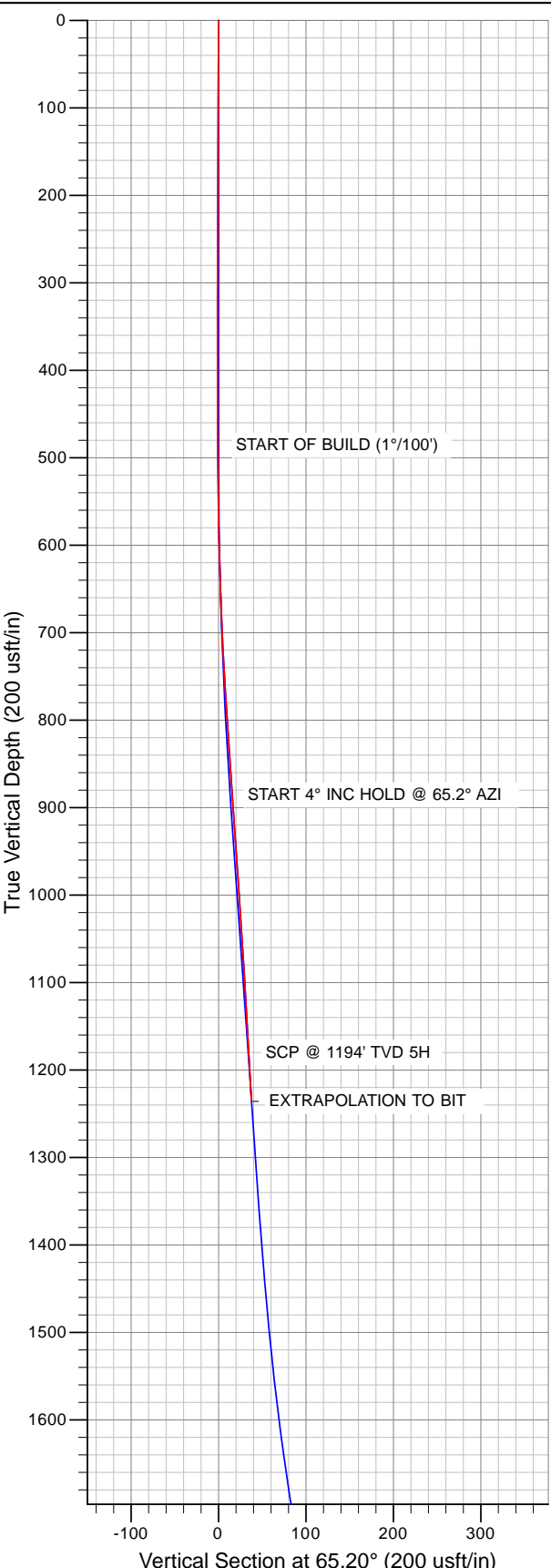
Survey: FINAL SURFACE SURVEYS (21MJ-104)

PIONEER

NATURAL RESOURCES

ANNOTATIONS

Table with 8 columns: TVD, MD, Inc, Azi, +N/-S, +E/-W, VSect, Annotation. Row 1: 1235.84, 1237.00, 3.40, 64.30, +N/-S 16.58, +E/-W 34.19, VSect 37.99, EXTRAPOLATION TO BIT



PROJECT DETAILS: Midland Permian South

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Texas Central 4203

System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well UNIVERSITY-RATLIFF W58-7E #5H, Grid North
Vertical (TVD) Reference: KB @ GL @ 2704.00usft (PINNERGY 3)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: KB @ GL @ 2704.00usft (PINNERGY 3)
Calculation Method: Minimum Curvature

Survey: FINAL SURFACE SURVEYS (21MJ-104) (UNIVERSITY-RATLIFF W58-7E #5H/API:)

Created By: Meteorite Energy Services Date: 14:09, May 03 2021
Checked: Date:
Reviewed: Date:
Approved: Date:

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well UNIVERSITY-RATLIFF W58-7E #5H
Project:	Midland Permian South	TVD Reference:	KB @ GL @ 2704.00usft (PINNERY 3)
Site:	Upton County	MD Reference:	KB @ GL @ 2704.00usft (PINNERY 3)
Well:	UNIVERSITY-RATLIFF W58-7E #5H	North Reference:	Grid
Wellbore:	API:	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURFACE SURVEYS (21MJ-104)	Database:	EDM 5000.1 Single User Db

Project	Midland Permian South		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	Upton County		
Site Position:		Northing:	654,420.89 usft
From:	Map	Easting:	1,500,481.90 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	31° 27' 22.219046 N
		Longitude:	101° 56' 7.353091 W
		Grid Convergence:	-0.83 °

Well	UNIVERSITY-RATLIFF W58-7E #5H		
Well Position	+N/-S	0.00 usft	Northing: 598,655.00 usft
	+E/-W	0.00 usft	Easting: 1,514,377.90 usft
			Latitude: 31° 18' 12.268563 N
			Longitude: 101° 53' 17.933773 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Ground Level:	2,704.00 usft

Wellbore	API:		
Magnetics	Model Name	Sample Date	Declination (°)
	User Defined	4/5/2021	6.13
			Dip Angle (°)
			59.40
			Field Strength (nT)
			47,199

Design	FINAL SURFACE SURVEYS (21MJ-104)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	-7.00	0.00	0.00
			Direction (°)
			65.20

Survey Program	Date	5/3/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
124.00	1,237.00	FINAL SURFACE SURVEYS (21MJ-104) (CLEAR MWD	MWD

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	2,704.00	0.00	0.00	0.00	0.00	0.00	0.00
124.00	0.40	202.50	124.00	2,580.00	-0.40	-0.17	-0.32	0.32	0.32	0.00
211.00	0.30	197.90	211.00	2,493.00	-0.90	-0.35	-0.70	0.12	-0.11	-5.29
299.00	0.30	193.20	299.00	2,405.00	-1.34	-0.48	-0.99	0.03	0.00	-5.34
389.00	0.20	181.60	389.00	2,315.00	-1.73	-0.53	-1.21	0.12	-0.11	-12.89
483.00	0.50	82.20	482.99	2,221.01	-1.84	-0.13	-0.89	0.60	0.32	-105.74
578.00	1.10	55.20	577.98	2,126.02	-1.26	1.03	0.40	0.73	0.63	-28.42
673.00	2.20	59.20	672.94	2,031.06	0.20	3.34	3.12	1.16	1.16	4.21
767.00	3.50	59.60	766.83	1,937.17	2.57	7.37	7.77	1.38	1.38	0.43
860.00	4.30	57.50	859.61	1,844.39	5.88	12.76	14.05	0.87	0.86	-2.26
954.00	3.80	62.60	953.37	1,750.63	9.21	18.49	20.65	0.66	-0.53	5.43
1,049.00	3.60	65.70	1,048.18	1,655.82	11.88	24.01	26.78	0.30	-0.21	3.26
1,143.00	3.30	66.20	1,142.01	1,561.99	14.19	29.17	32.43	0.32	-0.32	0.53

Company:	PIONEER NATURAL RESOURCES	Local Co-ordinate Reference:	Well UNIVERSITY-RATLIFF W58-7E #5H
Project:	Midland Permian South	TVD Reference:	KB @ GL @ 2704.00usft (PINNERY 3)
Site:	Upton County	MD Reference:	KB @ GL @ 2704.00usft (PINNERY 3)
Well:	UNIVERSITY-RATLIFF W58-7E #5H	North Reference:	Grid
Wellbore:	API:	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURFACE SURVEYS (21MJ-104)	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,167.00	3.40	64.30	1,165.97	1,538.03	14.78	30.45	33.84	0.62	0.42	-7.92
EXTRAPOLATION TO BIT										
1,237.00	3.40	64.30	1,235.84	1,468.16	16.58	34.19	37.99	0.00	0.00	0.00

Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
2H POP	0.00	360.00	6,058.00	434.70	-783.80	599,089.70	1,513,594.10	31° 18' 16.462256 N	101° 53' 27.037882 W	
- survey misses target center by 4908.88usft at 1237.00usft MD (1235.84 TVD, 16.58 N, 34.19 E)										
- Point										
1H LTP/BHL	0.00	360.00	8,308.00	10,873.60	-522.20	609,528.60	1,513,855.70	31° 19' 59.811841 N	101° 53' 25.706999 W	
- survey misses target center by 12969.19usft at 1237.00usft MD (1235.84 TVD, 16.58 N, 34.19 E)										
- Point										
1H POP	0.00	360.00	6,058.00	344.70	-786.00	598,999.70	1,513,591.90	31° 18' 15.571222 N	101° 53' 27.048714 W	
- survey misses target center by 4902.41usft at 1237.00usft MD (1235.84 TVD, 16.58 N, 34.19 E)										
- Point										
5H POP	0.00	360.00	6,058.00	400.00	865.80	599,055.00	1,515,243.70	31° 18' 16.347043 N	101° 53' 8.019030 W	
- survey misses target center by 4908.34usft at 1237.00usft MD (1235.84 TVD, 16.58 N, 34.19 E)										
- Point										
2H LTP/BHL	0.00	360.00	8,308.00	10,873.60	-522.20	609,528.60	1,513,855.70	31° 19' 59.811841 N	101° 53' 25.706999 W	
- survey misses target center by 12969.19usft at 1237.00usft MD (1235.84 TVD, 16.58 N, 34.19 E)										
- Point										
5H LTP/BHL	0.00	360.00	8,308.00	10,914.60	1,129.40	609,569.60	1,515,507.30	31° 20' 0.446048 N	101° 53' 6.671547 W	
- survey misses target center by 13037.71usft at 1237.00usft MD (1235.84 TVD, 16.58 N, 34.19 E)										
- Point										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,237.00	1,235.84	16.58	34.19	EXTRAPOLATION TO BIT	

Checked By: _____ Approved By: _____ Date: _____



METEORITE
energy services

Survey Certification

I, Bryson Kriz, an authorized employee of Meteorite Energy Services Inc., have verified the MWD surveys performed on University-Ratliff W58-7E 5H , between 4/28/2021 and 4/29/2021 , from 100 ' to 1237 '.

The data are true, correct, complete and within the limitations of the tool used. This survey was conducted at the request of Pioneer Natural Resources for # 867521 (42-461-41693) drilled in Upton county, Texas.

Sincerely
Meteorite Energy Services Inc.

Bryson A. Kriz B.a.GIS | Technical Operations Coordinator
METEORITE Energy Services
6310 S County Road 1273 Midland, Texas 79706 USA
Tel: (403)-667-1848
www.meteoriteenergyservices.com



Railroad Commission of Texas
Oil and Gas Division
PO Box 12967
Capitol Station
Austin, TX 78711

Attention: Pam Johns

Pioneer Natural Resources
University Ratliff W58-7E 5H
Upton County, Texas
API # 42-461-41693

Enclosed, please find the original and one copy of the survey performed on the referenced well by INTREPID MWD TECH., a division of INTREPID DIRECTIONAL DRILLING SPECIALIST. Other information required by your office is as follows:

<u>Name & Title of Surveyor</u>	<u>Start Depth</u>	<u>End Depth</u>	<u>Start Date</u>	<u>End Date</u>	<u>Type of Survey</u>
Tyler Allison	1342	7887	6/9/2021	6/12/2021	MWD/ D&I & Gamma
PTB:		7967			

The bottom hole orientation/coordinates related to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Sincerely,

Nephi Smith

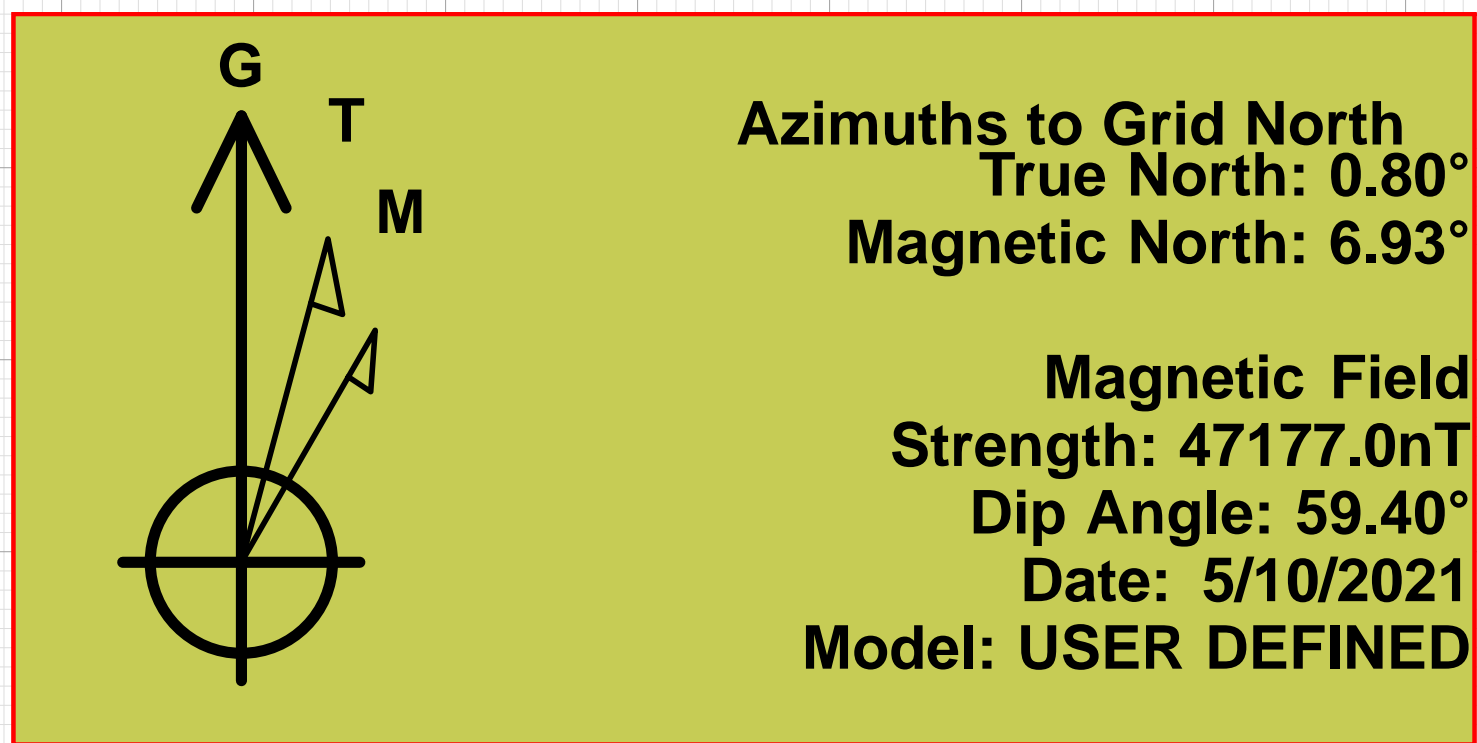
Nephi Smith
Well Planner



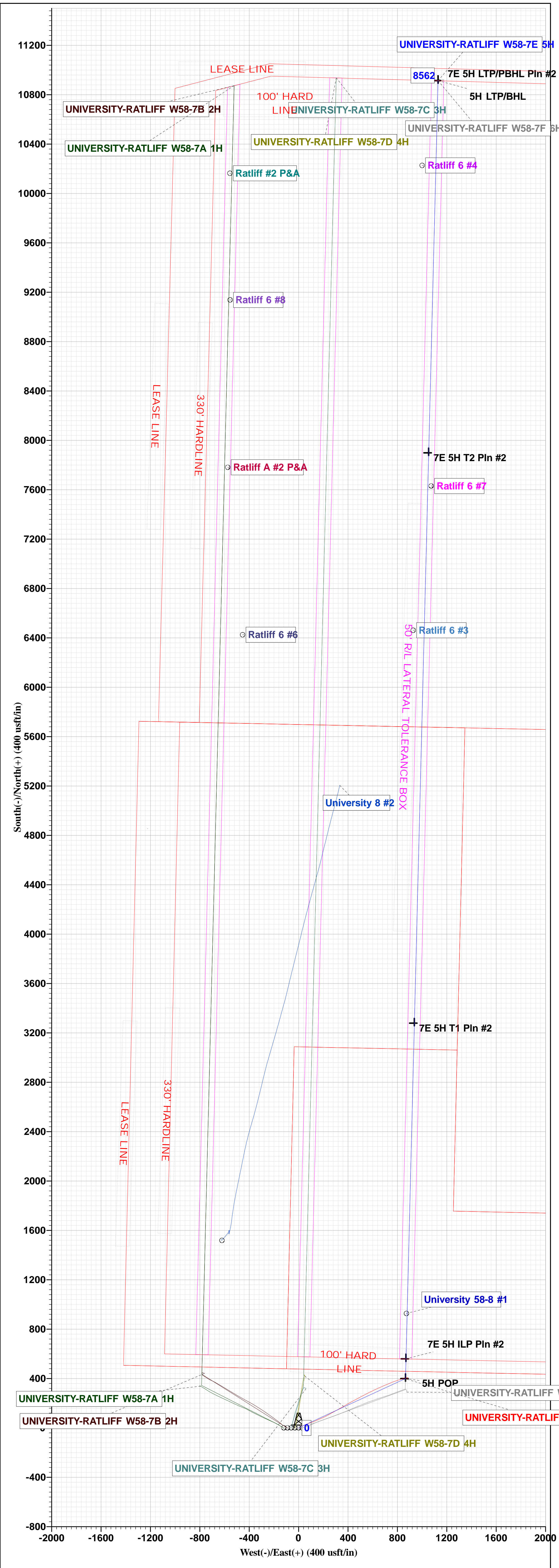
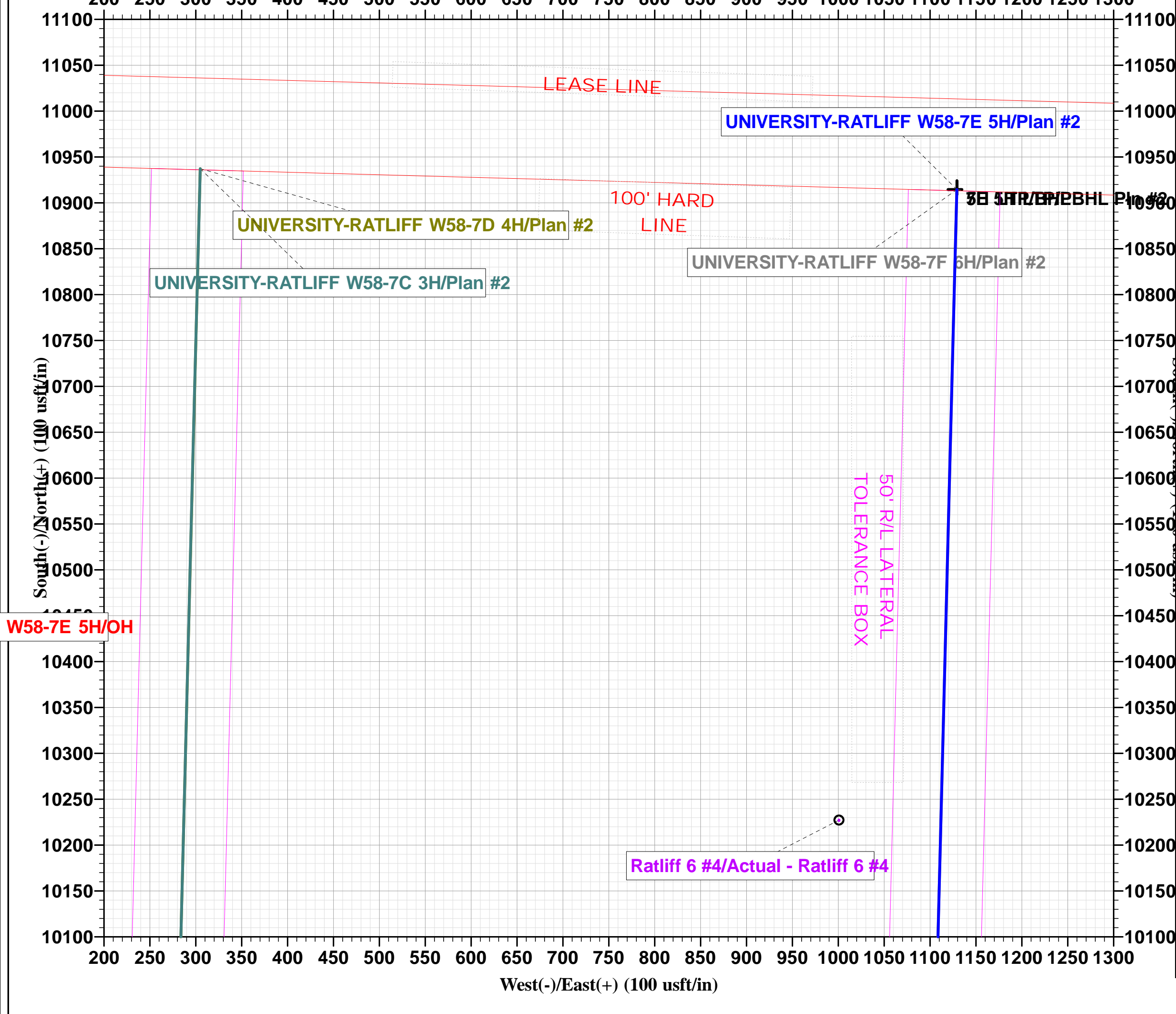
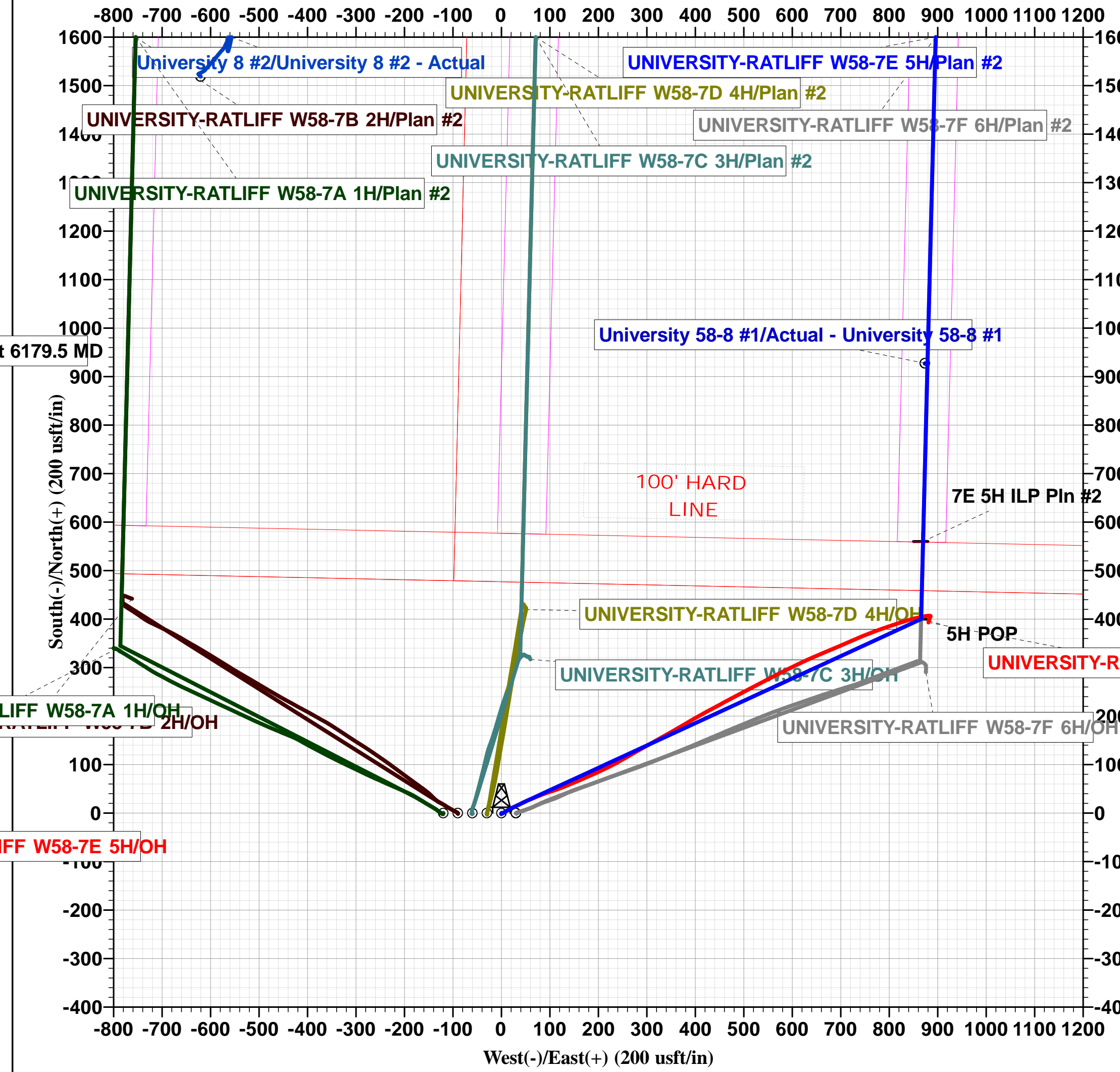
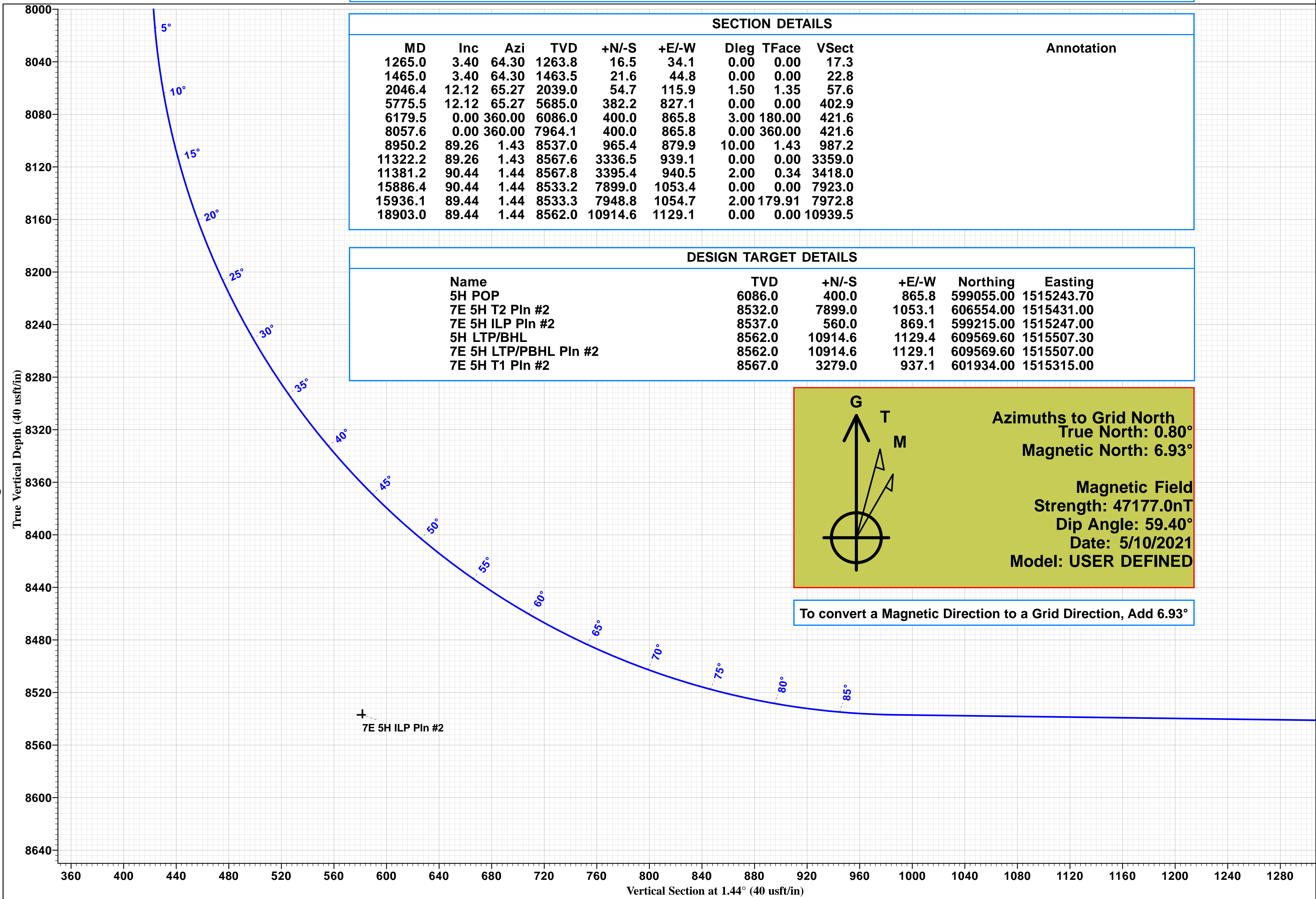
WELL DETAILS: UNIVERSITY-RATLIFF W58-7E 5H						
			Ground Level: 2704.0			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	598655.00	1514377.90	31° 18' 12.269 N	101° 53' 17.934 W	

SECTION DETAILS									Annotation
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
1265.0	3.40	64.30	1263.8	16.5	34.1	0.00	0.00	17.3	
1465.0	3.40	64.30	1463.5	21.6	44.8	0.00	0.00	22.8	
2046.4	12.12	65.27	2039.0	54.7	115.9	1.50	1.35	57.6	
5775.5	12.12	65.27	5685.0	382.2	827.1	0.00	0.00	402.9	
6179.5	0.00	360.00	6086.0	400.0	865.8	3.00	180.00	421.6	
8057.6	0.00	360.00	7964.1	400.0	865.8	0.00	360.00	421.6	
8950.2	89.26	1.43	8537.0	965.4	879.9	10.00	1.43	987.2	
11322.2	89.26	1.43	8567.6	3336.5	939.1	0.00	0.00	3359.0	
11381.2	90.44	1.44	8567.8	3395.4	940.5	2.00	0.34	3418.0	
15886.4	90.44	1.44	8533.2	7899.0	1053.4	0.00	0.00	7923.0	
15936.1	89.44	1.44	8533.3	7948.8	1054.7	2.00	179.91	7972.8	
18903.0	89.44	1.44	8562.0	10914.6	1129.1	0.00	0.00	10939.5	

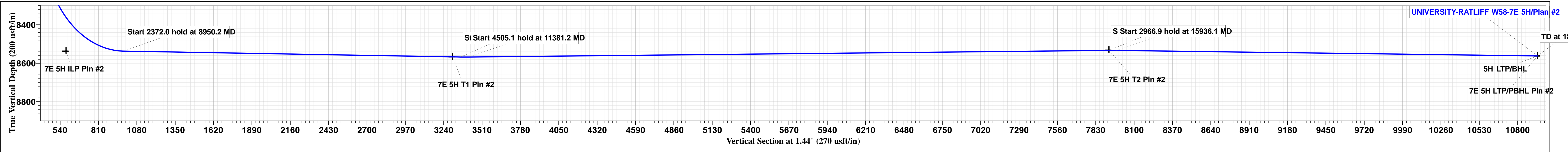
DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
5H POP	6086.0	400.0	865.8	599055.00	1515243.70
7E 5H T2 Pln #2	8532.0	7899.0	1053.1	606554.00	1515431.00
7E 5H ILP Pln #2	8537.0	560.0	869.1	599215.00	1515247.00
5H LTP/BHL	8562.0	10914.6	1129.4	609569.60	1515507.30
7E 5H LTP/PBHL Pln #2	8562.0	10914.6	1129.1	609569.60	1515507.00
7E 5H T1 Pln #2	8567.0	3279.0	937.1	601934.00	1515315.00



To convert a Magnetic Direction to a Grid Direction, Add 6.93°



Hardlines are not to be crossed. Contain well path within 50' left/right tolerance window throughout lateral. Do not risk exiting this 50' L/R window even for existing vertical well avoidance unless otherwise instructed. Contact PXD representative or engineer immediately if hardlines are anticipated to be encroached upon.



Pioneer Natural Resources

Upton County, TX (NAD 27 TC)

Univeristy Ratliff Pad

UNIVERSITY-RATLIFF W58-7E 5H

OH

Design: OH

Standard Survey Report

12 June, 2021



Company:	Pioneer Natural Resources	Local Co-ordinate Reference:	Well UNIVERSITY-RATLIFF W58-7E 5H
Project:	Upton County, TX (NAD 27 TC)	TVD Reference:	KB @ 28' @ 2732.0usft
Site:	Univeristy Ratliff Pad	MD Reference:	KB @ 28' @ 2732.0usft
Well:	UNIVERSITY-RATLIFF W58-7E 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	Upton County, TX (NAD 27 TC)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	Univeristy Ratliff Pad		
Site Position:		Northing:	603,720.22 usft
From:	Lat/Long	Easting:	1,514,611.09 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	31° 19' 2.431 N
		Longitude:	101° 53' 16.062 W
		Grid Convergence:	-0.80 °

Well		UNIVERSITY-RATLIFF W58-7E 5H				
Well Position	+N-S	0.0 usft	Northing:	598,655.00 usft	Latitude:	31° 18' 12.269 N
	+E-W	0.0 usft	Easting:	1,514,377.90 usft	Longitude:	101° 53' 17.934 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	2,704.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	5/10/2021	6.13	59.40	47,177.00000000

Design	OH				
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	1.44	

Survey Program	Date	6/12/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
152.0	1,195.0	Survey #1 (OH)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction
1,342.0	7,967.0	Intrepid MWD (OH)	MWD+IFR1+SAG+MS	OWSG MWD + IFR1 + Sag + 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
152.0	0.40	202.50	152.0	-0.5	-0.2	-0.5	0.26	0.26	0.00
239.0	0.30	197.90	239.0	-1.0	-0.4	-1.0	0.12	-0.11	-5.29
327.0	0.30	193.20	327.0	-1.4	-0.5	-1.4	0.03	0.00	-5.34
417.0	0.20	181.60	417.0	-1.8	-0.6	-1.8	0.12	-0.11	-12.89
511.0	0.50	82.20	511.0	-1.9	-0.2	-1.9	0.60	0.32	-105.74
606.0	1.10	55.20	606.0	-1.3	1.0	-1.3	0.73	0.63	-28.42
701.0	2.20	59.20	700.9	0.1	3.3	0.2	1.16	1.16	4.21
795.0	3.50	59.60	794.8	2.5	7.3	2.7	1.38	1.38	0.43
888.0	4.30	57.50	887.6	5.8	12.7	6.1	0.87	0.86	-2.26

Company:	Pioneer Natural Resources	Local Co-ordinate Reference:	Well UNIVERSITY-RATLIFF W58-7E 5H
Project:	Upton County, TX (NAD 27 TC)	TVD Reference:	KB @ 28' @ 2732.0usft
Site:	Univeristy Ratliff Pad	MD Reference:	KB @ 28' @ 2732.0usft
Well:	UNIVERSITY-RATLIFF W58-7E 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)
982.0	3.80	62.60	981.4	9.1	18.5	9.6	0.66	-0.53	5.43
1,077.0	3.60	65.70	1,076.2	11.8	24.0	12.4	0.30	-0.21	3.26
1,171.0	3.30	66.20	1,170.0	14.1	29.1	14.8	0.32	-0.32	0.53
1,195.0	3.40	64.30	1,194.0	14.7	30.4	15.4	0.62	0.42	-7.92
1,342.0	3.32	62.80	1,340.7	18.5	38.1	19.5	0.08	-0.05	-1.02
1,435.0	3.56	63.28	1,433.5	21.1	43.1	22.1	0.26	0.26	0.52
1,529.0	5.08	65.50	1,527.3	24.1	49.5	25.3	1.63	1.62	2.36
1,624.0	5.90	68.59	1,621.8	27.6	57.9	29.1	0.92	0.86	3.25
1,718.0	5.75	67.66	1,715.4	31.2	66.7	32.8	0.19	-0.16	-0.99
1,812.0	7.43	67.47	1,808.7	35.3	76.7	37.2	1.79	1.79	-0.20
1,905.0	8.87	70.46	1,900.8	40.0	89.0	42.2	1.61	1.55	3.22
1,999.0	10.34	71.93	1,993.5	45.0	103.8	47.6	1.59	1.56	1.56
2,092.0	10.99	69.92	2,084.9	50.7	120.1	53.7	0.81	0.70	-2.16
2,186.0	12.34	66.16	2,176.9	57.8	137.7	61.2	1.65	1.44	-4.00
2,279.0	12.09	68.22	2,267.8	65.4	155.8	69.3	0.54	-0.27	2.22
2,373.0	12.55	65.76	2,359.6	73.3	174.3	77.6	0.74	0.49	-2.62
2,467.0	13.95	65.52	2,451.1	82.2	193.9	87.0	1.49	1.49	-0.26
2,561.0	13.57	64.78	2,542.4	91.6	214.2	96.9	0.45	-0.40	-0.79
2,654.0	13.40	61.46	2,632.9	101.4	233.6	107.2	0.85	-0.18	-3.57
2,748.0	13.62	60.37	2,724.3	112.0	252.7	118.3	0.36	0.23	-1.16
2,842.0	13.59	59.84	2,815.6	123.1	271.9	129.8	0.14	-0.03	-0.56
2,935.0	13.26	61.11	2,906.1	133.7	290.7	141.0	0.48	-0.35	1.37
3,030.0	13.19	60.98	2,998.6	144.2	309.7	152.0	0.08	-0.07	-0.14
3,124.0	12.79	60.34	3,090.2	154.6	328.1	162.8	0.45	-0.43	-0.68
3,217.0	12.55	60.08	3,180.9	164.7	345.8	173.3	0.27	-0.26	-0.28
3,311.0	12.35	60.73	3,272.7	174.7	363.5	183.8	0.26	-0.21	0.69
3,404.0	12.11	58.98	3,363.6	184.6	380.5	194.1	0.47	-0.26	-1.88
3,498.0	11.70	60.21	3,455.6	194.4	397.2	204.3	0.51	-0.44	1.31
3,592.0	12.10	61.19	3,547.6	203.9	414.1	214.2	0.48	0.43	1.04
3,685.0	12.82	62.13	3,638.4	213.4	431.8	224.2	0.80	0.77	1.01
3,779.0	13.03	61.28	3,730.0	223.4	450.3	234.6	0.30	0.22	-0.90
3,873.0	13.01	61.76	3,821.6	233.5	468.9	245.2	0.12	-0.02	0.51
3,966.0	13.05	61.87	3,912.2	243.4	487.4	255.6	0.05	0.04	0.12
4,060.0	12.54	62.66	4,003.8	253.1	505.8	265.7	0.57	-0.54	0.84
4,153.0	12.12	62.89	4,094.7	262.2	523.5	275.2	0.45	-0.45	0.25
4,247.0	12.14	62.17	4,186.6	271.3	541.0	284.8	0.16	0.02	-0.77
4,340.0	12.23	62.53	4,277.5	280.4	558.4	294.3	0.13	0.10	0.39
4,434.0	11.76	63.67	4,369.4	289.2	575.8	303.6	0.56	-0.50	1.21
4,528.0	11.52	63.74	4,461.5	297.6	592.8	312.4	0.26	-0.26	0.07
4,623.0	11.27	64.01	4,554.6	305.9	609.7	321.1	0.27	-0.26	0.28
4,717.0	11.32	64.28	4,646.8	313.9	626.2	329.6	0.08	0.05	0.29
4,811.0	12.54	67.97	4,738.8	321.8	644.0	337.8	1.53	1.30	3.93
4,904.0	12.74	66.50	4,829.5	329.6	662.8	346.2	0.41	0.22	-1.58

Company:	Pioneer Natural Resources	Local Co-ordinate Reference:	Well UNIVERSITY-RATLIFF W58-7E 5H
Project:	Upton County, TX (NAD 27 TC)	TVD Reference:	KB @ 28' @ 2732.0usft
Site:	Univeristy Ratliff Pad	MD Reference:	KB @ 28' @ 2732.0usft
Well:	UNIVERSITY-RATLIFF W58-7E 5H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

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)	
4,998.0	12.46	66.87	4,921.3	337.8	681.6	354.8	0.31	-0.30	0.39	
5,092.0	12.25	67.10	5,013.1	345.6	700.1	363.1	0.23	-0.22	0.24	
5,186.0	11.88	66.66	5,105.0	353.3	718.2	371.3	0.41	-0.39	-0.47	
5,280.0	10.80	66.24	5,197.2	360.7	735.1	379.1	1.15	-1.15	-0.45	
5,373.0	10.05	68.21	5,288.6	367.2	750.6	386.0	0.89	-0.81	2.12	
5,468.0	9.99	69.26	5,382.2	373.2	766.0	392.4	0.20	-0.06	1.11	
5,561.0	9.63	71.32	5,473.8	378.6	780.9	398.1	0.54	-0.39	2.22	
5,656.0	9.11	70.66	5,567.6	383.6	795.6	403.5	0.56	-0.55	-0.69	
5,749.0	8.35	71.67	5,659.5	388.2	808.9	408.4	0.83	-0.82	1.09	
5,844.0	8.02	71.97	5,753.5	392.4	821.8	412.9	0.35	-0.35	0.32	
5,937.0	7.15	72.91	5,845.7	396.1	833.5	416.9	0.94	-0.94	1.01	
6,031.0	6.51	75.79	5,939.0	399.1	844.2	420.2	0.77	-0.68	3.06	
6,124.0	4.39	74.32	6,031.6	401.4	852.8	422.7	2.28	-2.28	-1.58	
6,218.0	3.16	79.90	6,125.4	402.8	858.8	424.3	1.36	-1.31	5.94	
6,312.0	2.57	77.68	6,219.3	403.7	863.4	425.3	0.64	-0.63	-2.36	
6,405.0	2.35	76.28	6,312.2	404.6	867.3	426.3	0.25	-0.24	-1.51	
6,500.0	2.27	79.70	6,407.1	405.4	871.0	427.2	0.17	-0.08	3.60	
6,593.0	1.72	77.27	6,500.1	406.0	874.2	427.9	0.60	-0.59	-2.61	
6,687.0	1.44	88.15	6,594.0	406.4	876.8	428.3	0.44	-0.30	11.57	
6,780.0	1.44	73.62	6,687.0	406.8	879.0	428.7	0.39	0.00	-15.62	
6,874.0	1.14	96.71	6,781.0	407.0	881.1	429.0	0.63	-0.32	24.56	
6,968.0	1.10	79.27	6,875.0	407.0	882.9	429.1	0.36	-0.04	-18.55	
7,063.0	1.07	110.35	6,969.9	406.9	884.7	429.0	0.61	-0.03	32.72	
7,157.0	0.81	179.60	7,063.9	405.9	885.5	428.1	1.16	-0.28	73.67	
7,250.0	1.16	200.65	7,156.9	404.4	885.2	426.5	0.54	0.38	22.63	
7,344.0	0.99	218.82	7,250.9	402.9	884.3	425.0	0.40	-0.18	19.33	
7,437.0	1.25	195.98	7,343.9	401.3	883.5	423.4	0.55	0.28	-24.56	
7,531.0	1.29	205.56	7,437.9	399.3	882.8	421.4	0.23	0.04	10.19	
7,625.0	0.82	182.81	7,531.9	397.7	882.3	419.8	0.66	-0.50	-24.20	
7,720.0	0.92	205.85	7,626.8	396.3	881.9	418.4	0.38	0.11	24.25	
7,813.0	0.82	201.14	7,719.8	395.1	881.4	417.1	0.13	-0.11	-5.06	
7,887.0	0.76	188.00	7,793.8	394.1	881.1	416.1	0.26	-0.08	-17.76	
7,967.0	0.76	188.00	7,873.8	393.0	881.0	415.0	0.00	0.00	0.00	

Checked By: _____ Approved By: _____ Date: _____



State of Texas

County of

Upton

I, Tyler Allison certify that; I am employed by INTREPID DIRECTIONAL DRILLING SPECIALISTS, Ltd.; that I did conduct or supervise the taking of MWD surveys on the dates and depths below ; that the data is true, correct, complete and within the limitations of the tool as set forth by INTREPID MWD, a division of INTREPID DIRECTIONAL DRILLING, Ltd.; that I am authorized and qualified to make this report;that this survey was conducted at the request of Pioneer Natural Resources API# 42-461-41693 Upton County, Texas; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by INTREPID MWD. A division of INTREPID DIRECTIONAL DRILLING SPECIALISTS, Ltd.

<u>Start Depth</u>	<u>End Depth</u>	<u>Start Date</u>	<u>End Date</u>	<u>Type of Survey</u>
1342	7887	6/9/2021	6/12/2021	MWD/ D&I & Gamma

Tyler Allison

Tyler Allison
MWD Engineer

Operator:	Pioneer Natural Resources
Well name	UNIVERSITY-RATLIFF W58-7E 5H
North Reference	GRID

TVD Reference	2732.00	Ft US
Ground Level	2704.00	Ft US
Vertical Section Azimuth	1.44	Degree(s)

Measured Depth Ft US	Inclination Degree(s)	Azimuth Degree(s)	Vertical Depth Ft US	Northings Local Ft US	Eastings Local Ft US	Vertical Section Ft US	Dogleg Rate °/100Ft US	Tool Code	Comments
28	0.00	202.50	28.00	0.00	0.00	0.00		Tie-in	Tie-in point
152	0.40	202.50	152.00	-0.40	-0.17	-0.40	0.32		Start Gyro Surface Surveys
239	0.30	197.90	239.00	-0.90	-0.35	-0.91	0.12		
327	0.30	193.20	327.00	-1.34	-0.48	-1.35	0.03		
417	0.20	181.60	417.00	-1.73	-0.53	-1.74	0.12		
511	0.50	82.20	510.99	-1.84	-0.13	-1.84	0.60		
606	1.10	55.20	605.98	-1.26	1.03	-1.23	0.73		
701	2.20	59.20	700.94	0.20	3.34	0.28	1.16		
795	3.50	59.60	794.83	2.57	7.37	2.76	1.38		
888	4.30	57.50	887.61	5.88	12.76	6.20	0.87		
982	3.80	62.60	981.37	9.21	18.49	9.67	0.66		
1077	3.60	65.70	1076.18	11.88	24.01	12.48	0.30		
1171	3.30	66.20	1170.01	14.19	29.17	14.92	0.32		
1195	3.40	64.30	1193.97	14.78	30.45	15.54	0.62		End Gyro Surface Surveys
1342	3.32	62.80	1340.71	18.61	38.16	19.57	0.08	MWD+IFR1+SAG+MS	Start MWD Run 01
1435	3.56	63.28	1433.55	21.14	43.13	22.22	0.26	MWD+IFR1+SAG+MS	
1529	5.08	65.50	1527.28	24.18	49.52	25.42	1.63	MWD+IFR1+SAG+MS	
1624	5.90	68.59	1621.84	27.71	57.90	29.15	0.92	MWD+IFR1+SAG+MS	
1718	5.75	67.66	1715.35	31.26	66.76	32.93	0.19	MWD+IFR1+SAG+MS	
1812	7.43	67.47	1808.73	35.38	76.73	37.30	1.78	MWD+IFR1+SAG+MS	
1905	8.87	70.46	1900.79	40.09	89.04	42.31	1.62	MWD+IFR1+SAG+MS	
1999	10.34	71.93	1993.47	45.13	103.90	47.72	1.59	MWD+IFR1+SAG+MS	
2092	10.99	69.92	2084.86	50.76	120.16	53.76	0.80	MWD+IFR1+SAG+MS	
2186	12.34	66.16	2176.92	57.90	137.76	61.34	1.65	MWD+IFR1+SAG+MS	
2279	12.09	68.22	2267.81	65.53	155.89	69.43	0.55	MWD+IFR1+SAG+MS	
2373	12.55	65.76	2359.65	73.37	174.35	77.73	0.75	MWD+IFR1+SAG+MS	
2467	13.95	65.52	2451.14	82.26	193.97	87.11	1.48	MWD+IFR1+SAG+MS	
2561	13.57	64.78	2542.45	91.66	214.26	97.01	0.44	MWD+IFR1+SAG+MS	

2654	13.40	61.46	2632.88	101.45	233.59	107.29	0.85	MWD+IFR1+SAG+MS	
2748	13.62	60.37	2724.28	112.13	252.78	118.44	0.36	MWD+IFR1+SAG+MS	
2842	13.59	59.84	2815.65	123.15	271.94	129.94	0.14	MWD+IFR1+SAG+MS	
2935	13.26	61.11	2906.11	133.79	290.72	141.05	0.48	MWD+IFR1+SAG+MS	
3030	13.19	60.98	2998.59	144.30	309.74	152.04	0.07	MWD+IFR1+SAG+MS	
3124	12.79	60.34	3090.18	154.66	328.16	162.85	0.45	MWD+IFR1+SAG+MS	
3217	12.55	60.08	3180.92	164.79	345.87	173.43	0.26	MWD+IFR1+SAG+MS	
3311	12.35	60.73	3272.71	174.80	363.49	183.88	0.26	MWD+IFR1+SAG+MS	
3404	12.11	58.98	3363.60	184.69	380.52	194.19	0.48	MWD+IFR1+SAG+MS	
3498	11.70	60.21	3455.58	194.50	397.24	204.43	0.51	MWD+IFR1+SAG+MS	
3592	12.10	61.19	3547.56	203.98	414.14	214.33	0.48	MWD+IFR1+SAG+MS	
3685	12.82	62.13	3638.37	213.50	431.80	224.29	0.81	MWD+IFR1+SAG+MS	
3779	13.03	61.28	3729.98	223.47	450.32	234.72	0.30	MWD+IFR1+SAG+MS	
3873	13.01	61.76	3821.57	233.57	468.93	245.28	0.12	MWD+IFR1+SAG+MS	
3966	13.05	61.87	3912.17	243.47	487.42	255.64	0.05	MWD+IFR1+SAG+MS	
4060	12.54	62.66	4003.84	253.16	505.84	265.79	0.57	MWD+IFR1+SAG+MS	
4153	12.12	62.89	4094.69	262.25	523.50	275.32	0.46	MWD+IFR1+SAG+MS	
4247	12.14	62.17	4186.59	271.36	541.02	284.87	0.16	MWD+IFR1+SAG+MS	
4340	12.23	62.53	4277.50	280.47	558.41	294.41	0.13	MWD+IFR1+SAG+MS	
4434	11.76	63.67	4369.45	289.31	575.83	303.69	0.56	MWD+IFR1+SAG+MS	
4528	11.52	63.74	4461.51	297.71	592.83	312.52	0.26	MWD+IFR1+SAG+MS	
4623	11.27	64.01	4554.64	305.98	609.68	321.20	0.27	MWD+IFR1+SAG+MS	
4717	11.32	64.28	4646.82	314.01	626.26	329.65	0.08	MWD+IFR1+SAG+MS	
4811	12.54	67.97	4738.79	321.84	644.03	337.93	1.53	MWD+IFR1+SAG+MS	
4904	12.74	66.50	4829.53	329.72	662.80	346.27	0.40	MWD+IFR1+SAG+MS	
4998	12.46	66.87	4921.27	337.84	681.63	354.86	0.31	MWD+IFR1+SAG+MS	
5092	12.25	67.10	5013.09	345.70	700.14	363.19	0.23	MWD+IFR1+SAG+MS	
5186	11.88	66.66	5105.01	353.42	718.21	371.35	0.40	MWD+IFR1+SAG+MS	
5280	10.80	66.24	5197.18	360.80	735.16	379.16	1.15	MWD+IFR1+SAG+MS	
5373	10.05	68.21	5288.64	367.32	750.67	386.07	0.90	MWD+IFR1+SAG+MS	
5468	9.99	69.26	5382.19	373.32	766.07	392.45	0.20	MWD+IFR1+SAG+MS	
5561	9.63	71.32	5473.83	378.67	780.99	398.17	0.54	MWD+IFR1+SAG+MS	
5656	9.11	70.66	5567.57	383.70	795.61	403.57	0.56	MWD+IFR1+SAG+MS	
5749	8.35	71.67	5659.49	388.26	808.97	408.47	0.83	MWD+IFR1+SAG+MS	
5844	8.02	71.97	5753.52	392.49	821.82	413.01	0.35	MWD+IFR1+SAG+MS	
5937	7.15	72.91	5845.70	396.20	833.53	417.02	0.94	MWD+IFR1+SAG+MS	

6031	6.51	75.79	5939.04	399.23	844.29	420.32	0.77	MWD+IFR1+SAG+MS	
6124	4.39	74.32	6031.61	401.48	852.83	422.79	2.29	MWD+IFR1+SAG+MS	
6218	3.16	79.90	6125.40	402.91	858.85	424.37	1.36	MWD+IFR1+SAG+MS	
6312	2.57	77.68	6219.29	403.81	863.46	425.39	0.65	MWD+IFR1+SAG+MS	
6405	2.35	76.28	6312.20	404.71	867.35	426.38	0.25	MWD+IFR1+SAG+MS	
6500	2.27	79.70	6407.12	405.51	871.09	427.27	0.16	MWD+IFR1+SAG+MS	
6593	1.72	77.27	6500.07	406.14	874.26	427.99	0.60	MWD+IFR1+SAG+MS	
6687	1.44	88.15	6594.03	406.49	876.81	428.40	0.43	MWD+IFR1+SAG+MS	
6780	1.44	73.62	6687.00	406.86	879.10	428.82	0.39	MWD+IFR1+SAG+MS	
6874	1.14	96.71	6780.98	407.08	881.15	429.10	0.63	MWD+IFR1+SAG+MS	
6968	1.10	79.27	6874.96	407.14	882.96	429.20	0.36	MWD+IFR1+SAG+MS	
7063	1.07	110.35	6969.95	407.00	884.69	429.10	0.61	MWD+IFR1+SAG+MS	
7157	0.81	179.60	7063.94	406.03	885.51	428.16	1.16	MWD+IFR1+SAG+MS	
7250	1.16	200.65	7156.92	404.49	885.18	426.61	0.54	MWD+IFR1+SAG+MS	
7344	0.99	218.82	7250.91	402.97	884.34	425.06	0.41	MWD+IFR1+SAG+MS	
7437	1.25	195.98	7343.89	401.37	883.56	423.45	0.55	MWD+IFR1+SAG+MS	
7531	1.29	205.56	7437.87	399.43	882.82	421.49	0.23	MWD+IFR1+SAG+MS	
7625	0.82	182.81	7531.85	397.80	882.33	419.85	0.66	MWD+IFR1+SAG+MS	
7720	0.92	205.85	7626.84	396.44	881.97	418.47	0.38	MWD+IFR1+SAG+MS	
7813	0.82	201.14	7719.83	395.14	881.40	417.17	0.13	MWD+IFR1+SAG+MS	
7887	0.76	188.00	7793.82	394.16	881.14	416.18	0.26	MWD+IFR1+SAG+MS	End MWD Run 01
7970	0.37	154.07	7876.82	393.37	881.18	415.39	0.61	MWD+IFR1+SAG+MS	Start MWD Run 02
8064	5.88	15.84	7970.66	397.73	882.63	419.79	6.55	MWD+IFR1+SAG+MS	
8158	10.23	12.46	8063.71	410.52	885.74	432.65	4.65	MWD+IFR1+SAG+MS	
8251	19.09	4.55	8153.60	433.80	888.74	455.99	9.75	MWD+IFR1+SAG+MS	
8344	29.06	2.50	8238.41	471.62	890.94	493.86	10.76	MWD+IFR1+SAG+MS	
8438	38.30	5.87	8316.55	523.52	894.92	545.84	10.03	MWD+IFR1+SAG+MS	
8533	46.86	5.92	8386.43	587.40	901.52	609.87	9.01	MWD+IFR1+SAG+MS	
8626	52.13	355.11	8446.92	657.89	901.89	680.35	10.49	MWD+IFR1+SAG+MS	
8719	61.83	356.96	8497.54	735.59	896.58	757.89	10.57	MWD+IFR1+SAG+MS	
8813	74.47	359.80	8532.46	822.62	894.21	844.83	13.73	MWD+IFR1+SAG+MS	
8906	83.63	3.98	8550.12	913.76	897.28	936.02	10.79	MWD+IFR1+SAG+MS	
9000	89.36	358.18	8555.87	1007.48	899.03	1029.76	8.66	MWD+IFR1+SAG+MS	
9095	89.39	0.19	8556.90	1102.46	897.68	1124.67	2.11	MWD+IFR1+SAG+MS	
9188	88.96	0.62	8558.23	1195.45	898.33	1217.65	0.65	MWD+IFR1+SAG+MS	
9282	88.84	0.30	8560.04	1289.43	899.08	1311.62	0.36	MWD+IFR1+SAG+MS	

9375	88.69	0.25	8562.04	1382.41	899.53	1404.58	0.17	MWD+IFR1+SAG+MS	
9469	89.76	4.82	8563.31	1476.28	903.69	1498.52	4.99	MWD+IFR1+SAG+MS	
9562	88.35	1.17	8564.85	1569.12	908.56	1591.46	4.21	MWD+IFR1+SAG+MS	
9656	87.36	359.55	8568.37	1663.05	909.15	1685.37	2.02	MWD+IFR1+SAG+MS	
9749	88.13	359.76	8572.02	1755.98	908.59	1778.25	0.86	MWD+IFR1+SAG+MS	
9843	88.96	3.57	8574.41	1849.89	911.31	1872.21	4.15	MWD+IFR1+SAG+MS	
9937	89.06	4.45	8576.03	1943.64	917.89	1966.10	0.94	MWD+IFR1+SAG+MS	
10031	88.44	4.09	8578.08	2037.36	924.88	2059.96	0.76	MWD+IFR1+SAG+MS	
10124	89.30	2.15	8579.92	2130.20	929.94	2152.90	2.28	MWD+IFR1+SAG+MS	
10217	91.00	2.35	8579.67	2223.12	933.59	2245.88	1.83	MWD+IFR1+SAG+MS	
10311	87.73	1.14	8580.72	2317.06	936.45	2339.86	3.70	MWD+IFR1+SAG+MS	
10405	88.81	358.66	8583.55	2411.01	936.29	2433.78	2.87	MWD+IFR1+SAG+MS	
10499	91.30	1.23	8583.46	2504.99	936.20	2527.73	3.81	MWD+IFR1+SAG+MS	
10592	90.84	0.71	8581.72	2597.96	937.76	2620.71	0.75	MWD+IFR1+SAG+MS	
10686	90.90	0.83	8580.29	2691.94	939.02	2714.69	0.15	MWD+IFR1+SAG+MS	
10779	89.95	0.26	8579.60	2784.93	939.91	2807.68	1.19	MWD+IFR1+SAG+MS	
10873	90.20	2.78	8579.48	2878.89	942.41	2901.67	2.69	MWD+IFR1+SAG+MS	
10966	89.52	359.34	8579.71	2971.86	944.12	2994.65	3.77	MWD+IFR1+SAG+MS	
11059	90.23	0.35	8579.92	3064.86	943.87	3087.61	1.33	MWD+IFR1+SAG+MS	
11153	90.38	0.79	8579.42	3158.85	944.80	3181.60	0.50	MWD+IFR1+SAG+MS	
11247	90.53	1.25	8578.67	3252.84	946.48	3275.59	0.51	MWD+IFR1+SAG+MS	
11341	90.87	1.84	8577.51	3346.79	949.01	3369.59	0.73	MWD+IFR1+SAG+MS	
11434	90.47	359.88	8576.42	3439.77	950.41	3462.57	2.15	MWD+IFR1+SAG+MS	
11527	90.07	2.10	8575.98	3532.75	952.02	3555.56	2.42	MWD+IFR1+SAG+MS	
11621	89.76	1.70	8576.11	3626.70	955.13	3649.56	0.54	MWD+IFR1+SAG+MS	
11714	89.46	0.56	8576.74	3719.68	956.97	3742.55	1.26	MWD+IFR1+SAG+MS	
11808	89.92	0.74	8577.26	3813.67	958.03	3836.54	0.52	MWD+IFR1+SAG+MS	
11902	90.63	2.30	8576.81	3907.63	960.52	3930.54	1.82	MWD+IFR1+SAG+MS	
11995	90.44	1.37	8575.94	4000.58	963.50	4023.53	1.01	MWD+IFR1+SAG+MS	
12089	90.57	0.58	8575.12	4094.56	965.11	4117.52	0.85	MWD+IFR1+SAG+MS	
12182	91.80	1.18	8573.20	4187.53	966.54	4210.50	1.47	MWD+IFR1+SAG+MS	
12275	91.09	1.21	8570.86	4280.48	968.48	4303.46	0.76	MWD+IFR1+SAG+MS	
12369	90.26	359.09	8569.75	4374.47	968.73	4397.43	2.42	MWD+IFR1+SAG+MS	
12462	91.00	359.95	8568.74	4467.46	967.95	4490.37	1.22	MWD+IFR1+SAG+MS	
12556	91.40	3.30	8566.77	4561.38	970.62	4584.33	3.59	MWD+IFR1+SAG+MS	
12649	89.89	2.19	8565.73	4654.27	975.08	4677.30	2.02	MWD+IFR1+SAG+MS	

12742	89.98	2.71	8565.84	4747.18	979.05	4770.29	0.56	MWD+IFR1+SAG+MS	
12837	89.46	1.21	8566.31	4842.12	982.29	4865.28	1.67	MWD+IFR1+SAG+MS	
12930	89.83	0.93	8566.89	4935.10	984.03	4958.27	0.50	MWD+IFR1+SAG+MS	
13024	90.72	2.88	8566.44	5029.04	987.15	5052.26	2.28	MWD+IFR1+SAG+MS	
13117	91.40	4.30	8564.72	5121.84	992.97	5145.18	1.69	MWD+IFR1+SAG+MS	
13211	91.00	4.05	8562.76	5215.57	999.81	5239.05	0.50	MWD+IFR1+SAG+MS	
13305	90.35	3.28	8561.66	5309.37	1005.82	5332.97	1.08	MWD+IFR1+SAG+MS	
13398	89.86	0.92	8561.49	5402.30	1009.22	5425.96	2.59	MWD+IFR1+SAG+MS	
13492	89.36	0.89	8562.13	5496.29	1010.70	5519.95	0.53	MWD+IFR1+SAG+MS	
13585	88.41	359.38	8563.94	5589.27	1010.92	5612.91	1.92	MWD+IFR1+SAG+MS	
13679	89.36	0.75	8565.76	5683.25	1011.03	5706.86	1.78	MWD+IFR1+SAG+MS	
13772	90.38	2.27	8565.97	5776.21	1013.48	5799.86	1.96	MWD+IFR1+SAG+MS	
13866	90.50	4.89	8565.25	5870.02	1019.34	5893.78	2.79	MWD+IFR1+SAG+MS	
13960	90.57	2.03	8564.37	5963.83	1025.01	5987.71	3.04	MWD+IFR1+SAG+MS	
14054	90.69	1.17	8563.34	6057.79	1027.63	6081.70	0.92	MWD+IFR1+SAG+MS	
14147	90.53	2.82	8562.35	6150.72	1030.87	6174.69	1.78	MWD+IFR1+SAG+MS	
14241	90.72	1.91	8561.32	6244.64	1034.75	6268.67	0.99	MWD+IFR1+SAG+MS	
14335	90.69	359.57	8560.16	6338.62	1035.97	6362.65	2.49	MWD+IFR1+SAG+MS	
14428	89.52	359.27	8560.00	6431.61	1035.02	6455.59	1.30	MWD+IFR1+SAG+MS	
14521	89.86	356.47	8560.50	6524.53	1031.56	6548.40	3.03	MWD+IFR1+SAG+MS	
14615	90.10	358.79	8560.54	6618.45	1027.67	6642.18	2.49	MWD+IFR1+SAG+MS	
14709	89.86	359.95	8560.57	6712.44	1026.64	6736.12	1.26	MWD+IFR1+SAG+MS	
14803	90.78	0.46	8560.05	6806.44	1026.98	6830.09	1.12	MWD+IFR1+SAG+MS	
14897	89.55	0.53	8559.78	6900.43	1027.79	6924.08	1.31	MWD+IFR1+SAG+MS	
14991	91.74	3.95	8558.72	6994.33	1031.45	7018.04	4.32	MWD+IFR1+SAG+MS	
15084	91.18	0.81	8556.36	7087.21	1035.31	7110.99	3.42	MWD+IFR1+SAG+MS	
15178	88.93	1.97	8556.26	7181.18	1037.59	7204.98	2.69	MWD+IFR1+SAG+MS	
15271	89.36	3.85	8557.64	7274.04	1042.31	7297.94	2.08	MWD+IFR1+SAG+MS	
15365	88.69	0.24	8559.24	7367.95	1045.67	7391.90	3.91	MWD+IFR1+SAG+MS	
15458	88.22	359.80	8561.75	7460.92	1045.70	7484.84	0.69	MWD+IFR1+SAG+MS	
15552	88.22	359.58	8564.66	7554.87	1045.19	7578.75	0.23	MWD+IFR1+SAG+MS	
15645	88.75	359.85	8567.12	7647.84	1044.73	7671.68	0.63	MWD+IFR1+SAG+MS	
15739	90.23	0.96	8567.96	7741.83	1045.39	7765.65	1.97	MWD+IFR1+SAG+MS	
15833	90.44	359.45	8567.41	7835.82	1045.72	7859.63	1.62	MWD+IFR1+SAG+MS	
15926	91.70	2.18	8565.67	7928.79	1047.04	7952.59	3.23	MWD+IFR1+SAG+MS	
16020	88.93	0.40	8565.15	8022.75	1049.16	8046.58	3.50	MWD+IFR1+SAG+MS	

16113	91.74	0.75	8564.60	8115.73	1050.09	8139.56	3.04	MWD+IFR1+SAG+MS	
16207	88.53	0.77	8564.39	8209.71	1051.33	8233.54	3.41	MWD+IFR1+SAG+MS	
16301	89.18	0.93	8566.26	8303.68	1052.72	8327.51	0.71	MWD+IFR1+SAG+MS	
16395	88.90	357.69	8567.84	8397.65	1051.59	8421.42	3.46	MWD+IFR1+SAG+MS	
16489	90.07	0.25	8568.68	8491.62	1049.90	8515.32	3.00	MWD+IFR1+SAG+MS	
16582	89.76	1.57	8568.81	8584.61	1051.38	8608.32	1.46	MWD+IFR1+SAG+MS	
16676	89.15	2.33	8569.70	8678.55	1054.58	8702.31	1.04	MWD+IFR1+SAG+MS	
16770	89.33	3.48	8570.95	8772.42	1059.34	8796.27	1.24	MWD+IFR1+SAG+MS	
16863	89.92	4.03	8571.55	8865.21	1065.42	8889.19	0.86	MWD+IFR1+SAG+MS	
16957	87.98	3.26	8573.28	8959.00	1071.39	8983.10	2.22	MWD+IFR1+SAG+MS	
17050	91.24	2.78	8573.91	9051.86	1076.30	9076.05	3.55	MWD+IFR1+SAG+MS	
17144	91.09	3.18	8572.00	9145.71	1081.18	9169.99	0.45	MWD+IFR1+SAG+MS	
17238	88.78	3.28	8572.11	9239.56	1086.48	9263.94	2.46	MWD+IFR1+SAG+MS	
17331	91.03	2.88	8572.27	9332.42	1091.48	9356.90	2.46	MWD+IFR1+SAG+MS	
17425	90.78	2.96	8570.78	9426.28	1096.27	9450.85	0.28	MWD+IFR1+SAG+MS	
17519	91.09	1.20	8569.25	9520.20	1099.68	9544.83	1.90	MWD+IFR1+SAG+MS	
17613	89.06	358.09	8569.13	9614.18	1099.10	9638.77	3.95	MWD+IFR1+SAG+MS	
17706	89.21	1.10	8570.54	9707.16	1098.44	9731.70	3.24	MWD+IFR1+SAG+MS	
17800	89.18	0.24	8571.86	9801.14	1099.54	9825.68	0.91	MWD+IFR1+SAG+MS	
17893	89.83	3.35	8572.66	9894.08	1102.46	9918.66	3.41	MWD+IFR1+SAG+MS	
17987	89.03	0.63	8573.61	9988.01	1105.72	10012.65	3.01	MWD+IFR1+SAG+MS	
18081	90.10	0.44	8574.32	10082.00	1106.59	10106.63	1.16	MWD+IFR1+SAG+MS	
18174	91.86	1.69	8572.73	10174.97	1108.32	10199.61	2.32	MWD+IFR1+SAG+MS	
18268	91.18	4.95	8570.24	10268.77	1113.77	10293.51	3.54	MWD+IFR1+SAG+MS	
18361	88.10	0.11	8570.82	10361.63	1117.87	10386.45	6.17	MWD+IFR1+SAG+MS	
18455	88.22	0.24	8573.83	10455.58	1118.15	10480.38	0.19	MWD+IFR1+SAG+MS	
18549	88.07	359.04	8576.87	10549.53	1117.56	10574.28	1.29	MWD+IFR1+SAG+MS	
18642	88.32	0.09	8579.80	10642.48	1116.85	10667.19	1.16	MWD+IFR1+SAG+MS	
18736	88.75	0.33	8582.21	10736.45	1117.20	10761.13	0.52	MWD+IFR1+SAG+MS	
18829	90.63	1.02	8582.72	10829.44	1118.29	10854.12	2.15	MWD+IFR1+SAG+MS	
18888	89.89	1.61	8582.45	10888.42	1119.64	10913.12	1.60	MWD+IFR1+SAG+MS	
18913	89.89	1.61	8582.50	10913.41	1120.35	10938.12	0.00	MWD+IFR1+SAG+MS	End MWD Run 02