

AMEREDEV

Ameredev Operating, LLC.

PIN/DOG

PIN/DOG #1S

Pine Straw 101H

Final Survey

Plan: Design #1

Lease Penetration Section Line Foot

02 January, 2020

HOBBS OCD
FEB 03 2020
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Company:	Ameredev Operating, LLC.	Local Co-ordinate Reference:	Well Pine Straw 101H
Project:	PIN/DOG	TVD Reference:	KB @ 3268.0usft
Site:	PIN/DOG #1S	MD Reference:	KB @ 3268.0usft
Well:	Pine Straw 101H	North Reference:	Grid
Wellbore:	Final Survey	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM5000

Project	PIN/DOG		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PIN/DOG #1S				
Site Position:		Northing:	425,695.22 usft	Latitude:	32° 9' 57.779 N
From:	Lat/Long	Easting:	862,769.39 usft	Longitude:	103° 17' 40.433 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.55 °

Well	Pine Straw 101H				
Well Position	+N/-S	0.0 usft	Northing:	425,694.72 usft	Latitude: 32° 9' 57.780 N
	+E/-W	0.0 usft	Easting:	862,709.39 usft	Longitude: 103° 17' 41.131 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,241.0 usft

Wellbore	Final Survey				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/2/2020	6.54	60.02	47,671.81117556

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.91

Survey Tool Program	Date	1/2/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	21,598.0	Design #1 (Final Survey)	MWD	OWSG MWD - Standard

Planned Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	-233.5	230.0	32° 9' 57.780 N	103° 17' 41.131 W
70.0	0.40	181.00	70.0	-233.8	230.0	32° 9' 57.777 N	103° 17' 41.131 W
100.0	0.40	166.01	100.0	-234.0	230.0	32° 9' 57.775 N	103° 17' 41.131 W
179.0	0.50	133.00	179.0	-234.5	230.3	32° 9' 57.770 N	103° 17' 41.127 W
200.0	0.42	137.54	200.0	-234.6	230.5	32° 9' 57.769 N	103° 17' 41.126 W
266.0	0.20	176.00	266.0	-234.9	230.6	32° 9' 57.766 N	103° 17' 41.124 W
300.0	0.19	186.65	300.0	-235.0	230.6	32° 9' 57.765 N	103° 17' 41.124 W
370.0	0.20	209.00	370.0	-235.2	230.5	32° 9' 57.763 N	103° 17' 41.125 W
400.0	0.27	186.66	400.0	-235.3	230.5	32° 9' 57.762 N	103° 17' 41.125 W
495.0	0.60	163.00	495.0	-236.0	230.6	32° 9' 57.755 N	103° 17' 41.124 W
500.0	0.59	162.82	500.0	-236.1	230.6	32° 9' 57.754 N	103° 17' 41.124 W
590.0	0.40	158.00	590.0	-236.8	230.9	32° 9' 57.747 N	103° 17' 41.121 W

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 Site: PIN/DOG #1S
 Well: Pine Straw 101H
 Wellbore: Final Survey
 Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
 TVD Reference: KB @ 3268.0usft
 MD Reference: KB @ 3268.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
600.0	0.35	164.65	600.0	-236.9	230.9	32° 9' 57.746 N	103° 17' 41.121 W
686.0	0.40	260.00	686.0	-237.2	230.7	32° 9' 57.743 N	103° 17' 41.123 W
700.0	0.37	255.44	700.0	-237.2	230.6	32° 9' 57.743 N	103° 17' 41.124 W
800.0	0.29	204.53	800.0	-237.5	230.2	32° 9' 57.740 N	103° 17' 41.129 W
810.0	0.30	199.00	810.0	-237.6	230.2	32° 9' 57.740 N	103° 17' 41.129 W
900.0	1.07	184.18	900.0	-238.6	230.0	32° 9' 57.729 N	103° 17' 41.131 W
904.0	1.10	184.00	904.0	-238.7	230.0	32° 9' 57.728 N	103° 17' 41.131 W
936.0	1.10	202.00	936.0	-239.3	229.9	32° 9' 57.723 N	103° 17' 41.133 W
999.0	1.20	194.00	999.0	-240.5	229.5	32° 9' 57.711 N	103° 17' 41.138 W
1,000.0	1.19	194.11	1,000.0	-240.5	229.5	32° 9' 57.710 N	103° 17' 41.138 W
1,061.0	0.90	203.00	1,060.9	-241.6	229.2	32° 9' 57.700 N	103° 17' 41.142 W
1,100.0	0.99	192.21	1,099.9	-242.2	229.0	32° 9' 57.694 N	103° 17' 41.144 W
1,189.0	1.30	175.00	1,188.9	-243.9	228.9	32° 9' 57.677 N	103° 17' 41.145 W
1,200.0	1.32	174.48	1,199.9	-244.2	228.9	32° 9' 57.674 N	103° 17' 41.145 W
1,284.0	1.50	171.00	1,283.9	-246.2	229.2	32° 9' 57.654 N	103° 17' 41.142 W
1,300.0	1.68	191.20	1,299.9	-246.7	229.2	32° 9' 57.649 N	103° 17' 41.142 W
1,311.0	1.90	202.00	1,310.9	-247.0	229.1	32° 9' 57.646 N	103° 17' 41.143 W
1,345.0	1.20	206.00	1,344.9	-247.8	228.7	32° 9' 57.638 N	103° 17' 41.148 W
1,397.0	0.90	179.00	1,396.9	-248.7	228.5	32° 9' 57.629 N	103° 17' 41.151 W
1,400.0	0.91	178.59	1,399.9	-248.8	228.5	32° 9' 57.629 N	103° 17' 41.151 W
1,459.0	1.10	172.00	1,458.9	-249.8	228.6	32° 9' 57.618 N	103° 17' 41.150 W
1,500.0	1.36	159.46	1,499.8	-250.7	228.8	32° 9' 57.610 N	103° 17' 41.147 W
1,520.0	1.50	155.00	1,519.8	-251.1	229.0	32° 9' 57.605 N	103° 17' 41.145 W
1,568.0	0.78	172.22	1,567.8	-252.0	229.3	32° 9' 57.597 N	103° 17' 41.141 W
1,600.0	0.67	167.88	1,599.8	-252.4	229.4	32° 9' 57.593 N	103° 17' 41.141 W
1,631.0	0.57	162.13	1,630.8	-252.7	229.4	32° 9' 57.589 N	103° 17' 41.140 W
1,700.0	1.25	139.50	1,699.8	-253.6	230.0	32° 9' 57.581 N	103° 17' 41.133 W
1,726.0	1.52	136.38	1,725.8	-254.1	230.5	32° 9' 57.576 N	103° 17' 41.128 W
1,800.0	0.52	128.69	1,799.8	-255.0	231.4	32° 9' 57.567 N	103° 17' 41.117 W
1,821.0	0.25	115.34	1,820.8	-255.1	231.5	32° 9' 57.566 N	103° 17' 41.116 W
1,900.0	0.43	333.01	1,899.8	-254.9	231.5	32° 9' 57.568 N	103° 17' 41.116 W
1,917.0	0.57	329.70	1,916.8	-254.8	231.5	32° 9' 57.569 N	103° 17' 41.116 W
2,000.0	0.79	290.70	1,999.8	-254.2	230.7	32° 9' 57.575 N	103° 17' 41.125 W
2,012.0	0.84	287.16	2,011.8	-254.2	230.6	32° 9' 57.575 N	103° 17' 41.127 W
2,100.0	0.98	300.93	2,099.8	-253.6	229.3	32° 9' 57.581 N	103° 17' 41.141 W
2,107.0	0.99	301.85	2,106.8	-253.5	229.2	32° 9' 57.582 N	103° 17' 41.143 W
2,200.0	0.82	314.11	2,199.8	-252.6	228.0	32° 9' 57.591 N	103° 17' 41.156 W
2,203.0	0.82	314.58	2,202.8	-252.6	228.0	32° 9' 57.591 N	103° 17' 41.156 W
2,299.0	0.70	323.55	2,298.8	-251.6	227.2	32° 9' 57.600 N	103° 17' 41.166 W
2,300.0	0.70	323.62	2,299.8	-251.6	227.2	32° 9' 57.601 N	103° 17' 41.166 W
2,394.0	0.70	329.87	2,393.7	-250.7	226.5	32° 9' 57.610 N	103° 17' 41.173 W
2,400.0	0.70	331.12	2,399.7	-250.6	226.5	32° 9' 57.611 N	103° 17' 41.174 W
2,489.0	0.81	347.35	2,488.7	-249.5	226.1	32° 9' 57.622 N	103° 17' 41.178 W
2,500.0	0.82	350.23	2,499.7	-249.4	226.1	32° 9' 57.623 N	103° 17' 41.179 W

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North Reference: Grid
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MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
2,583.0	0.92	9.75	2,582.7	-248.1	226.1	32° 9' 57.635 N	103° 17' 41.178 W
2,600.0	0.94	9.73	2,599.7	-247.9	226.1	32° 9' 57.638 N	103° 17' 41.178 W
2,678.0	1.03	9.66	2,677.7	-246.5	226.3	32° 9' 57.651 N	103° 17' 41.175 W
2,700.0	1.05	10.27	2,699.7	-246.1	226.4	32° 9' 57.655 N	103° 17' 41.174 W
2,774.0	1.11	12.19	2,773.7	-244.8	226.7	32° 9' 57.668 N	103° 17' 41.171 W
2,800.0	1.15	12.47	2,799.7	-244.3	226.8	32° 9' 57.673 N	103° 17' 41.169 W
2,870.0	1.26	13.12	2,869.7	-242.8	227.1	32° 9' 57.688 N	103° 17' 41.166 W
2,900.0	1.31	18.11	2,899.7	-242.2	227.3	32° 9' 57.694 N	103° 17' 41.163 W
2,964.0	1.44	27.45	2,963.7	-240.8	227.9	32° 9' 57.708 N	103° 17' 41.156 W
3,000.0	1.60	30.93	2,999.6	-240.0	228.4	32° 9' 57.716 N	103° 17' 41.151 W
3,057.0	1.87	35.18	3,056.6	-238.5	229.3	32° 9' 57.730 N	103° 17' 41.140 W
3,100.0	1.98	37.23	3,099.6	-237.3	230.2	32° 9' 57.742 N	103° 17' 41.129 W
3,153.0	2.11	39.47	3,152.6	-235.9	231.3	32° 9' 57.756 N	103° 17' 41.116 W
3,200.0	2.19	41.67	3,199.5	-234.5	232.5	32° 9' 57.769 N	103° 17' 41.102 W
3,248.0	2.28	43.75	3,247.5	-233.1	233.8	32° 9' 57.783 N	103° 17' 41.087 W
3,300.0	2.45	46.01	3,299.4	-231.6	235.3	32° 9' 57.798 N	103° 17' 41.069 W
3,343.0	2.60	47.65	3,342.4	-230.3	236.7	32° 9' 57.810 N	103° 17' 41.053 W
3,400.0	2.68	53.98	3,399.3	-228.7	238.7	32° 9' 57.827 N	103° 17' 41.029 W
3,438.0	2.75	57.96	3,437.3	-227.7	240.2	32° 9' 57.836 N	103° 17' 41.012 W
3,500.0	2.20	56.22	3,499.2	-226.2	242.4	32° 9' 57.851 N	103° 17' 40.986 W
3,533.0	1.91	54.89	3,532.2	-225.6	243.4	32° 9' 57.857 N	103° 17' 40.974 W
3,600.0	1.44	35.40	3,599.2	-224.2	244.8	32° 9' 57.870 N	103° 17' 40.958 W
3,627.0	1.32	24.19	3,626.2	-223.7	245.1	32° 9' 57.876 N	103° 17' 40.954 W
3,700.0	1.36	16.33	3,699.2	-222.1	245.7	32° 9' 57.891 N	103° 17' 40.947 W
3,722.0	1.38	14.07	3,721.2	-221.6	245.9	32° 9' 57.896 N	103° 17' 40.945 W
3,800.0	1.43	1.88	3,799.1	-219.7	246.1	32° 9' 57.915 N	103° 17' 40.942 W
3,816.0	1.45	359.52	3,815.1	-219.3	246.1	32° 9' 57.919 N	103° 17' 40.942 W
3,900.0	1.15	350.20	3,899.1	-217.4	246.0	32° 9' 57.938 N	103° 17' 40.943 W
3,910.0	1.12	348.77	3,909.1	-217.2	245.9	32° 9' 57.940 N	103° 17' 40.944 W
4,000.0	0.94	316.31	3,999.1	-215.8	245.3	32° 9' 57.954 N	103° 17' 40.952 W
4,005.0	0.94	314.27	4,004.1	-215.7	245.2	32° 9' 57.954 N	103° 17' 40.952 W
4,100.0	0.83	316.09	4,099.1	-214.7	244.2	32° 9' 57.965 N	103° 17' 40.964 W
4,101.0	0.83	316.11	4,100.1	-214.7	244.1	32° 9' 57.965 N	103° 17' 40.964 W
4,195.0	0.94	317.39	4,194.1	-213.6	243.2	32° 9' 57.975 N	103° 17' 40.976 W
4,200.0	0.91	317.97	4,199.1	-213.6	243.1	32° 9' 57.976 N	103° 17' 40.976 W
4,290.0	0.48	339.04	4,289.1	-212.7	242.5	32° 9' 57.985 N	103° 17' 40.983 W
4,300.0	0.63	321.51	4,299.1	-212.6	242.4	32° 9' 57.985 N	103° 17' 40.984 W
4,400.0	2.73	289.53	4,399.0	-211.4	239.8	32° 9' 57.998 N	103° 17' 41.014 W
4,480.0	2.87	287.15	4,478.9	-210.1	236.1	32° 9' 58.010 N	103° 17' 41.057 W
4,500.0	2.68	284.83	4,498.9	-209.9	235.2	32° 9' 58.013 N	103° 17' 41.068 W
4,576.0	2.03	272.28	4,574.8	-209.4	232.1	32° 9' 58.018 N	103° 17' 41.103 W
4,600.0	1.96	269.63	4,598.8	-209.3	231.3	32° 9' 58.019 N	103° 17' 41.113 W
4,671.0	1.79	260.71	4,669.8	-209.5	229.0	32° 9' 58.017 N	103° 17' 41.140 W
4,700.0	1.67	262.93	4,698.8	-209.7	228.1	32° 9' 58.016 N	103° 17' 41.150 W

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Wellbore: Final Survey
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TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
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Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
4,765.0	1.40	269.31	4,763.7	-209.8	226.4	32° 9' 58.015 N	103° 17' 41.170 W
4,800.0	1.65	275.68	4,798.7	-209.7	225.5	32° 9' 58.015 N	103° 17' 41.181 W
4,860.0	2.12	282.90	4,858.7	-209.4	223.5	32° 9' 58.019 N	103° 17' 41.204 W
4,900.0	2.19	288.37	4,898.7	-209.0	222.1	32° 9' 58.023 N	103° 17' 41.220 W
4,954.0	2.32	295.13	4,952.6	-208.2	220.1	32° 9' 58.031 N	103° 17' 41.243 W
5,000.0	2.31	297.23	4,998.6	-207.4	218.4	32° 9' 58.039 N	103° 17' 41.262 W
5,049.0	2.31	299.47	5,047.5	-206.4	216.7	32° 9' 58.049 N	103° 17' 41.283 W
5,100.0	2.42	296.37	5,098.5	-205.5	214.8	32° 9' 58.059 N	103° 17' 41.304 W
5,144.0	2.52	293.92	5,142.5	-204.7	213.1	32° 9' 58.067 N	103° 17' 41.324 W
5,200.0	3.19	292.72	5,198.4	-203.6	210.6	32° 9' 58.078 N	103° 17' 41.354 W
5,239.0	3.65	292.15	5,237.3	-202.7	208.4	32° 9' 58.087 N	103° 17' 41.379 W
5,300.0	3.87	294.25	5,298.2	-201.1	204.7	32° 9' 58.103 N	103° 17' 41.421 W
5,334.0	3.99	295.32	5,332.1	-200.1	202.6	32° 9' 58.113 N	103° 17' 41.446 W
5,400.0	2.98	294.87	5,398.0	-198.4	199.0	32° 9' 58.130 N	103° 17' 41.488 W
5,430.0	2.52	294.55	5,428.0	-197.8	197.7	32° 9' 58.136 N	103° 17' 41.503 W
5,500.0	1.10	297.07	5,497.9	-196.9	195.7	32° 9' 58.145 N	103° 17' 41.526 W
5,526.0	0.57	301.21	5,523.9	-196.7	195.4	32° 9' 58.147 N	103° 17' 41.530 W
5,600.0	0.59	68.56	5,597.9	-196.4	195.4	32° 9' 58.150 N	103° 17' 41.529 W
5,621.0	0.87	77.06	5,618.9	-196.3	195.7	32° 9' 58.151 N	103° 17' 41.526 W
5,700.0	1.29	85.88	5,697.9	-196.1	197.1	32° 9' 58.153 N	103° 17' 41.509 W
5,716.0	1.38	87.00	5,713.9	-196.1	197.5	32° 9' 58.153 N	103° 17' 41.505 W
5,800.0	1.37	104.23	5,797.9	-196.3	199.5	32° 9' 58.151 N	103° 17' 41.482 W
5,811.0	1.38	106.45	5,808.9	-196.3	199.7	32° 9' 58.150 N	103° 17' 41.479 W
5,900.0	1.39	95.33	5,897.8	-196.7	201.8	32° 9' 58.146 N	103° 17' 41.454 W
5,907.0	1.39	94.47	5,904.8	-196.7	202.0	32° 9' 58.146 N	103° 17' 41.452 W
6,000.0	1.46	103.60	5,997.8	-197.1	204.3	32° 9' 58.142 N	103° 17' 41.426 W
6,002.0	1.46	103.79	5,999.8	-197.1	204.3	32° 9' 58.142 N	103° 17' 41.425 W
6,097.0	1.40	99.46	6,094.8	-197.6	206.7	32° 9' 58.137 N	103° 17' 41.398 W
6,100.0	1.40	99.55	6,097.8	-197.6	206.7	32° 9' 58.137 N	103° 17' 41.398 W
6,192.0	1.40	102.35	6,189.8	-198.0	208.9	32° 9' 58.133 N	103° 17' 41.372 W
6,200.0	1.41	102.41	6,197.7	-198.1	209.1	32° 9' 58.132 N	103° 17' 41.370 W
6,287.0	1.56	102.97	6,284.7	-198.6	211.3	32° 9' 58.127 N	103° 17' 41.344 W
6,300.0	1.55	103.74	6,297.7	-198.7	211.7	32° 9' 58.126 N	103° 17' 41.340 W
6,382.0	1.50	108.81	6,379.7	-199.3	213.8	32° 9' 58.120 N	103° 17' 41.316 W
6,400.0	1.55	110.35	6,397.7	-199.4	214.2	32° 9' 58.118 N	103° 17' 41.311 W
6,477.0	1.79	115.89	6,474.6	-200.3	216.3	32° 9' 58.109 N	103° 17' 41.287 W
6,500.0	1.83	116.72	6,497.6	-200.6	216.9	32° 9' 58.106 N	103° 17' 41.279 W
6,572.0	1.94	119.13	6,569.6	-201.8	219.0	32° 9' 58.095 N	103° 17' 41.255 W
6,600.0	1.87	118.90	6,597.6	-202.2	219.8	32° 9' 58.090 N	103° 17' 41.246 W
6,668.0	1.69	118.26	6,665.5	-203.2	221.7	32° 9' 58.080 N	103° 17' 41.224 W
6,700.0	1.65	119.96	6,697.5	-203.7	222.5	32° 9' 58.076 N	103° 17' 41.215 W
6,763.0	1.57	123.58	6,760.5	-204.6	224.0	32° 9' 58.066 N	103° 17' 41.197 W
6,800.0	1.59	122.77	6,797.5	-205.2	224.9	32° 9' 58.061 N	103° 17' 41.188 W
6,858.0	1.62	121.55	6,855.5	-206.0	226.2	32° 9' 58.052 N	103° 17' 41.172 W
6,900.0	1.64	122.00	6,897.5	-206.6	227.2	32° 9' 58.046 N	103° 17' 41.160 W

Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
6,954.0	1.66	122.57	6,951.4	-207.5	228.6	32° 9' 58.037 N	103° 17' 41.145 W
7,000.0	1.71	117.92	6,997.4	-208.2	229.7	32° 9' 58.031 N	103° 17' 41.131 W
7,049.0	1.77	113.28	7,046.4	-208.8	231.1	32° 9' 58.024 N	103° 17' 41.116 W
7,100.0	1.81	113.96	7,097.4	-209.4	232.5	32° 9' 58.018 N	103° 17' 41.099 W
7,144.0	1.84	114.52	7,141.3	-210.0	233.8	32° 9' 58.012 N	103° 17' 41.084 W
7,200.0	1.85	115.69	7,197.3	-210.8	235.4	32° 9' 58.004 N	103° 17' 41.065 W
7,239.0	1.85	116.50	7,236.3	-211.3	236.6	32° 9' 57.998 N	103° 17' 41.052 W
7,300.0	1.96	115.32	7,297.3	-212.2	238.4	32° 9' 57.990 N	103° 17' 41.031 W
7,334.0	2.02	114.72	7,331.2	-212.7	239.5	32° 9' 57.985 N	103° 17' 41.019 W
7,400.0	1.72	117.44	7,397.2	-213.7	241.4	32° 9' 57.975 N	103° 17' 40.996 W
7,430.0	1.59	119.01	7,427.2	-214.1	242.2	32° 9' 57.971 N	103° 17' 40.987 W
7,500.0	1.55	134.56	7,497.2	-215.2	243.7	32° 9' 57.959 N	103° 17' 40.970 W
7,525.0	1.57	140.13	7,522.2	-215.7	244.1	32° 9' 57.954 N	103° 17' 40.964 W
7,600.0	1.48	136.17	7,597.1	-217.2	245.5	32° 9' 57.940 N	103° 17' 40.949 W
7,620.0	1.46	135.04	7,617.1	-217.6	245.8	32° 9' 57.936 N	103° 17' 40.945 W
7,700.0	1.40	142.91	7,697.1	-219.1	247.1	32° 9' 57.921 N	103° 17' 40.930 W
7,716.0	1.39	144.56	7,713.1	-219.4	247.4	32° 9' 57.918 N	103° 17' 40.927 W
7,800.0	1.33	127.63	7,797.1	-220.8	248.7	32° 9' 57.904 N	103° 17' 40.912 W
7,811.0	1.33	125.35	7,808.1	-220.9	248.9	32° 9' 57.902 N	103° 17' 40.909 W
7,900.0	1.04	132.15	7,897.0	-222.1	250.4	32° 9' 57.891 N	103° 17' 40.893 W
7,907.0	1.02	132.85	7,904.0	-222.2	250.5	32° 9' 57.890 N	103° 17' 40.891 W
8,000.0	1.03	135.77	7,997.0	-223.3	251.7	32° 9' 57.878 N	103° 17' 40.878 W
8,002.0	1.03	135.83	7,999.0	-223.4	251.7	32° 9' 57.878 N	103° 17' 40.877 W
8,097.0	0.98	138.23	8,094.0	-224.6	252.8	32° 9' 57.866 N	103° 17' 40.864 W
8,100.0	0.97	138.78	8,097.0	-224.6	252.9	32° 9' 57.865 N	103° 17' 40.864 W
8,192.0	0.65	165.11	8,189.0	-225.7	253.5	32° 9' 57.855 N	103° 17' 40.857 W
8,200.0	0.68	168.07	8,197.0	-225.8	253.5	32° 9' 57.854 N	103° 17' 40.856 W
8,288.0	1.13	187.11	8,285.0	-227.2	253.5	32° 9' 57.840 N	103° 17' 40.857 W
8,300.0	1.11	186.45	8,297.0	-227.4	253.5	32° 9' 57.838 N	103° 17' 40.857 W
8,383.0	0.95	180.98	8,380.0	-228.9	253.4	32° 9' 57.823 N	103° 17' 40.858 W
8,400.0	0.93	180.21	8,397.0	-229.2	253.4	32° 9' 57.820 N	103° 17' 40.858 W
8,478.0	0.85	176.26	8,475.0	-230.4	253.4	32° 9' 57.808 N	103° 17' 40.858 W
8,500.0	0.83	172.56	8,497.0	-230.7	253.5	32° 9' 57.805 N	103° 17' 40.858 W
8,574.0	0.78	158.90	8,571.0	-231.7	253.7	32° 9' 57.795 N	103° 17' 40.855 W
8,600.0	0.75	154.41	8,597.0	-232.0	253.9	32° 9' 57.792 N	103° 17' 40.853 W
8,669.0	0.68	140.64	8,666.0	-232.7	254.3	32° 9' 57.785 N	103° 17' 40.848 W
8,700.0	0.68	136.77	8,696.9	-233.0	254.5	32° 9' 57.782 N	103° 17' 40.845 W
8,764.0	0.68	128.75	8,760.9	-233.5	255.1	32° 9' 57.777 N	103° 17' 40.839 W
8,800.0	0.65	125.94	8,796.9	-233.8	255.4	32° 9' 57.774 N	103° 17' 40.835 W
8,859.0	0.61	120.79	8,855.9	-234.1	256.0	32° 9' 57.771 N	103° 17' 40.829 W
8,900.0	0.58	100.47	8,896.9	-234.3	256.4	32° 9' 57.769 N	103° 17' 40.824 W
8,954.0	0.65	75.05	8,950.9	-234.3	256.9	32° 9' 57.770 N	103° 17' 40.818 W
9,000.0	0.68	74.00	8,996.9	-234.1	257.4	32° 9' 57.771 N	103° 17' 40.812 W
9,050.0	0.71	72.95	9,046.9	-233.9	258.0	32° 9' 57.773 N	103° 17' 40.805 W

Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
9,100.0	0.96	71.41	9,096.9	-233.7	258.7	32° 9' 57.775 N	103° 17' 40.797 W
9,144.0	1.18	70.60	9,140.9	-233.5	259.5	32° 9' 57.777 N	103° 17' 40.788 W
9,200.0	1.08	74.83	9,196.9	-233.1	260.5	32° 9' 57.781 N	103° 17' 40.776 W
9,239.0	1.02	78.23	9,235.9	-233.0	261.2	32° 9' 57.782 N	103° 17' 40.767 W
9,300.0	1.19	72.59	9,296.9	-232.7	262.4	32° 9' 57.785 N	103° 17' 40.754 W
9,335.0	1.29	70.04	9,331.9	-232.4	263.1	32° 9' 57.787 N	103° 17' 40.746 W
9,400.0	1.70	76.59	9,396.9	-231.9	264.7	32° 9' 57.792 N	103° 17' 40.727 W
9,430.0	1.90	78.64	9,426.8	-231.7	265.6	32° 9' 57.794 N	103° 17' 40.716 W
9,500.0	1.73	77.94	9,496.8	-231.3	267.8	32° 9' 57.798 N	103° 17' 40.691 W
9,526.0	1.67	77.64	9,522.8	-231.1	268.6	32° 9' 57.800 N	103° 17' 40.682 W
9,600.0	1.77	75.47	9,596.8	-230.6	270.7	32° 9' 57.804 N	103° 17' 40.657 W
9,622.0	1.80	74.87	9,618.7	-230.4	271.4	32° 9' 57.806 N	103° 17' 40.649 W
9,700.0	1.27	76.56	9,696.7	-229.9	273.4	32° 9' 57.811 N	103° 17' 40.625 W
9,717.0	1.15	77.14	9,713.7	-229.8	273.8	32° 9' 57.812 N	103° 17' 40.621 W
9,800.0	0.56	78.91	9,796.7	-229.6	275.0	32° 9' 57.814 N	103° 17' 40.607 W
9,812.0	0.48	79.52	9,808.7	-229.5	275.1	32° 9' 57.815 N	103° 17' 40.606 W
9,900.0	0.46	27.32	9,896.7	-229.2	275.6	32° 9' 57.818 N	103° 17' 40.600 W
9,907.0	0.47	23.64	9,903.7	-229.1	275.6	32° 9' 57.819 N	103° 17' 40.600 W
10,000.0	0.57	323.88	9,996.7	-228.4	275.5	32° 9' 57.826 N	103° 17' 40.601 W
10,002.0	0.58	323.02	9,998.7	-228.4	275.5	32° 9' 57.826 N	103° 17' 40.601 W
10,098.0	0.57	21.89	10,094.7	-227.5	275.4	32° 9' 57.834 N	103° 17' 40.602 W
10,100.0	0.57	22.58	10,096.7	-227.5	275.4	32° 9' 57.834 N	103° 17' 40.602 W
10,194.0	0.75	47.99	10,190.7	-226.7	276.0	32° 9' 57.843 N	103° 17' 40.595 W
10,200.0	0.75	48.54	10,196.7	-226.6	276.1	32° 9' 57.843 N	103° 17' 40.594 W
10,289.0	0.71	57.17	10,285.7	-225.9	277.0	32° 9' 57.850 N	103° 17' 40.583 W
10,300.0	0.56	59.89	10,296.7	-225.9	277.1	32° 9' 57.851 N	103° 17' 40.582 W
10,384.0	0.66	216.93	10,380.7	-226.1	277.2	32° 9' 57.849 N	103° 17' 40.582 W
10,400.0	0.58	216.64	10,396.7	-226.2	277.0	32° 9' 57.847 N	103° 17' 40.583 W
10,480.0	0.21	212.14	10,476.7	-226.7	276.7	32° 9' 57.843 N	103° 17' 40.587 W
10,500.0	0.21	210.33	10,496.7	-226.7	276.7	32° 9' 57.842 N	103° 17' 40.587 W
10,575.0	0.22	203.84	10,571.7	-227.0	276.6	32° 9' 57.840 N	103° 17' 40.589 W
10,600.0	0.17	227.13	10,596.7	-227.0	276.5	32° 9' 57.839 N	103° 17' 40.589 W
10,601.0	0.17	228.30	10,597.7	-227.0	276.5	32° 9' 57.839 N	103° 17' 40.589 W
10,700.0	0.63	209.16	10,696.7	-227.6	276.1	32° 9' 57.834 N	103° 17' 40.594 W
10,705.0	0.65	208.91	10,701.7	-227.7	276.1	32° 9' 57.833 N	103° 17' 40.594 W
10,800.0	0.35	152.53	10,796.7	-228.4	276.0	32° 9' 57.826 N	103° 17' 40.595 W
10,895.0	0.66	89.16	10,891.7	-228.6	276.7	32° 9' 57.823 N	103° 17' 40.588 W
10,900.0	0.69	113.31	10,896.7	-228.6	276.7	32° 9' 57.823 N	103° 17' 40.587 W
11,000.0	5.90	179.67	10,996.5	-234.0	277.3	32° 9' 57.770 N	103° 17' 40.581 W
11,048.0	8.60	181.69	11,044.1	-240.1	277.2	32° 9' 57.710 N	103° 17' 40.582 W
11,080.0	11.14	182.66	11,075.6	-245.6	277.0	32° 9' 57.656 N	103° 17' 40.586 W
11,100.0	14.02	182.64	11,095.1	-249.9	276.8	32° 9' 57.613 N	103° 17' 40.588 W
11,125.0	17.63	182.63	11,119.2	-256.7	276.5	32° 9' 57.545 N	103° 17' 40.593 W
11,175.0	19.95	182.39	11,166.5	-272.8	275.8	32° 9' 57.386 N	103° 17' 40.603 W

Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
11,200.0	21.03	182.52	11,189.9	-281.6	275.4	32° 9' 57.300 N	103° 17' 40.608 W
11,220.0	21.89	182.62	11,208.5	-288.9	275.1	32° 9' 57.228 N	103° 17' 40.613 W
11,270.0	27.10	183.95	11,254.0	-309.5	273.9	32° 9' 57.023 N	103° 17' 40.629 W
11,300.0	30.30	185.12	11,280.3	-323.9	272.7	32° 9' 56.881 N	103° 17' 40.644 W
11,315.0	31.91	185.63	11,293.2	-331.6	272.0	32° 9' 56.805 N	103° 17' 40.653 W
11,366.0	36.08	187.02	11,335.5	-360.0	268.8	32° 9' 56.525 N	103° 17' 40.693 W
11,400.0	38.26	187.48	11,362.5	-380.3	266.2	32° 9' 56.323 N	103° 17' 40.726 W
11,411.0	38.96	187.62	11,371.1	-387.1	265.3	32° 9' 56.256 N	103° 17' 40.737 W
11,461.0	41.03	187.57	11,409.4	-419.0	261.1	32° 9' 55.941 N	103° 17' 40.790 W
11,493.0	43.84	188.29	11,433.1	-440.4	258.1	32° 9' 55.730 N	103° 17' 40.827 W
11,500.0	44.82	188.31	11,438.1	-445.2	257.4	32° 9' 55.682 N	103° 17' 40.836 W
11,523.0	48.05	188.38	11,453.9	-461.7	255.0	32° 9' 55.519 N	103° 17' 40.866 W
11,555.0	52.25	188.48	11,474.4	-486.0	251.4	32° 9' 55.279 N	103° 17' 40.911 W
11,587.0	57.47	188.40	11,492.8	-511.9	247.5	32° 9' 55.024 N	103° 17' 40.958 W
11,600.0	58.73	188.54	11,499.7	-522.8	245.9	32° 9' 54.916 N	103° 17' 40.978 W
11,619.0	60.56	188.74	11,509.3	-539.0	243.5	32° 9' 54.756 N	103° 17' 41.009 W
11,651.0	63.76	188.98	11,524.2	-566.9	239.1	32° 9' 54.480 N	103° 17' 41.063 W
11,682.0	68.14	187.96	11,536.9	-594.9	234.9	32° 9' 54.203 N	103° 17' 41.114 W
11,697.6	70.00	187.70	11,542.5	-609.4	232.9	32° 9' 54.060 N	103° 17' 41.139 W
PS101 As Drilled FTP							
11,700.0	70.28	187.67	11,543.3	-611.6	232.6	32° 9' 54.038 N	103° 17' 41.143 W
11,745.0	75.64	186.96	11,556.4	-654.3	227.2	32° 9' 53.617 N	103° 17' 41.211 W
11,777.0	79.75	186.54	11,563.3	-685.3	223.5	32° 9' 53.310 N	103° 17' 41.257 W
11,800.0	82.56	185.05	11,566.8	-707.9	221.2	32° 9' 53.086 N	103° 17' 41.286 W
11,840.0	87.45	182.49	11,570.3	-747.7	218.6	32° 9' 52.693 N	103° 17' 41.321 W
11,900.0	87.77	181.23	11,572.8	-807.6	216.6	32° 9' 52.101 N	103° 17' 41.351 W
11,955.0	88.07	180.07	11,574.8	-862.5	216.0	32° 9' 51.557 N	103° 17' 41.364 W
12,000.0	87.40	179.89	11,576.6	-907.5	216.0	32° 9' 51.112 N	103° 17' 41.369 W
12,050.0	86.66	179.68	11,579.1	-957.4	216.2	32° 9' 50.618 N	103° 17' 41.372 W
12,100.0	88.56	180.14	11,581.2	-1,007.4	216.3	32° 9' 50.124 N	103° 17' 41.377 W
12,145.0	90.27	180.56	11,581.7	-1,052.4	216.0	32° 9' 49.679 N	103° 17' 41.385 W
12,200.0	90.51	180.29	11,581.3	-1,107.4	215.6	32° 9' 49.134 N	103° 17' 41.396 W
12,241.0	90.69	180.08	11,580.9	-1,148.4	215.5	32° 9' 48.729 N	103° 17' 41.402 W
12,300.0	90.76	180.00	11,580.1	-1,207.4	215.5	32° 9' 48.145 N	103° 17' 41.409 W
12,336.0	90.81	179.95	11,579.6	-1,243.4	215.5	32° 9' 47.789 N	103° 17' 41.413 W
12,400.0	91.10	179.75	11,578.6	-1,307.4	215.6	32° 9' 47.156 N	103° 17' 41.419 W
12,432.0	91.24	179.65	11,577.9	-1,339.4	215.8	32° 9' 46.839 N	103° 17' 41.420 W
12,500.0	90.14	179.39	11,577.1	-1,407.3	216.4	32° 9' 46.166 N	103° 17' 41.421 W
12,527.0	89.71	179.29	11,577.1	-1,434.3	216.7	32° 9' 45.899 N	103° 17' 41.421 W
12,600.0	87.85	179.75	11,578.7	-1,507.3	217.3	32° 9' 45.177 N	103° 17' 41.422 W
12,622.0	87.29	179.89	11,579.6	-1,529.3	217.4	32° 9' 44.960 N	103° 17' 41.423 W
12,700.0	86.72	179.63	11,583.7	-1,607.2	217.7	32° 9' 44.189 N	103° 17' 41.428 W
12,717.0	86.60	179.57	11,584.7	-1,624.2	217.8	32° 9' 44.021 N	103° 17' 41.429 W
12,800.0	85.65	178.99	11,590.3	-1,707.0	218.9	32° 9' 43.201 N	103° 17' 41.426 W

Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
12,813.0	85.50	178.90	11,591.3	-1,719.9	219.1	32° 9' 43.073 N	103° 17' 41.425 W
12,859.0	85.55	178.58	11,594.9	-1,765.8	220.1	32° 9' 42.619 N	103° 17' 41.418 W
12,900.0	87.11	178.99	11,597.5	-1,806.7	221.0	32° 9' 42.215 N	103° 17' 41.413 W
12,908.0	87.42	179.07	11,597.9	-1,814.7	221.1	32° 9' 42.136 N	103° 17' 41.412 W
12,955.0	87.56	179.22	11,600.0	-1,861.6	221.8	32° 9' 41.671 N	103° 17' 41.409 W
13,000.0	89.53	179.29	11,601.1	-1,906.6	222.4	32° 9' 41.226 N	103° 17' 41.407 W
13,002.0	89.62	179.29	11,601.1	-1,908.6	222.4	32° 9' 41.206 N	103° 17' 41.407 W
13,040.0	89.40	179.44	11,601.4	-1,946.6	222.8	32° 9' 40.830 N	103° 17' 41.407 W
13,097.0	90.00	179.09	11,601.7	-2,003.6	223.6	32° 9' 40.266 N	103° 17' 41.404 W
13,100.0	90.14	179.11	11,601.7	-2,006.6	223.6	32° 9' 40.236 N	103° 17' 41.404 W
13,190.0	94.19	179.60	11,598.3	-2,096.5	224.6	32° 9' 39.347 N	103° 17' 41.403 W
13,200.0	94.17	179.63	11,597.6	-2,106.5	224.7	32° 9' 39.248 N	103° 17' 41.403 W
13,286.0	94.00	179.93	11,591.5	-2,192.3	225.0	32° 9' 38.399 N	103° 17' 41.409 W
13,300.0	93.72	180.05	11,590.5	-2,206.2	225.0	32° 9' 38.261 N	103° 17' 41.410 W
13,381.0	92.07	180.75	11,586.4	-2,287.1	224.5	32° 9' 37.461 N	103° 17' 41.426 W
13,400.0	91.64	181.11	11,585.8	-2,306.1	224.1	32° 9' 37.273 N	103° 17' 41.432 W
13,475.0	89.94	182.52	11,584.8	-2,381.1	221.8	32° 9' 36.531 N	103° 17' 41.468 W
13,500.0	88.82	182.62	11,585.1	-2,406.0	220.7	32° 9' 36.284 N	103° 17' 41.484 W
13,568.0	85.78	182.89	11,588.3	-2,473.9	217.4	32° 9' 35.614 N	103° 17' 41.529 W
13,600.0	85.66	183.20	11,590.7	-2,505.7	215.7	32° 9' 35.298 N	103° 17' 41.552 W
13,616.0	85.60	183.35	11,591.9	-2,521.7	214.8	32° 9' 35.141 N	103° 17' 41.565 W
13,664.0	85.46	181.23	11,595.6	-2,569.5	212.9	32° 9' 34.668 N	103° 17' 41.592 W
13,700.0	85.62	179.93	11,598.4	-2,605.4	212.5	32° 9' 34.313 N	103° 17' 41.601 W
13,714.0	85.68	179.43	11,599.5	-2,619.3	212.6	32° 9' 34.175 N	103° 17' 41.601 W
13,759.0	87.52	177.48	11,602.2	-2,664.2	213.8	32° 9' 33.730 N	103° 17' 41.592 W
13,800.0	87.91	176.30	11,603.8	-2,705.1	216.0	32° 9' 33.325 N	103° 17' 41.571 W
13,809.0	88.00	176.04	11,604.1	-2,714.1	216.6	32° 9' 33.237 N	103° 17' 41.565 W
13,852.0	87.88	175.34	11,605.7	-2,757.0	219.9	32° 9' 32.812 N	103° 17' 41.532 W
13,900.0	89.92	178.28	11,606.6	-2,804.8	223.4	32° 9' 32.338 N	103° 17' 41.497 W
13,902.0	90.01	176.32	11,606.6	-2,806.8	223.5	32° 9' 32.319 N	103° 17' 41.496 W
13,948.0	89.20	177.87	11,606.9	-2,852.7	225.8	32° 9' 31.864 N	103° 17' 41.474 W
13,998.0	88.75	178.93	11,607.8	-2,902.7	227.2	32° 9' 31.369 N	103° 17' 41.463 W
14,000.0	88.77	178.95	11,607.8	-2,904.7	227.2	32° 9' 31.350 N	103° 17' 41.463 W
14,042.0	89.09	179.38	11,608.6	-2,946.7	227.9	32° 9' 30.934 N	103° 17' 41.460 W
14,100.0	88.76	179.24	11,609.7	-3,004.7	228.6	32° 9' 30.360 N	103° 17' 41.459 W
14,138.0	88.55	179.14	11,610.6	-3,042.7	229.1	32° 9' 29.984 N	103° 17' 41.457 W
14,200.0	90.03	179.43	11,611.4	-3,104.7	229.9	32° 9' 29.371 N	103° 17' 41.455 W
14,232.0	90.79	179.58	11,611.1	-3,136.7	230.2	32° 9' 29.054 N	103° 17' 41.455 W
14,300.0	89.02	179.93	11,611.2	-3,204.7	230.4	32° 9' 28.381 N	103° 17' 41.459 W
14,326.0	88.35	180.07	11,611.8	-3,230.7	230.4	32° 9' 28.124 N	103° 17' 41.462 W
14,400.0	87.82	180.09	11,614.3	-3,304.6	230.3	32° 9' 27.392 N	103° 17' 41.472 W
14,420.0	87.68	180.10	11,615.1	-3,324.6	230.3	32° 9' 27.195 N	103° 17' 41.474 W
14,500.0	90.19	180.93	11,616.6	-3,404.6	229.6	32° 9' 26.403 N	103° 17' 41.492 W
14,514.0	90.63	181.07	11,616.5	-3,418.6	229.3	32° 9' 26.265 N	103° 17' 41.496 W

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 Wellbore: Final Survey
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 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM5000

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
14,600.0	91.50	181.92	11,614.9	-3,504.5	227.1	32° 9' 25.415 N	103° 17' 41.532 W
14,608.0	91.58	182.00	11,614.7	-3,512.5	226.8	32° 9' 25.336 N	103° 17' 41.536 W
14,700.0	89.93	181.17	11,613.5	-3,604.5	224.3	32° 9' 24.426 N	103° 17' 41.576 W
14,704.0	89.86	181.13	11,613.5	-3,608.5	224.2	32° 9' 24.387 N	103° 17' 41.577 W
14,797.0	85.93	179.15	11,616.9	-3,701.4	224.0	32° 9' 23.467 N	103° 17' 41.590 W
14,800.0	85.96	179.09	11,617.1	-3,704.4	224.0	32° 9' 23.438 N	103° 17' 41.590 W
14,893.0	86.94	177.35	11,622.8	-3,797.1	226.9	32° 9' 22.519 N	103° 17' 41.567 W
14,900.0	87.24	177.41	11,623.2	-3,804.1	227.2	32° 9' 22.450 N	103° 17' 41.564 W
14,989.0	91.12	178.14	11,624.5	-3,893.0	230.7	32° 9' 21.570 N	103° 17' 41.534 W
15,000.0	90.88	178.27	11,624.3	-3,904.0	231.0	32° 9' 21.461 N	103° 17' 41.531 W
15,082.0	89.09	179.22	11,624.3	-3,986.0	232.8	32° 9' 20.650 N	103° 17' 41.519 W
15,100.0	88.92	179.23	11,624.6	-4,004.0	233.1	32° 9' 20.472 N	103° 17' 41.519 W
15,177.0	88.17	179.29	11,626.6	-4,081.0	234.1	32° 9' 19.710 N	103° 17' 41.516 W
15,200.0	87.54	179.46	11,627.4	-4,103.9	234.3	32° 9' 19.483 N	103° 17' 41.515 W
15,272.0	85.58	179.99	11,631.8	-4,175.8	234.6	32° 9' 18.772 N	103° 17' 41.519 W
15,300.0	86.23	179.92	11,633.8	-4,203.7	234.7	32° 9' 18.496 N	103° 17' 41.522 W
15,368.0	87.80	179.76	11,637.3	-4,271.6	234.9	32° 9' 17.824 N	103° 17' 41.528 W
15,400.0	87.39	179.40	11,638.6	-4,303.6	235.1	32° 9' 17.507 N	103° 17' 41.529 W
15,463.0	86.58	178.70	11,642.0	-4,366.5	236.1	32° 9' 16.885 N	103° 17' 41.523 W
15,500.0	86.45	179.07	11,644.2	-4,403.4	236.8	32° 9' 16.519 N	103° 17' 41.519 W
15,559.0	86.25	179.67	11,648.0	-4,462.3	237.5	32° 9' 15.937 N	103° 17' 41.518 W
15,600.0	87.48	179.63	11,650.2	-4,503.3	237.7	32° 9' 15.532 N	103° 17' 41.520 W
15,654.0	89.10	179.58	11,651.8	-4,557.2	238.1	32° 9' 14.998 N	103° 17' 41.522 W
15,700.0	88.00	179.09	11,653.0	-4,603.2	238.6	32° 9' 14.543 N	103° 17' 41.521 W
15,749.0	86.83	178.57	11,655.2	-4,652.2	239.6	32° 9' 14.058 N	103° 17' 41.515 W
15,800.0	90.08	179.43	11,656.6	-4,703.1	240.5	32° 9' 13.554 N	103° 17' 41.510 W
15,845.0	92.94	180.18	11,655.4	-4,748.1	240.7	32° 9' 13.109 N	103° 17' 41.513 W
15,900.0	95.22	181.32	11,651.5	-4,803.0	240.0	32° 9' 12.566 N	103° 17' 41.528 W
15,940.0	96.87	182.16	11,647.3	-4,842.7	238.8	32° 9' 12.173 N	103° 17' 41.546 W
16,000.0	93.21	182.19	11,642.0	-4,902.4	236.5	32° 9' 11.582 N	103° 17' 41.579 W
16,035.0	91.08	182.20	11,640.7	-4,937.4	235.2	32° 9' 11.237 N	103° 17' 41.599 W
16,100.0	89.55	181.34	11,640.3	-5,002.3	233.2	32° 9' 10.594 N	103° 17' 41.629 W
16,130.0	88.85	180.95	11,640.7	-5,032.3	232.6	32° 9' 10.297 N	103° 17' 41.640 W
16,200.0	88.05	180.94	11,642.6	-5,102.3	231.4	32° 9' 9.605 N	103° 17' 41.661 W
16,225.0	87.76	180.93	11,643.5	-5,127.3	231.0	32° 9' 9.358 N	103° 17' 41.669 W
16,300.0	90.02	181.48	11,645.0	-5,202.2	229.4	32° 9' 8.616 N	103° 17' 41.695 W
16,321.0	90.65	181.64	11,644.9	-5,223.2	228.8	32° 9' 8.409 N	103° 17' 41.704 W
16,400.0	85.97	180.56	11,647.2	-5,302.2	227.3	32° 9' 7.628 N	103° 17' 41.731 W
16,417.0	84.96	180.33	11,648.5	-5,319.1	227.2	32° 9' 7.460 N	103° 17' 41.734 W
16,500.0	83.73	179.98	11,656.7	-5,401.7	227.0	32° 9' 6.643 N	103° 17' 41.746 W
16,512.0	83.55	179.93	11,658.1	-5,413.6	227.0	32° 9' 6.525 N	103° 17' 41.747 W
16,600.0	82.53	178.67	11,668.7	-5,501.0	228.0	32° 9' 5.661 N	103° 17' 41.745 W
16,608.0	82.44	178.56	11,669.8	-5,508.9	228.2	32° 9' 5.582 N	103° 17' 41.744 W
16,700.0	82.68	178.91	11,681.7	-5,600.1	230.2	32° 9' 4.680 N	103° 17' 41.730 W
16,704.0	82.69	178.93	11,682.2	-5,604.1	230.3	32° 9' 4.640 N	103° 17' 41.730 W

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Survey Calculation Method: Minimum Curvature
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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
16,799.0	86.68	178.08	11,691.0	-5,698.6	232.8	32° 9' 3.705 N	103° 17' 41.712 W
16,800.0	86.69	178.09	11,691.0	-5,699.6	232.8	32° 9' 3.695 N	103° 17' 41.712 W
16,893.0	88.07	179.12	11,695.3	-5,792.5	235.1	32° 9' 2.776 N	103° 17' 41.696 W
16,900.0	88.12	179.16	11,695.5	-5,799.5	235.2	32° 9' 2.707 N	103° 17' 41.695 W
16,988.0	88.73	179.60	11,697.9	-5,887.4	236.1	32° 9' 1.836 N	103° 17' 41.694 W
17,000.0	88.70	179.52	11,698.2	-5,899.4	236.2	32° 9' 1.717 N	103° 17' 41.694 W
17,083.0	88.52	179.00	11,700.2	-5,982.4	237.3	32° 9' 0.896 N	103° 17' 41.691 W
17,100.0	88.93	179.13	11,700.6	-5,999.4	237.6	32° 9' 0.728 N	103° 17' 41.690 W
17,178.0	90.83	179.72	11,700.8	-6,077.4	238.4	32° 8' 59.956 N	103° 17' 41.690 W
17,200.0	90.22	179.76	11,700.6	-6,099.4	238.5	32° 8' 59.739 N	103° 17' 41.691 W
17,272.0	88.22	179.90	11,701.5	-6,171.4	238.7	32° 8' 59.026 N	103° 17' 41.696 W
17,300.0	88.04	179.85	11,702.5	-6,199.4	238.7	32° 8' 58.750 N	103° 17' 41.699 W
17,367.0	87.60	179.74	11,705.0	-6,266.3	239.0	32° 8' 58.087 N	103° 17' 41.704 W
17,400.0	87.68	179.64	11,706.4	-6,299.3	239.1	32° 8' 57.761 N	103° 17' 41.705 W
17,461.0	87.83	179.45	11,708.7	-6,360.2	239.6	32° 8' 57.158 N	103° 17' 41.706 W
17,500.0	87.73	179.16	11,710.3	-6,399.2	240.1	32° 8' 56.772 N	103° 17' 41.705 W
17,555.0	87.58	178.75	11,712.5	-6,454.1	241.1	32° 8' 56.228 N	103° 17' 41.700 W
17,600.0	87.42	178.49	11,714.5	-6,499.1	242.2	32° 8' 55.784 N	103° 17' 41.692 W
17,649.0	87.25	178.20	11,716.8	-6,548.0	243.6	32° 8' 55.299 N	103° 17' 41.681 W
17,700.0	87.92	178.14	11,718.9	-6,598.9	245.2	32° 8' 54.795 N	103° 17' 41.668 W
17,744.0	88.50	178.09	11,720.3	-6,642.9	246.7	32° 8' 54.360 N	103° 17' 41.656 W
17,800.0	89.90	178.06	11,721.1	-6,698.9	248.6	32° 8' 53.806 N	103° 17' 41.641 W
17,837.0	90.82	178.04	11,720.8	-6,735.8	249.8	32° 8' 53.440 N	103° 17' 41.630 W
17,900.0	91.16	178.97	11,719.7	-6,798.8	251.5	32° 8' 52.817 N	103° 17' 41.618 W
17,932.0	91.33	179.45	11,719.0	-6,830.8	251.9	32° 8' 52.500 N	103° 17' 41.617 W
18,000.0	92.07	179.44	11,717.0	-6,898.8	252.6	32° 8' 51.828 N	103° 17' 41.617 W
18,028.0	92.37	179.44	11,715.9	-6,926.7	252.8	32° 8' 51.551 N	103° 17' 41.616 W
18,100.0	92.49	179.16	11,712.9	-6,998.7	253.7	32° 8' 50.839 N	103° 17' 41.614 W
18,122.0	92.53	179.08	11,711.9	-7,020.6	254.0	32° 8' 50.622 N	103° 17' 41.613 W
18,200.0	92.80	179.42	11,708.3	-7,098.5	255.1	32° 8' 49.851 N	103° 17' 41.610 W
18,217.0	92.86	179.49	11,707.5	-7,115.5	255.2	32° 8' 49.683 N	103° 17' 41.610 W
18,300.0	92.63	179.69	11,703.5	-7,198.4	255.8	32° 8' 48.862 N	103° 17' 41.612 W
18,313.0	92.59	179.72	11,702.9	-7,211.4	255.9	32° 8' 48.734 N	103° 17' 41.613 W
18,400.0	92.48	180.22	11,699.0	-7,298.3	255.9	32° 8' 47.874 N	103° 17' 41.622 W
18,408.0	92.47	180.27	11,698.7	-7,306.3	255.9	32° 8' 47.795 N	103° 17' 41.623 W
18,500.0	92.44	182.50	11,694.8	-7,398.2	253.7	32° 8' 46.886 N	103° 17' 41.660 W
18,502.0	92.44	182.55	11,694.7	-7,400.2	253.6	32° 8' 46.866 N	103° 17' 41.661 W
18,597.0	89.58	182.67	11,693.0	-7,495.1	249.3	32° 8' 45.928 N	103° 17' 41.722 W
18,600.0	89.58	182.66	11,693.0	-7,498.1	249.1	32° 8' 45.898 N	103° 17' 41.724 W
18,693.0	89.65	182.22	11,693.6	-7,591.0	245.2	32° 8' 44.979 N	103° 17' 41.780 W
18,700.0	89.71	182.09	11,693.7	-7,598.0	244.9	32° 8' 44.910 N	103° 17' 41.784 W
18,786.0	90.43	180.55	11,693.6	-7,684.0	242.9	32° 8' 44.060 N	103° 17' 41.817 W
18,800.0	90.44	180.54	11,693.5	-7,698.0	242.8	32° 8' 43.921 N	103° 17' 41.820 W
18,881.0	90.47	180.45	11,692.8	-7,778.9	242.1	32° 8' 43.120 N	103° 17' 41.837 W

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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
18,900.0	90.94	180.52	11,692.6	-7,797.9	241.9	32° 8' 42.932 N	103° 17' 41.841 W
18,976.0	92.81	180.79	11,690.1	-7,873.9	241.1	32° 8' 42.180 N	103° 17' 41.860 W
19,000.0	92.90	180.72	11,688.9	-7,897.9	240.7	32° 8' 41.943 N	103° 17' 41.866 W
19,072.0	93.15	180.50	11,685.1	-7,969.8	240.0	32° 8' 41.232 N	103° 17' 41.883 W
19,100.0	93.06	180.38	11,683.6	-7,997.7	239.8	32° 8' 40.955 N	103° 17' 41.889 W
19,167.0	92.86	180.08	11,680.1	-8,064.6	239.5	32° 8' 40.293 N	103° 17' 41.899 W
19,200.0	92.97	180.12	11,678.5	-8,097.6	239.4	32° 8' 39.967 N	103° 17' 41.903 W
19,261.0	93.16	180.19	11,675.2	-8,158.5	239.3	32° 8' 39.365 N	103° 17' 41.912 W
19,300.0	92.80	179.98	11,673.2	-8,197.4	239.2	32° 8' 38.979 N	103° 17' 41.917 W
19,356.0	92.29	179.67	11,670.7	-8,253.4	239.4	32° 8' 38.426 N	103° 17' 41.922 W
19,400.0	92.04	179.92	11,669.0	-8,297.4	239.6	32° 8' 37.991 N	103° 17' 41.925 W
19,451.0	91.74	180.22	11,667.4	-8,348.3	239.5	32° 8' 37.486 N	103° 17' 41.931 W
19,500.0	91.83	180.17	11,665.8	-8,397.3	239.3	32° 8' 37.002 N	103° 17' 41.939 W
19,547.0	91.92	180.12	11,664.3	-8,444.3	239.2	32° 8' 36.537 N	103° 17' 41.945 W
19,600.0	92.56	180.01	11,662.2	-8,497.2	239.1	32° 8' 36.013 N	103° 17' 41.952 W
19,642.0	93.06	179.93	11,660.2	-8,539.2	239.2	32° 8' 35.598 N	103° 17' 41.956 W
19,700.0	90.80	179.63	11,658.2	-8,597.2	239.4	32° 8' 35.024 N	103° 17' 41.960 W
19,735.0	89.43	179.45	11,658.1	-8,632.2	239.7	32° 8' 34.678 N	103° 17' 41.961 W
19,800.0	89.48	179.22	11,658.8	-8,697.1	240.4	32° 8' 34.035 N	103° 17' 41.959 W
19,830.0	89.51	179.12	11,659.0	-8,727.1	240.9	32° 8' 33.738 N	103° 17' 41.958 W
19,900.0	89.18	179.12	11,659.8	-8,797.1	241.9	32° 8' 33.045 N	103° 17' 41.953 W
19,925.0	89.06	179.12	11,660.2	-8,822.1	242.3	32° 8' 32.798 N	103° 17' 41.951 W
20,000.0	89.69	179.40	11,661.0	-8,897.1	243.3	32° 8' 32.056 N	103° 17' 41.949 W
20,021.0	89.87	179.48	11,661.1	-8,918.1	243.5	32° 8' 31.848 N	103° 17' 41.949 W
20,100.0	89.28	179.42	11,661.7	-8,997.1	244.2	32° 8' 31.066 N	103° 17' 41.949 W
20,115.0	89.17	179.41	11,661.9	-9,012.1	244.4	32° 8' 30.918 N	103° 17' 41.948 W
20,200.0	89.57	179.11	11,662.8	-9,097.1	245.5	32° 8' 30.077 N	103° 17' 41.945 W
20,210.0	89.62	179.07	11,662.9	-9,107.1	245.7	32° 8' 29.978 N	103° 17' 41.944 W
20,300.0	93.65	179.03	11,660.3	-9,197.0	247.1	32° 8' 29.088 N	103° 17' 41.937 W
20,305.0	93.87	179.03	11,660.0	-9,202.0	247.2	32° 8' 29.039 N	103° 17' 41.937 W
20,400.0	94.19	179.14	11,653.3	-9,296.8	248.7	32° 8' 28.101 N	103° 17' 41.930 W
20,401.0	94.19	179.14	11,653.3	-9,297.8	248.8	32° 8' 28.091 N	103° 17' 41.930 W
20,495.0	94.36	179.07	11,646.2	-9,391.5	250.2	32° 8' 27.164 N	103° 17' 41.923 W
20,500.0	94.34	179.13	11,645.9	-9,396.5	250.3	32° 8' 27.114 N	103° 17' 41.923 W
20,590.0	94.00	180.13	11,639.3	-9,486.2	250.9	32° 8' 26.226 N	103° 17' 41.926 W
20,600.0	93.92	180.18	11,638.6	-9,496.2	250.9	32° 8' 26.127 N	103° 17' 41.928 W
20,685.0	93.25	180.60	11,633.3	-9,581.0	250.3	32° 8' 25.288 N	103° 17' 41.944 W
20,700.0	93.10	180.57	11,632.5	-9,596.0	250.1	32° 8' 25.140 N	103° 17' 41.947 W
20,780.0	92.31	180.44	11,628.7	-9,675.9	249.4	32° 8' 24.349 N	103° 17' 41.965 W
20,800.0	92.26	180.47	11,627.9	-9,695.9	249.3	32° 8' 24.152 N	103° 17' 41.969 W
20,875.0	92.05	180.59	11,625.1	-9,770.8	248.6	32° 8' 23.410 N	103° 17' 41.985 W
20,900.0	91.96	180.52	11,624.2	-9,795.8	248.3	32° 8' 23.163 N	103° 17' 41.991 W
20,970.0	91.69	180.33	11,622.0	-9,865.8	247.8	32° 8' 22.471 N	103° 17' 42.005 W
21,000.0	91.55	180.31	11,621.1	-9,895.8	247.6	32° 8' 22.174 N	103° 17' 42.010 W

Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM5000

Planned Survey

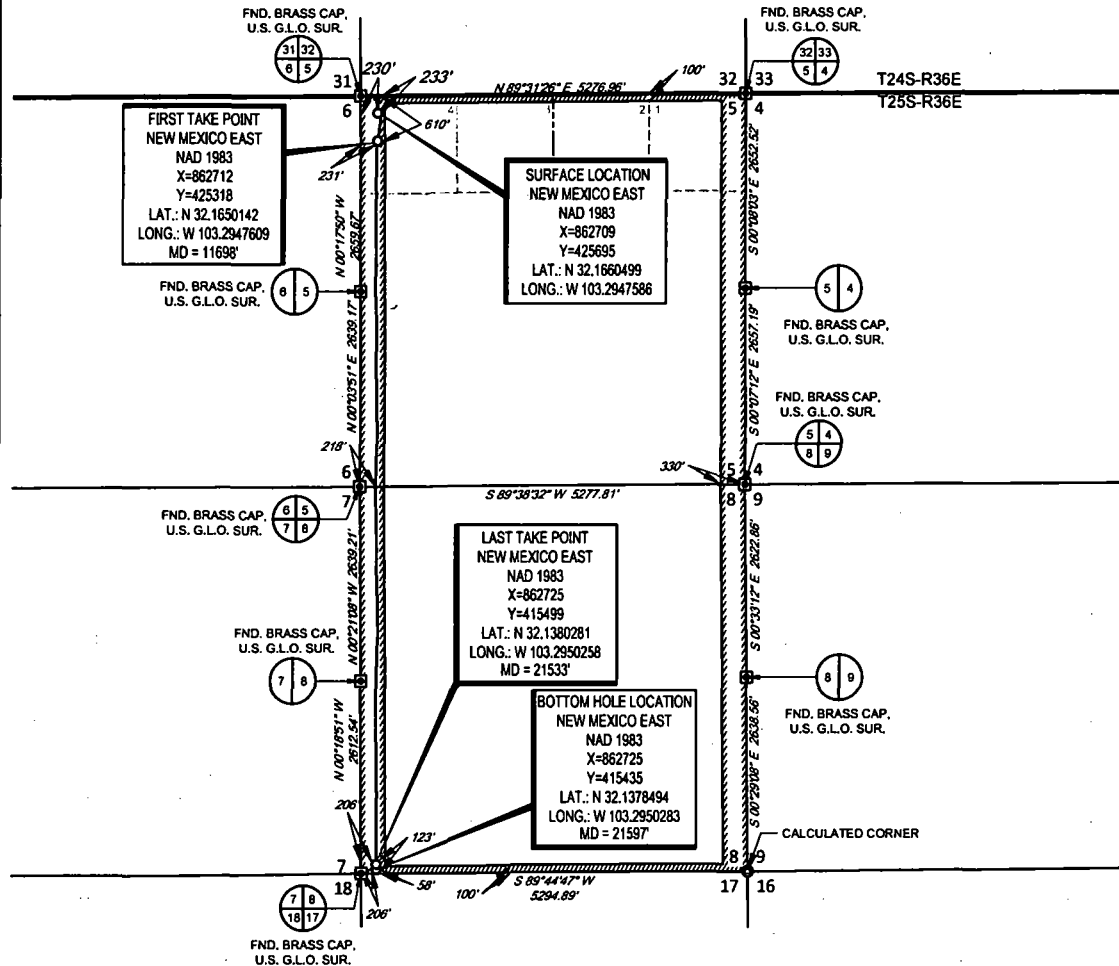
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	+FSL/-FNL (usft)	+FWL/-FEL (usft)	Latitude	Longitude
21,065.0	91.24	180.28	11,619.6	-9,960.8	247.3	32° 8' 21.531 N	103° 17' 42.021 W
21,100.0	91.08	180.34	11,618.9	-9,995.8	247.1	32° 8' 21.185 N	103° 17' 42.027 W
21,159.0	90.80	180.43	11,617.9	-10,054.7	246.7	32° 8' 20.601 N	103° 17' 42.038 W
21,200.0	90.59	180.35	11,617.4	-10,095.7	246.4	32° 8' 20.196 N	103° 17' 42.046 W
21,254.0	90.31	180.24	11,617.0	-10,149.7	246.2	32° 8' 19.662 N	103° 17' 42.056 W
21,300.0	90.07	180.08	11,616.8	-10,195.7	246.0	32° 8' 19.206 N	103° 17' 42.062 W
21,350.0	89.81	179.90	11,616.9	-10,245.7	246.0	32° 8' 18.712 N	103° 17' 42.068 W
21,400.0	90.09	180.09	11,616.9	-10,295.7	246.0	32° 8' 18.217 N	103° 17' 42.073 W
21,443.0	90.34	180.25	11,616.7	-10,338.7	245.9	32° 8' 17.791 N	103° 17' 42.080 W
21,500.0	89.83	180.17	11,616.7	-10,395.7	245.7	32° 8' 17.227 N	103° 17' 42.088 W
21,533.0	89.53	180.13	11,616.9	-10,428.7	245.6	32° 8' 16.901 N	103° 17' 42.093 W
PS101 As Drilled LTP							
21,598.0	89.53	180.13	11,617.4	-10,493.7	245.5	32° 8' 16.258 N	103° 17' 42.102 W
PS101 As Drilled BHL							

Checked By: _____ Approved By: _____ Date: _____

AMEREDEV

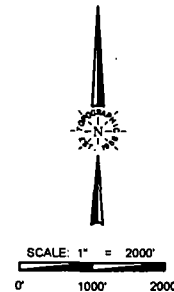
AMEREDEV OPERATING, LLC EXHIBIT 2A

SECTION 5, TOWNSHIP 25-S, RANGE 36-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: PINE STRAW 25 36 05 FED COM 101H

SECTION 5 TWP 25-S RGE 36-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 233' FNL & 230' FWL



AMEREDEV
AMEREDEV OPERATING, LLC

TOPOGRAPHIC
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1400 EVERMAN PARKWAY, Ste. 140 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



John Trevor Carnegie, P.S. No. 11401

PINE STRAW FED COM
25 36 05 101H
AS-COMPLETED

DATE: 01/22/2020

FILE: AD_PINE_STRAW_FED_COM_25_36_05_101H

DRAWN BY: JDR

SHEET: 1 OF 1

REVISION:

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY AMEREDEV OPERATING, LLC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

AMEREDEV

Ameredev Operating, LLC.

PIN/DOG

PIN/DOG #1S

Pine Straw 101H

Final Survey

Plan: Design #1

Standard Planning Report

02 January, 2020

Database:	EDM5000	Local Co-ordinate Reference:	Well Pine Straw 101H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3268.0usft
Project:	PIN/DOG	MD Reference:	KB @ 3268.0usft
Site:	PIN/DOG #1S	North Reference:	Grid
Well:	Pine Straw 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Final Survey		
Design:	Design #1		

Project	PIN/DOG		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	PIN/DOG #1S		
Site Position:		Northing:	425,695.22 usft
From:	Lat/Long	Easting:	862,769.39 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 9' 57.779 N
		Longitude:	103° 17' 40.433 W
		Grid Convergence:	0.55 °

Well	Pine Straw 101H					
Well Position	+N/-S	-0.5 usft	Northing:	425,694.72 usft	Latitude:	32° 9' 57.780 N
	+E/-W	-60.0 usft	Easting:	862,709.39 usft	Longitude:	103° 17' 41.131 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,241.0 usft

Wellbore	Final Survey				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/2/2020	6.54	60.02	47,671.81117556

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.91

Plan Survey Tool Program	Date	1/2/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,598.0	Design #1 (Final Survey)	MWD
				OWSG MWD - Standard

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
70.0	0.40	181.00	70.0	-0.2	0.0	0.57	0.57	0.00	181.00	
179.0	0.50	133.00	179.0	-0.9	0.3	0.35	0.09	-44.04	-99.99	
266.0	0.20	176.00	266.0	-1.4	0.6	0.44	-0.34	49.43	158.91	
370.0	0.20	209.00	370.0	-1.7	0.5	0.11	0.00	31.73	106.50	
495.0	0.60	163.00	495.0	-2.5	0.6	0.39	0.32	-36.80	-63.33	
590.0	0.40	158.00	590.0	-3.3	0.9	0.22	-0.21	-5.26	-170.19	
686.0	0.40	260.00	686.0	-3.7	0.7	0.65	0.00	106.25	141.00	
810.0	0.30	199.00	810.0	-4.1	0.2	0.29	-0.08	-49.19	-134.13	
904.0	1.10	184.00	904.0	-5.2	0.0	0.87	0.85	-15.96	-20.47	
936.0	1.10	202.00	936.0	-5.8	-0.1	1.08	0.00	56.25	99.00	
999.0	1.20	194.00	999.0	-7.0	-0.5	0.30	0.16	-12.70	-62.13	
1,061.0	0.90	203.00	1,060.9	-8.1	-0.8	0.55	-0.48	14.52	155.65	
1,189.0	1.30	175.00	1,188.9	-10.4	-1.1	0.51	0.31	-21.88	-67.90	
1,284.0	1.50	171.00	1,283.9	-12.7	-0.8	0.23	0.21	-4.21	-28.05	
1,311.0	1.90	202.00	1,310.9	-13.5	-0.9	3.66	1.48	114.81	82.50	
1,345.0	1.20	206.00	1,344.9	-14.3	-1.3	2.08	-2.06	11.76	173.21	
1,397.0	0.90	179.00	1,396.9	-15.2	-1.5	1.10	-0.58	-51.92	-134.25	
1,459.0	1.10	172.00	1,458.9	-16.3	-1.4	0.38	0.32	-11.29	-34.95	
1,520.0	1.50	155.00	1,519.8	-17.6	-1.0	0.90	0.66	-27.87	-52.67	
1,568.0	0.78	172.22	1,567.8	-18.5	-0.7	1.64	-1.50	35.88	162.99	
1,631.0	0.57	162.13	1,630.8	-19.2	-0.6	0.38	-0.33	-16.02	-155.47	
1,726.0	1.52	136.38	1,725.8	-20.6	0.5	1.09	1.00	-27.11	-39.57	
1,821.0	0.25	115.34	1,820.8	-21.6	1.5	1.36	-1.34	-22.15	-176.01	
1,917.0	0.57	329.70	1,916.8	-21.3	1.5	0.82	0.33	-151.71	-155.94	
2,012.0	0.84	287.16	2,011.8	-20.7	0.6	0.60	0.28	-44.78	-85.08	
2,107.0	0.99	301.85	2,106.8	-20.0	-0.8	0.29	0.16	15.46	64.89	
2,203.0	0.82	314.58	2,202.8	-19.1	-2.0	0.27	-0.18	13.26	136.46	
2,299.0	0.70	323.55	2,298.8	-18.1	-2.8	0.18	-0.13	9.34	139.67	
2,394.0	0.70	329.87	2,393.7	-17.2	-3.5	0.08	0.00	6.65	93.16	
2,489.0	0.81	347.35	2,488.7	-16.0	-3.9	0.27	0.12	18.40	73.38	
2,583.0	0.92	9.75	2,582.7	-14.6	-3.9	0.38	0.12	23.83	83.40	
2,678.0	1.03	9.66	2,677.7	-13.0	-3.7	0.12	0.12	-0.09	-0.84	
2,774.0	1.11	12.19	2,773.7	-11.3	-3.3	0.10	0.08	2.64	31.83	
2,870.0	1.26	13.12	2,869.7	-9.3	-2.9	0.16	0.16	0.97	7.77	
2,964.0	1.44	27.45	2,963.7	-7.3	-2.1	0.41	0.19	15.24	69.22	
3,057.0	1.87	35.18	3,056.6	-5.0	-0.7	0.52	0.46	8.31	31.34	
3,153.0	2.11	39.47	3,152.6	-2.4	1.3	0.29	0.25	4.47	33.98	
3,248.0	2.28	43.75	3,247.5	0.4	3.8	0.25	0.18	4.51	46.11	
3,343.0	2.60	47.65	3,342.4	3.2	6.7	0.38	0.34	4.11	29.38	
3,438.0	2.75	57.96	3,437.3	5.8	10.2	0.53	0.16	10.85	77.88	
3,533.0	1.91	54.89	3,532.2	8.0	13.4	0.89	-0.88	-3.23	-173.08	
3,627.0	1.32	24.19	3,626.2	9.8	15.1	1.09	-0.63	-32.66	-138.99	
3,722.0	1.38	14.07	3,721.2	12.0	15.9	0.26	0.06	-10.65	-80.97	
3,816.0	1.45	359.52	3,815.1	14.2	16.1	0.39	0.07	-15.48	-86.31	
3,910.0	1.12	348.77	3,909.1	16.3	15.9	0.43	-0.35	-11.44	-149.14	
4,005.0	0.94	314.27	4,004.1	17.8	15.2	0.67	-0.19	-36.32	-122.97	
4,101.0	0.83	316.11	4,100.1	18.8	14.1	0.12	-0.11	1.92	166.43	

Database:	EDM5000	Local Co-ordinate Reference:	Well Pine Straw 101H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3268.0usft
Project:	PIN/DOG	MD Reference:	KB @ 3268.0usft
Site:	PIN/DOG #1S	North Reference:	Grid
Well:	Pine Straw 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Final Survey		
Design:	Design #1		

4,195.0	0.94	317.39	4,194.1	19.9	13.2	0.12	0.12	1.36	10.83
4,290.0	0.48	339.04	4,289.1	20.8	12.5	0.55	-0.48	22.79	160.27
4,400.0	2.73	289.53	4,399.0	22.1	9.9	2.22	2.05	-45.01	-58.09
4,480.0	2.87	287.15	4,478.9	23.4	6.1	0.23	0.18	-2.98	-40.90
4,576.0	2.03	272.28	4,574.8	24.1	2.1	1.09	-0.88	-15.49	-150.16
4,671.0	1.79	260.71	4,669.8	24.0	-1.0	0.48	-0.25	-12.18	-127.59
4,765.0	1.40	269.31	4,763.7	23.7	-3.6	0.49	-0.41	9.15	152.71
4,860.0	2.12	282.90	4,858.7	24.1	-6.5	0.87	0.76	14.31	37.01
4,954.0	2.32	295.13	4,952.6	25.3	-9.9	0.55	0.21	13.01	73.30
5,049.0	2.31	299.47	5,047.5	27.1	-13.3	0.18	-0.01	4.57	95.43
5,144.0	2.52	293.92	5,142.5	28.8	-16.9	0.33	0.22	-5.84	-50.87
5,239.0	3.65	292.15	5,237.3	30.8	-21.6	1.19	1.19	-1.86	-5.70
5,334.0	3.99	295.32	5,332.1	33.4	-27.4	0.42	0.36	3.34	33.43
5,430.0	2.52	294.55	5,428.0	35.7	-32.3	1.53	-1.53	-0.80	-178.68
5,526.0	0.57	301.21	5,523.9	36.8	-34.6	2.04	-2.03	6.94	178.06
5,621.0	0.87	77.06	5,618.9	37.2	-34.3	1.41	0.32	143.00	153.09
5,716.0	1.38	87.00	5,713.9	37.4	-32.5	0.57	0.54	10.46	25.96
5,811.0	1.38	106.45	5,808.9	37.2	-30.3	0.49	0.00	20.47	99.72
5,907.0	1.39	94.47	5,904.8	36.8	-28.0	0.30	0.01	-12.48	-94.02
6,002.0	1.46	103.79	5,999.8	36.4	-25.7	0.25	0.07	9.81	77.89
6,097.0	1.40	99.46	6,094.8	35.9	-23.3	0.13	-0.06	-4.56	-121.19
6,192.0	1.40	102.35	6,189.7	35.5	-21.1	0.07	0.00	3.04	91.44
6,287.0	1.56	102.97	6,284.7	34.9	-18.7	0.17	0.17	0.65	6.03
6,382.0	1.50	108.81	6,379.7	34.2	-16.2	0.18	-0.06	6.15	113.95
6,477.0	1.79	115.89	6,474.6	33.2	-13.7	0.37	0.31	7.45	38.60
6,572.0	1.94	119.13	6,569.6	31.8	-11.0	0.19	0.16	3.41	36.73
6,668.0	1.69	118.26	6,665.5	30.3	-8.3	0.26	-0.26	-0.91	-174.14
6,763.0	1.57	123.58	6,760.5	28.9	-6.0	0.20	-0.13	5.60	131.05
6,858.0	1.62	121.55	6,855.5	27.5	-3.8	0.08	0.05	-2.14	-49.51
6,954.0	1.66	122.57	6,951.4	26.0	-1.4	0.05	0.04	1.06	36.63
7,049.0	1.77	113.28	7,046.4	24.7	1.1	0.31	0.12	-9.78	-73.10
7,144.0	1.84	114.52	7,141.3	23.5	3.8	0.08	0.07	1.31	29.78
7,239.0	1.85	116.50	7,236.3	22.2	6.6	0.07	0.01	2.08	82.08
7,334.0	2.02	114.72	7,331.2	20.8	9.5	0.19	0.18	-1.87	-20.36
7,430.0	1.59	119.01	7,427.2	19.4	12.2	0.47	-0.45	4.47	164.69
7,525.0	1.57	140.13	7,522.2	17.8	14.1	0.61	-0.02	22.23	102.50
7,620.0	1.46	135.04	7,617.1	15.9	15.8	0.18	-0.12	-5.36	-131.79
7,716.0	1.39	144.56	7,713.1	14.1	17.4	0.26	-0.07	9.92	111.19
7,811.0	1.33	125.35	7,808.1	12.6	18.9	0.48	-0.06	-20.22	-107.03
7,907.0	1.02	132.85	7,904.0	11.3	20.5	0.36	-0.32	7.81	157.33
8,002.0	1.03	135.83	7,999.0	10.1	21.7	0.06	0.01	3.14	80.87
8,097.0	0.98	138.23	8,094.0	8.9	22.8	0.07	-0.05	2.53	141.10
8,192.0	0.65	165.11	8,189.0	7.8	23.5	0.52	-0.35	28.29	143.71
8,288.0	1.13	187.11	8,285.0	6.3	23.5	0.61	0.50	22.92	46.78
8,383.0	0.95	180.98	8,380.0	4.6	23.4	0.22	-0.19	-6.45	-151.32
8,478.0	0.85	176.26	8,475.0	3.1	23.4	0.13	-0.11	-4.97	-145.79
8,574.0	0.78	158.90	8,571.0	1.8	23.7	0.27	-0.07	-18.08	-114.39
8,669.0	0.68	140.64	8,666.0	0.8	24.3	0.27	-0.11	-19.22	-122.21
8,764.0	0.68	128.75	8,760.9	0.0	25.1	0.15	0.00	-12.52	-95.94
8,859.0	0.61	120.79	8,855.9	-0.6	26.0	0.12	-0.07	-8.38	-131.93
8,954.0	0.65	75.05	8,950.9	-0.8	26.9	0.52	0.04	-48.15	-108.56
9,050.0	0.71	72.95	9,046.9	-0.4	28.0	0.07	0.06	-2.19	-23.61
9,144.0	1.18	70.60	9,140.9	0.1	29.5	0.50	0.50	-2.50	-5.89

Database: EDM5000
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North Reference: Grid
Survey Calculation Method: Minimum Curvature

9,239.0	1.02	78.23	9,235.9	0.6	31.2	0.23	-0.17	8.03	141.30
9,335.0	1.29	70.04	9,331.9	1.1	33.1	0.33	0.28	-8.53	-35.58
9,430.0	1.90	78.64	9,426.8	1.8	35.7	0.69	0.64	9.05	25.76
9,526.0	1.67	77.64	9,522.8	2.4	38.6	0.24	-0.24	-1.04	-172.79
9,622.0	1.80	74.87	9,618.7	3.1	41.4	0.16	0.14	-2.89	-34.22
9,717.0	1.15	77.14	9,713.7	3.7	43.8	0.69	-0.68	2.39	176.00
9,812.0	0.48	79.52	9,808.7	4.0	45.1	0.71	-0.71	2.51	178.30
9,907.0	0.47	23.64	9,903.7	4.4	45.6	0.47	-0.01	-58.82	-119.08
10,002.0	0.58	323.02	9,998.7	5.1	45.5	0.57	0.12	-63.81	-110.15
10,098.0	0.57	21.89	10,094.7	6.0	45.4	0.59	-0.01	61.32	120.32
10,194.0	0.75	47.99	10,190.7	6.8	46.0	0.36	0.19	27.19	72.58
10,289.0	0.71	57.17	10,285.7	7.6	47.0	0.13	-0.04	9.66	113.43
10,384.0	0.66	216.93	10,380.7	7.4	47.2	1.42	-0.05	168.17	170.25
10,480.0	0.21	212.14	10,476.7	6.9	46.7	0.47	-0.47	-4.99	-177.77
10,575.0	0.22	203.84	10,571.7	6.5	46.6	0.03	0.01	-8.74	-76.38
10,601.0	0.17	228.30	10,597.7	6.5	46.5	0.37	-0.19	94.08	132.83
10,705.0	0.65	208.91	10,701.7	5.8	46.1	0.47	0.46	-18.64	-25.97
10,800.0	0.35	152.53	10,796.7	5.1	46.0	0.57	-0.32	-59.35	-147.43
10,895.0	0.66	89.16	10,891.7	4.9	46.7	0.62	0.33	-66.71	-95.24
11,048.0	8.60	181.69	11,044.1	-6.6	47.2	5.66	5.19	60.48	96.87
11,080.0	11.14	182.66	11,075.6	-12.1	47.0	7.95	7.94	3.03	4.22
11,125.0	17.63	182.63	11,119.2	-23.2	46.5	14.42	14.42	-0.07	-0.08
11,175.0	19.95	182.39	11,166.5	-39.3	45.8	4.64	4.64	-0.48	-2.02
11,220.0	21.89	182.62	11,208.5	-55.4	45.1	4.31	4.31	0.51	2.53
11,270.0	27.10	183.95	11,254.0	-76.0	43.9	10.48	10.42	2.66	6.65
11,315.0	31.91	185.63	11,293.2	-98.1	42.0	10.84	10.69	3.73	10.50
11,366.0	36.08	187.02	11,335.5	-126.4	38.8	8.32	8.18	2.73	11.14
11,411.0	38.96	187.62	11,371.1	-153.6	35.3	6.45	6.40	1.33	7.47
11,461.0	41.03	187.57	11,409.4	-185.5	31.1	4.14	4.14	-0.10	-0.91
11,493.0	43.84	188.29	11,433.1	-206.9	28.1	8.91	8.78	2.25	10.08
11,523.0	48.05	188.38	11,453.9	-228.2	25.0	14.03	14.03	0.30	0.91
11,555.0	52.25	188.48	11,474.4	-252.5	21.4	13.13	13.13	0.31	1.08
11,587.0	57.47	188.40	11,492.8	-278.4	17.5	16.31	16.31	-0.25	-0.74
11,619.0	60.56	188.74	11,509.3	-305.5	13.5	9.70	9.66	1.06	5.48
11,651.0	63.76	188.98	11,524.2	-333.4	9.1	10.02	10.00	0.75	3.85
11,682.0	68.14	187.96	11,536.9	-361.4	4.9	14.44	14.13	-3.29	-12.22
11,745.0	75.64	186.96	11,556.4	-420.8	-2.8	12.00	11.90	-1.59	-7.38
11,777.0	79.75	186.54	11,563.3	-451.8	-6.5	12.91	12.84	-1.31	-5.75
11,840.0	87.45	182.49	11,570.3	-514.2	-11.4	13.79	12.22	-6.43	-27.85
11,955.0	88.07	180.07	11,574.8	-629.0	-14.0	2.17	0.54	-2.10	-75.67
12,050.0	86.66	179.68	11,579.1	-723.9	-13.8	1.54	-1.48	-0.41	-164.56
12,145.0	90.27	180.56	11,581.7	-818.9	-14.0	3.91	3.80	0.93	13.71
12,241.0	90.69	180.08	11,580.9	-914.9	-14.5	0.66	0.44	-0.50	-48.81
12,336.0	90.81	179.95	11,579.6	-1,009.9	-14.5	0.19	0.13	-0.14	-47.29
12,432.0	91.24	179.65	11,577.9	-1,105.9	-14.2	0.55	0.45	-0.31	-34.90
12,527.0	89.71	179.29	11,577.1	-1,200.8	-13.3	1.65	-1.61	-0.38	-166.76
12,622.0	87.29	179.89	11,579.6	-1,295.8	-12.6	2.62	-2.55	0.63	166.09
12,717.0	86.60	179.57	11,584.7	-1,390.7	-12.2	0.80	-0.73	-0.34	-155.16
12,813.0	85.50	178.90	11,591.3	-1,486.4	-10.9	1.34	-1.15	-0.70	-148.74
12,859.0	85.55	178.58	11,594.9	-1,532.3	-9.9	0.70	0.11	-0.70	-81.11
12,908.0	87.42	179.07	11,597.9	-1,581.2	-8.9	3.94	3.82	1.00	14.67
12,955.0	87.56	179.22	11,600.0	-1,628.1	-8.2	0.44	0.30	0.32	46.95
13,002.0	89.62	179.29	11,601.1	-1,675.1	-7.6	4.39	4.38	0.15	1.95

Database:	EDM5000	Local Co-ordinate Reference:	Well Pine Straw 101H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3268.0usft
Project:	PIN/DOG	MD Reference:	KB @ 3268.0usft
Site:	PIN/DOG #1S	North Reference:	Grid
Well:	Pine Straw 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Final Survey		
Design:	Design #1		

13,040.0	89.40	179.44	11,601.4	-1,713.1	-7.2	0.70	-0.58	0.39	145.71
13,097.0	90.00	179.09	11,601.7	-1,770.1	-6.4	1.22	1.05	-0.61	-30.26
13,190.0	94.19	179.60	11,598.3	-1,863.0	-5.4	4.54	4.51	0.55	6.93
13,286.0	94.00	179.93	11,591.5	-1,958.8	-5.0	0.40	-0.20	0.34	119.98
13,381.0	92.07	180.75	11,586.4	-2,053.6	-5.5	2.21	-2.03	0.86	156.99
13,475.0	89.94	182.52	11,584.8	-2,147.5	-8.2	2.95	-2.27	1.88	140.26
13,568.0	85.78	182.89	11,588.3	-2,240.4	-12.6	4.49	-4.47	0.40	174.93
13,616.0	85.60	183.35	11,591.9	-2,288.2	-15.2	1.03	-0.38	0.96	111.44
13,664.0	85.46	181.23	11,595.6	-2,336.0	-17.1	4.41	-0.29	-4.42	-93.87
13,714.0	85.68	179.43	11,599.5	-2,385.8	-17.4	3.62	0.44	-3.60	-83.08
13,759.0	87.52	177.48	11,602.2	-2,430.7	-16.2	5.95	4.09	-4.33	-46.67
13,809.0	88.00	176.04	11,604.1	-2,480.6	-13.4	3.03	0.96	-2.88	-71.58
13,852.0	87.88	175.34	11,605.7	-2,523.4	-10.1	1.65	-0.28	-1.63	-99.75
13,902.0	90.01	176.32	11,606.6	-2,573.3	-6.5	4.69	4.26	1.96	24.71
13,948.0	89.20	177.87	11,606.9	-2,619.2	-4.2	3.80	-1.76	3.37	117.59
13,998.0	88.75	178.93	11,607.8	-2,669.2	-2.8	2.30	-0.90	2.12	113.01
14,042.0	89.09	179.38	11,608.6	-2,713.2	-2.1	1.28	0.77	1.02	52.93
14,138.0	88.55	179.14	11,610.6	-2,809.2	-0.9	0.62	-0.56	-0.25	-156.04
14,232.0	90.79	179.58	11,611.1	-2,903.2	0.2	2.43	2.38	0.47	11.11
14,326.0	88.35	180.07	11,611.8	-2,997.1	0.4	2.65	-2.60	0.52	168.65
14,420.0	87.68	180.10	11,615.1	-3,091.1	0.3	0.71	-0.71	0.03	177.44
14,514.0	90.63	181.07	11,616.5	-3,185.1	-0.7	3.30	3.14	1.03	18.21
14,608.0	91.58	182.00	11,614.7	-3,279.0	-3.2	1.41	1.01	0.99	44.38
14,704.0	89.86	181.13	11,613.5	-3,375.0	-5.8	2.01	-1.79	-0.91	-153.16
14,797.0	85.93	179.15	11,616.9	-3,467.9	-6.0	4.73	-4.23	-2.13	-153.31
14,893.0	86.94	177.35	11,622.8	-3,563.6	-3.1	2.15	1.05	-1.88	-60.71
14,989.0	91.12	178.14	11,624.5	-3,659.5	0.7	4.43	4.35	0.82	10.71
15,082.0	89.09	179.22	11,624.3	-3,752.5	2.8	2.47	-2.18	1.16	151.98
15,177.0	88.17	179.29	11,626.6	-3,847.5	4.1	0.97	-0.97	0.07	175.65
15,272.0	85.58	179.99	11,631.8	-3,942.3	4.6	2.82	-2.73	0.74	164.92
15,368.0	87.80	179.76	11,637.3	-4,038.1	4.9	2.32	2.31	-0.24	-5.91
15,463.0	86.58	178.70	11,642.0	-4,133.0	6.1	1.70	-1.28	-1.12	-139.07
15,559.0	86.25	179.67	11,648.0	-4,228.8	7.5	1.07	-0.34	1.01	108.85
15,654.0	89.10	179.58	11,651.8	-4,323.7	8.1	3.00	3.00	-0.09	-1.81
15,749.0	86.83	178.57	11,655.2	-4,418.6	9.6	2.62	-2.39	-1.06	-156.04
15,845.0	92.94	180.18	11,655.4	-4,514.6	10.7	6.58	6.36	1.68	14.77
15,940.0	96.87	182.16	11,647.3	-4,609.2	8.8	4.63	4.14	2.08	26.58
16,035.0	91.08	182.20	11,640.7	-4,703.9	5.2	6.09	-6.09	0.04	179.60
16,130.0	88.85	180.95	11,640.7	-4,798.8	2.6	2.69	-2.35	-1.32	-150.73
16,225.0	87.76	180.93	11,643.5	-4,893.8	1.0	1.15	-1.15	-0.02	-178.95
16,321.0	90.65	181.64	11,644.9	-4,989.7	-1.2	3.10	3.01	0.74	13.81
16,417.0	84.96	180.33	11,648.5	-5,085.6	-2.8	6.08	-5.93	-1.36	-167.06
16,512.0	83.55	179.93	11,658.1	-5,180.1	-3.0	1.54	-1.48	-0.42	-164.26
16,608.0	82.44	178.56	11,669.8	-5,275.4	-1.8	1.83	-1.16	-1.43	-129.31
16,704.0	82.69	178.93	11,682.2	-5,370.6	0.3	0.46	0.26	0.39	55.75
16,799.0	86.68	178.08	11,691.0	-5,465.1	2.8	4.29	4.20	-0.89	-12.02
16,893.0	88.07	179.12	11,695.3	-5,559.0	5.1	1.85	1.48	1.11	36.80
16,988.0	88.73	179.60	11,697.9	-5,653.9	6.1	0.86	0.69	0.51	36.02
17,083.0	88.52	179.00	11,700.2	-5,748.9	7.3	0.67	-0.22	-0.63	-109.30
17,178.0	90.83	179.72	11,700.8	-5,843.9	8.4	2.55	2.43	0.76	17.31
17,272.0	88.22	179.90	11,701.5	-5,937.9	8.7	2.78	-2.78	0.19	176.06
17,367.0	87.60	179.74	11,705.0	-6,032.8	9.0	0.67	-0.65	-0.17	-165.54
17,461.0	87.83	179.45	11,708.7	-6,126.7	9.6	0.39	0.24	-0.31	-51.57

Database:	EDM5000	Local Co-ordinate Reference:	Well Pine Straw 101H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3268.0usft
Project:	PIN/DOG	MD Reference:	KB @ 3268.0usft
Site:	PIN/DOG #1S	North Reference:	Grid
Well:	Pine Straw 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Final Survey		
Design:	Design #1		

17,555.0	87.58	178.75	11,712.5	-6,220.6	11.1	0.79	-0.27	-0.74	-109.68
17,649.0	87.25	178.20	11,716.8	-6,314.5	13.6	0.68	-0.35	-0.59	-121.00
17,744.0	88.50	178.09	11,720.3	-6,409.4	16.7	1.32	1.32	-0.12	-5.03
17,837.0	90.82	178.04	11,720.8	-6,502.3	19.8	2.50	2.49	-0.05	-1.23
17,932.0	91.33	179.45	11,719.0	-6,597.3	21.9	1.58	0.54	1.48	70.10
18,028.0	92.37	179.44	11,715.9	-6,693.2	22.8	1.08	1.08	-0.01	-0.55
18,122.0	92.53	179.08	11,711.9	-6,787.1	24.0	0.42	0.17	-0.38	-66.01
18,217.0	92.86	179.49	11,707.5	-6,882.0	25.2	0.55	0.35	0.43	51.13
18,313.0	92.59	179.72	11,702.9	-6,977.9	25.9	0.37	-0.28	0.24	139.60
18,408.0	92.47	180.27	11,698.7	-7,072.8	25.9	0.59	-0.13	0.58	102.31
18,502.0	92.44	182.55	11,694.7	-7,166.7	23.6	2.42	-0.03	2.43	90.71
18,597.0	89.58	182.67	11,693.0	-7,261.6	19.3	3.01	-3.01	0.13	177.60
18,693.0	89.65	182.22	11,693.6	-7,357.5	15.2	0.47	0.07	-0.47	-81.16
18,786.0	90.43	180.55	11,693.6	-7,450.4	12.9	1.98	0.84	-1.80	-64.97
18,881.0	90.47	180.45	11,692.8	-7,545.4	12.1	0.11	0.04	-0.11	-68.20
18,976.0	92.81	180.79	11,690.1	-7,640.4	11.1	2.49	2.46	0.36	8.26
19,072.0	93.15	180.50	11,685.1	-7,736.3	10.0	0.47	0.35	-0.30	-40.42
19,167.0	92.86	180.08	11,680.1	-7,831.1	9.5	0.54	-0.31	-0.44	-124.65
19,261.0	93.16	180.19	11,675.2	-7,925.0	9.3	0.34	0.32	0.12	20.11
19,356.0	92.29	179.67	11,670.7	-8,019.9	9.4	1.07	-0.92	-0.55	-149.15
19,451.0	91.74	180.22	11,667.4	-8,114.8	9.5	0.82	-0.58	0.58	135.01
19,547.0	91.92	180.12	11,664.3	-8,210.8	9.2	0.21	0.19	-0.10	-29.04
19,642.0	93.06	179.93	11,660.2	-8,305.7	9.2	1.22	1.20	-0.20	-9.45
19,735.0	89.43	179.45	11,658.1	-8,398.6	9.7	3.94	-3.90	-0.52	-172.46
19,830.0	89.51	179.12	11,659.0	-8,493.6	10.9	0.36	0.08	-0.35	-76.37
19,925.0	89.06	179.12	11,660.2	-8,588.6	12.3	0.47	-0.47	0.00	180.00
20,021.0	89.87	179.48	11,661.1	-8,684.6	13.5	0.92	0.84	0.38	23.96
20,115.0	89.17	179.41	11,661.9	-8,778.6	14.4	0.75	-0.74	-0.07	-174.29
20,210.0	89.62	179.07	11,662.9	-8,873.6	15.7	0.59	0.47	-0.36	-37.07
20,305.0	93.87	179.03	11,660.0	-8,968.5	17.2	4.47	4.47	-0.04	-0.54
20,401.0	94.19	179.14	11,653.3	-9,064.3	18.8	0.35	0.33	0.11	18.92
20,495.0	94.36	179.07	11,646.2	-9,158.0	20.2	0.20	0.18	-0.07	-22.32
20,590.0	94.00	180.13	11,639.3	-9,252.7	20.9	1.18	-0.38	1.12	108.77
20,685.0	93.25	180.60	11,633.3	-9,347.5	20.3	0.93	-0.79	0.49	147.96
20,780.0	92.31	180.44	11,628.7	-9,442.4	19.4	1.00	-0.99	-0.17	-170.35
20,875.0	92.05	180.59	11,625.1	-9,537.3	18.6	0.32	-0.27	0.16	150.03
20,970.0	91.69	180.33	11,622.0	-9,632.3	17.8	0.47	-0.38	-0.27	-144.17
21,065.0	91.24	180.28	11,619.6	-9,727.3	17.3	0.48	-0.47	-0.05	-173.66
21,159.0	90.80	180.43	11,617.9	-9,821.2	16.7	0.49	-0.47	0.16	161.18
21,254.0	90.31	180.24	11,617.0	-9,916.2	16.2	0.55	-0.52	-0.20	-158.81
21,350.0	89.81	179.90	11,616.9	-10,012.2	16.0	0.63	-0.52	-0.35	-145.78
21,443.0	90.34	180.25	11,616.7	-10,105.2	15.9	0.68	0.57	0.38	33.44
21,533.0	89.53	180.13	11,616.9	-10,195.2	15.6	0.91	-0.90	-0.13	-171.57
21,598.0	89.53	180.13	11,617.4	-10,260.2	15.5	0.00	0.00	0.00	0.00

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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
70.0	0.40	181.00	70.0	-0.2	0.0	0.2	0.57	0.57	0.00
100.0	0.40	186.01	100.0	-0.4	0.0	0.4	0.35	-0.02	-49.96
179.0	0.50	133.00	179.0	-0.9	0.3	0.9	0.35	0.13	-41.79
200.0	0.42	137.54	200.0	-1.1	0.5	1.1	0.44	-0.40	21.62
266.0	0.20	176.00	266.0	-1.4	0.6	1.4	0.44	-0.33	58.27
300.0	0.19	186.65	300.0	-1.5	0.6	1.5	0.11	-0.02	31.31
370.0	0.20	209.00	370.0	-1.7	0.5	1.7	0.11	0.01	31.93
400.0	0.27	186.66	400.0	-1.8	0.5	1.8	0.39	0.24	-74.48
495.0	0.60	163.00	495.0	-2.5	0.6	2.5	0.39	0.34	-24.90
500.0	0.59	162.82	500.0	-2.6	0.7	2.6	0.22	-0.21	-3.57
590.0	0.40	158.00	590.0	-3.3	0.9	3.3	0.22	-0.21	-5.36
600.0	0.35	164.65	600.0	-3.4	0.9	3.4	0.65	-0.48	66.48
686.0	0.40	260.00	686.0	-3.7	0.7	3.7	0.65	0.06	110.87
700.0	0.37	255.44	700.0	-3.7	0.6	3.7	0.29	-0.20	-32.59
800.0	0.29	204.53	800.0	-4.0	0.2	4.0	0.29	-0.08	-50.91
810.0	0.30	199.00	810.0	-4.1	0.2	4.1	0.29	0.07	-55.29
900.0	1.07	184.18	900.0	-5.1	0.0	5.1	0.87	0.85	-16.47
904.0	1.10	184.00	904.0	-5.2	0.0	5.2	0.87	0.86	-4.44
936.0	1.10	202.00	936.0	-5.8	-0.1	5.8	1.08	0.00	56.25
999.0	1.20	194.00	999.0	-7.0	-0.5	7.0	0.30	0.16	-12.70
1,000.0	1.19	194.11	1,000.0	-7.0	-0.5	7.0	0.55	-0.50	10.89
1,061.0	0.90	203.00	1,060.9	-8.1	-0.8	8.1	0.55	-0.48	14.58
1,100.0	0.99	192.21	1,099.9	-8.7	-1.0	8.7	0.51	0.24	-27.67
1,189.0	1.30	175.00	1,188.9	-10.4	-1.1	10.4	0.51	0.34	-19.33
1,200.0	1.32	174.48	1,199.9	-10.7	-1.1	10.7	0.23	0.21	-4.77
1,284.0	1.50	171.00	1,283.9	-12.7	-0.8	12.7	0.23	0.21	-4.14
1,300.0	1.68	191.20	1,299.9	-13.2	-0.8	13.2	3.66	1.12	126.24
1,311.0	1.90	202.00	1,310.9	-13.5	-0.9	13.5	3.66	2.00	98.20
1,345.0	1.20	206.00	1,344.9	-14.3	-1.3	14.3	2.08	-2.06	11.76
1,397.0	0.90	179.00	1,396.9	-15.2	-1.5	15.2	1.10	-0.58	-51.92
1,400.0	0.91	178.59	1,399.9	-15.3	-1.5	15.3	0.38	0.31	-13.62
1,459.0	1.10	172.00	1,458.9	-16.3	-1.4	16.3	0.38	0.32	-11.17
1,500.0	1.36	159.46	1,499.8	-17.2	-1.2	17.1	0.90	0.63	-30.59
1,520.0	1.50	155.00	1,519.8	-17.6	-1.0	17.6	0.90	0.71	-22.28
1,568.0	0.78	172.22	1,567.8	-18.5	-0.7	18.5	1.64	-1.50	35.88
1,600.0	0.67	167.88	1,599.8	-18.9	-0.6	18.9	0.38	-0.34	-13.55
1,631.0	0.57	162.13	1,630.8	-19.2	-0.6	19.2	0.38	-0.33	-18.56
1,700.0	1.25	139.50	1,699.8	-20.1	0.0	20.1	1.09	0.98	-32.80
1,726.0	1.52	136.38	1,725.8	-20.6	0.5	20.6	1.09	1.05	-11.99
1,800.0	0.52	128.69	1,799.8	-21.5	1.4	21.5	1.36	-1.35	-10.39
1,821.0	0.25	115.34	1,820.8	-21.6	1.5	21.6	1.36	-1.30	-63.57
1,900.0	0.43	333.01	1,899.8	-21.4	1.5	21.4	0.82	0.23	-180.17
1,917.0	0.57	329.70	1,916.8	-21.3	1.5	21.3	0.82	0.80	-19.45
2,000.0	0.79	290.70	1,999.8	-20.7	0.7	20.7	0.60	0.26	-46.99
2,012.0	0.84	287.16	2,011.8	-20.7	0.6	20.7	0.60	0.43	-29.50
2,100.0	0.98	300.93	2,099.8	-20.1	-0.7	20.1	0.29	0.16	15.65
2,107.0	0.99	301.85	2,106.8	-20.0	-0.8	20.0	0.29	0.18	13.15
2,200.0	0.82	314.11	2,199.8	-19.1	-2.0	19.1	0.27	-0.18	13.18
2,203.0	0.82	314.58	2,202.8	-19.1	-2.0	19.1	0.27	-0.15	15.79
2,299.0	0.70	323.55	2,298.8	-18.1	-2.8	18.1	0.18	-0.13	9.34
2,300.0	0.70	323.62	2,299.8	-18.1	-2.8	18.1	0.08	0.00	6.64
2,394.0	0.70	329.87	2,393.7	-17.2	-3.5	17.2	0.08	0.00	6.65
2,400.0	0.70	331.12	2,399.7	-17.1	-3.5	17.1	0.27	0.08	20.82

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Planned 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)
2,489.0	0.81	347.35	2,488.7	-16.0	-3.9	16.0	0.27	0.12	18.24
2,500.0	0.82	350.23	2,499.7	-15.9	-3.9	15.9	0.38	0.05	26.21
2,583.0	0.92	9.75	2,582.7	-14.6	-3.9	14.6	0.38	0.13	23.51
2,600.0	0.94	9.73	2,599.7	-14.4	-3.9	14.3	0.12	0.12	-0.10
2,678.0	1.03	9.66	2,677.7	-13.0	-3.7	13.0	0.12	0.12	-0.09
2,700.0	1.05	10.27	2,699.7	-12.6	-3.6	12.6	0.10	0.08	2.79
2,774.0	1.11	12.19	2,773.7	-11.3	-3.3	11.3	0.10	0.08	2.59
2,800.0	1.15	12.47	2,799.7	-10.8	-3.2	10.8	0.16	0.16	1.06
2,870.0	1.26	13.12	2,869.7	-9.3	-2.9	9.3	0.16	0.16	0.93
2,900.0	1.31	18.11	2,899.7	-8.7	-2.7	8.7	0.41	0.16	16.63
2,964.0	1.44	27.45	2,963.7	-7.3	-2.1	7.3	0.41	0.21	14.60
3,000.0	1.60	30.93	2,999.6	-6.4	-1.6	6.4	0.52	0.45	9.67
3,057.0	1.87	35.18	3,056.6	-5.0	-0.7	5.0	0.52	0.47	7.45
3,100.0	1.98	37.23	3,099.6	-3.8	0.2	3.8	0.29	0.25	4.77
3,153.0	2.11	39.47	3,152.6	-2.4	1.3	2.4	0.29	0.25	4.23
3,200.0	2.19	41.67	3,199.5	-1.0	2.5	1.0	0.25	0.18	4.68
3,248.0	2.28	43.75	3,247.5	0.4	3.8	-0.4	0.25	0.18	4.33
3,300.0	2.45	46.01	3,299.4	1.9	5.3	-1.9	0.38	0.33	4.35
3,343.0	2.60	47.65	3,342.4	3.2	6.7	-3.2	0.38	0.34	3.81
3,400.0	2.68	53.88	3,399.3	4.8	8.7	-4.8	0.53	0.14	11.10
3,438.0	2.75	57.96	3,437.3	5.8	10.2	-5.8	0.53	0.19	10.48
3,500.0	2.20	56.22	3,499.2	7.3	12.4	-7.3	0.89	-0.89	-2.80
3,533.0	1.91	54.89	3,532.2	8.0	13.4	-7.9	0.89	-0.88	-4.04
3,600.0	1.44	35.40	3,599.2	9.3	14.8	-9.3	1.09	-0.70	-29.08
3,627.0	1.32	24.19	3,626.2	9.8	15.1	-9.8	1.09	-0.44	-41.54
3,700.0	1.36	16.33	3,699.2	11.4	15.7	-11.4	0.26	0.06	-10.77
3,722.0	1.38	14.07	3,721.2	12.0	15.9	-11.9	0.26	0.08	-10.27
3,800.0	1.43	1.88	3,799.1	13.8	16.1	-13.8	0.39	0.07	-15.63
3,816.0	1.45	359.52	3,815.1	14.2	16.1	-14.2	0.39	0.11	-14.76
3,900.0	1.15	350.20	3,899.1	16.1	16.0	-16.1	0.43	-0.35	-11.10
3,910.0	1.12	348.77	3,909.1	16.3	15.9	-16.3	0.43	-0.33	-14.30
4,000.0	0.94	316.31	3,999.1	17.7	15.3	-17.7	0.67	-0.20	-36.07
4,005.0	0.94	314.27	4,004.1	17.8	15.2	-17.8	0.67	0.01	-40.72
4,100.0	0.83	316.09	4,099.1	18.8	14.2	-18.8	0.12	-0.11	1.91
4,101.0	0.83	316.11	4,100.1	18.8	14.1	-18.8	0.12	-0.11	2.17
4,195.0	0.94	317.39	4,194.1	19.9	13.2	-19.9	0.12	0.12	1.36
4,200.0	0.91	317.97	4,199.1	20.0	13.1	-19.9	0.55	-0.52	11.69
4,290.0	0.48	339.04	4,289.1	20.8	12.5	-20.8	0.55	-0.48	23.41
4,300.0	0.63	321.51	4,299.1	20.9	12.4	-20.9	2.22	1.47	-175.29
4,400.0	2.73	289.53	4,399.0	22.1	9.9	-22.1	2.22	2.10	-31.98
4,480.0	2.87	287.15	4,478.9	23.4	6.1	-23.4	0.23	0.18	-2.98
4,500.0	2.68	284.83	4,498.9	23.6	5.2	-23.6	1.09	-0.93	-11.59
4,576.0	2.03	272.28	4,574.8	24.1	2.1	-24.1	1.09	-0.86	-16.51
4,600.0	1.96	269.63	4,598.8	24.2	1.3	-24.2	0.48	-0.28	-11.04
4,671.0	1.79	260.71	4,669.8	24.0	-1.0	-24.0	0.48	-0.24	-12.56
4,700.0	1.67	262.93	4,698.8	23.8	-1.9	-23.9	0.49	-0.43	7.66
4,765.0	1.40	269.31	4,763.7	23.7	-3.6	-23.7	0.49	-0.41	9.81
4,800.0	1.65	275.68	4,798.7	23.8	-4.5	-23.8	0.87	0.72	18.20
4,860.0	2.12	282.90	4,858.7	24.1	-6.5	-24.1	0.87	0.78	12.03
4,900.0	2.19	288.37	4,898.7	24.5	-7.9	-24.5	0.55	0.18	13.68
4,954.0	2.32	295.13	4,952.6	25.3	-9.9	-25.3	0.55	0.24	12.51
5,000.0	2.31	297.23	4,998.6	26.1	-11.6	-26.1	0.18	-0.01	4.56
5,049.0	2.31	299.47	5,047.5	27.1	-13.3	-27.1	0.18	-0.01	4.58
5,100.0	2.42	296.37	5,098.5	28.0	-15.2	-28.1	0.33	0.22	-6.08

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North Reference: Grid
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Planned 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)
5,144.0	2.52	293.92	5,142.5	28.8	-16.9	-28.9	-0.33	0.23	-5.57
5,200.0	3.19	292.72	5,198.4	29.9	-19.4	-30.0	1.19	1.19	-2.13
5,239.0	3.65	292.15	5,237.3	30.8	-21.6	-30.9	1.19	1.19	-1.47
5,300.0	3.87	294.25	5,298.2	32.4	-25.3	-32.4	0.42	0.36	3.44
5,334.0	3.99	295.32	5,332.1	33.4	-27.4	-33.4	0.42	0.36	3.15
5,400.0	2.98	294.87	5,398.0	35.1	-31.0	-35.1	1.53	-1.53	-0.68
5,430.0	2.52	294.55	5,428.0	35.7	-32.3	-35.7	1.53	-1.53	-1.07
5,500.0	1.10	297.07	5,497.9	36.6	-34.3	-36.7	2.04	-2.03	3.60
5,526.0	0.57	301.21	5,523.9	36.8	-34.6	-36.9	2.04	-2.02	15.92
5,600.0	0.59	68.56	5,597.9	37.1	-34.6	-37.2	1.41	0.03	172.09
5,621.0	0.87	77.06	5,618.9	37.2	-34.3	-37.3	1.41	1.32	40.48
5,700.0	1.29	85.88	5,697.9	37.4	-32.9	-37.5	0.57	0.53	11.16
5,716.0	1.38	87.00	5,713.9	37.4	-32.5	-37.5	0.57	0.55	7.01
5,800.0	1.37	104.23	5,797.9	37.2	-30.5	-37.3	0.49	-0.01	20.51
5,811.0	1.38	106.45	5,808.9	37.2	-30.3	-37.2	0.49	0.07	20.21
5,900.0	1.39	95.33	5,897.8	36.8	-28.2	-36.8	0.30	0.01	-12.49
5,907.0	1.39	94.47	5,904.8	36.8	-28.0	-36.8	0.30	0.04	-12.32
6,000.0	1.46	103.60	5,997.8	36.4	-25.7	-36.4	0.25	0.07	9.82
6,002.0	1.46	103.79	5,999.8	36.4	-25.7	-36.4	0.25	0.09	9.31
6,097.0	1.40	99.46	6,094.8	35.9	-23.3	-35.9	0.13	-0.06	-4.56
6,100.0	1.40	99.55	6,097.8	35.9	-23.3	-35.9	0.07	0.00	3.04
6,192.0	1.40	102.35	6,189.7	35.5	-21.1	-35.5	0.07	0.00	3.04
6,200.0	1.41	102.41	6,197.7	35.4	-20.9	-35.5	0.17	0.17	0.72
6,287.0	1.56	102.97	6,284.7	34.9	-18.7	-35.0	0.17	0.17	0.65
6,300.0	1.55	103.74	6,297.7	34.8	-18.3	-34.9	0.18	-0.07	5.94
6,382.0	1.50	108.81	6,379.7	34.2	-16.2	-34.3	0.18	-0.06	6.18
6,400.0	1.55	110.35	6,397.7	34.1	-15.8	-34.1	0.37	0.29	8.57
6,477.0	1.79	115.89	6,474.6	33.2	-13.7	-33.2	0.37	0.31	7.19
6,500.0	1.83	116.72	6,497.6	32.9	-13.1	-32.9	0.19	0.16	3.62
6,572.0	1.94	119.13	6,569.6	31.8	-11.0	-31.8	0.19	0.16	3.34
6,600.0	1.87	118.90	6,597.6	31.3	-10.2	-31.3	0.26	-0.26	-0.82
6,668.0	1.69	118.26	6,665.5	30.3	-8.3	-30.3	0.26	-0.26	-0.94
6,700.0	1.65	119.96	6,697.5	29.8	-7.5	-29.9	0.20	-0.13	5.33
6,763.0	1.57	123.58	6,760.5	28.9	-6.0	-28.9	0.20	-0.12	5.74
6,800.0	1.59	122.77	6,797.5	28.4	-5.1	-28.4	0.08	0.05	-2.18
6,858.0	1.62	121.55	6,855.5	27.5	-3.8	-27.5	0.08	0.05	-2.11
6,900.0	1.64	122.00	6,897.5	26.9	-2.8	-26.9	0.05	0.04	1.08
6,954.0	1.66	122.57	6,951.4	26.0	-1.4	-26.0	0.05	0.04	1.05
7,000.0	1.71	117.92	6,997.4	25.4	-0.3	-25.4	0.31	0.10	-10.10
7,049.0	1.77	113.28	7,046.4	24.7	1.1	-24.7	0.31	0.13	-9.48
7,100.0	1.81	113.96	7,097.4	24.1	2.5	-24.1	0.08	0.07	1.33
7,144.0	1.84	114.52	7,141.3	23.5	3.8	-23.5	0.08	0.07	1.28
7,200.0	1.85	115.69	7,197.3	22.7	5.4	-22.7	0.07	0.01	2.09
7,239.0	1.85	116.50	7,238.3	22.2	6.6	-22.2	0.07	0.01	2.08
7,300.0	1.96	115.32	7,297.3	21.3	8.4	-21.3	0.19	0.18	-1.93
7,334.0	2.02	114.72	7,331.2	20.8	9.5	-20.8	0.19	0.18	-1.77
7,400.0	1.72	117.44	7,397.2	19.9	11.4	-19.8	0.47	-0.45	4.12
7,430.0	1.59	119.01	7,427.2	19.4	12.2	-19.4	0.47	-0.44	5.23
7,500.0	1.55	134.56	7,497.2	18.3	13.7	-18.3	0.61	-0.05	22.22
7,525.0	1.57	140.13	7,522.2	17.8	14.1	-17.8	0.61	0.06	22.26
7,600.0	1.48	136.17	7,597.1	16.3	15.5	-16.3	0.18	-0.12	-5.28
7,620.0	1.46	135.04	7,617.1	15.9	15.8	-15.9	0.18	-0.11	-5.67
7,700.0	1.40	142.91	7,697.1	14.4	17.1	-14.4	0.26	-0.08	9.84
7,716.0	1.39	144.56	7,713.1	14.1	17.4	-14.1	0.26	-0.06	10.30

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7,800.0	1.33	127.63	7,797.1	12.7	18.7	-12.7	0.48	-0.07	-20.15
7,811.0	1.33	125.35	7,808.1	12.6	18.9	-12.5	0.48	0.01	-20.76
7,900.0	1.04	132.15	7,897.0	11.4	20.4	-11.4	0.36	-0.32	7.64
7,907.0	1.02	132.85	7,904.0	11.3	20.5	-11.3	0.36	-0.31	9.94
8,000.0	1.03	135.77	7,997.0	10.2	21.7	-10.1	0.06	0.01	3.14
8,002.0	1.03	135.83	7,999.0	10.1	21.7	-10.1	0.06	0.01	3.11
8,097.0	0.98	138.23	8,094.0	8.9	22.8	-8.9	0.07	-0.05	2.53
8,100.0	0.97	138.78	8,097.0	8.9	22.9	-8.9	0.52	-0.42	18.32
8,192.0	0.65	165.11	8,189.0	7.8	23.5	-7.8	0.52	-0.35	28.62
8,200.0	0.68	168.07	8,197.0	7.7	23.5	-7.7	0.61	0.43	36.95
8,288.0	1.13	187.11	8,285.0	6.3	23.5	-6.3	0.61	0.51	21.64
8,300.0	1.11	186.45	8,297.0	6.1	23.5	-6.1	0.22	-0.19	-5.53
8,383.0	0.95	180.98	8,380.0	4.6	23.4	-4.6	0.22	-0.19	-6.59
8,400.0	0.93	180.21	8,397.0	4.3	23.4	-4.3	0.13	-0.11	-4.53
8,478.0	0.85	176.26	8,475.0	3.1	23.4	-3.1	0.13	-0.10	-5.06
8,500.0	0.83	172.56	8,497.0	2.8	23.5	-2.8	0.27	-0.10	-16.80
8,574.0	0.78	158.90	8,571.0	1.8	23.7	-1.8	0.27	-0.06	-18.47
8,600.0	0.75	154.41	8,597.0	1.5	23.9	-1.5	0.27	-0.13	-17.25
8,669.0	0.68	140.64	8,666.0	0.8	24.3	-0.7	0.27	-0.09	-19.96
8,700.0	0.68	136.77	8,696.9	0.5	24.5	-0.5	0.15	-0.01	-12.49
8,784.0	0.68	128.75	8,760.9	0.0	25.1	0.1	0.15	0.01	-12.53
8,800.0	0.65	125.94	8,796.9	-0.3	25.4	0.3	0.12	-0.08	-7.82
8,859.0	0.61	120.79	8,855.9	-0.6	26.0	0.7	0.12	-0.07	-8.72
8,900.0	0.58	100.47	8,896.9	-0.8	26.4	0.8	0.52	-0.08	-49.56
8,954.0	0.65	75.05	8,950.9	-0.8	26.9	0.8	0.52	0.13	-47.07
9,000.0	0.68	74.00	8,996.9	-0.6	27.4	0.7	0.07	0.06	-2.29
9,050.0	0.71	72.95	9,046.9	-0.4	28.0	0.5	0.07	0.06	-2.09
9,100.0	0.96	71.41	9,096.9	-0.2	28.7	0.3	0.50	0.50	-3.07
9,144.0	1.18	70.80	9,140.9	0.1	29.5	0.0	0.50	0.50	-1.85
9,200.0	1.08	74.83	9,196.9	0.4	30.6	-0.3	0.23	-0.17	7.55
9,239.0	1.02	78.23	9,235.9	0.6	31.2	-0.5	0.23	-0.16	8.73
9,300.0	1.19	72.59	9,296.9	0.9	32.4	-0.8	0.33	0.28	-9.24
9,335.0	1.29	70.04	9,331.9	1.1	33.1	-1.0	0.33	0.29	-7.30
9,400.0	1.70	76.59	9,396.9	1.6	34.7	-1.5	0.69	0.64	10.08
9,430.0	1.90	78.64	9,426.8	1.8	35.7	-1.7	0.69	0.65	6.83
9,500.0	1.73	77.94	9,496.8	2.2	37.8	-2.2	0.24	-0.24	-1.00
9,526.0	1.67	77.64	9,522.8	2.4	38.6	-2.3	0.24	-0.24	-1.14
9,600.0	1.77	75.47	9,596.8	2.9	40.7	-2.8	0.16	0.13	-2.93
9,622.0	1.80	74.87	9,618.7	3.1	41.4	-3.0	0.16	0.14	-2.72
9,700.0	1.27	76.56	9,696.7	3.6	43.4	-3.5	0.69	-0.68	2.17
9,717.0	1.15	77.14	9,713.7	3.7	43.8	-3.6	0.69	-0.68	3.40
9,800.0	0.56	78.91	9,796.7	3.9	45.0	-3.9	0.71	-0.71	2.13
9,812.0	0.48	79.52	9,808.7	4.0	45.1	-3.9	0.71	-0.70	5.10
9,900.0	0.46	27.32	9,896.7	4.3	45.6	-4.3	0.47	-0.03	-59.32
9,907.0	0.47	23.64	9,903.7	4.4	45.6	-4.3	0.47	0.20	-52.58
10,000.0	0.57	323.88	9,996.7	5.1	45.5	-5.0	0.57	0.11	-64.26
10,002.0	0.58	323.02	9,998.7	5.1	45.5	-5.1	0.57	0.36	-43.13
10,098.0	0.57	21.89	10,094.7	6.0	45.4	-5.9	0.59	-0.01	61.32
10,100.0	0.57	22.58	10,096.7	6.0	45.4	-5.9	0.36	0.11	34.42
10,194.0	0.75	47.99	10,190.7	6.8	46.0	-6.8	0.36	0.19	27.03
10,200.0	0.75	48.54	10,196.7	6.9	46.1	-6.8	0.13	-0.05	9.15
10,289.0	0.71	57.17	10,285.7	7.6	47.0	-7.5	0.13	-0.04	9.70
10,300.0	0.56	59.89	10,296.7	7.6	47.1	-7.6	1.42	-1.39	24.75
10,384.0	0.66	216.93	10,380.7	7.4	47.2	-7.4	1.42	0.12	186.95

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
10,400.0	0.58	216.64	10,396.7	7.3	47.1	-7.2	0.47	-0.47	-1.79
10,480.0	0.21	212.14	10,476.7	6.9	46.7	-6.8	0.47	-0.47	-5.63
10,500.0	0.21	210.33	10,496.7	6.8	46.7	-6.7	0.03	0.01	-9.05
10,575.0	0.22	203.84	10,571.7	6.5	46.6	-6.5	0.03	0.01	-8.65
10,600.0	0.17	227.13	10,596.7	6.5	46.5	-6.4	0.37	-0.20	93.15
10,601.0	0.17	228.30	10,597.7	6.5	46.5	-6.4	0.37	-0.12	117.26
10,700.0	0.63	209.16	10,696.7	5.9	46.1	-5.8	0.47	0.46	-19.34
10,705.0	0.65	208.91	10,701.7	5.8	46.1	-5.8	0.47	0.47	-4.96
10,800.0	0.35	152.53	10,796.7	5.1	46.0	-5.1	0.57	-0.32	-59.35
10,895.0	0.66	89.16	10,891.7	4.9	46.7	-4.8	0.62	0.33	-66.71
10,900.0	0.69	113.31	10,896.7	4.9	46.7	-4.8	5.66	0.53	483.05
11,000.0	5.90	179.67	10,996.5	-0.5	47.3	0.6	5.66	5.21	66.36
11,048.0	8.60	181.69	11,044.1	-6.6	47.2	6.6	5.66	5.63	4.21
11,080.0	11.14	182.66	11,075.6	-12.1	47.0	12.1	7.95	7.94	3.03
11,100.0	14.02	182.64	11,095.1	-16.4	46.8	16.5	14.42	14.42	-0.08
11,125.0	17.63	182.63	11,119.2	-23.2	46.5	23.3	14.42	14.42	-0.05
11,175.0	19.95	182.39	11,166.5	-39.3	45.8	39.4	4.64	4.64	-0.48
11,200.0	21.03	182.52	11,189.9	-48.0	45.4	48.1	4.31	4.31	0.53
11,220.0	21.89	182.62	11,208.5	-55.4	45.1	55.4	4.31	4.31	0.49
11,270.0	27.10	183.95	11,254.0	-76.0	43.9	76.1	10.48	10.42	2.66
11,300.0	30.30	185.12	11,280.3	-90.4	42.7	90.5	10.84	10.68	3.91
11,315.0	31.91	185.63	11,293.2	-98.1	42.0	98.2	10.84	10.70	3.37
11,366.0	36.08	187.02	11,335.5	-126.4	38.8	126.5	8.32	8.18	2.73
11,400.0	38.26	187.48	11,362.5	-146.8	36.2	146.9	6.45	6.40	1.35
11,411.0	38.96	187.62	11,371.1	-153.6	35.3	153.7	6.45	6.40	1.27
11,461.0	41.03	187.57	11,409.4	-185.5	31.1	185.5	4.14	4.14	-0.10
11,493.0	43.84	188.29	11,433.1	-206.9	28.1	206.9	8.91	8.78	2.25
11,500.0	44.82	188.31	11,438.1	-211.7	27.4	211.7	14.03	14.03	0.32
11,523.0	48.05	188.38	11,453.9	-228.2	25.0	228.2	14.03	14.03	0.29
11,555.0	52.25	188.48	11,474.4	-252.5	21.4	252.5	13.13	13.13	0.31
11,587.0	57.47	188.40	11,492.8	-278.4	17.5	278.4	16.31	16.31	-0.25
11,600.0	58.73	188.54	11,499.7	-289.3	15.9	289.3	9.70	9.66	1.08
11,619.0	60.56	188.74	11,509.3	-305.5	13.5	305.5	9.70	9.66	1.05
11,651.0	63.76	188.98	11,524.2	-333.4	9.1	333.5	10.02	10.00	0.75
11,682.0	68.14	187.96	11,536.9	-361.4	4.9	361.4	14.44	14.13	-3.29
11,697.6	70.00	187.70	11,542.5	-375.9	2.9	375.9	12.00	11.90	-1.64
PS101 As Drilled FTP									
11,700.0	70.28	187.67	11,543.3	-378.1	2.6	378.1	12.00	11.90	-1.62
11,745.0	75.64	186.96	11,556.4	-420.8	-2.8	420.8	12.00	11.91	-1.57
11,777.0	79.75	186.54	11,563.3	-451.8	-6.5	451.8	12.91	12.84	-1.31
11,800.0	82.56	185.05	11,566.8	-474.4	-8.8	474.4	13.79	12.21	-6.49
11,840.0	87.45	182.49	11,570.3	-514.2	-11.4	514.1	13.79	12.23	-6.39
11,900.0	87.77	181.23	11,572.8	-574.1	-13.4	574.1	2.17	0.54	-2.10
11,955.0	88.07	180.07	11,574.8	-629.0	-14.0	629.0	2.17	0.54	-2.10
12,000.0	87.40	179.89	11,576.6	-674.0	-14.0	674.0	1.54	-1.48	-0.41
12,050.0	86.66	179.68	11,579.1	-723.9	-13.8	723.9	1.54	-1.48	-0.41
12,100.0	88.56	180.14	11,581.2	-773.9	-13.7	773.9	3.91	3.80	0.93
12,145.0	90.27	180.56	11,581.7	-818.9	-14.0	818.9	3.91	3.80	0.93
12,200.0	90.51	180.29	11,581.3	-873.9	-14.4	873.9	0.66	0.44	-0.50
12,241.0	90.69	180.08	11,580.9	-914.9	-14.5	914.9	0.66	0.44	-0.50
12,300.0	90.76	180.00	11,580.1	-973.9	-14.5	973.8	0.19	0.13	-0.14
12,336.0	90.81	179.95	11,579.6	-1,009.9	-14.5	1,009.8	0.19	0.13	-0.14
12,400.0	91.10	179.75	11,578.6	-1,073.9	-14.4	1,073.8	0.55	0.45	-0.31
12,432.0	91.24	179.65	11,577.9	-1,105.9	-14.2	1,105.8	0.55	0.45	-0.31

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
12,500.0	90.14	179.39	11,577.1	-1,173.8	-13.6	1,173.8	1.65	-1.61	-0.38
12,527.0	89.71	179.29	11,577.1	-1,200.8	-13.3	1,200.8	1.65	-1.61	-0.38
12,600.0	87.85	179.75	11,578.7	-1,273.8	-12.7	1,273.8	2.62	-2.55	0.63
12,622.0	87.29	179.89	11,579.6	-1,295.8	-12.6	1,295.8	2.62	-2.55	0.63
12,700.0	86.72	179.63	11,583.7	-1,373.7	-12.3	1,373.7	0.80	-0.73	-0.34
12,717.0	86.60	179.57	11,584.7	-1,390.7	-12.2	1,390.6	0.80	-0.73	-0.34
12,800.0	85.65	178.99	11,590.3	-1,473.5	-11.1	1,473.4	1.34	-1.15	-0.70
12,813.0	85.50	178.90	11,591.3	-1,486.4	-10.9	1,486.4	1.34	-1.15	-0.70
12,859.0	85.55	178.58	11,594.9	-1,532.3	-9.9	1,532.3	0.70	0.11	-0.70
12,900.0	87.11	178.99	11,597.5	-1,573.2	-9.0	1,573.2	3.94	3.82	1.00
12,908.0	87.42	179.07	11,597.9	-1,581.2	-8.9	1,581.2	3.94	3.82	1.00
12,955.0	87.56	179.22	11,600.0	-1,628.1	-8.2	1,628.1	0.44	0.30	0.32
13,000.0	89.53	179.29	11,601.1	-1,673.1	-7.6	1,673.1	4.39	4.38	0.15
13,002.0	89.62	179.29	11,601.1	-1,675.1	-7.6	1,675.1	4.39	4.38	0.15
13,040.0	89.40	179.44	11,601.4	-1,713.1	-7.2	1,713.1	0.70	-0.58	0.39
13,097.0	90.00	179.09	11,601.7	-1,770.1	-6.4	1,770.1	1.22	1.05	-0.61
13,100.0	90.14	179.11	11,601.7	-1,773.1	-6.4	1,773.1	4.54	4.51	0.55
13,190.0	94.19	179.60	11,598.3	-1,863.0	-5.4	1,863.0	4.54	4.51	0.55
13,200.0	94.17	179.63	11,597.6	-1,873.0	-5.3	1,873.0	0.40	-0.20	0.34
13,286.0	94.00	179.93	11,591.5	-1,958.8	-5.0	1,958.7	0.40	-0.20	0.34
13,300.0	93.72	180.05	11,590.5	-1,972.7	-5.0	1,972.7	2.21	-2.03	0.86
13,381.0	92.07	180.75	11,586.4	-2,053.6	-5.5	2,053.6	2.21	-2.03	0.86
13,400.0	91.64	181.11	11,585.8	-2,072.6	-5.8	2,072.6	2.95	-2.27	1.88
13,475.0	89.94	182.52	11,584.8	-2,147.5	-8.2	2,147.5	2.95	-2.27	1.88
13,500.0	88.82	182.62	11,585.1	-2,172.5	-9.3	2,172.5	4.49	-4.47	0.40
13,568.0	85.78	182.89	11,588.3	-2,240.4	-12.6	2,240.3	4.49	-4.47	0.40
13,600.0	85.66	183.20	11,590.7	-2,272.2	-14.3	2,272.2	1.03	-0.38	0.96
13,616.0	85.60	183.35	11,591.9	-2,288.2	-15.2	2,288.1	1.03	-0.37	0.96
13,664.0	85.46	181.23	11,595.6	-2,336.0	-17.1	2,335.9	4.41	-0.29	-4.42
13,700.0	85.62	179.93	11,598.4	-2,371.9	-17.5	2,371.8	3.62	0.44	-3.60
13,714.0	85.68	179.43	11,599.5	-2,385.8	-17.4	2,385.8	3.62	0.44	-3.60
13,759.0	87.52	177.48	11,602.2	-2,430.7	-16.2	2,430.7	5.95	4.09	-4.33
13,800.0	87.91	176.30	11,603.8	-2,471.6	-14.0	2,471.6	3.03	0.96	-2.88
13,809.0	88.00	176.04	11,604.1	-2,480.6	-13.4	2,480.6	3.03	0.96	-2.88
13,852.0	87.88	175.34	11,605.7	-2,523.4	-10.1	2,523.4	1.65	-0.28	-1.63
13,900.0	89.92	176.28	11,606.6	-2,571.3	-6.6	2,571.3	4.69	4.26	1.96
13,902.0	90.01	176.32	11,606.6	-2,573.3	-6.5	2,573.3	4.69	4.26	1.96
13,948.0	89.20	177.87	11,606.9	-2,619.2	-4.2	2,619.2	3.80	-1.76	3.37
13,998.0	88.75	178.93	11,607.8	-2,669.2	-2.8	2,669.2	2.30	-0.90	2.12
14,000.0	88.77	178.95	11,607.8	-2,671.2	-2.7	2,671.2	1.28	0.77	1.02
14,042.0	89.09	179.38	11,608.6	-2,713.2	-2.1	2,713.2	1.28	0.77	1.02
14,100.0	88.76	179.24	11,609.7	-2,771.2	-1.4	2,771.2	0.62	-0.56	-0.25
14,138.0	88.55	179.14	11,610.6	-2,809.2	-0.9	2,809.2	0.62	-0.56	-0.25
14,200.0	90.03	179.43	11,611.4	-2,871.2	-0.1	2,871.2	2.43	2.38	0.47
14,232.0	90.79	179.58	11,611.1	-2,903.2	0.2	2,903.2	2.43	2.38	0.47
14,300.0	89.02	179.93	11,611.2	-2,971.2	0.4	2,971.1	2.65	-2.60	0.52
14,326.0	88.35	180.07	11,611.8	-2,997.1	0.4	2,997.1	2.65	-2.60	0.52
14,400.0	87.82	180.09	11,614.3	-3,071.1	0.3	3,071.1	0.71	-0.71	0.03
14,420.0	87.68	180.10	11,615.1	-3,091.1	0.3	3,091.1	0.71	-0.71	0.03
14,500.0	90.19	180.93	11,616.6	-3,171.1	-0.4	3,171.1	3.30	3.14	1.03
14,514.0	90.63	181.07	11,616.5	-3,185.1	-0.7	3,185.1	3.30	3.14	1.03
14,600.0	91.50	181.92	11,614.9	-3,271.0	-2.9	3,271.0	1.41	1.01	0.99
14,608.0	91.58	182.00	11,614.7	-3,279.0	-3.2	3,279.0	1.41	1.01	0.99
14,700.0	89.93	181.17	11,613.5	-3,371.0	-5.7	3,370.9	2.01	-1.79	-0.91

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
14,704.0	89.86	181.13	11,613.5	-3,375.0	-5.8	3,374.9	2.01	-1.79	-0.91
14,797.0	85.93	179.15	11,616.9	-3,467.9	-6.0	3,467.9	4.73	-4.23	-2.13
14,800.0	85.96	179.09	11,617.1	-3,470.9	-6.0	3,470.9	2.15	1.05	-1.88
14,893.0	86.94	177.35	11,622.8	-3,563.6	-3.1	3,563.6	2.15	1.05	-1.87
14,900.0	87.24	177.41	11,623.2	-3,570.6	-2.8	3,570.6	4.43	4.35	0.82
14,989.0	91.12	178.14	11,624.5	-3,659.5	0.7	3,659.5	4.43	4.35	0.82
15,000.0	90.88	178.27	11,624.3	-3,670.5	1.0	3,670.5	2.47	-2.18	1.16
15,082.0	89.09	179.22	11,624.3	-3,752.5	2.8	3,752.5	2.47	-2.18	1.16
15,100.0	88.92	179.23	11,624.6	-3,770.5	3.1	3,770.5	0.97	-0.97	0.07
15,177.0	88.17	179.29	11,626.6	-3,847.5	4.1	3,847.5	0.97	-0.97	0.07
15,200.0	87.54	179.46	11,627.4	-3,870.4	4.3	3,870.4	2.82	-2.73	0.74
15,272.0	85.58	179.99	11,631.8	-3,942.3	4.6	3,942.3	2.82	-2.73	0.74
15,300.0	86.23	179.92	11,633.8	-3,970.2	4.7	3,970.2	2.32	2.31	-0.24
15,368.0	87.80	179.76	11,637.3	-4,038.1	4.9	4,038.1	2.32	2.31	-0.24
15,400.0	87.39	179.40	11,638.6	-4,070.1	5.1	4,070.1	1.70	-1.28	-1.12
15,463.0	86.58	178.70	11,642.0	-4,133.0	6.1	4,133.0	1.70	-1.28	-1.12
15,500.0	86.45	179.07	11,644.2	-4,169.9	6.9	4,169.9	1.07	-0.34	1.01
15,559.0	86.25	179.67	11,648.0	-4,228.8	7.5	4,228.8	1.07	-0.34	1.01
15,600.0	87.48	179.63	11,650.2	-4,269.8	7.7	4,269.8	3.00	3.00	-0.09
15,654.0	89.10	179.58	11,651.8	-4,323.7	8.1	4,323.7	3.00	3.00	-0.09
15,700.0	88.00	179.09	11,653.0	-4,369.7	8.7	4,369.7	2.62	-2.39	-1.06
15,749.0	86.83	178.57	11,655.2	-4,418.6	9.6	4,418.6	2.62	-2.39	-1.06
15,800.0	90.08	179.43	11,656.6	-4,469.6	10.5	4,469.6	6.58	6.36	1.68
15,845.0	92.94	180.18	11,655.4	-4,514.6	10.7	4,514.6	6.58	6.36	1.68
15,900.0	95.22	181.32	11,651.5	-4,569.4	10.0	4,569.5	4.63	4.14	2.08
15,940.0	96.87	182.16	11,647.3	-4,609.2	8.8	4,609.2	4.63	4.14	2.09
16,000.0	93.21	182.19	11,642.0	-4,668.9	6.5	4,668.9	6.09	-6.09	0.04
16,035.0	91.08	182.20	11,640.7	-4,703.9	5.2	4,703.9	6.09	-6.09	0.04
16,100.0	89.55	181.34	11,640.3	-4,768.8	3.2	4,768.8	2.69	-2.35	-1.32
16,130.0	88.85	180.95	11,640.7	-4,798.8	2.6	4,798.8	2.69	-2.35	-1.32
16,200.0	88.05	180.94	11,642.6	-4,868.8	1.4	4,868.8	1.15	-1.15	-0.02
16,225.0	87.76	180.93	11,643.5	-4,893.8	1.0	4,893.8	1.15	-1.15	-0.02
16,300.0	90.02	181.48	11,645.0	-4,968.7	-0.6	4,968.7	3.10	3.01	0.74
16,321.0	90.65	181.64	11,644.9	-4,989.7	-1.2	4,989.7	3.10	3.01	0.74
16,400.0	85.97	180.56	11,647.2	-5,068.6	-2.7	5,068.6	6.08	-5.93	-1.36
16,417.0	84.96	180.33	11,648.5	-5,085.6	-2.8	5,085.6	6.08	-5.93	-1.37
16,500.0	83.73	179.98	11,656.7	-5,168.2	-3.0	5,168.2	1.54	-1.48	-0.42
16,512.0	83.55	179.93	11,658.1	-5,180.1	-3.0	5,180.1	1.54	-1.48	-0.42
16,600.0	82.53	178.67	11,668.7	-5,267.5	-2.0	5,267.4	1.83	-1.16	-1.43
16,608.0	82.44	178.56	11,669.8	-5,275.4	-1.8	5,275.4	1.83	-1.15	-1.43
16,700.0	82.68	178.91	11,681.7	-5,366.6	0.2	5,366.6	0.46	0.26	0.39
16,704.0	82.69	178.93	11,682.2	-5,370.6	0.3	5,370.6	0.46	0.26	0.39
16,799.0	86.68	178.08	11,691.0	-5,465.1	2.8	5,465.1	4.29	4.20	-0.89
16,800.0	86.69	178.09	11,691.0	-5,466.1	2.8	5,466.1	1.85	1.48	1.11
16,893.0	88.07	179.12	11,695.3	-5,559.0	5.1	5,559.0	1.85	1.48	1.11
16,900.0	88.12	179.16	11,695.5	-5,566.0	5.2	5,566.0	0.86	0.69	0.51
16,988.0	88.73	179.60	11,697.9	-5,653.9	6.1	5,653.9	0.86	0.69	0.51
17,000.0	88.70	179.52	11,698.2	-5,665.9	6.2	5,665.9	0.67	-0.22	-0.63
17,083.0	88.52	179.00	11,700.2	-5,748.9	7.3	5,748.9	0.67	-0.22	-0.63
17,100.0	88.93	179.13	11,700.6	-5,765.9	7.6	5,765.9	2.55	2.43	0.76
17,178.0	90.83	179.72	11,700.8	-5,843.9	8.4	5,843.9	2.55	2.43	0.76
17,200.0	90.22	179.76	11,700.6	-5,865.9	8.5	5,865.9	2.78	-2.78	0.19
17,272.0	88.22	179.90	11,701.5	-5,937.9	8.7	5,937.9	2.78	-2.78	0.19
17,300.0	88.04	179.85	11,702.5	-5,965.8	8.7	5,965.9	0.67	-0.65	-0.17

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
17,367.0	87.60	179.74	11,705.0	-6,032.8	9.0	6,032.8	0.67	-0.65	-0.17
17,400.0	87.68	179.64	11,706.4	-6,065.8	9.2	6,065.8	0.39	0.24	-0.31
17,461.0	87.83	179.45	11,708.7	-6,126.7	9.6	6,126.7	0.39	0.24	-0.31
17,500.0	87.73	179.16	11,710.3	-6,165.7	10.1	6,165.7	0.79	-0.27	-0.74
17,555.0	87.58	178.75	11,712.5	-6,220.6	11.1	6,220.6	0.79	-0.27	-0.74
17,600.0	87.42	178.49	11,714.5	-6,265.6	12.2	6,265.6	0.68	-0.35	-0.59
17,649.0	87.25	178.20	11,716.8	-6,314.5	13.6	6,314.5	0.68	-0.35	-0.59
17,700.0	87.92	178.14	11,718.9	-6,365.4	15.2	6,365.4	1.32	1.32	-0.12
17,744.0	88.50	178.09	11,720.3	-6,409.4	16.7	6,409.4	1.32	1.32	-0.12
17,800.0	89.90	178.06	11,721.1	-6,465.3	18.6	6,465.4	2.50	2.49	-0.05
17,837.0	90.82	178.04	11,720.8	-6,502.3	19.8	6,502.3	2.50	2.49	-0.05
17,900.0	91.16	178.98	11,719.7	-6,565.3	21.5	6,565.3	1.58	0.54	1.48
17,932.0	91.33	179.45	11,719.0	-6,597.3	21.9	6,597.3	1.58	0.54	1.48
18,000.0	92.07	179.44	11,717.0	-6,665.2	22.6	6,665.3	1.08	1.08	-0.01
18,028.0	92.37	179.44	11,715.9	-6,693.2	22.8	6,693.3	1.08	1.08	-0.01
18,100.0	92.49	179.16	11,712.9	-6,765.2	23.7	6,765.2	0.42	0.17	-0.38
18,122.0	92.53	179.08	11,711.9	-6,787.1	24.0	6,787.2	0.42	0.17	-0.38
18,200.0	92.80	179.42	11,708.3	-6,865.0	25.1	6,865.1	0.55	0.35	0.43
18,217.0	92.86	179.49	11,707.5	-6,882.0	25.2	6,882.0	0.55	0.35	0.43
18,300.0	92.63	179.69	11,703.5	-6,964.9	25.8	6,965.0	0.37	-0.28	0.24
18,313.0	92.59	179.72	11,702.9	-6,977.9	25.9	6,977.9	0.37	-0.28	0.24
18,400.0	92.48	180.22	11,699.0	-7,064.8	25.9	7,064.9	0.59	-0.13	0.58
18,408.0	92.47	180.27	11,698.7	-7,072.8	25.9	7,072.8	0.59	-0.13	0.58
18,500.0	92.44	182.50	11,694.8	-7,164.7	23.7	7,164.7	2.42	-0.03	2.43
18,502.0	92.44	182.55	11,694.7	-7,166.7	23.6	7,166.7	2.42	-0.03	2.43
18,597.0	89.58	182.67	11,693.0	-7,261.6	19.3	7,261.6	3.01	-3.01	0.13
18,600.0	89.58	182.66	11,693.0	-7,264.6	19.1	7,264.6	0.47	0.07	-0.47
18,693.0	89.65	182.22	11,693.6	-7,357.5	15.2	7,357.5	0.47	0.07	-0.47
18,700.0	89.71	182.09	11,693.7	-7,364.5	14.9	7,364.5	1.98	0.84	-1.80
18,786.0	90.43	180.55	11,693.6	-7,450.4	12.9	7,450.5	1.98	0.84	-1.80
18,800.0	90.44	180.54	11,693.5	-7,464.4	12.8	7,464.5	0.11	0.04	-0.11
18,881.0	90.47	180.45	11,692.8	-7,545.4	12.1	7,545.5	0.11	0.04	-0.11
18,900.0	90.94	180.52	11,692.6	-7,564.4	11.9	7,564.5	2.49	2.46	0.36
18,976.0	92.81	180.79	11,690.1	-7,640.4	11.1	7,640.4	2.49	2.46	0.36
19,000.0	92.90	180.72	11,688.9	-7,664.4	10.7	7,664.4	0.47	0.35	-0.30
19,072.0	93.15	180.50	11,685.1	-7,736.3	10.0	7,736.3	0.47	0.35	-0.30
19,100.0	93.06	180.38	11,683.6	-7,764.2	9.8	7,764.2	0.54	-0.31	-0.44
19,167.0	92.86	180.08	11,680.1	-7,831.1	9.5	7,831.1	0.54	-0.31	-0.44
19,200.0	92.97	180.12	11,678.5	-7,864.1	9.4	7,864.1	0.34	0.32	0.12
19,261.0	93.16	180.19	11,675.2	-7,925.0	9.3	7,925.0	0.34	0.32	0.12
19,300.0	92.80	179.98	11,673.2	-7,963.9	9.2	7,963.9	1.07	-0.92	-0.55
19,356.0	92.29	179.67	11,670.7	-8,019.9	9.4	8,019.9	1.07	-0.92	-0.55
19,400.0	92.04	179.92	11,669.0	-8,063.9	9.6	8,063.9	0.82	-0.58	0.58
19,451.0	91.74	180.22	11,667.4	-8,114.8	9.5	8,114.8	0.82	-0.58	0.58
19,500.0	91.83	180.17	11,665.8	-8,163.8	9.3	8,163.8	0.21	0.19	-0.10
19,547.0	91.92	180.12	11,664.3	-8,210.8	9.2	8,210.8	0.21	0.19	-0.10
19,600.0	92.56	180.01	11,662.2	-8,263.7	9.1	8,263.7	1.22	1.20	-0.20
19,642.0	93.06	179.93	11,660.2	-8,305.7	9.2	8,305.7	1.22	1.20	-0.20
19,700.0	90.80	179.63	11,658.2	-8,363.6	9.4	8,363.7	3.94	-3.90	-0.52
19,735.0	89.43	179.45	11,658.1	-8,398.6	9.7	8,398.7	3.94	-3.90	-0.52
19,800.0	89.48	179.22	11,658.8	-8,463.6	10.4	8,463.6	0.36	0.08	-0.35
19,830.0	89.51	179.12	11,659.0	-8,493.6	10.9	8,493.6	0.36	0.08	-0.35
19,900.0	89.18	179.12	11,659.8	-8,563.6	11.9	8,563.6	0.47	-0.47	0.00
19,925.0	89.06	179.12	11,660.2	-8,588.6	12.3	8,588.6	0.47	-0.47	0.00

Database:	EDM5000	Local Co-ordinate Reference:	Well Pine Straw 101H
Company:	Ameredev Operating, LLC.	TVD Reference:	KB @ 3268.0usft
Project:	PIN/DOG	MD Reference:	KB @ 3268.0usft
Site:	PIN/DOG #1S	North Reference:	Grid
Well:	Pine Straw 101H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Final Survey		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Buird Rate (°/100usft)	Turn Rate (°/100usft)
20,000.0	89.69	179.40	11,661.0	-8,663.6	13.3	8,663.6	0.92	0.84	0.38
20,021.0	89.87	179.48	11,661.1	-8,684.6	13.5	8,684.6	0.92	0.84	0.37
20,100.0	89.28	179.42	11,661.7	-8,763.6	14.2	8,763.6	0.75	-0.74	-0.07
20,115.0	89.17	179.41	11,661.9	-8,778.6	14.4	8,778.6	0.75	-0.74	-0.07
20,200.0	89.57	179.11	11,662.8	-8,863.6	15.5	8,863.6	0.59	0.47	-0.36
20,210.0	89.62	179.07	11,662.9	-8,873.6	15.7	8,873.6	0.59	0.47	-0.36
20,300.0	93.65	179.03	11,660.3	-8,963.5	17.1	8,963.5	4.47	4.47	-0.04
20,305.0	93.87	179.03	11,660.0	-8,968.5	17.2	8,968.5	4.47	4.47	-0.04
20,400.0	94.19	179.14	11,653.3	-9,063.3	18.7	9,063.3	0.35	0.33	0.11
20,401.0	94.19	179.14	11,653.3	-9,064.3	18.8	9,064.3	0.35	0.33	0.11
20,495.0	94.36	179.07	11,646.2	-9,158.0	20.2	9,158.0	0.20	0.18	-0.07
20,500.0	94.34	179.13	11,645.9	-9,163.0	20.3	9,163.0	1.18	-0.38	1.12
20,590.0	94.00	180.13	11,639.3	-9,252.7	20.9	9,252.7	1.18	-0.38	1.12
20,600.0	93.92	180.18	11,638.6	-9,262.7	20.9	9,262.7	0.93	-0.79	0.50
20,685.0	93.25	180.60	11,633.3	-9,347.5	20.3	9,347.5	0.93	-0.79	0.49
20,700.0	93.10	180.57	11,632.5	-9,362.5	20.1	9,362.5	1.00	-0.99	-0.17
20,780.0	92.31	180.44	11,628.7	-9,442.4	19.4	9,442.4	1.00	-0.99	-0.17
20,800.0	92.26	180.47	11,627.9	-9,462.4	19.3	9,462.4	0.32	-0.27	0.16
20,875.0	92.05	180.59	11,625.1	-9,537.3	18.6	9,537.4	0.32	-0.27	0.16
20,900.0	91.96	180.52	11,624.2	-9,562.3	18.3	9,562.3	0.47	-0.38	-0.27
20,970.0	91.69	180.33	11,622.0	-9,632.3	17.8	9,632.3	0.47	-0.38	-0.27
21,000.0	91.55	180.31	11,621.1	-9,662.3	17.6	9,662.3	0.48	-0.47	-0.05
21,065.0	91.24	180.28	11,619.6	-9,727.3	17.3	9,727.3	0.48	-0.47	-0.05
21,100.0	91.08	180.34	11,618.9	-9,762.2	17.1	9,762.3	0.49	-0.47	0.16
21,159.0	90.80	180.43	11,617.9	-9,821.2	16.7	9,821.3	0.49	-0.47	0.16
21,200.0	90.59	180.35	11,617.4	-9,862.2	16.4	9,862.2	0.55	-0.52	-0.20
21,254.0	90.31	180.24	11,617.0	-9,916.2	16.2	9,916.2	0.55	-0.52	-0.20
21,300.0	90.07	180.08	11,616.8	-9,962.2	16.0	9,962.2	0.63	-0.52	-0.35
21,350.0	89.81	179.90	11,616.9	-10,012.2	16.0	10,012.2	0.63	-0.52	-0.35
21,400.0	90.09	180.09	11,616.9	-10,062.2	16.0	10,062.2	0.68	0.57	0.38
21,443.0	90.34	180.25	11,616.7	-10,105.2	15.9	10,105.2	0.68	0.57	0.38
21,500.0	89.83	180.17	11,616.7	-10,162.2	15.7	10,162.2	0.91	-0.90	-0.13
21,533.0	89.53	180.13	11,616.9	-10,195.2	15.6	10,195.2	0.91	-0.90	-0.13
PS101 As Drilled LTP									
21,598.0	89.53	180.13	11,617.4	-10,260.2	15.5	10,260.2	0.00	0.00	0.00
PS101 As Drilled BHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PS101 As Drilled FTP - hit/miss target - Shape - Point	0.00	0.00	11,542.5	-375.9	2.9	425,318.82	862,712.33	32° 9' 54.060 N	103° 17' 41.139 W
PS101 As Drilled LTP - plan misses target center by 22.8usft at 21533.0usft MD (11616.9 TVD, -10195.2 N, 15.6 E) - Point	0.00	0.00	11,617.0	-10,218.0	15.6	415,476.72	862,724.96	32° 8' 16.676 N	103° 17' 42.096 W
PS101 As Drilled BHL - plan hits target center - Point	0.00	0.00	11,617.4	-10,260.2	15.5	415,434.49	862,724.87	32° 8' 16.258 N	103° 17' 42.102 W



Ameredev Operating, LLC
Planning Report

Database: EDM5000
Company: Ameredev Operating, LLC.
Project: PIN/DOG
Site: PIN/DOG #1S
Well: Pine Straw 101H
Wellbore: Final Survey
Design: Design #1

Local Co-ordinate Reference: Well Pine Straw 101H
TVD Reference: KB @ 3268.0usft
MD Reference: KB @ 3268.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature