

NORTHERN DELAWARE BASIN

EDDY COUNTY, NM

HELLFIRE

ACADIA FED COM #1H

OWB

Design: AWP

Survey Report - Geographic

29 April, 2019

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

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

Site	HELLFIRE				
Site Position:		Northing:	376,102.80 usft	Latitude:	32° 2' 2.399 N
From:	Map	Easting:	477,108.80 usft	Longitude:	104° 24' 25.936 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.04 °

Well	ACADIA FED COM #1H					
Well Position	+N/-S	0.0 usft	Northing:	386,922.20 usft	Latitude:	32° 3' 49.541 N
	+E/-W	0.0 usft	Easting:	491,299.30 usft	Longitude:	104° 21' 41.112 W
Position Uncertainty	3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,608.4 usft	

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	3/20/2019	7.15	59.74	47,559.63564707

Design:	AWP			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	175.11

Survey Program		Date: 4/29/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,224.0	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
8,361.0	19,270.0	MWD (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	386,922.20	491,299.30	32° 3' 49.541 N	104° 21' 41.112 W
100.0	0.32	112.44	100.0	-0.1	0.3	386,922.09	491,299.56	32° 3' 49.540 N	104° 21' 41.109 W
125.0	0.40	111.25	125.0	-0.2	0.4	386,922.03	491,299.70	32° 3' 49.539 N	104° 21' 41.107 W
150.0	0.39	116.30	150.0	-0.2	0.6	386,921.96	491,299.86	32° 3' 49.538 N	104° 21' 41.106 W
175.0	0.33	103.77	175.0	-0.3	0.7	386,921.91	491,300.01	32° 3' 49.538 N	104° 21' 41.104 W
200.0	0.28	95.46	200.0	-0.3	0.8	386,921.89	491,300.14	32° 3' 49.538 N	104° 21' 41.102 W
225.0	0.31	97.90	225.0	-0.3	1.0	386,921.87	491,300.27	32° 3' 49.538 N	104° 21' 41.101 W
250.0	0.32	95.20	250.0	-0.3	1.1	386,921.86	491,300.40	32° 3' 49.537 N	104° 21' 41.099 W
275.0	0.31	88.66	275.0	-0.3	1.2	386,921.85	491,300.54	32° 3' 49.537 N	104° 21' 41.098 W
300.0	0.34	98.15	300.0	-0.4	1.4	386,921.84	491,300.68	32° 3' 49.537 N	104° 21' 41.096 W
325.0	0.27	83.01	325.0	-0.4	1.5	386,921.84	491,300.81	32° 3' 49.537 N	104° 21' 41.095 W

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid:
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
350.0	0.27	82.41	350.0	-0.3	1.6	386,921.85	491,300.93	32° 3' 49.537 N	104° 21' 41.093 W	
375.0	0.26	94.01	375.0	-0.3	1.7	386,921.86	491,301.05	32° 3' 49.537 N	104° 21' 41.092 W	
400.0	0.26	80.74	400.0	-0.3	1.9	386,921.86	491,301.16	32° 3' 49.537 N	104° 21' 41.091 W	
425.0	0.27	78.22	425.0	-0.3	2.0	386,921.88	491,301.27	32° 3' 49.538 N	104° 21' 41.089 W	
450.0	0.27	77.82	450.0	-0.3	2.1	386,921.91	491,301.39	32° 3' 49.538 N	104° 21' 41.088 W	
475.0	0.27	77.49	475.0	-0.3	2.2	386,921.93	491,301.50	32° 3' 49.538 N	104° 21' 41.087 W	
500.0	0.30	82.31	500.0	-0.2	2.3	386,921.96	491,301.62	32° 3' 49.538 N	104° 21' 41.085 W	
525.0	0.29	76.19	525.0	-0.2	2.4	386,921.98	491,301.75	32° 3' 49.539 N	104° 21' 41.084 W	
550.0	0.30	63.91	550.0	-0.2	2.6	386,922.02	491,301.87	32° 3' 49.539 N	104° 21' 41.082 W	
575.0	0.26	69.55	575.0	-0.1	2.7	386,922.07	491,301.98	32° 3' 49.539 N	104° 21' 41.081 W	
600.0	0.24	61.02	600.0	-0.1	2.8	386,922.12	491,302.08	32° 3' 49.540 N	104° 21' 41.080 W	
625.0	0.27	65.45	625.0	0.0	2.9	386,922.17	491,302.18	32° 3' 49.540 N	104° 21' 41.079 W	
650.0	0.22	77.59	650.0	0.0	3.0	386,922.20	491,302.28	32° 3' 49.541 N	104° 21' 41.078 W	
675.0	0.29	64.93	675.0	0.0	3.1	386,922.24	491,302.39	32° 3' 49.541 N	104° 21' 41.076 W	
700.0	0.29	75.35	700.0	0.1	3.2	386,922.28	491,302.50	32° 3' 49.542 N	104° 21' 41.075 W	
725.0	0.29	95.68	725.0	0.1	3.3	386,922.29	491,302.63	32° 3' 49.542 N	104° 21' 41.073 W	
750.0	0.28	86.48	750.0	0.1	3.5	386,922.29	491,302.75	32° 3' 49.542 N	104° 21' 41.072 W	
775.0	0.22	77.74	775.0	0.1	3.6	386,922.30	491,302.86	32° 3' 49.542 N	104° 21' 41.071 W	
800.0	0.26	81.85	800.0	0.1	3.7	386,922.32	491,302.96	32° 3' 49.542 N	104° 21' 41.070 W	
825.0	0.28	76.81	825.0	0.1	3.8	386,922.34	491,303.08	32° 3' 49.542 N	104° 21' 41.068 W	
850.0	0.32	74.62	850.0	0.2	3.9	386,922.38	491,303.21	32° 3' 49.542 N	104° 21' 41.067 W	
875.0	0.29	82.05	875.0	0.2	4.0	386,922.40	491,303.34	32° 3' 49.543 N	104° 21' 41.065 W	
900.0	0.28	70.11	900.0	0.2	4.2	386,922.43	491,303.46	32° 3' 49.543 N	104° 21' 41.064 W	
925.0	0.32	70.14	925.0	0.3	4.3	386,922.48	491,303.58	32° 3' 49.544 N	104° 21' 41.062 W	
950.0	0.30	81.86	950.0	0.3	4.4	386,922.51	491,303.71	32° 3' 49.544 N	104° 21' 41.061 W	
975.0	0.31	72.58	975.0	0.3	4.5	386,922.54	491,303.84	32° 3' 49.544 N	104° 21' 41.059 W	
1,000.0	0.28	66.18	1,000.0	0.4	4.7	386,922.58	491,303.96	32° 3' 49.545 N	104° 21' 41.058 W	
1,025.0	0.31	93.94	1,025.0	0.4	4.8	386,922.60	491,304.08	32° 3' 49.545 N	104° 21' 41.057 W	
1,050.0	0.30	71.50	1,050.0	0.4	4.9	386,922.62	491,304.21	32° 3' 49.545 N	104° 21' 41.055 W	
1,075.0	0.32	76.49	1,075.0	0.5	5.0	386,922.66	491,304.34	32° 3' 49.545 N	104° 21' 41.054 W	
1,100.0	0.32	84.66	1,100.0	0.5	5.2	386,922.68	491,304.48	32° 3' 49.546 N	104° 21' 41.052 W	
1,125.0	0.31	84.15	1,125.0	0.5	5.3	386,922.69	491,304.62	32° 3' 49.546 N	104° 21' 41.050 W	
1,150.0	0.27	76.55	1,150.0	0.5	5.4	386,922.71	491,304.74	32° 3' 49.546 N	104° 21' 41.049 W	
1,175.0	0.31	76.89	1,175.0	0.5	5.6	386,922.74	491,304.86	32° 3' 49.546 N	104° 21' 41.048 W	
1,200.0	0.27	74.80	1,200.0	0.6	5.7	386,922.77	491,304.99	32° 3' 49.546 N	104° 21' 41.046 W	
1,225.0	0.29	80.72	1,225.0	0.6	5.8	386,922.80	491,305.11	32° 3' 49.547 N	104° 21' 41.045 W	
1,250.0	0.30	71.38	1,250.0	0.6	5.9	386,922.83	491,305.23	32° 3' 49.547 N	104° 21' 41.043 W	
1,275.0	0.29	78.92	1,275.0	0.7	6.1	386,922.86	491,305.35	32° 3' 49.547 N	104° 21' 41.042 W	
1,300.0	0.39	90.02	1,300.0	0.7	6.2	386,922.88	491,305.50	32° 3' 49.547 N	104° 21' 41.040 W	
1,325.0	0.51	71.40	1,325.0	0.7	6.4	386,922.91	491,305.69	32° 3' 49.548 N	104° 21' 41.038 W	
1,350.0	0.58	70.88	1,350.0	0.8	6.6	386,922.99	491,305.92	32° 3' 49.549 N	104° 21' 41.035 W	
1,375.0	0.58	68.79	1,375.0	0.9	6.9	386,923.08	491,306.15	32° 3' 49.549 N	104° 21' 41.033 W	
1,400.0	0.61	70.71	1,400.0	1.0	7.1	386,923.16	491,306.40	32° 3' 49.550 N	104° 21' 41.030 W	
1,425.0	0.58	73.89	1,425.0	1.0	7.3	386,923.24	491,306.65	32° 3' 49.551 N	104° 21' 41.027 W	
1,450.0	0.56	72.29	1,450.0	1.1	7.6	386,923.32	491,306.88	32° 3' 49.552 N	104° 21' 41.024 W	
1,475.0	0.59	73.32	1,475.0	1.2	7.8	386,923.39	491,307.12	32° 3' 49.553 N	104° 21' 41.021 W	
1,500.0	0.58	73.84	1,500.0	1.3	8.1	386,923.46	491,307.37	32° 3' 49.553 N	104° 21' 41.018 W	
1,525.0	0.61	71.52	1,525.0	1.3	8.3	386,923.54	491,307.62	32° 3' 49.554 N	104° 21' 41.016 W	
1,550.0	0.58	74.79	1,550.0	1.4	8.6	386,923.62	491,307.86	32° 3' 49.555 N	104° 21' 41.013 W	
1,575.0	0.58	71.21	1,575.0	1.5	8.8	386,923.69	491,308.11	32° 3' 49.556 N	104° 21' 41.010 W	
1,600.0	0.56	68.58	1,600.0	1.6	9.0	386,923.77	491,308.34	32° 3' 49.556 N	104° 21' 41.007 W	
1,625.0	0.54	84.85	1,625.0	1.6	9.3	386,923.83	491,308.57	32° 3' 49.557 N	104° 21' 41.004 W	
1,650.0	0.53	86.91	1,650.0	1.6	9.5	386,923.85	491,308.80	32° 3' 49.557 N	104° 21' 41.002 W	
1,675.0	0.51	77.19	1,675.0	1.7	9.7	386,923.88	491,309.03	32° 3' 49.557 N	104° 21' 40.999 W	
1,700.0	0.46	87.14	1,700.0	1.7	9.9	386,923.91	491,309.24	32° 3' 49.558 N	104° 21' 40.997 W	

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,725.0	0.49	100.92	1,725.0	1.7	10.1	386,923.89	491,309.44	32° 3' 49.558 N	104° 21' 40.994 W
1,750.0	0.50	92.30	1,750.0	1.7	10.4	386,923.87	491,309.66	32° 3' 49.557 N	104° 21' 40.992 W
1,775.0	0.43	92.36	1,775.0	1.7	10.6	386,923.86	491,309.86	32° 3' 49.557 N	104° 21' 40.989 W
1,800.0	0.45	94.74	1,800.0	1.6	10.7	386,923.85	491,310.05	32° 3' 49.557 N	104° 21' 40.987 W
1,825.0	0.53	89.38	1,825.0	1.6	11.0	386,923.84	491,310.26	32° 3' 49.557 N	104° 21' 40.985 W
1,850.0	0.48	92.93	1,850.0	1.6	11.2	386,923.84	491,310.48	32° 3' 49.557 N	104° 21' 40.982 W
1,875.0	0.47	78.01	1,875.0	1.7	11.4	386,923.85	491,310.69	32° 3' 49.557 N	104° 21' 40.980 W
1,900.0	0.46	92.87	1,900.0	1.7	11.6	386,923.87	491,310.89	32° 3' 49.557 N	104° 21' 40.977 W
1,925.0	0.48	88.27	1,925.0	1.7	11.8	386,923.87	491,311.09	32° 3' 49.557 N	104° 21' 40.975 W
1,950.0	0.52	78.75	1,950.0	1.7	12.0	386,923.89	491,311.31	32° 3' 49.558 N	104° 21' 40.973 W
1,975.0	0.57	78.40	1,975.0	1.7	12.2	386,923.94	491,311.54	32° 3' 49.558 N	104° 21' 40.970 W
2,000.0	0.91	82.29	2,000.0	1.8	12.6	386,923.99	491,311.86	32° 3' 49.559 N	104° 21' 40.966 W
2,025.0	1.27	93.24	2,024.9	1.8	13.0	386,924.00	491,312.33	32° 3' 49.559 N	104° 21' 40.961 W
2,050.0	2.05	86.12	2,049.9	1.8	13.8	386,924.02	491,313.06	32° 3' 49.559 N	104° 21' 40.952 W
2,075.0	3.19	82.22	2,074.9	1.9	14.9	386,924.14	491,314.19	32° 3' 49.560 N	104° 21' 40.939 W
2,100.0	3.94	79.68	2,099.9	2.2	16.4	386,924.39	491,315.73	32° 3' 49.562 N	104° 21' 40.921 W
2,125.0	4.56	78.70	2,124.8	2.5	18.2	386,924.74	491,317.55	32° 3' 49.566 N	104° 21' 40.900 W
2,150.0	5.26	77.86	2,149.7	3.0	20.3	386,925.17	491,319.64	32° 3' 49.570 N	104° 21' 40.876 W
2,175.0	5.19	77.66	2,174.6	3.5	22.6	386,925.66	491,321.87	32° 3' 49.575 N	104° 21' 40.850 W
2,200.0	5.18	77.84	2,199.5	3.9	24.8	386,926.13	491,324.07	32° 3' 49.580 N	104° 21' 40.824 W
2,225.0	5.31	77.76	2,224.4	4.4	27.0	386,926.62	491,326.31	32° 3' 49.585 N	104° 21' 40.798 W
2,250.0	5.29	77.72	2,249.3	4.9	29.3	386,927.11	491,328.56	32° 3' 49.589 N	104° 21' 40.772 W
2,275.0	5.22	77.89	2,274.2	5.4	31.5	386,927.59	491,330.80	32° 3' 49.594 N	104° 21' 40.746 W
2,300.0	5.18	77.26	2,299.1	5.9	33.7	386,928.08	491,333.02	32° 3' 49.599 N	104° 21' 40.720 W
2,325.0	5.13	77.60	2,324.0	6.4	35.9	386,928.57	491,335.21	32° 3' 49.604 N	104° 21' 40.695 W
2,350.0	5.11	77.51	2,348.9	6.9	38.1	386,929.05	491,337.39	32° 3' 49.609 N	104° 21' 40.670 W
2,375.0	4.90	77.32	2,373.8	7.3	40.2	386,929.52	491,339.51	32° 3' 49.613 N	104° 21' 40.645 W
2,400.0	4.93	76.70	2,398.7	7.8	42.3	386,930.01	491,341.60	32° 3' 49.618 N	104° 21' 40.621 W
2,425.0	4.86	76.68	2,423.6	8.3	44.4	386,930.50	491,343.68	32° 3' 49.623 N	104° 21' 40.596 W
2,450.0	4.82	76.28	2,448.5	8.8	46.4	386,930.99	491,345.73	32° 3' 49.628 N	104° 21' 40.573 W
2,475.0	4.75	76.11	2,473.4	9.3	48.5	386,931.49	491,347.75	32° 3' 49.633 N	104° 21' 40.549 W
2,500.0	4.63	76.62	2,498.3	9.8	50.4	386,931.97	491,349.74	32° 3' 49.638 N	104° 21' 40.526 W
2,525.0	4.56	75.16	2,523.3	10.3	52.4	386,932.46	491,351.68	32° 3' 49.642 N	104° 21' 40.503 W
2,550.0	4.28	76.01	2,548.2	10.7	54.2	386,932.94	491,353.55	32° 3' 49.647 N	104° 21' 40.482 W
2,575.0	4.10	74.90	2,573.1	11.2	56.0	386,933.40	491,355.32	32° 3' 49.652 N	104° 21' 40.461 W
2,600.0	4.15	73.96	2,598.1	11.7	57.7	386,933.88	491,357.05	32° 3' 49.656 N	104° 21' 40.441 W
2,625.0	4.08	72.39	2,623.0	12.2	59.5	386,934.40	491,358.77	32° 3' 49.662 N	104° 21' 40.421 W
2,650.0	4.09	70.08	2,647.9	12.8	61.2	386,934.97	491,360.45	32° 3' 49.667 N	104° 21' 40.402 W
2,675.0	4.34	67.86	2,672.9	13.4	62.9	386,935.63	491,362.17	32° 3' 49.674 N	104° 21' 40.382 W
2,700.0	4.52	65.29	2,697.8	14.2	64.6	386,936.40	491,363.94	32° 3' 49.681 N	104° 21' 40.361 W
2,725.0	4.62	64.52	2,722.7	15.0	66.4	386,937.24	491,365.74	32° 3' 49.690 N	104° 21' 40.340 W
2,750.0	4.75	65.66	2,747.6	15.9	68.3	386,938.10	491,367.59	32° 3' 49.698 N	104° 21' 40.319 W
2,775.0	5.33	69.96	2,772.5	16.7	70.3	386,938.93	491,369.63	32° 3' 49.706 N	104° 21' 40.295 W
2,800.0	5.54	71.41	2,797.4	17.5	72.6	386,939.71	491,371.86	32° 3' 49.714 N	104° 21' 40.269 W
2,825.0	5.60	71.59	2,822.3	18.3	74.9	386,940.48	491,374.16	32° 3' 49.722 N	104° 21' 40.242 W
2,850.0	5.60	72.03	2,847.2	19.0	77.2	386,941.24	491,376.48	32° 3' 49.729 N	104° 21' 40.215 W
2,875.0	5.62	71.34	2,872.1	19.8	79.5	386,942.01	491,378.80	32° 3' 49.737 N	104° 21' 40.188 W
2,900.0	5.59	71.97	2,896.9	20.6	81.8	386,942.78	491,381.12	32° 3' 49.745 N	104° 21' 40.161 W
2,925.0	5.59	71.65	2,921.8	21.3	84.1	386,943.54	491,383.43	32° 3' 49.752 N	104° 21' 40.135 W
2,950.0	5.53	71.93	2,946.7	22.1	86.4	386,944.30	491,385.73	32° 3' 49.760 N	104° 21' 40.108 W
2,975.0	5.59	71.30	2,971.6	22.9	88.7	386,945.06	491,388.03	32° 3' 49.767 N	104° 21' 40.081 W
3,000.0	5.43	72.16	2,996.5	23.6	91.0	386,945.81	491,390.31	32° 3' 49.775 N	104° 21' 40.055 W
3,025.0	5.31	72.03	3,021.4	24.3	93.2	386,946.53	491,392.54	32° 3' 49.782 N	104° 21' 40.029 W
3,050.0	5.22	72.15	3,046.2	25.0	95.4	386,947.24	491,394.72	32° 3' 49.789 N	104° 21' 40.003 W
3,075.0	5.15	72.24	3,071.1	25.7	97.6	386,947.93	491,396.87	32° 3' 49.796 N	104° 21' 39.978 W

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey/Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,100.0	4.99	71.85	3,096.0	26.4	99.7	386,948.61	491,398.97	32° 3' 49.802 N	104° 21' 39.954 W
3,125.0	5.01	72.88	3,121.0	27.1	101.7	386,949.27	491,401.05	32° 3' 49.809 N	104° 21' 39.930 W
3,150.0	4.94	72.08	3,145.9	27.7	103.8	386,949.92	491,403.12	32° 3' 49.815 N	104° 21' 39.906 W
3,175.0	4.87	71.57	3,170.8	28.4	105.8	386,950.59	491,405.15	32° 3' 49.822 N	104° 21' 39.882 W
3,200.0	4.67	70.82	3,195.7	29.1	107.8	386,951.26	491,407.12	32° 3' 49.829 N	104° 21' 39.859 W
3,225.0	4.73	71.16	3,220.6	29.7	109.8	386,951.93	491,409.05	32° 3' 49.835 N	104° 21' 39.837 W
3,250.0	4.58	71.08	3,245.5	30.4	111.7	386,952.58	491,410.97	32° 3' 49.842 N	104° 21' 39.814 W
3,275.0	4.59	70.37	3,270.4	31.0	113.6	386,953.24	491,412.86	32° 3' 49.848 N	104° 21' 39.793 W
3,300.0	4.47	70.63	3,295.4	31.7	115.4	386,953.90	491,414.72	32° 3' 49.855 N	104° 21' 39.771 W
3,325.0	4.41	70.68	3,320.3	32.3	117.2	386,954.54	491,416.55	32° 3' 49.861 N	104° 21' 39.750 W
3,350.0	4.40	70.52	3,345.2	33.0	119.1	386,955.18	491,418.36	32° 3' 49.867 N	104° 21' 39.729 W
3,375.0	4.30	71.42	3,370.1	33.6	120.8	386,955.80	491,420.15	32° 3' 49.874 N	104° 21' 39.708 W
3,400.0	4.37	69.93	3,395.1	34.2	122.6	386,956.42	491,421.93	32° 3' 49.880 N	104° 21' 39.687 W
3,425.0	4.30	71.19	3,420.0	34.9	124.4	386,957.05	491,423.71	32° 3' 49.886 N	104° 21' 39.666 W
3,450.0	4.27	70.95	3,444.9	35.5	126.2	386,957.66	491,425.48	32° 3' 49.892 N	104° 21' 39.646 W
3,475.0	4.35	70.93	3,469.8	36.1	128.0	386,958.27	491,427.26	32° 3' 49.898 N	104° 21' 39.625 W
3,500.0	4.31	72.35	3,494.8	36.7	129.7	386,958.87	491,429.05	32° 3' 49.904 N	104° 21' 39.604 W
3,525.0	4.16	74.48	3,519.7	37.2	131.5	386,959.39	491,430.82	32° 3' 49.909 N	104° 21' 39.584 W
3,550.0	4.28	76.09	3,544.6	37.7	133.3	386,959.86	491,432.60	32° 3' 49.914 N	104° 21' 39.563 W
3,575.0	4.15	76.67	3,569.6	38.1	135.1	386,960.29	491,434.38	32° 3' 49.918 N	104° 21' 39.542 W
3,600.0	4.25	76.58	3,594.5	38.5	136.9	386,960.72	491,436.16	32° 3' 49.922 N	104° 21' 39.522 W
3,625.0	4.28	76.45	3,619.4	39.0	138.7	386,961.15	491,437.97	32° 3' 49.927 N	104° 21' 39.501 W
3,650.0	4.23	77.35	3,644.4	39.4	140.5	386,961.57	491,439.78	32° 3' 49.931 N	104° 21' 39.480 W
3,675.0	4.14	77.12	3,669.3	39.8	142.3	386,961.98	491,441.56	32° 3' 49.935 N	104° 21' 39.459 W
3,700.0	4.08	78.14	3,694.2	40.2	144.0	386,962.36	491,443.31	32° 3' 49.939 N	104° 21' 39.439 W
3,725.0	4.05	77.20	3,719.2	40.5	145.7	386,962.74	491,445.04	32° 3' 49.942 N	104° 21' 39.419 W
3,750.0	3.93	78.59	3,744.1	40.9	147.4	386,963.10	491,446.74	32° 3' 49.946 N	104° 21' 39.399 W
3,775.0	3.99	77.95	3,769.1	41.3	149.1	386,963.45	491,448.43	32° 3' 49.949 N	104° 21' 39.379 W
3,800.0	4.01	77.58	3,794.0	41.6	150.8	386,963.82	491,450.13	32° 3' 49.953 N	104° 21' 39.359 W
3,825.0	3.89	77.96	3,818.9	42.0	152.5	386,964.19	491,451.82	32° 3' 49.957 N	104° 21' 39.340 W
3,850.0	3.87	78.05	3,843.9	42.3	154.2	386,964.54	491,453.47	32° 3' 49.960 N	104° 21' 39.321 W
3,875.0	3.91	78.71	3,868.8	42.7	155.8	386,964.88	491,455.13	32° 3' 49.964 N	104° 21' 39.301 W
3,900.0	3.86	78.90	3,893.8	43.0	157.5	386,965.21	491,456.79	32° 3' 49.967 N	104° 21' 39.282 W
3,925.0	3.85	79.29	3,918.7	43.3	159.1	386,965.53	491,458.44	32° 3' 49.970 N	104° 21' 39.263 W
3,950.0	3.83	78.91	3,943.7	43.6	160.8	386,965.84	491,460.09	32° 3' 49.973 N	104° 21' 39.244 W
3,975.0	3.92	79.26	3,968.6	44.0	162.4	386,966.16	491,461.75	32° 3' 49.976 N	104° 21' 39.224 W
4,000.0	4.04	81.09	3,993.5	44.3	164.2	386,966.46	491,463.46	32° 3' 49.979 N	104° 21' 39.205 W
4,025.0	4.28	82.08	4,018.5	44.5	166.0	386,966.73	491,465.25	32° 3' 49.982 N	104° 21' 39.184 W
4,050.0	4.22	82.28	4,043.4	44.8	167.8	386,966.98	491,467.09	32° 3' 49.984 N	104° 21' 39.162 W
4,075.0	4.21	81.84	4,068.3	45.0	169.6	386,967.23	491,468.91	32° 3' 49.987 N	104° 21' 39.141 W
4,100.0	4.22	82.61	4,093.3	45.3	171.4	386,967.48	491,470.73	32° 3' 49.989 N	104° 21' 39.120 W
4,125.0	4.21	83.52	4,118.2	45.5	173.3	386,967.70	491,472.55	32° 3' 49.992 N	104° 21' 39.099 W
4,150.0	4.16	83.33	4,143.1	45.7	175.1	386,967.91	491,474.36	32° 3' 49.994 N	104° 21' 39.078 W
4,175.0	4.22	83.99	4,168.1	45.9	176.9	386,968.11	491,476.18	32° 3' 49.996 N	104° 21' 39.057 W
4,200.0	4.25	83.33	4,193.0	46.1	178.7	386,968.32	491,478.01	32° 3' 49.998 N	104° 21' 39.035 W
4,225.0	4.25	83.53	4,217.9	46.3	180.6	386,968.53	491,479.85	32° 3' 50.000 N	104° 21' 39.014 W
4,250.0	4.25	83.51	4,242.9	46.5	182.4	386,968.74	491,481.70	32° 3' 50.002 N	104° 21' 38.993 W
4,275.0	4.32	83.04	4,267.8	46.8	184.2	386,968.96	491,483.55	32° 3' 50.004 N	104° 21' 38.971 W
4,300.0	4.44	83.63	4,292.7	47.0	186.1	386,969.18	491,485.45	32° 3' 50.006 N	104° 21' 38.949 W
4,325.0	4.47	84.57	4,317.6	47.2	188.1	386,969.38	491,487.38	32° 3' 50.008 N	104° 21' 38.927 W
4,350.0	4.57	83.66	4,342.6	47.4	190.0	386,969.58	491,489.34	32° 3' 50.010 N	104° 21' 38.904 W
4,375.0	4.51	83.65	4,367.5	47.6	192.0	386,969.80	491,491.30	32° 3' 50.012 N	104° 21' 38.881 W
4,400.0	4.51	83.93	4,392.4	47.8	194.0	386,970.01	491,493.26	32° 3' 50.014 N	104° 21' 38.858 W
4,425.0	4.56	84.27	4,417.3	48.0	195.9	386,970.21	491,495.23	32° 3' 50.016 N	104° 21' 38.835 W
4,450.0	4.41	84.89	4,442.2	48.2	197.9	386,970.40	491,497.17	32° 3' 50.018 N	104° 21' 38.813 W

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,475.0	4.48	85.43	4,467.2	48.4	199.8	386,970.56	491,499.10	32° 3' 50.020 N	104° 21' 38.790 W	
4,500.0	4.31	86.47	4,492.1	48.5	201.7	386,970.70	491,501.01	32° 3' 50.021 N	104° 21' 38.768 W	
4,525.0	4.40	84.87	4,517.0	48.6	203.6	386,970.84	491,502.91	32° 3' 50.023 N	104° 21' 38.746 W	
4,550.0	4.33	86.11	4,542.0	48.8	205.5	386,970.99	491,504.80	32° 3' 50.024 N	104° 21' 38.724 W	
4,575.0	4.35	86.83	4,566.9	48.9	207.4	386,971.11	491,506.69	32° 3' 50.025 N	104° 21' 38.702 W	
4,600.0	4.38	86.90	4,591.8	49.0	209.3	386,971.21	491,508.59	32° 3' 50.026 N	104° 21' 38.680 W	
4,625.0	4.33	87.39	4,616.7	49.1	211.2	386,971.31	491,510.49	32° 3' 50.027 N	104° 21' 38.658 W	
4,650.0	4.32	87.47	4,641.7	49.2	213.1	386,971.39	491,512.37	32° 3' 50.028 N	104° 21' 38.636 W	
4,675.0	4.28	88.41	4,666.6	49.3	214.9	386,971.46	491,514.24	32° 3' 50.029 N	104° 21' 38.614 W	
4,700.0	4.35	87.18	4,691.5	49.3	216.8	386,971.53	491,516.12	32° 3' 50.030 N	104° 21' 38.593 W	
4,725.0	4.30	87.45	4,716.5	49.4	218.7	386,971.62	491,518.01	32° 3' 50.030 N	104° 21' 38.571 W	
4,750.0	4.25	87.62	4,741.4	49.5	220.6	386,971.70	491,519.87	32° 3' 50.031 N	104° 21' 38.549 W	
4,775.0	4.25	88.04	4,766.3	49.6	222.4	386,971.77	491,521.72	32° 3' 50.032 N	104° 21' 38.528 W	
4,800.0	4.37	87.62	4,791.2	49.6	224.3	386,971.84	491,523.60	32° 3' 50.033 N	104° 21' 38.506 W	
4,825.0	4.28	88.02	4,816.2	49.7	226.2	386,971.91	491,525.48	32° 3' 50.033 N	104° 21' 38.484 W	
4,850.0	4.31	85.64	4,841.1	49.8	228.0	386,972.02	491,527.35	32° 3' 50.034 N	104° 21' 38.462 W	
4,875.0	4.39	82.40	4,866.0	50.0	229.9	386,972.21	491,529.23	32° 3' 50.036 N	104° 21' 38.440 W	
4,900.0	4.51	81.79	4,891.0	50.3	231.9	386,972.48	491,531.16	32° 3' 50.039 N	104° 21' 38.418 W	
4,925.0	4.50	82.94	4,915.9	50.5	233.8	386,972.74	491,533.10	32° 3' 50.042 N	104° 21' 38.395 W	
4,950.0	4.52	82.40	4,940.8	50.8	235.8	386,972.99	491,535.05	32° 3' 50.044 N	104° 21' 38.373 W	
4,975.0	4.47	82.16	4,965.7	51.1	237.7	386,973.26	491,536.99	32° 3' 50.047 N	104° 21' 38.350 W	
5,000.0	4.29	81.59	4,990.7	51.3	239.6	386,973.52	491,538.88	32° 3' 50.049 N	104° 21' 38.328 W	
5,025.0	4.36	80.67	5,015.6	51.6	241.4	386,973.82	491,540.75	32° 3' 50.052 N	104° 21' 38.306 W	
5,050.0	4.33	78.28	5,040.5	52.0	243.3	386,974.16	491,542.61	32° 3' 50.056 N	104° 21' 38.285 W	
5,075.0	4.37	78.35	5,065.4	52.3	245.2	386,974.55	491,544.47	32° 3' 50.059 N	104° 21' 38.263 W	
5,100.0	4.43	76.59	5,090.4	52.8	247.0	386,974.96	491,546.34	32° 3' 50.064 N	104° 21' 38.241 W	
5,125.0	4.40	77.47	5,115.3	53.2	248.9	386,975.39	491,548.21	32° 3' 50.068 N	104° 21' 38.220 W	
5,150.0	4.46	76.12	5,140.2	53.6	250.8	386,975.84	491,550.09	32° 3' 50.072 N	104° 21' 38.198 W	
5,175.0	4.48	76.77	5,165.1	54.1	252.7	386,976.29	491,551.99	32° 3' 50.077 N	104° 21' 38.176 W	
5,200.0	4.49	76.92	5,190.1	54.5	254.6	386,976.74	491,553.89	32° 3' 50.081 N	104° 21' 38.154 W	
5,225.0	4.30	78.93	5,215.0	54.9	256.5	386,977.14	491,555.76	32° 3' 50.085 N	104° 21' 38.132 W	
5,250.0	4.17	78.53	5,239.9	55.3	258.3	386,977.50	491,557.57	32° 3' 50.089 N	104° 21' 38.111 W	
5,275.0	3.96	76.92	5,264.9	55.7	260.0	386,977.87	491,559.31	32° 3' 50.092 N	104° 21' 38.091 W	
5,300.0	3.79	77.99	5,289.8	56.0	261.7	386,978.24	491,560.95	32° 3' 50.096 N	104° 21' 38.072 W	
5,325.0	3.54	78.76	5,314.8	56.4	263.2	386,978.56	491,562.52	32° 3' 50.099 N	104° 21' 38.053 W	
5,350.0	3.56	77.81	5,339.7	56.7	264.7	386,978.88	491,564.04	32° 3' 50.102 N	104° 21' 38.036 W	
5,375.0	3.39	77.91	5,364.7	57.0	266.2	386,979.20	491,565.52	32° 3' 50.106 N	104° 21' 38.019 W	
5,400.0	3.36	79.07	5,389.6	57.3	267.7	386,979.49	491,566.96	32° 3' 50.108 N	104° 21' 38.002 W	
5,425.0	3.47	77.17	5,414.6	57.6	269.1	386,979.80	491,568.42	32° 3' 50.111 N	104° 21' 37.985 W	
5,450.0	3.42	77.74	5,439.5	57.9	270.6	386,980.12	491,569.88	32° 3' 50.115 N	104° 21' 37.968 W	
5,475.0	3.42	76.90	5,464.5	58.3	272.0	386,980.45	491,571.34	32° 3' 50.118 N	104° 21' 37.951 W	
5,500.0	3.53	75.87	5,489.4	58.6	273.5	386,980.81	491,572.81	32° 3' 50.121 N	104° 21' 37.934 W	
5,525.0	3.55	74.29	5,514.4	59.0	275.0	386,981.21	491,574.30	32° 3' 50.125 N	104° 21' 37.917 W	
5,550.0	3.48	74.26	5,539.3	59.4	276.5	386,981.62	491,575.78	32° 3' 50.130 N	104° 21' 37.899 W	
5,575.0	3.59	73.86	5,564.3	59.8	278.0	386,982.05	491,577.26	32° 3' 50.134 N	104° 21' 37.882 W	
5,600.0	3.55	72.01	5,589.2	60.3	279.4	386,982.50	491,578.75	32° 3' 50.138 N	104° 21' 37.865 W	
5,625.0	3.83	71.55	5,614.2	60.8	281.0	386,983.00	491,580.27	32° 3' 50.143 N	104° 21' 37.847 W	
5,650.0	3.89	70.24	5,639.1	61.4	282.6	386,983.56	491,581.86	32° 3' 50.149 N	104° 21' 37.829 W	
5,675.0	3.92	70.03	5,664.1	61.9	284.2	386,984.13	491,583.47	32° 3' 50.154 N	104° 21' 37.810 W	
5,700.0	3.80	70.02	5,689.0	62.5	285.7	386,984.71	491,585.05	32° 3' 50.160 N	104° 21' 37.792 W	
5,725.0	3.87	72.51	5,714.0	63.0	287.3	386,985.25	491,586.63	32° 3' 50.165 N	104° 21' 37.773 W	
5,750.0	3.78	73.36	5,738.9	63.5	288.9	386,985.74	491,588.23	32° 3' 50.170 N	104° 21' 37.755 W	
5,775.0	3.69	76.13	5,763.9	64.0	290.5	386,986.16	491,589.80	32° 3' 50.175 N	104° 21' 37.736 W	
5,800.0	3.68	75.73	5,788.8	64.4	292.1	386,986.55	491,591.35	32° 3' 50.178 N	104° 21' 37.718 W	
5,825.0	3.73	76.26	5,813.7	64.7	293.6	386,986.95	491,592.92	32° 3' 50.182 N	104° 21' 37.700 W	

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB: 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB: 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,850.0	3.74	80.36	5,838.7	65.1	295.2	386,987.28	491,594.52	32° 3' 50.186 N	104° 21' 37.682 W	
5,875.0	4.21	89.64	5,863.6	65.2	296.9	386,987.42	491,596.24	32° 3' 50.187 N	104° 21' 37.662 W	
5,900.0	4.20	90.51	5,888.6	65.2	298.8	386,987.42	491,598.07	32° 3' 50.187 N	104° 21' 37.640 W	
5,925.0	4.18	91.73	5,913.5	65.2	300.6	386,987.38	491,599.90	32° 3' 50.187 N	104° 21' 37.619 W	
5,950.0	4.24	91.07	5,938.4	65.1	302.4	386,987.34	491,601.73	32° 3' 50.186 N	104° 21' 37.598 W	
5,975.0	4.23	91.29	5,963.4	65.1	304.3	386,987.30	491,603.58	32° 3' 50.186 N	104° 21' 37.576 W	
6,000.0	4.29	90.96	5,988.3	65.1	306.1	386,987.26	491,605.43	32° 3' 50.185 N	104° 21' 37.555 W	
6,025.0	4.63	83.11	6,013.2	65.2	308.1	386,987.37	491,607.37	32° 3' 50.186 N	104° 21' 37.532 W	
6,050.0	4.86	77.18	6,038.1	65.5	310.1	386,987.72	491,609.40	32° 3' 50.190 N	104° 21' 37.509 W	
6,075.0	5.19	75.51	6,063.0	66.0	312.2	386,988.24	491,611.53	32° 3' 50.195 N	104° 21' 37.484 W	
6,100.0	4.92	76.93	6,087.9	66.6	314.4	386,988.77	491,613.67	32° 3' 50.200 N	104° 21' 37.459 W	
6,125.0	4.90	77.43	6,112.9	67.0	316.5	386,989.24	491,615.76	32° 3' 50.205 N	104° 21' 37.435 W	
6,150.0	4.92	76.02	6,137.8	67.5	318.5	386,989.73	491,617.84	32° 3' 50.210 N	104° 21' 37.411 W	
6,175.0	4.96	77.90	6,162.7	68.0	320.6	386,990.22	491,619.94	32° 3' 50.215 N	104° 21' 37.386 W	
6,200.0	5.14	77.87	6,187.6	68.5	322.8	386,990.68	491,622.09	32° 3' 50.219 N	104° 21' 37.361 W	
6,225.0	5.49	79.28	6,212.5	68.9	325.1	386,991.14	491,624.36	32° 3' 50.224 N	104° 21' 37.335 W	
6,250.0	5.59	80.06	6,237.3	69.4	327.4	386,991.57	491,626.73	32° 3' 50.228 N	104° 21' 37.307 W	
6,275.0	5.62	80.63	6,262.2	69.8	329.8	386,991.98	491,629.14	32° 3' 50.232 N	104° 21' 37.279 W	
6,300.0	5.72	80.66	6,287.1	70.2	332.3	386,992.38	491,631.58	32° 3' 50.236 N	104° 21' 37.251 W	
6,325.0	5.81	80.58	6,312.0	70.6	334.8	386,992.79	491,634.05	32° 3' 50.240 N	104° 21' 37.222 W	
6,350.0	5.81	80.52	6,336.8	71.0	337.3	386,993.21	491,636.55	32° 3' 50.244 N	104° 21' 37.193 W	
6,375.0	5.78	80.27	6,361.7	71.4	339.7	386,993.63	491,639.04	32° 3' 50.248 N	104° 21' 37.164 W	
6,400.0	5.73	80.56	6,386.6	71.8	342.2	386,994.04	491,641.51	32° 3' 50.253 N	104° 21' 37.135 W	
6,425.0	5.65	79.28	6,411.5	72.3	344.7	386,994.48	491,643.95	32° 3' 50.257 N	104° 21' 37.107 W	
6,450.0	5.63	78.69	6,436.4	72.7	347.1	386,994.95	491,646.36	32° 3' 50.262 N	104° 21' 37.079 W	
6,475.0	5.58	76.07	6,461.2	73.3	349.4	386,995.48	491,648.75	32° 3' 50.267 N	104° 21' 37.051 W	
6,500.0	5.61	74.63	6,486.1	73.9	351.8	386,996.10	491,651.10	32° 3' 50.273 N	104° 21' 37.024 W	
6,525.0	5.59	74.96	6,511.0	74.5	354.2	386,996.74	491,653.46	32° 3' 50.279 N	104° 21' 36.997 W	
6,550.0	5.69	74.65	6,535.9	75.2	356.5	386,997.38	491,655.83	32° 3' 50.286 N	104° 21' 36.969 W	
6,575.0	5.58	74.77	6,560.8	75.8	358.9	386,998.03	491,658.20	32° 3' 50.292 N	104° 21' 36.942 W	
6,600.0	5.61	74.79	6,585.6	76.5	361.2	386,998.67	491,660.55	32° 3' 50.298 N	104° 21' 36.914 W	
6,625.0	5.64	74.74	6,610.5	77.1	363.6	386,999.31	491,662.91	32° 3' 50.305 N	104° 21' 36.887 W	
6,650.0	5.63	75.18	6,635.4	77.7	366.0	386,999.95	491,665.28	32° 3' 50.311 N	104° 21' 36.859 W	
6,675.0	5.67	75.89	6,660.3	78.4	368.4	387,000.56	491,667.67	32° 3' 50.317 N	104° 21' 36.832 W	
6,700.0	5.77	75.31	6,685.1	79.0	370.8	387,001.18	491,670.08	32° 3' 50.323 N	104° 21' 36.803 W	
6,725.0	5.83	75.76	6,710.0	79.6	373.2	387,001.81	491,672.53	32° 3' 50.330 N	104° 21' 36.775 W	
6,750.0	5.78	75.57	6,734.9	80.2	375.7	387,002.44	491,674.98	32° 3' 50.336 N	104° 21' 36.747 W	
6,775.0	5.67	75.51	6,759.8	80.9	378.1	387,003.06	491,677.39	32° 3' 50.342 N	104° 21' 36.719 W	
6,800.0	5.56	76.17	6,784.6	81.5	380.5	387,003.66	491,679.76	32° 3' 50.348 N	104° 21' 36.691 W	
6,825.0	5.53	75.09	6,809.5	82.1	382.8	387,004.26	491,682.10	32° 3' 50.354 N	104° 21' 36.664 W	
6,850.0	5.34	76.47	6,834.4	82.6	385.1	387,004.84	491,684.40	32° 3' 50.360 N	104° 21' 36.637 W	
6,875.0	5.33	75.98	6,859.3	83.2	387.4	387,005.40	491,686.66	32° 3' 50.365 N	104° 21' 36.611 W	
6,900.0	5.12	75.19	6,884.2	83.8	389.6	387,005.96	491,688.86	32° 3' 50.371 N	104° 21' 36.585 W	
6,925.0	4.84	74.08	6,909.1	84.3	391.7	387,006.54	491,690.95	32° 3' 50.376 N	104° 21' 36.561 W	
6,950.0	4.68	74.10	6,934.0	84.9	393.6	387,007.11	491,692.95	32° 3' 50.382 N	104° 21' 36.538 W	
6,975.0	4.40	72.20	6,958.9	85.5	395.5	387,007.68	491,694.84	32° 3' 50.388 N	104° 21' 36.516 W	
7,000.0	4.23	72.04	6,983.9	86.1	397.3	387,008.26	491,696.63	32° 3' 50.393 N	104° 21' 36.495 W	
7,025.0	4.13	71.10	7,008.8	86.6	399.1	387,008.83	491,698.36	32° 3' 50.399 N	104° 21' 36.475 W	
7,050.0	4.00	70.09	7,033.7	87.2	400.7	387,009.42	491,700.03	32° 3' 50.405 N	104° 21' 36.455 W	
7,075.0	3.93	70.43	7,058.7	87.8	402.4	387,010.00	491,701.66	32° 3' 50.411 N	104° 21' 36.437 W	
7,100.0	3.87	69.66	7,083.6	88.4	404.0	387,010.58	491,703.26	32° 3' 50.416 N	104° 21' 36.418 W	
7,125.0	3.86	69.32	7,108.6	89.0	405.5	387,011.17	491,704.84	32° 3' 50.422 N	104° 21' 36.400 W	
7,150.0	3.81	68.30	7,133.5	89.6	407.1	387,011.78	491,706.40	32° 3' 50.428 N	104° 21' 36.381 W	
7,175.0	3.75	67.15	7,158.5	90.2	408.6	387,012.40	491,707.92	32° 3' 50.434 N	104° 21' 36.364 W	
7,200.0	3.61	67.33	7,183.4	90.8	410.1	387,013.02	491,709.40	32° 3' 50.441 N	104° 21' 36.347 W	

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
7,225.0	3.44	65.65	7,208.4	91.4	411.5	387,013.64	491,710.81	32° 3' 50.447 N	104° 21' 36.330 W	
7,250.0	3.30	63.57	7,233.3	92.1	412.8	387,014.27	491,712.14	32° 3' 50.453 N	104° 21' 36.315 W	
7,275.0	3.20	64.28	7,258.3	92.7	414.1	387,014.89	491,713.41	32° 3' 50.459 N	104° 21' 36.300 W	
7,300.0	3.14	62.35	7,283.2	93.3	415.3	387,015.51	491,714.65	32° 3' 50.465 N	104° 21' 36.286 W	
7,325.0	2.93	63.59	7,308.2	93.9	416.5	387,016.11	491,715.82	32° 3' 50.471 N	104° 21' 36.272 W	
7,350.0	3.12	64.31	7,333.2	94.5	417.7	387,016.69	491,717.01	32° 3' 50.477 N	104° 21' 36.258 W	
7,375.0	3.18	63.52	7,358.1	95.1	418.9	387,017.30	491,718.24	32° 3' 50.483 N	104° 21' 36.244 W	
7,400.0	3.04	64.98	7,383.1	95.7	420.2	387,017.88	491,719.47	32° 3' 50.489 N	104° 21' 36.230 W	
7,425.0	2.82	71.33	7,408.1	96.2	421.3	387,018.36	491,720.65	32° 3' 50.493 N	104° 21' 36.216 W	
7,450.0	2.80	77.60	7,433.0	96.5	422.5	387,018.69	491,721.83	32° 3' 50.497 N	104° 21' 36.202 W	
7,475.0	2.72	77.84	7,458.0	96.7	423.7	387,018.95	491,723.00	32° 3' 50.499 N	104° 21' 36.189 W	
7,500.0	2.64	77.64	7,483.0	97.0	424.8	387,019.19	491,724.15	32° 3' 50.502 N	104° 21' 36.175 W	
7,525.0	2.51	79.82	7,507.9	97.2	425.9	387,019.41	491,725.25	32° 3' 50.504 N	104° 21' 36.162 W	
7,550.0	2.46	79.38	7,532.9	97.4	427.0	387,019.61	491,726.31	32° 3' 50.506 N	104° 21' 36.150 W	
7,575.0	2.38	77.93	7,557.9	97.6	428.0	387,019.82	491,727.35	32° 3' 50.508 N	104° 21' 36.138 W	
7,600.0	2.27	79.56	7,582.9	97.8	429.0	387,020.02	491,728.34	32° 3' 50.510 N	104° 21' 36.126 W	
7,625.0	2.34	77.19	7,607.9	98.0	430.0	387,020.22	491,729.33	32° 3' 50.512 N	104° 21' 36.115 W	
7,650.0	2.22	76.80	7,632.8	98.2	431.0	387,020.44	491,730.30	32° 3' 50.514 N	104° 21' 36.104 W	
7,675.0	2.32	74.74	7,657.8	98.5	432.0	387,020.69	491,731.26	32° 3' 50.517 N	104° 21' 36.093 W	
7,700.0	2.30	74.09	7,682.8	98.8	432.9	387,020.96	491,732.23	32° 3' 50.519 N	104° 21' 36.081 W	
7,725.0	2.32	73.71	7,707.8	99.0	433.9	387,021.24	491,733.19	32° 3' 50.522 N	104° 21' 36.070 W	
7,750.0	2.35	74.55	7,732.8	99.3	434.9	387,021.51	491,734.17	32° 3' 50.525 N	104° 21' 36.059 W	
7,775.0	2.11	75.93	7,757.7	99.6	435.8	387,021.76	491,735.11	32° 3' 50.527 N	104° 21' 36.048 W	
7,800.0	1.99	79.28	7,782.7	99.8	436.7	387,021.96	491,735.99	32° 3' 50.529 N	104° 21' 36.038 W	
7,825.0	2.06	78.89	7,807.7	99.9	437.6	387,022.12	491,736.86	32° 3' 50.531 N	104° 21' 36.028 W	
7,850.0	2.00	78.85	7,832.7	100.1	438.4	387,022.29	491,737.72	32° 3' 50.532 N	104° 21' 36.017 W	
7,875.0	1.93	77.00	7,857.7	100.3	439.3	387,022.47	491,738.56	32° 3' 50.534 N	104° 21' 36.008 W	
7,900.0	1.87	75.99	7,882.7	100.5	440.1	387,022.67	491,739.37	32° 3' 50.536 N	104° 21' 35.998 W	
7,925.0	1.87	76.75	7,907.7	100.7	440.9	387,022.86	491,740.16	32° 3' 50.538 N	104° 21' 35.989 W	
7,950.0	1.83	77.01	7,932.6	100.8	441.6	387,023.04	491,740.95	32° 3' 50.540 N	104° 21' 35.980 W	
7,975.0	1.85	74.82	7,957.6	101.0	442.4	387,023.24	491,741.73	32° 3' 50.542 N	104° 21' 35.971 W	
8,000.0	1.87	76.37	7,982.6	101.2	443.2	387,023.44	491,742.51	32° 3' 50.544 N	104° 21' 35.962 W	
8,025.0	1.85	75.57	8,007.6	101.4	444.0	387,023.64	491,743.30	32° 3' 50.546 N	104° 21' 35.953 W	
8,050.0	1.94	76.74	8,032.6	101.6	444.8	387,023.83	491,744.10	32° 3' 50.548 N	104° 21' 35.943 W	
8,075.0	1.94	76.72	8,057.6	101.8	445.6	387,024.03	491,744.93	32° 3' 50.550 N	104° 21' 35.934 W	
8,100.0	1.67	72.98	8,082.6	102.0	446.4	387,024.23	491,745.69	32° 3' 50.552 N	104° 21' 35.925 W	
8,125.0	1.51	70.26	8,107.6	102.3	447.0	387,024.45	491,746.34	32° 3' 50.554 N	104° 21' 35.917 W	
8,150.0	1.41	72.25	8,132.5	102.5	447.6	387,024.65	491,746.95	32° 3' 50.556 N	104° 21' 35.910 W	
8,175.0	1.51	67.17	8,157.5	102.7	448.2	387,024.88	491,747.54	32° 3' 50.558 N	104° 21' 35.903 W	
8,200.0	1.42	70.14	8,182.5	102.9	448.8	387,025.11	491,748.14	32° 3' 50.560 N	104° 21' 35.896 W	
8,224.0	1.40	69.80	8,206.5	103.1	449.4	387,025.31	491,748.69	32° 3' 50.562 N	104° 21' 35.890 W	
8,361.0	1.72	68.64	8,343.5	104.4	452.9	387,026.64	491,752.18	32° 3' 50.575 N	104° 21' 35.849 W	
8,435.0	2.10	71.87	8,417.4	105.3	455.2	387,027.46	491,754.50	32° 3' 50.584 N	104° 21' 35.823 W	
8,467.0	3.70	106.19	8,449.4	105.2	456.7	387,027.36	491,756.05	32° 3' 50.583 N	104° 21' 35.805 W	
8,499.0	5.64	128.17	8,481.3	103.9	459.0	387,026.10	491,758.28	32° 3' 50.570 N	104° 21' 35.779 W	
8,531.0	8.12	134.11	8,513.1	101.4	461.8	387,023.55	491,761.14	32° 3' 50.545 N	104° 21' 35.745 W	
8,562.0	9.35	138.66	8,543.7	97.9	465.1	387,020.14	491,764.37	32° 3' 50.511 N	104° 21' 35.708 W	
8,594.0	10.41	142.05	8,575.2	93.7	468.6	387,015.91	491,767.87	32° 3' 50.469 N	104° 21' 35.667 W	
8,626.0	11.84	143.34	8,606.6	88.8	472.3	387,010.99	491,771.61	32° 3' 50.421 N	104° 21' 35.624 W	
8,659.0	12.16	144.66	8,638.9	83.2	476.3	387,005.44	491,775.64	32° 3' 50.366 N	104° 21' 35.577 W	
8,691.0	12.24	146.26	8,670.2	77.7	480.2	386,999.87	491,779.47	32° 3' 50.311 N	104° 21' 35.532 W	
8,722.0	14.73	152.26	8,700.3	71.5	483.8	386,993.65	491,783.13	32° 3' 50.249 N	104° 21' 35.490 W	
8,754.0	17.75	156.11	8,731.0	63.4	487.7	386,985.59	491,787.00	32° 3' 50.169 N	104° 21' 35.445 W	
8,785.0	19.76	158.68	8,760.4	54.2	491.5	386,976.39	491,790.82	32° 3' 50.078 N	104° 21' 35.400 W	
8,817.0	21.69	155.90	8,790.3	43.7	495.9	386,965.95	491,795.20	32° 3' 49.975 N	104° 21' 35.349 W	

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,848.0	25.19	155.29	8,818.8	32.5	501.0	386,954.72	491,800.30	32° 3' 49.864 N	104° 21' 35.290 W
8,880.0	30.75	156.73	8,847.0	18.8	507.1	386,941.01	491,806.39	32° 3' 49.728 N	104° 21' 35.219 W
8,911.0	36.57	159.81	8,872.8	2.8	513.4	386,925.05	491,812.71	32° 3' 49.570 N	104° 21' 35.146 W
8,942.0	42.66	161.88	8,896.7	-15.8	519.9	386,906.38	491,819.17	32° 3' 49.385 N	104° 21' 35.071 W
8,973.0	48.54	163.56	8,918.3	-37.0	526.4	386,885.23	491,825.73	32° 3' 49.176 N	104° 21' 34.994 W
9,004.0	54.07	164.46	8,937.7	-60.2	533.1	386,861.98	491,832.39	32° 3' 48.946 N	104° 21' 34.917 W
9,036.0	59.89	164.42	8,955.2	-86.1	540.3	386,836.15	491,839.58	32° 3' 48.690 N	104° 21' 34.833 W
9,068.0	65.39	164.85	8,969.9	-113.4	547.8	386,808.75	491,847.10	32° 3' 48.419 N	104° 21' 34.746 W
9,079.5	67.58	164.74	8,974.4	-123.6	550.6	386,798.58	491,849.87	32° 3' 48.319 N	104° 21' 34.714 W
FTP @ 9079.5' MD									
9,099.0	71.30	164.55	8,981.3	-141.2	555.4	386,780.97	491,854.71	32° 3' 48.144 N	104° 21' 34.657 W
9,131.0	77.41	163.88	8,989.9	-170.9	563.8	386,751.34	491,863.09	32° 3' 47.851 N	104° 21' 34.560 W
9,162.0	81.99	162.48	8,995.5	-200.0	572.6	386,722.15	491,871.91	32° 3' 47.562 N	104° 21' 34.457 W
9,194.0	85.18	164.67	8,999.0	-230.5	581.6	386,691.65	491,880.90	32° 3' 47.261 N	104° 21' 34.353 W
9,225.0	88.60	164.76	9,000.7	-260.4	589.8	386,661.80	491,889.06	32° 3' 46.965 N	104° 21' 34.258 W
9,257.0	89.30	165.06	9,001.3	-291.3	598.1	386,630.91	491,897.39	32° 3' 46.659 N	104° 21' 34.161 W
9,288.0	90.87	164.23	9,001.3	-321.2	606.3	386,601.01	491,905.60	32° 3' 46.364 N	104° 21' 34.065 W
9,382.0	92.07	160.86	8,998.8	-410.8	634.5	386,511.39	491,933.78	32° 3' 45.477 N	104° 21' 33.738 W
9,477.0	92.13	158.41	8,995.4	-499.8	667.5	386,422.39	491,966.81	32° 3' 44.596 N	104° 21' 33.353 W
9,572.0	91.32	157.67	8,992.5	-587.9	703.0	386,334.33	492,002.32	32° 3' 43.725 N	104° 21' 32.941 W
9,667.0	90.31	159.58	8,991.1	-676.3	737.6	386,245.87	492,036.94	32° 3' 42.849 N	104° 21' 32.538 W
9,761.0	90.53	164.71	8,990.5	-765.8	766.5	386,156.43	492,065.75	32° 3' 41.964 N	104° 21' 32.203 W
9,856.0	90.56	168.45	8,989.6	-858.2	788.5	386,064.05	492,087.80	32° 3' 41.050 N	104° 21' 31.947 W
9,950.0	89.44	172.66	8,989.6	-950.9	803.9	385,971.35	492,103.22	32° 3' 40.132 N	104° 21' 31.767 W
10,045.0	88.54	176.77	8,991.2	-1,045.4	812.7	385,876.78	492,111.97	32° 3' 39.197 N	104° 21' 31.665 W
10,138.0	88.74	179.21	8,993.4	-1,138.3	815.9	385,783.88	492,115.23	32° 3' 38.277 N	104° 21' 31.627 W
10,233.0	88.99	179.03	8,995.3	-1,233.3	817.4	385,688.91	492,116.69	32° 3' 37.337 N	104° 21' 31.610 W
10,328.0	89.75	179.13	8,996.4	-1,328.3	818.9	385,593.92	492,118.21	32° 3' 36.397 N	104° 21' 31.592 W
10,423.0	90.08	178.97	8,996.5	-1,423.3	820.5	385,498.94	492,119.79	32° 3' 35.457 N	104° 21' 31.573 W
10,518.0	91.09	178.98	8,995.5	-1,518.2	822.2	385,403.96	492,121.48	32° 3' 34.517 N	104° 21' 31.553 W
10,613.0	91.54	178.93	8,993.4	-1,613.2	823.9	385,309.00	492,123.22	32° 3' 33.578 N	104° 21' 31.533 W
10,708.0	92.16	178.63	8,990.3	-1,708.1	825.9	385,214.07	492,125.24	32° 3' 32.638 N	104° 21' 31.509 W
10,802.0	92.63	178.48	8,986.4	-1,802.0	828.3	385,120.18	492,127.61	32° 3' 31.709 N	104° 21' 31.481 W
10,897.0	93.20	178.28	8,981.5	-1,896.9	831.0	385,025.35	492,130.29	32° 3' 30.770 N	104° 21' 31.450 W
10,992.0	93.73	178.31	8,975.8	-1,991.6	833.8	384,930.56	492,133.11	32° 3' 29.832 N	104° 21' 31.417 W
11,086.0	94.01	178.16	8,969.4	-2,085.4	836.7	384,836.82	492,136.00	32° 3' 28.905 N	104° 21' 31.383 W
11,180.0	94.15	177.95	8,962.8	-2,179.1	839.9	384,743.11	492,139.18	32° 3' 27.977 N	104° 21' 31.346 W
11,275.0	94.21	177.66	8,955.8	-2,273.8	843.5	384,648.43	492,142.81	32° 3' 27.040 N	104° 21' 31.303 W
11,370.0	94.15	177.65	8,948.9	-2,368.4	847.4	384,553.77	492,146.69	32° 3' 26.103 N	104° 21' 31.258 W
11,464.0	94.46	178.10	8,941.8	-2,462.1	850.9	384,460.10	492,150.16	32° 3' 25.176 N	104° 21' 31.217 W
11,560.0	94.77	178.39	8,934.1	-2,557.7	853.8	384,364.45	492,153.09	32° 3' 24.230 N	104° 21' 31.183 W
11,654.0	94.96	178.75	8,926.2	-2,651.4	856.1	384,270.82	492,155.43	32° 3' 23.303 N	104° 21' 31.156 W
11,749.0	95.05	179.13	8,917.9	-2,746.0	857.9	384,176.20	492,157.18	32° 3' 22.367 N	104° 21' 31.135 W
11,843.0	94.26	179.15	8,910.2	-2,839.7	859.3	384,082.52	492,158.59	32° 3' 21.440 N	104° 21' 31.119 W
11,938.0	93.39	179.51	8,903.9	-2,934.5	860.4	383,987.74	492,159.70	32° 3' 20.502 N	104° 21' 31.105 W
12,032.0	92.21	179.60	8,899.3	-3,028.3	861.1	383,893.86	492,160.42	32° 3' 19.572 N	104° 21' 31.097 W
12,127.0	90.95	179.32	8,896.7	-3,123.3	862.0	383,798.90	492,161.32	32° 3' 18.633 N	104° 21' 31.086 W
12,221.0	91.40	177.83	8,894.8	-3,217.2	864.4	383,704.95	492,163.66	32° 3' 17.703 N	104° 21' 31.059 W
12,315.0	92.10	177.75	8,891.9	-3,311.1	868.0	383,611.07	492,167.28	32° 3' 16.774 N	104° 21' 31.016 W
12,410.0	91.90	177.99	8,888.6	-3,406.0	871.5	383,516.19	492,170.81	32° 3' 15.835 N	104° 21' 30.975 W
12,505.0	92.07	178.70	8,885.3	-3,500.9	874.2	383,421.29	492,173.55	32° 3' 14.896 N	104° 21' 30.943 W
12,599.0	92.16	179.12	8,881.8	-3,594.8	876.0	383,327.37	492,175.34	32° 3' 13.966 N	104° 21' 30.922 W
12,694.0	91.99	179.22	8,878.4	-3,689.8	877.4	383,232.44	492,176.71	32° 3' 13.027 N	104° 21' 30.906 W
12,788.0	92.19	179.22	8,874.9	-3,783.7	878.7	383,138.51	492,177.99	32° 3' 12.097 N	104° 21' 30.890 W
12,883.0	92.18	179.40	8,871.3	-3,878.6	879.8	383,043.59	492,179.14	32° 3' 11.158 N	104° 21' 30.877 W

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
12,977.0	92.35	180.35	8,867.6	-3,972.5	880.0	382,949.66	492,179.34	32° 3' 10.228 N	104° 21' 30.874 W	
13,072.0	92.27	181.24	8,863.8	-4,067.4	878.7	382,854.75	492,178.02	32° 3' 9.289 N	104° 21' 30.889 W	
13,166.0	92.16	181.96	8,860.1	-4,161.3	876.1	382,760.86	492,175.40	32° 3' 8.360 N	104° 21' 30.920 W	
13,260.0	92.30	182.18	8,856.5	-4,255.2	872.7	382,666.99	492,172.01	32° 3' 7.431 N	104° 21' 30.959 W	
13,355.0	92.75	181.88	8,852.3	-4,350.1	869.3	382,572.14	492,168.65	32° 3' 6.492 N	104° 21' 30.998 W	
13,449.0	93.14	181.80	8,847.5	-4,443.9	866.3	382,478.31	492,165.63	32° 3' 5.563 N	104° 21' 31.032 W	
13,544.0	93.25	181.87	8,842.2	-4,538.7	863.3	382,383.51	492,162.59	32° 3' 4.625 N	104° 21' 31.067 W	
13,639.0	93.22	181.65	8,836.8	-4,633.5	860.4	382,288.71	492,159.68	32° 3' 3.687 N	104° 21' 31.101 W	
13,733.0	93.28	181.43	8,831.5	-4,727.3	857.9	382,194.89	492,157.16	32° 3' 2.758 N	104° 21' 31.130 W	
13,828.0	93.28	181.35	8,826.1	-4,822.1	855.6	382,100.08	492,154.86	32° 3' 1.820 N	104° 21' 31.156 W	
13,922.0	93.19	180.93	8,820.8	-4,916.0	853.7	382,006.24	492,152.99	32° 3' 0.891 N	104° 21' 31.178 W	
14,017.0	93.19	180.46	8,815.5	-5,010.8	852.5	381,911.40	492,151.84	32° 2' 59.953 N	104° 21' 31.191 W	
14,111.0	93.05	180.07	8,810.3	-5,104.7	852.1	381,817.54	492,151.41	32° 2' 59.024 N	104° 21' 31.196 W	
14,207.0	92.80	180.13	8,805.4	-5,200.5	851.9	381,721.66	492,151.24	32° 2' 58.075 N	104° 21' 31.197 W	
14,302.0	92.75	180.24	8,800.8	-5,295.4	851.6	381,626.78	492,150.93	32° 2' 57.136 N	104° 21' 31.201 W	
14,396.0	92.52	180.30	8,796.5	-5,389.3	851.2	381,532.88	492,150.49	32° 2' 56.207 N	104° 21' 31.206 W	
14,491.0	92.16	180.39	8,792.6	-5,484.2	850.6	381,437.96	492,149.92	32° 2' 55.267 N	104° 21' 31.212 W	
14,586.0	92.10	180.27	8,789.1	-5,579.2	850.1	381,343.02	492,149.37	32° 2' 54.328 N	104° 21' 31.218 W	
14,680.0	92.13	180.09	8,785.6	-5,673.1	849.8	381,249.09	492,149.08	32° 2' 53.398 N	104° 21' 31.221 W	
14,775.0	91.68	180.10	8,782.5	-5,768.1	849.6	381,154.14	492,148.92	32° 2' 52.458 N	104° 21' 31.223 W	
14,870.0	91.54	180.17	8,779.8	-5,863.0	849.4	381,059.18	492,148.70	32° 2' 51.519 N	104° 21' 31.225 W	
14,964.0	91.15	180.32	8,777.6	-5,957.0	849.0	380,965.21	492,148.29	32° 2' 50.589 N	104° 21' 31.230 W	
15,058.0	91.12	179.88	8,775.8	-6,051.0	848.8	380,871.23	492,148.13	32° 2' 49.658 N	104° 21' 31.231 W	
15,153.0	91.18	179.60	8,773.8	-6,146.0	849.3	380,776.25	492,148.56	32° 2' 48.718 N	104° 21' 31.226 W	
15,247.0	91.34	179.76	8,771.8	-6,239.9	849.8	380,682.27	492,149.09	32° 2' 47.788 N	104° 21' 31.220 W	
15,341.0	91.09	179.68	8,769.8	-6,333.9	850.2	380,588.29	492,149.54	32° 2' 46.858 N	104° 21' 31.214 W	
15,436.0	91.29	179.62	8,767.8	-6,428.9	850.8	380,493.31	492,150.12	32° 2' 45.918 N	104° 21' 31.207 W	
15,531.0	91.12	179.53	8,765.8	-6,523.9	851.5	380,398.34	492,150.83	32° 2' 44.978 N	104° 21' 31.199 W	
15,625.0	91.32	179.29	8,763.8	-6,617.8	852.5	380,304.36	492,151.80	32° 2' 44.048 N	104° 21' 31.187 W	
15,720.0	91.18	178.95	8,761.7	-6,712.8	854.0	380,209.40	492,153.26	32° 2' 43.109 N	104° 21' 31.170 W	
15,814.0	91.09	178.79	8,759.9	-6,806.8	855.8	380,115.44	492,155.11	32° 2' 42.179 N	104° 21' 31.148 W	
15,909.0	91.32	178.32	8,757.9	-6,901.7	858.2	380,020.49	492,157.50	32° 2' 41.239 N	104° 21' 31.120 W	
16,004.0	90.90	178.23	8,756.0	-6,996.7	861.1	379,925.55	492,160.36	32° 2' 40.299 N	104° 21' 31.087 W	
16,098.0	91.48	178.28	8,754.1	-7,090.6	863.9	379,831.61	492,163.23	32° 2' 39.370 N	104° 21' 31.053 W	
16,193.0	91.20	179.11	8,751.9	-7,185.5	866.1	379,736.66	492,165.39	32° 2' 38.430 N	104° 21' 31.028 W	
16,288.0	90.06	179.86	8,750.8	-7,280.5	866.9	379,641.68	492,166.24	32° 2' 37.490 N	104° 21' 31.017 W	
16,382.0	90.28	180.42	8,750.5	-7,374.5	866.7	379,547.68	492,166.01	32° 2' 36.560 N	104° 21' 31.020 W	
16,477.0	90.14	180.67	8,750.2	-7,469.5	865.8	379,452.68	492,165.11	32° 2' 35.620 N	104° 21' 31.030 W	
16,572.0	90.22	181.59	8,749.9	-7,564.5	863.9	379,357.70	492,163.24	32° 2' 34.680 N	104° 21' 31.052 W	
16,667.0	90.87	182.36	8,749.0	-7,659.4	860.7	379,262.76	492,159.96	32° 2' 33.740 N	104° 21' 31.089 W	
16,762.0	91.29	183.79	8,747.2	-7,754.3	855.6	379,167.92	492,154.87	32° 2' 32.801 N	104° 21' 31.148 W	
16,857.0	91.12	181.99	8,745.2	-7,849.1	850.8	379,073.07	492,150.08	32° 2' 31.863 N	104° 21' 31.204 W	
16,951.0	91.23	181.31	8,743.3	-7,943.1	848.1	378,979.13	492,147.37	32° 2' 30.933 N	104° 21' 31.235 W	
17,046.0	91.18	180.19	8,741.3	-8,038.0	846.8	378,884.16	492,146.13	32° 2' 29.993 N	104° 21' 31.249 W	
17,141.0	91.23	180.41	8,739.3	-8,133.0	846.3	378,789.18	492,145.63	32° 2' 29.053 N	104° 21' 31.255 W	
17,236.0	91.29	179.20	8,737.2	-8,228.0	846.7	378,694.20	492,145.95	32° 2' 28.113 N	104° 21' 31.251 W	
17,332.0	91.20	178.99	8,735.1	-8,324.0	848.2	378,598.24	492,147.47	32° 2' 27.163 N	104° 21' 31.233 W	
17,426.0	90.87	178.91	8,733.4	-8,417.9	849.9	378,504.27	492,149.19	32° 2' 26.233 N	104° 21' 31.212 W	
17,521.0	91.04	178.38	8,731.8	-8,512.9	852.1	378,409.31	492,151.44	32° 2' 25.294 N	104° 21' 31.186 W	
17,615.0	91.15	177.97	8,730.0	-8,606.8	855.1	378,315.37	492,154.43	32° 2' 24.364 N	104° 21' 31.151 W	
17,709.0	91.23	177.53	8,728.1	-8,700.7	858.8	378,221.47	492,158.12	32° 2' 23.435 N	104° 21' 31.108 W	
17,804.0	91.04	176.10	8,726.2	-8,795.6	864.1	378,126.64	492,163.40	32° 2' 22.496 N	104° 21' 31.046 W	
17,899.0	90.53	174.80	8,724.9	-8,890.3	871.6	378,031.95	492,170.93	32° 2' 21.559 N	104° 21' 30.959 W	
18,019.0	90.36	174.17	8,724.0	-9,009.7	883.2	377,912.51	492,182.47	32° 2' 20.377 N	104° 21' 30.824 W	
18,114.0	91.62	174.27	8,722.3	-9,104.2	892.7	377,818.00	492,192.03	32° 2' 19.442 N	104° 21' 30.713 W	

Survey Report - Geographic

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well ACADIA FED COM #1H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Site:	HELLFIRE	MD Reference:	RKB- 3608.4 + 29' @ 3637.4usft (NORAM 21)
Well:	ACADIA FED COM #1H	North Reference:	Grid:
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWP	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
18,208.0	92.97	175.31	8,718.6	-9,197.7	901.3	377,724.47	492,200.56	32° 2' 18.516 N	104° 21' 30.614 W	
18,303.0	93.87	176.84	8,712.9	-9,292.3	907.8	377,629.87	492,207.05	32° 2' 17.580 N	104° 21' 30.538 W	
18,398.0	94.15	177.89	8,706.2	-9,387.0	912.1	377,535.20	492,211.41	32° 2' 16.643 N	104° 21' 30.487 W	
18,492.0	93.31	178.47	8,700.1	-9,480.7	915.1	377,441.45	492,214.39	32° 2' 15.715 N	104° 21' 30.452 W	
18,587.0	91.09	178.63	8,696.5	-9,575.6	917.5	377,346.56	492,216.79	32° 2' 14.776 N	104° 21' 30.424 W	
18,682.0	93.05	179.91	8,693.1	-9,670.6	918.7	377,251.63	492,218.00	32° 2' 13.837 N	104° 21' 30.410 W	
18,776.0	92.32	180.98	8,688.6	-9,764.5	918.0	377,157.74	492,217.27	32° 2' 12.907 N	104° 21' 30.418 W	
18,871.0	90.22	181.67	8,686.5	-9,859.4	915.8	377,062.79	492,215.07	32° 2' 11.968 N	104° 21' 30.443 W	
18,965.0	89.55	182.82	8,686.7	-9,953.3	912.1	376,968.87	492,211.39	32° 2' 11.038 N	104° 21' 30.486 W	
19,060.0	92.55	184.22	8,685.0	-10,048.1	906.3	376,874.08	492,205.56	32° 2' 10.100 N	104° 21' 30.553 W	
19,127.7	92.31	184.62	8,682.1	-10,115.6	901.0	376,806.64	492,200.35	32° 2' 9.433 N	104° 21' 30.614 W	
LTP @ 19127.7 MD										
19,155.0	92.21	184.78	8,681.0	-10,142.7	898.8	376,779.45	492,198.12	32° 2' 9.164 N	104° 21' 30.639 W	
19,232.0	91.93	185.12	8,678.3	-10,219.4	892.2	376,702.79	492,191.48	32° 2' 8.405 N	104° 21' 30.716 W	
LAST SVY										
19,270.0	91.93	185.12	8,677.0	-10,257.2	888.8	376,664.96	492,188.09	32° 2' 8.031 N	104° 21' 30.756 W	
PTB										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP - Acadia Fed Cor	- actual wellpath misses target center by 31.3usft at 19128.7usft MD (8682.1 TVD, -10116.6 N, 901.0 E)	0.00	360.00	8,702.0	-10,115.4	876.9	376,806.80	492,176.20	32° 2' 9.434 N	104° 21' 30.894 W
- Point										
PBHL-Acadia Fed Cor	- actual wellpath misses target center by 27.8usft at 19258.4usft MD (8677.4 TVD, -10245.7 N, 889.8 E)	1.01	359.95	8,702.0	-10,245.4	877.0	376,676.80	492,176.30	32° 2' 8.148 N	104° 21' 30.893 W
- Rectangle (sides W100.0 H4,350.0 D20.0)										
TP3 - Acadia Fed Cor	- actual wellpath misses target center by 24.0usft at 14892.9usft MD (8779.2 TVD, -5885.9 N, 849.3 E)	2.55	359.95	8,780.0	-5,886.0	873.3	381,036.20	492,172.60	32° 2' 51.291 N	104° 21' 30.947 W
- Rectangle (sides W100.0 H4,516.1 D20.0)										
TP2 - Acadia Fed Cor	- actual wellpath misses target center by 52.5usft at 10370.4usft MD (8996.5 TVD, -1370.7 N, 819.6 E)	1.03	359.95	8,980.0	-1,369.9	869.4	385,552.30	492,168.70	32° 3' 35.985 N	104° 21' 31.005 W
- Rectangle (sides W100.0 H980.4 D20.0)										
FTP - Acadia Fed Cor	- actual wellpath misses target center by 304.5usft at 9174.5usft MD (8997.1 TVD, -211.9 N, 576.2 E)	0.00	360.00	8,998.0	-125.7	868.3	386,796.50	492,167.60	32° 3' 48.299 N	104° 21' 31.021 W
- Circle (radius 50.0)										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
9,079.5	8,974.4	-123.6	550.6	FTP @ 9079.5 MD	
19,127.7	8,682.1	-10,115.6	901.0	LTP @ 19127.7 MD	
19,232.0	8,678.3	-10,219.4	892.2	LAST SVY	
19,270.0	8,677.0	-10,257.2	888.8	PTB	

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------