

RECEIVED

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-0728

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1928 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45534		Pool Code 16800	Pool Name Delaware River; Bone Spring
Property Code 3222993	Property Name SRO 5 STATE COM		Well Number 507H
OGRID No. 229137	Operator Name COG OPERATING, LLC		Elevation 3009.2'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	5	26-S	28-E		314	NORTH	1490	EAST	EDDY

Bottom Hole Location If Different From Surface

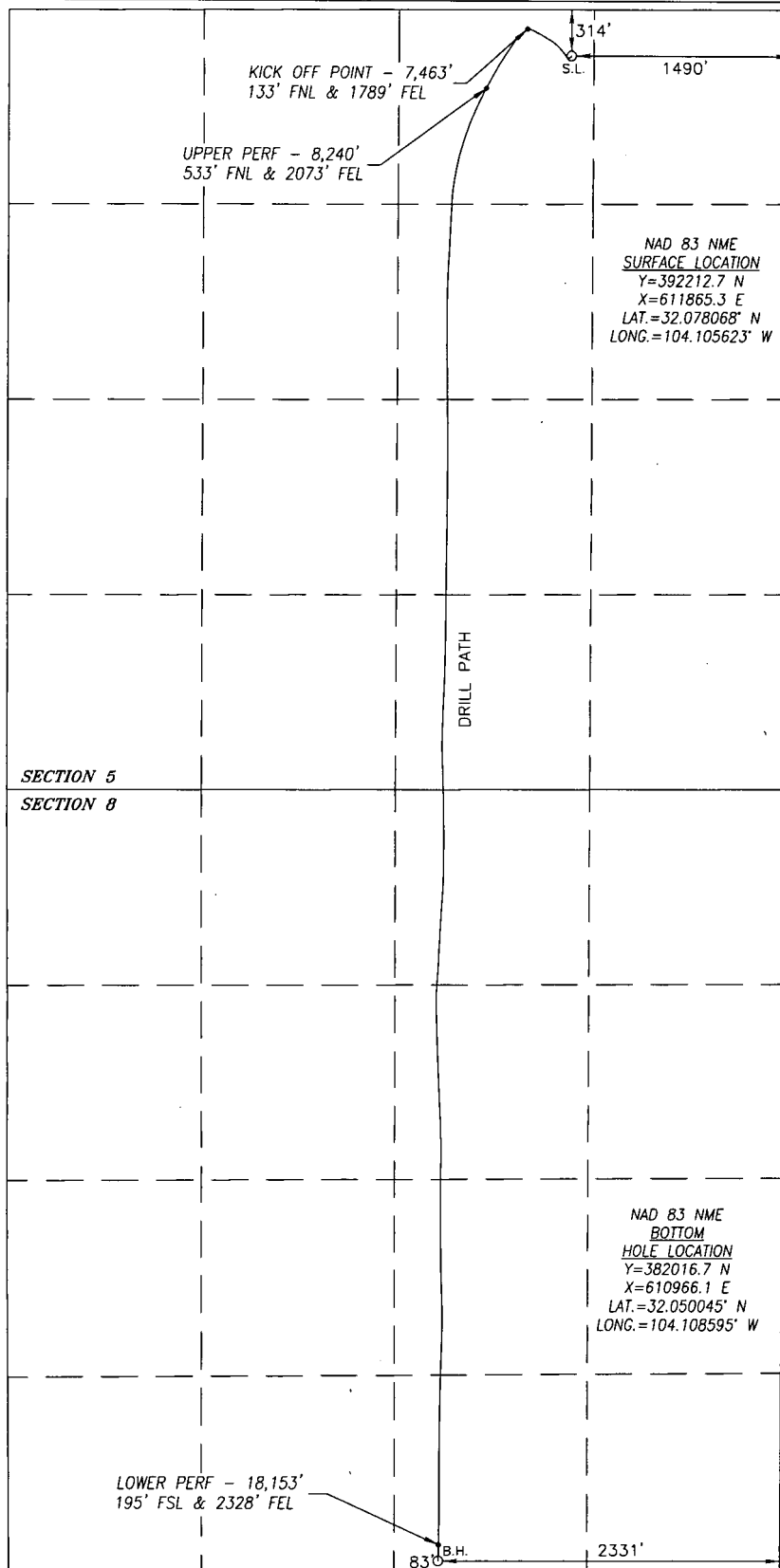
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	8	26-S	28-E		83	SOUTH	2331	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

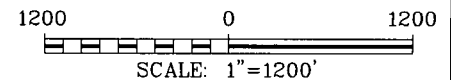
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SEE PAGE 2

Property Code 322993	Property Name SRO 5 STATE COM	Well Number 507H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3009.2'



BOREPATH SHOWN HEREON IS BASED ON
DIRECTIONAL SURVEY REPORT PROVIDED BY
COG OPERATING, LLC FOR THE SRO 5 STATE
COM #507H SUPPLIED TO HARCROW SURVEYING,
LLC ON SEPTEMBER 25, 2019.



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Amanda Avery 11/6/19
Signature Date

Amanda Avery

Printed Name

aavery@concho.com

E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JAN. 14, 2018/APR. 12, 2019

Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 10/21/19

Certificate No. CHAD HARCROW 17777

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Intent ☐ As Drilled ☒

DISTRICT 7 - ARTESIA O.C.D.

API # 30-015-45534	Operator Name: COG OPERATING, LLC		Property Name: SRO 5 STATE COM	Well Number 507H
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Kick Off Point (KOP)

UL B	Section 5	Township 26S	Range 28E	Lot	Feet 133	From N/S NORTH	Feet 1789	From E/W EAST	County EDDY
Latitude 32.078566					Longitude -104.106595			NAD 83	

First Take Point (FTP)

UL B	Section 5	Township 26S	Range 28E	Lot	Feet 533	From N/S NORTH	Feet 2073	From E/W EAST	County EDDY
Latitude 32.077466					Longitude -104.107499			NAD 83	

Last Take Point (LTP)

UL O	Section 8	Township 26S	Range 28E	Lot	Feet 195	From N/S SOUTH	Feet 2328	From E/W EAST	County EDDY
Latitude 32.050352					Longitude -104.108583			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit?

☒ Yes

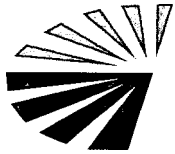
Is this well an infill well?

☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #	Operator Name:		Property Name:	Well Number

KZ 06/29/2018



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NOV 19 2019

DISTRICT/ARTESIAO.C.D.

NORTHERN DELAWARE BASIN

EDDY COUNTY, NM

ATLAS

SRO 5 STATE COM #507H

OWB

Design: ACTUAL WELLPLAN

Standard Survey Report

12 April, 2019

A Certified Directional Survey should be
submitted as required by NMOCD Rule
19.15.16.14 NMAC

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	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		ATLAS			
Site Position:		Northing:	371,480.80 usft	Latitude:	32° 1' 15.933 N
From:	Map	Easting:	573,599.60 usft	Longitude:	104° 5' 45.086 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	SRO 5 STATE COM #507H					
Well Position	+N/-S	0.0 usft	Northing:	392,155.20 usft	Latitude:	32° 4' 40.601 N
	+E/-W	0.0 usft	Easting:	570,681.00 usft	Longitude:	104° 6' 18.480 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level:	3,009.2 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	10/2/2018	7.08	59.81	47,649.15939114

Design	ACTUAL WELLPLAN				
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	184.91	

Survey Program	Date	4/10/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	7,265.0	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
7,298.0	18,265.0	MWD-CURVE/LATERAL (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)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.54	211.06	100.0	-0.4	-0.2	0.4	0.54	0.54	0.00	
125.0	0.71	213.94	125.0	-0.6	-0.4	0.7	0.69	0.68	11.52	
150.0	0.78	219.29	150.0	-0.9	-0.6	0.9	0.39	0.28	21.40	
175.0	0.86	207.95	175.0	-1.2	-0.8	1.3	0.72	0.32	-45.36	
200.0	0.93	211.53	200.0	-1.5	-1.0	1.6	0.36	0.28	14.32	
225.0	1.00	214.56	225.0	-1.9	-1.2	2.0	0.35	0.28	12.12	
250.0	0.95	213.81	250.0	-2.2	-1.4	2.3	0.21	-0.20	-3.00	

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
275.0	0.93	213.81	275.0	-2.6	-1.7	2.7	0.08	-0.08	0.00	
300.0	0.76	204.94	300.0	-2.9	-1.9	3.0	0.86	-0.68	-35.48	
325.0	0.54	183.18	325.0	-3.2	-1.9	3.3	1.31	-0.88	-87.04	
350.0	0.57	161.62	350.0	-3.4	-1.9	3.5	0.84	0.12	-86.24	
375.0	0.61	159.29	375.0	-3.6	-1.8	3.8	0.19	0.16	-9.32	
400.0	0.63	156.08	400.0	-3.9	-1.7	4.0	0.16	0.08	-12.84	
425.0	0.83	152.00	425.0	-4.2	-1.6	4.3	0.83	0.80	-16.32	
450.0	0.78	156.56	450.0	-4.5	-1.4	4.6	0.32	-0.20	18.24	
475.0	0.65	158.47	475.0	-4.8	-1.3	4.9	0.53	-0.52	7.64	
500.0	0.60	163.59	500.0	-5.0	-1.2	5.1	0.30	-0.20	20.48	
525.0	0.48	172.25	525.0	-5.3	-1.2	5.3	0.58	-0.48	34.64	
550.0	0.55	167.86	550.0	-5.5	-1.1	5.6	0.32	0.28	-17.56	
575.0	0.53	172.07	575.0	-5.7	-1.1	5.8	0.18	-0.08	16.84	
600.0	0.57	201.76	600.0	-5.9	-1.1	6.0	1.14	0.16	118.76	
625.0	0.68	202.85	625.0	-6.2	-1.2	6.3	0.44	0.44	4.36	
650.0	0.69	216.16	650.0	-6.5	-1.4	6.6	0.64	0.04	53.24	
675.0	0.84	229.00	675.0	-6.7	-1.6	6.8	0.91	0.60	51.36	
700.0	0.89	224.30	699.9	-7.0	-1.9	7.1	0.35	0.20	-18.80	
725.0	0.90	232.77	724.9	-7.2	-2.1	7.4	0.53	0.04	33.88	
750.0	0.96	237.36	749.9	-7.4	-2.5	7.6	0.38	0.24	18.36	
775.0	1.01	244.82	774.9	-7.7	-2.9	7.9	0.55	0.20	29.84	
800.0	0.92	244.47	799.9	-7.8	-3.2	8.1	0.36	-0.36	-1.40	
825.0	0.87	242.98	824.9	-8.0	-3.6	8.3	0.22	-0.20	-5.96	
850.0	0.86	236.64	849.9	-8.2	-3.9	8.5	0.38	-0.04	-25.36	
875.0	0.89	236.82	874.9	-8.4	-4.2	8.7	0.12	0.12	0.72	
900.0	0.86	247.45	899.9	-8.6	-4.6	8.9	0.66	-0.12	42.52	
925.0	0.89	238.72	924.9	-8.8	-4.9	9.1	0.55	0.12	-34.92	
950.0	0.95	245.58	949.9	-8.9	-5.3	9.4	0.50	0.24	27.44	
975.0	0.99	241.51	974.9	-9.1	-5.6	9.6	0.32	0.16	-16.28	
1,000.0	1.01	239.74	999.9	-9.3	-6.0	9.8	0.15	0.08	-7.08	
1,025.0	1.10	237.83	1,024.9	-9.6	-6.4	10.1	0.39	0.36	-7.64	
1,050.0	1.07	235.60	1,049.9	-9.8	-6.8	10.4	0.21	-0.12	-8.92	
1,075.0	1.05	233.05	1,074.9	-10.1	-7.2	10.7	0.20	-0.08	-10.20	
1,100.0	1.23	241.84	1,099.9	-10.4	-7.6	11.0	1.00	0.72	35.16	
1,125.0	1.33	240.91	1,124.9	-10.6	-8.1	11.3	0.41	0.40	-3.72	
1,150.0	1.42	247.04	1,149.9	-10.9	-8.6	11.6	0.69	0.36	24.52	
1,175.0	1.38	248.21	1,174.9	-11.1	-9.2	11.9	0.20	-0.16	4.68	
1,200.0	1.49	247.34	1,199.9	-11.4	-9.8	12.2	0.45	0.44	-3.48	
1,225.0	1.45	248.35	1,224.9	-11.6	-10.4	12.5	0.19	-0.16	4.04	
1,250.0	1.46	250.32	1,249.8	-11.8	-11.0	12.7	0.20	0.04	7.88	
1,275.0	1.37	252.50	1,274.8	-12.0	-11.6	13.0	0.42	-0.36	8.72	
1,300.0	1.39	252.07	1,299.8	-12.2	-12.1	13.2	0.09	0.08	-1.72	

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Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,325.0	1.38	252.76	1,324.8	-12.4	-12.7	13.5	0.08	-0.04	2.76
1,350.0	1.40	250.16	1,349.8	-12.6	-13.3	13.7	0.26	0.08	-10.40
1,375.0	1.39	249.20	1,374.8	-12.8	-13.8	14.0	0.10	-0.04	-3.84
1,400.0	1.32	251.10	1,399.8	-13.0	-14.4	14.2	0.33	-0.28	7.60
1,425.0	1.32	249.65	1,424.8	-13.2	-14.9	14.4	0.13	0.00	-5.80
1,450.0	1.32	248.39	1,449.8	-13.4	-15.5	14.7	0.12	0.00	-5.04
1,475.0	1.29	249.16	1,474.8	-13.6	-16.0	14.9	0.14	-0.12	3.08
1,500.0	1.33	245.20	1,499.8	-13.8	-16.5	15.2	0.40	0.16	-15.84
1,525.0	1.38	247.59	1,524.8	-14.1	-17.1	15.5	0.30	0.20	9.56
1,550.0	1.39	243.29	1,549.8	-14.3	-17.6	15.8	0.42	0.04	-17.20
1,575.0	1.40	246.16	1,574.8	-14.6	-18.2	16.1	0.28	0.04	11.48
1,600.0	1.42	248.43	1,599.7	-14.8	-18.7	16.4	0.24	0.08	9.08
1,625.0	1.44	244.92	1,624.7	-15.1	-19.3	16.7	0.36	0.08	-14.04
1,650.0	1.36	241.88	1,649.7	-15.3	-19.9	17.0	0.44	-0.32	-12.16
1,675.0	1.29	237.78	1,674.7	-15.6	-20.4	17.3	0.47	-0.28	-16.40
1,700.0	1.35	233.38	1,699.7	-16.0	-20.8	17.7	0.47	0.24	-17.60
1,725.0	1.30	230.56	1,724.7	-16.3	-21.3	18.1	0.33	-0.20	-11.28
1,750.0	1.18	227.30	1,749.7	-16.7	-21.7	18.5	0.56	-0.48	-13.04
1,775.0	1.24	219.89	1,774.7	-17.1	-22.1	18.9	0.67	0.24	-29.64
1,800.0	1.29	220.84	1,799.7	-17.5	-22.4	19.3	0.22	0.20	3.80
1,825.0	1.23	218.00	1,824.7	-17.9	-22.8	19.8	0.35	-0.24	-11.36
1,850.0	1.16	212.59	1,849.7	-18.3	-23.1	20.2	0.53	-0.28	-21.64
1,875.0	1.20	198.77	1,874.7	-18.8	-23.3	20.7	1.15	0.16	-55.28
1,900.0	1.17	192.31	1,899.7	-19.3	-23.4	21.2	0.55	-0.12	-25.84
1,925.0	1.34	187.62	1,924.7	-19.8	-23.5	21.8	0.79	0.68	-18.76
1,950.0	1.29	181.73	1,949.7	-20.4	-23.6	22.3	0.58	-0.20	-23.56
1,975.0	1.26	184.68	1,974.7	-20.9	-23.6	22.9	0.29	-0.12	11.80
2,000.0	1.25	177.29	1,999.6	-21.5	-23.6	23.4	0.65	-0.04	-29.56
2,025.0	1.19	170.22	2,024.6	-22.0	-23.6	24.0	0.65	-0.24	-28.28
2,050.0	1.34	161.92	2,049.6	-22.6	-23.4	24.5	0.95	0.60	-33.20
2,075.0	1.32	159.86	2,074.6	-23.1	-23.2	25.0	0.21	-0.08	-8.24
2,100.0	1.42	157.24	2,099.6	-23.7	-23.0	25.5	0.47	0.40	-10.48
2,125.0	1.43	158.04	2,124.6	-24.2	-22.8	26.1	0.09	0.04	3.20
2,150.0	1.58	158.31	2,149.6	-24.8	-22.5	26.7	0.60	0.60	1.08
2,175.0	1.57	154.84	2,174.6	-25.5	-22.3	27.3	0.38	-0.04	-13.88
2,200.0	1.59	153.54	2,199.6	-26.1	-22.0	27.9	0.16	0.08	-5.20
2,225.0	1.65	154.48	2,224.6	-26.7	-21.7	28.5	0.26	0.24	3.76
2,250.0	1.71	151.91	2,249.6	-27.4	-21.3	29.1	0.39	0.24	-10.28
2,275.0	1.77	149.47	2,274.6	-28.0	-20.9	29.7	0.38	0.24	-9.76
2,300.0	1.77	148.32	2,299.5	-28.7	-20.5	30.4	0.14	0.00	-4.60
2,325.0	1.91	147.60	2,324.5	-29.4	-20.1	31.0	0.57	0.56	-2.88
2,350.0	1.80	148.24	2,349.5	-30.1	-19.7	31.6	0.45	-0.44	2.56

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2,375.0	1.72	148.30	2,374.5	-30.7	-19.3	32.3	0.32	-0.32	0.24
2,400.0	1.77	146.20	2,399.5	-31.4	-18.9	32.9	0.32	0.20	-8.40
2,425.0	1.77	145.82	2,424.5	-32.0	-18.4	33.5	0.05	0.00	-1.52
2,450.0	1.86	147.04	2,449.5	-32.7	-18.0	34.1	0.39	0.36	4.88
2,475.0	1.58	148.07	2,474.5	-33.3	-17.6	34.7	1.13	-1.12	4.12
2,500.0	1.55	145.53	2,499.4	-33.9	-17.2	35.2	0.30	-0.12	-10.16
2,525.0	1.39	145.60	2,524.4	-34.4	-16.9	35.7	0.64	-0.64	0.28
2,550.0	1.22	144.25	2,549.4	-34.9	-16.5	36.2	0.69	-0.68	-5.40
2,575.0	0.80	142.32	2,574.4	-35.2	-16.3	36.5	1.69	-1.68	-7.72
2,600.0	0.39	123.83	2,599.4	-35.4	-16.1	36.7	1.79	-1.64	-73.96
2,625.0	0.39	332.73	2,624.4	-35.4	-16.1	36.6	3.02	0.00	-604.40
2,650.0	1.18	329.85	2,649.4	-35.1	-16.2	36.3	3.16	3.16	-11.52
2,675.0	1.58	327.46	2,674.4	-34.6	-16.6	35.9	1.62	1.60	-9.56
2,700.0	3.47	328.56	2,699.4	-33.6	-17.1	35.0	7.56	7.56	4.40
2,725.0	3.76	328.52	2,724.3	-32.3	-18.0	33.7	1.16	1.16	-0.16
2,750.0	3.71	327.67	2,749.3	-30.9	-18.8	32.4	0.30	-0.20	-3.40
2,775.0	3.84	327.36	2,774.2	-29.5	-19.7	31.1	0.53	0.52	-1.24
2,800.0	3.83	328.18	2,799.2	-28.1	-20.6	29.8	0.22	-0.04	3.28
2,825.0	3.96	326.84	2,824.1	-26.7	-21.5	28.4	0.63	0.52	-5.36
2,850.0	3.96	326.22	2,849.1	-25.2	-22.5	27.1	0.17	0.00	-2.48
2,875.0	4.09	325.92	2,874.0	-23.8	-23.4	25.7	0.53	0.52	-1.20
2,900.0	3.89	326.36	2,898.9	-22.3	-24.4	24.3	0.81	-0.80	1.76
2,925.0	3.90	326.20	2,923.9	-20.9	-25.3	23.0	0.06	0.04	-0.64
2,950.0	3.84	327.18	2,948.8	-19.5	-26.3	21.7	0.36	-0.24	3.92
2,975.0	3.88	325.66	2,973.8	-18.1	-27.2	20.4	0.44	0.16	-6.08
3,000.0	3.89	327.60	2,998.7	-16.7	-28.1	19.0	0.53	0.04	7.76
3,025.0	3.88	327.60	3,023.7	-15.3	-29.0	17.7	0.04	-0.04	0.00
3,050.0	4.00	327.55	3,048.6	-13.8	-30.0	16.3	0.48	0.48	-0.20
3,075.0	3.95	328.19	3,073.5	-12.3	-30.9	14.9	0.27	-0.20	2.56
3,100.0	4.02	327.91	3,098.5	-10.9	-31.8	13.5	0.29	0.28	-1.12
3,125.0	4.14	328.23	3,123.4	-9.4	-32.7	12.1	0.49	0.48	1.28
3,150.0	4.20	327.58	3,148.3	-7.8	-33.7	10.7	0.31	0.24	-2.60
3,175.0	4.16	327.60	3,173.3	-6.3	-34.7	9.2	0.16	-0.16	0.08
3,200.0	4.14	326.89	3,198.2	-4.8	-35.7	7.8	0.22	-0.08	-2.84
3,225.0	4.12	326.29	3,223.1	-3.3	-36.7	6.4	0.19	-0.08	-2.40
3,250.0	4.14	325.47	3,248.1	-1.8	-37.7	5.0	0.25	0.08	-3.28
3,275.0	4.35	323.55	3,273.0	-0.3	-38.7	3.6	1.01	0.84	-7.68
3,300.0	4.24	324.33	3,297.9	1.3	-39.8	2.2	0.50	-0.44	3.12
3,325.0	4.17	322.80	3,322.9	2.7	-40.9	0.8	0.53	-0.28	-6.12
3,350.0	4.16	322.57	3,347.8	4.2	-42.0	-0.6	0.08	-0.04	-0.92
3,375.0	4.18	322.98	3,372.7	5.6	-43.1	-1.9	0.14	0.08	1.64
3,400.0	4.15	323.54	3,397.7	7.1	-44.2	-3.3	0.20	-0.12	2.24

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,425.0	4.23	322.48	3,422.6	8.5	-45.3	-4.6	0.45	0.32	-4.24
3,450.0	4.21	322.80	3,447.5	10.0	-46.4	-6.0	0.12	-0.08	1.28
3,475.0	4.26	322.26	3,472.5	11.5	-47.6	-7.4	0.26	0.20	-2.16
3,500.0	4.43	323.28	3,497.4	13.0	-48.7	-8.8	0.75	0.68	4.08
3,525.0	4.42	324.06	3,522.3	14.5	-49.9	-10.2	0.24	-0.04	3.12
3,550.0	4.43	323.90	3,547.3	16.1	-51.0	-11.7	0.06	0.04	-0.64
3,575.0	4.50	323.25	3,572.2	17.7	-52.1	-13.1	0.35	0.28	-2.60
3,600.0	4.60	322.34	3,597.1	19.2	-53.3	-14.6	0.49	0.40	-3.64
3,625.0	4.61	321.68	3,622.0	20.8	-54.6	-16.1	0.22	0.04	-2.64
3,650.0	4.75	320.85	3,646.9	22.4	-55.9	-17.5	0.62	0.56	-3.32
3,675.0	4.64	320.93	3,671.9	24.0	-57.1	-19.0	0.44	-0.44	0.32
3,700.0	4.76	320.81	3,696.8	25.6	-58.4	-20.5	0.48	0.48	-0.48
3,725.0	4.78	320.13	3,721.7	27.2	-59.8	-22.0	0.24	0.08	-2.72
3,750.0	4.91	319.91	3,746.6	28.8	-61.1	-23.5	0.53	0.52	-0.88
3,775.0	4.85	320.67	3,771.5	30.4	-62.5	-25.0	0.35	-0.24	3.04
3,800.0	4.86	320.35	3,796.4	32.1	-63.8	-26.5	0.12	0.04	-1.28
3,825.0	4.84	319.05	3,821.3	33.7	-65.2	-28.0	0.45	-0.08	-5.20
3,850.0	4.91	318.67	3,846.2	35.3	-66.6	-29.5	0.31	0.28	-1.52
3,875.0	4.84	319.30	3,871.1	36.9	-68.0	-30.9	0.35	-0.28	2.52
3,900.0	4.80	319.01	3,896.1	38.5	-69.4	-32.4	0.19	-0.16	-1.16
3,925.0	4.85	318.05	3,921.0	40.1	-70.7	-33.8	0.38	0.20	-3.84
3,950.0	4.90	318.55	3,945.9	41.6	-72.2	-35.3	0.26	0.20	2.00
3,975.0	5.06	317.77	3,970.8	43.3	-73.6	-36.8	0.69	0.64	-3.12
4,000.0	5.10	317.66	3,995.7	44.9	-75.1	-38.3	0.16	0.16	-0.44
4,025.0	5.05	317.64	4,020.6	46.5	-76.6	-39.8	0.20	-0.20	-0.08
4,050.0	5.14	317.15	4,045.5	48.2	-78.1	-41.3	0.40	0.36	-1.96
4,075.0	5.17	317.06	4,070.4	49.8	-79.6	-42.8	0.12	0.12	-0.36
4,100.0	5.25	316.85	4,095.3	51.5	-81.2	-44.3	0.33	0.32	-0.84
4,125.0	5.22	314.95	4,120.2	53.1	-82.8	-45.8	0.70	-0.12	-7.60
4,150.0	5.31	315.86	4,145.1	54.7	-84.4	-47.3	0.49	0.36	3.64
4,175.0	5.33	315.38	4,170.0	56.4	-86.0	-48.8	0.20	0.08	-1.92
4,200.0	5.38	314.58	4,194.9	58.0	-87.6	-50.3	0.36	0.20	-3.20
4,225.0	5.27	313.45	4,219.7	59.7	-89.3	-51.8	0.61	-0.44	-4.52
4,250.0	5.29	313.60	4,244.6	61.2	-91.0	-53.2	0.10	0.08	0.60
4,275.0	5.15	313.76	4,269.5	62.8	-92.6	-54.7	0.56	-0.56	0.64
4,300.0	5.43	312.91	4,294.4	64.4	-94.3	-56.1	1.16	1.12	-3.40
4,325.0	5.36	315.11	4,319.3	66.0	-96.0	-57.6	0.87	-0.28	8.80
4,350.0	5.47	313.51	4,344.2	67.7	-97.7	-59.1	0.75	0.44	-6.40
4,375.0	5.63	314.03	4,369.1	69.3	-99.4	-60.6	0.67	0.64	2.08
4,400.0	5.74	313.98	4,394.0	71.1	-101.2	-62.1	0.44	0.44	-0.20
4,425.0	5.71	314.07	4,418.8	72.8	-103.0	-63.7	0.13	-0.12	0.36
4,450.0	5.77	313.19	4,443.7	74.5	-104.8	-65.3	0.43	0.24	-3.52

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,475.0	5.82	312.46	4,468.6	76.2	-106.7	-66.8	0.36	0.20	-2.92
4,500.0	5.74	312.10	4,493.5	77.9	-108.5	-68.4	0.35	-0.32	-1.44
4,525.0	5.85	310.44	4,518.3	79.6	-110.4	-69.9	0.80	0.44	-6.64
4,550.0	5.82	309.43	4,543.2	81.2	-112.4	-71.3	0.43	-0.12	-4.04
4,575.0	5.75	309.27	4,568.1	82.8	-114.3	-72.7	0.29	-0.28	-0.64
4,600.0	5.89	307.17	4,592.9	84.4	-116.3	-74.1	1.02	0.56	-8.40
4,625.0	5.89	307.63	4,617.8	86.0	-118.3	-75.5	0.19	0.00	1.84
4,650.0	5.77	307.36	4,642.7	87.5	-120.4	-76.9	0.49	-0.48	-1.08
4,675.0	5.68	306.32	4,667.6	89.0	-122.4	-78.2	0.55	-0.36	-4.16
4,700.0	5.47	306.94	4,692.4	90.4	-124.3	-79.5	0.87	-0.84	2.48
4,725.0	5.66	306.78	4,717.3	91.9	-126.2	-80.8	0.76	0.76	-0.64
4,750.0	5.67	304.97	4,742.2	93.3	-128.2	-82.0	0.72	0.04	-7.24
4,775.0	5.43	305.38	4,767.1	94.7	-130.2	-83.2	0.97	-0.96	1.64
4,800.0	5.56	304.77	4,792.0	96.1	-132.2	-84.4	0.57	0.52	-2.44
4,825.0	5.54	303.73	4,816.9	97.5	-134.2	-85.6	0.41	-0.08	-4.16
4,850.0	5.45	303.83	4,841.7	98.8	-136.2	-86.8	0.36	-0.36	0.40
4,875.0	5.34	304.51	4,866.6	100.1	-138.1	-87.9	0.51	-0.44	2.72
4,900.0	5.30	303.27	4,891.5	101.4	-140.0	-89.1	0.49	-0.16	-4.96
4,925.0	5.27	304.02	4,916.4	102.7	-142.0	-90.2	0.30	-0.12	3.00
4,950.0	5.15	305.22	4,941.3	104.0	-143.8	-91.3	0.65	-0.48	4.80
4,975.0	5.09	303.65	4,966.2	105.2	-145.7	-92.4	0.61	-0.24	-6.28
5,000.0	5.17	304.55	4,991.1	106.5	-147.5	-93.5	0.45	0.32	3.60
5,025.0	5.14	303.94	5,016.0	107.8	-149.4	-94.6	0.25	-0.12	-2.44
5,050.0	5.21	302.58	5,040.9	109.0	-151.3	-95.6	0.56	0.28	-5.44
5,075.0	5.31	302.47	5,065.8	110.2	-153.2	-96.7	0.40	0.40	-0.44
5,100.0	5.09	302.96	5,090.7	111.5	-155.1	-97.8	0.90	-0.88	1.96
5,125.0	5.03	301.72	5,115.6	112.6	-157.0	-98.8	0.50	-0.24	-4.96
5,150.0	5.14	300.89	5,140.5	113.8	-158.8	-99.8	0.53	0.44	-3.32
5,175.0	5.20	301.00	5,165.4	114.9	-160.8	-100.8	0.24	0.24	0.44
5,200.0	5.21	300.48	5,190.3	116.1	-162.7	-101.7	0.19	0.04	-2.08
5,225.0	5.15	300.35	5,215.2	117.2	-164.7	-102.7	0.24	-0.24	-0.52
5,250.0	5.16	300.46	5,240.1	118.4	-166.6	-103.7	0.06	0.04	0.44
5,275.0	5.17	299.76	5,265.0	119.5	-168.6	-104.6	0.26	0.04	-2.80
5,300.0	5.11	300.48	5,289.9	120.6	-170.5	-105.6	0.35	-0.24	2.88
5,325.0	5.13	300.17	5,314.8	121.8	-172.4	-106.6	0.14	0.08	-1.24
5,350.0	5.03	299.89	5,339.7	122.9	-174.3	-107.5	0.41	-0.40	-1.12
5,375.0	4.90	300.11	5,364.6	123.9	-176.2	-108.4	0.53	-0.52	0.88
5,400.0	4.92	300.82	5,389.5	125.0	-178.1	-109.3	0.26	0.08	2.84
5,425.0	4.89	301.77	5,414.4	126.1	-179.9	-110.3	0.35	-0.12	3.80
5,450.0	4.97	302.23	5,439.3	127.3	-181.7	-111.3	0.36	0.32	1.84
5,475.0	4.93	301.98	5,464.2	128.4	-183.5	-112.2	0.18	-0.16	-1.00
5,500.0	4.99	302.20	5,489.1	129.6	-185.4	-113.2	0.25	0.24	0.88

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,525.0	5.11	300.15	5,514.0	130.7	-187.2	-114.2	0.87	0.48	-8.20	
5,550.0	5.11	299.61	5,538.9	131.8	-189.2	-115.1	0.19	0.00	-2.16	
5,575.0	5.02	299.65	5,563.8	132.9	-191.1	-116.1	0.36	-0.36	0.16	
5,600.0	5.14	299.65	5,588.7	134.0	-193.0	-117.0	0.48	0.48	0.00	
5,625.0	4.94	299.15	5,613.7	135.1	-194.9	-117.9	0.82	-0.80	-2.00	
5,650.0	4.99	299.55	5,638.6	136.2	-196.8	-118.8	0.24	0.20	1.60	
5,675.0	4.95	300.44	5,663.5	137.2	-198.7	-119.7	0.35	-0.16	3.56	
5,700.0	4.91	300.83	5,688.4	138.3	-200.5	-120.7	0.21	-0.16	1.56	
5,725.0	4.95	300.90	5,713.3	139.4	-202.4	-121.6	0.16	0.16	0.28	
5,750.0	4.99	299.75	5,738.2	140.5	-204.3	-122.5	0.43	0.16	-4.60	
5,775.0	4.95	299.35	5,763.1	141.6	-206.1	-123.4	0.21	-0.16	-1.60	
5,800.0	4.88	298.56	5,788.0	142.6	-208.0	-124.3	0.39	-0.28	-3.16	
5,825.0	4.79	298.71	5,812.9	143.6	-209.9	-125.1	0.36	-0.36	0.60	
5,850.0	4.74	299.71	5,837.8	144.7	-211.7	-126.0	0.39	-0.20	4.00	
5,875.0	4.79	300.34	5,862.7	145.7	-213.5	-126.9	0.29	0.20	2.52	
5,900.0	4.76	300.49	5,887.7	146.7	-215.3	-127.8	0.13	-0.12	0.60	
5,925.0	4.84	298.32	5,912.6	147.8	-217.1	-128.6	0.79	0.32	-8.68	
5,950.0	4.80	297.23	5,937.5	148.7	-219.0	-129.5	0.40	-0.16	-4.36	
5,975.0	4.73	297.10	5,962.4	149.7	-220.8	-130.2	0.28	-0.28	-0.52	
6,000.0	4.66	296.55	5,987.3	150.6	-222.6	-131.0	0.33	-0.28	-2.20	
6,025.0	4.56	296.92	6,012.2	151.5	-224.4	-131.8	0.42	-0.40	1.48	
6,050.0	4.74	298.16	6,037.1	152.5	-226.2	-132.5	0.82	0.72	4.96	
6,075.0	4.83	296.42	6,062.1	153.4	-228.1	-133.3	0.68	0.36	-6.96	
6,100.0	4.79	295.68	6,087.0	154.3	-230.0	-134.1	0.30	-0.16	-2.96	
6,125.0	4.77	295.52	6,111.9	155.2	-231.8	-134.8	0.10	-0.08	-0.64	
6,150.0	4.75	296.04	6,136.8	156.1	-233.7	-135.6	0.19	-0.08	2.08	
6,175.0	4.74	297.17	6,161.7	157.1	-235.5	-136.3	0.38	-0.04	4.52	
6,200.0	4.99	296.10	6,186.6	158.0	-237.4	-137.1	1.06	1.00	-4.28	
6,225.0	4.88	294.20	6,211.5	158.9	-239.4	-137.9	0.79	-0.44	-7.60	
6,250.0	4.84	294.23	6,236.4	159.8	-241.3	-138.6	0.16	-0.16	0.12	
6,275.0	4.71	293.27	6,261.3	160.6	-243.2	-139.2	0.61	-0.52	-3.84	
6,300.0	4.57	293.23	6,286.3	161.4	-245.1	-139.9	0.56	-0.56	-0.16	
6,325.0	4.58	294.34	6,311.2	162.2	-246.9	-140.5	0.36	0.04	4.44	
6,350.0	4.59	294.99	6,336.1	163.1	-248.7	-141.2	0.21	0.04	2.60	
6,375.0	4.49	293.12	6,361.0	163.9	-250.5	-141.8	0.71	-0.40	-7.48	
6,400.0	4.36	293.01	6,386.0	164.6	-252.3	-142.4	0.52	-0.52	-0.44	
6,425.0	4.25	292.55	6,410.9	165.4	-254.0	-143.0	0.46	-0.44	-1.84	
6,450.0	4.04	293.53	6,435.8	166.1	-255.7	-143.6	0.89	-0.84	3.92	
6,475.0	4.00	295.30	6,460.8	166.8	-257.3	-144.2	0.52	-0.16	7.08	
6,500.0	3.97	295.24	6,485.7	167.5	-258.9	-144.8	0.12	-0.12	-0.24	
6,525.0	3.90	295.45	6,510.6	168.3	-260.4	-145.4	0.29	-0.28	0.84	
6,550.0	3.88	293.30	6,535.6	169.0	-262.0	-145.9	0.59	-0.08	-8.60	

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,575.0	3.63	293.53	6,560.5	169.6	-263.5	-146.4	1.00	-1.00	0.92
6,600.0	3.42	295.16	6,585.5	170.3	-264.9	-147.0	0.93	-0.84	6.52
6,625.0	3.26	297.24	6,610.4	170.9	-266.2	-147.5	0.80	-0.64	8.32
6,650.0	3.16	296.05	6,635.4	171.5	-267.4	-148.0	0.48	-0.40	-4.76
6,675.0	2.93	294.61	6,660.4	172.1	-268.6	-148.5	0.97	-0.92	-5.76
6,700.0	2.75	292.87	6,685.3	172.6	-269.8	-148.9	0.80	-0.72	-6.96
6,725.0	2.72	295.87	6,710.3	173.1	-270.8	-149.3	0.58	-0.12	12.00
6,750.0	2.76	295.29	6,735.3	173.6	-271.9	-149.7	0.19	0.16	-2.32
6,775.0	2.74	294.63	6,760.2	174.1	-273.0	-150.1	0.15	-0.08	-2.64
6,800.0	2.83	289.88	6,785.2	174.6	-274.1	-150.5	0.99	0.36	-19.00
6,825.0	2.58	288.24	6,810.2	175.0	-275.2	-150.8	1.05	-1.00	-6.56
6,850.0	2.54	289.13	6,835.2	175.3	-276.3	-151.0	0.23	-0.16	3.56
6,875.0	2.67	289.53	6,860.1	175.7	-277.4	-151.3	0.53	0.52	1.60
6,900.0	2.73	287.74	6,885.1	176.1	-278.5	-151.6	0.41	0.24	-7.16
6,925.0	2.73	285.39	6,910.1	176.4	-279.6	-151.8	0.45	0.00	-9.40
6,950.0	2.64	284.78	6,935.1	176.7	-280.8	-152.0	0.38	-0.36	-2.44
6,975.0	2.60	286.85	6,960.0	177.0	-281.9	-152.2	0.41	-0.16	8.28
7,000.0	2.55	287.62	6,985.0	177.4	-282.9	-152.5	0.24	-0.20	3.08
7,025.0	2.64	287.32	7,010.0	177.7	-284.0	-152.7	0.36	0.36	-1.20
7,050.0	2.64	285.42	7,035.0	178.0	-285.1	-153.0	0.35	0.00	-7.60
7,075.0	2.55	284.97	7,059.9	178.3	-286.2	-153.2	0.37	-0.36	-1.80
7,100.0	2.51	282.22	7,084.9	178.6	-287.3	-153.3	0.51	-0.16	-11.00
7,125.0	2.44	282.72	7,109.9	178.8	-288.3	-153.5	0.29	-0.28	2.00
7,150.0	2.36	282.26	7,134.9	179.0	-289.4	-153.6	0.33	-0.32	-1.84
7,175.0	2.40	284.27	7,159.8	179.3	-290.4	-153.8	0.37	0.16	8.04
7,200.0	2.46	286.21	7,184.8	179.5	-291.4	-153.9	0.41	0.24	7.76
7,225.0	2.53	286.79	7,209.8	179.9	-292.4	-154.2	0.30	0.28	2.32
7,250.0	2.67	286.02	7,234.8	180.2	-293.5	-154.4	0.58	0.56	-3.08
7,265.0	2.48	286.66	7,249.7	180.4	-294.2	-154.5	1.28	-1.27	4.27
7,298.0	2.12	282.06	7,282.7	180.7	-295.5	-154.7	1.23	-1.09	-13.94
7,392.0	1.97	270.82	7,376.7	181.1	-298.8	-154.8	0.45	-0.16	-11.96
7,454.0	2.23	259.38	7,438.6	180.9	-301.0	-154.4	0.79	0.42	-18.45
7,486.0	5.57	237.80	7,470.5	179.9	-302.9	-153.3	11.22	10.44	-67.44
7,517.0	10.16	228.66	7,501.2	177.3	-306.3	-150.5	15.30	14.81	-29.48
7,579.0	16.40	227.53	7,561.6	167.8	-316.8	-140.1	10.07	10.06	-1.82
7,610.0	19.14	231.17	7,591.1	161.7	-324.0	-133.3	9.53	8.84	11.74
7,673.0	25.50	228.84	7,649.3	146.2	-342.3	-116.4	10.19	10.10	-3.70
7,704.0	29.08	227.55	7,676.9	136.8	-352.9	-106.0	11.70	11.55	-4.16
7,767.0	34.22	216.73	7,730.5	112.2	-374.8	-79.7	12.13	8.16	-17.17
7,797.0	36.82	212.19	7,754.9	97.8	-384.7	-64.5	12.34	8.67	-15.13
7,860.0	44.72	216.27	7,802.6	63.9	-407.9	-28.8	13.23	12.54	6.48
7,891.0	49.96	217.55	7,823.6	45.7	-421.6	-9.4	17.17	16.90	4.13



Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,954.0	55.86	213.40	7,861.6	4.8	-450.6	33.8	10.74	9.37	-6.59
8,001.0	59.16	212.27	7,886.9	-28.5	-472.1	68.9	7.31	7.02	-2.40
8,047.0	62.52	211.09	7,909.3	-62.7	-493.2	104.7	7.64	7.30	-2.57
8,094.0	65.71	210.20	7,929.8	-99.1	-514.8	142.8	7.00	6.79	-1.89
8,141.0	68.63	209.10	7,948.0	-136.8	-536.2	182.1	6.58	6.21	-2.34
8,172.0	70.96	208.24	7,958.7	-162.3	-550.1	208.8	7.95	7.52	-2.77
8,234.0	75.33	207.68	7,976.7	-214.7	-578.0	263.4	7.10	7.05	-0.90
8,281.0	79.52	207.60	7,986.9	-255.3	-599.2	305.7	8.92	8.91	-0.17
8,328.0	82.36	207.44	7,994.3	-296.5	-620.7	348.5	6.05	6.04	-0.34
8,421.0	86.90	203.04	8,003.0	-380.2	-660.1	435.3	6.78	4.88	-4.73
8,434.0	86.93	203.07	8,003.7	-392.1	-665.2	447.6	0.33	0.23	0.23
8,528.0	89.01	200.04	8,007.1	-479.5	-699.7	537.6	3.91	2.21	-3.22
8,621.0	89.29	197.31	8,008.4	-567.6	-729.5	627.9	2.95	0.30	-2.94
8,717.0	87.63	195.96	8,011.0	-659.5	-757.0	721.9	2.23	-1.73	-1.41
8,810.0	87.80	193.98	8,014.7	-749.3	-781.0	813.4	2.14	0.18	-2.13
8,903.0	87.94	187.68	8,018.2	-840.5	-798.4	905.8	6.77	0.15	-6.77
8,996.0	87.97	184.53	8,021.5	-932.9	-808.3	998.7	3.39	0.03	-3.39
9,090.0	87.72	184.41	8,025.0	-1,026.6	-815.6	1,092.6	0.29	-0.27	-0.13
9,184.0	89.17	183.46	8,027.6	-1,120.3	-822.1	1,186.5	1.84	1.54	-1.01
9,277.0	90.80	182.20	8,027.6	-1,213.2	-826.7	1,279.5	2.22	1.75	-1.35
9,371.0	90.91	182.61	8,026.2	-1,307.1	-830.6	1,373.4	0.45	0.12	0.44
9,466.0	91.05	183.15	8,024.6	-1,402.0	-835.4	1,468.3	0.59	0.15	0.57
9,560.0	89.73	182.08	8,024.0	-1,495.8	-839.7	1,562.2	1.81	-1.40	-1.14
9,653.0	89.68	182.51	8,024.4	-1,588.8	-843.4	1,655.1	0.47	-0.05	0.46
9,747.0	90.21	181.19	8,024.5	-1,682.7	-846.4	1,749.0	1.51	0.56	-1.40
9,841.0	89.29	179.18	8,024.9	-1,776.7	-846.7	1,842.7	2.35	-0.98	-2.14
9,935.0	89.03	179.50	8,026.3	-1,870.7	-845.6	1,936.2	0.44	-0.28	0.34
10,029.0	88.84	179.70	8,028.1	-1,964.7	-845.0	2,029.8	0.29	-0.20	0.21
10,123.0	88.95	180.00	8,029.9	-2,058.7	-844.7	2,123.4	0.34	0.12	0.32
10,216.0	90.43	179.56	8,030.4	-2,151.7	-844.4	2,216.0	1.66	1.59	-0.47
10,309.0	90.55	179.40	8,029.6	-2,244.6	-843.5	2,308.6	0.22	0.13	-0.17
10,403.0	90.13	179.43	8,029.0	-2,338.6	-842.6	2,402.2	0.45	-0.45	0.03
10,496.0	89.51	180.13	8,029.3	-2,431.6	-842.2	2,494.8	1.01	-0.67	0.75
10,591.0	90.88	179.58	8,029.0	-2,526.6	-842.0	2,589.4	1.55	1.44	-0.58
10,684.0	90.88	180.10	8,027.6	-2,619.6	-841.7	2,682.1	0.56	0.00	0.56
10,778.0	90.60	180.36	8,026.4	-2,713.6	-842.1	2,775.7	0.41	-0.30	0.28
10,872.0	90.10	180.13	8,025.8	-2,807.6	-842.5	2,869.4	0.59	-0.53	-0.24
10,965.0	89.03	179.94	8,026.5	-2,900.6	-842.6	2,962.1	1.17	-1.15	-0.20
11,058.0	90.18	180.85	8,027.1	-2,993.6	-843.2	3,054.8	1.58	1.24	0.98
11,151.0	89.12	180.15	8,027.7	-3,086.6	-844.0	3,147.5	1.37	-1.14	-0.75
11,245.0	91.27	180.47	8,027.4	-3,180.6	-844.5	3,241.2	2.31	2.29	0.34
11,339.0	91.02	180.46	8,025.5	-3,274.6	-845.3	3,334.9	0.27	-0.27	-0.01

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,433.0	90.57	180.48	8,024.2	-3,368.6	-846.0	3,428.6	0.48	-0.48	0.02	
11,526.0	89.62	180.19	8,024.0	-3,461.5	-846.6	3,521.3	1.07	-1.02	-0.31	
11,620.0	91.08	181.15	8,023.5	-3,555.5	-847.7	3,615.0	1.86	1.55	1.02	
11,713.0	90.77	181.16	8,022.0	-3,648.5	-849.6	3,707.8	0.33	-0.33	0.01	
11,806.0	89.90	181.15	8,021.4	-3,741.5	-851.4	3,800.6	0.94	-0.94	-0.01	
11,901.0	91.02	180.60	8,020.7	-3,836.5	-852.9	3,895.4	1.31	1.18	-0.58	
11,994.0	91.11	180.81	8,018.9	-3,929.4	-854.0	3,988.1	0.25	0.10	0.23	
12,087.0	90.71	181.24	8,017.4	-4,022.4	-855.7	4,080.9	0.63	-0.43	0.46	
12,181.0	90.46	181.24	8,016.5	-4,116.4	-857.7	4,174.7	0.27	-0.27	0.00	
12,274.0	89.99	181.80	8,016.1	-4,209.4	-860.2	4,267.5	0.79	-0.51	0.60	
12,368.0	89.51	182.49	8,016.5	-4,303.3	-863.7	4,361.4	0.89	-0.51	0.73	
12,462.0	89.01	182.51	8,017.7	-4,397.2	-867.8	4,455.3	0.53	-0.53	0.02	
12,555.0	88.28	182.67	8,019.9	-4,490.1	-872.0	4,548.2	0.80	-0.78	0.17	
12,648.0	88.95	180.54	8,022.2	-4,583.0	-874.6	4,641.0	2.40	0.72	-2.29	
12,742.0	88.58	180.90	8,024.2	-4,677.0	-875.8	4,734.8	0.55	-0.39	0.38	
12,836.0	90.27	178.58	8,025.2	-4,771.0	-875.4	4,828.4	3.05	1.80	-2.47	
12,929.0	89.37	178.02	8,025.5	-4,863.9	-872.6	4,920.8	1.14	-0.97	-0.60	
13,031.0	88.78	178.11	8,027.1	-4,965.8	-869.2	5,022.0	0.59	-0.58	0.09	
13,125.0	90.88	178.70	8,027.4	-5,059.8	-866.6	5,115.4	2.32	2.23	0.63	
13,218.0	91.67	178.99	8,025.3	-5,152.8	-864.7	5,207.9	0.90	0.85	0.31	
13,315.0	92.65	179.69	8,021.7	-5,249.7	-863.6	5,304.3	1.24	1.01	0.72	
13,408.0	91.95	180.64	8,017.9	-5,342.6	-863.8	5,396.9	1.27	-0.75	1.02	
13,502.0	90.29	181.31	8,016.1	-5,436.6	-865.4	5,490.7	1.90	-1.77	0.71	
13,595.0	89.02	180.50	8,016.6	-5,529.6	-866.9	5,583.5	1.62	-1.37	-0.87	
13,689.0	89.90	182.41	8,017.5	-5,623.5	-869.3	5,677.3	2.24	0.94	2.03	
13,782.0	90.77	183.45	8,017.0	-5,716.4	-874.0	5,770.2	1.46	0.94	1.12	
13,876.0	90.15	183.67	8,016.2	-5,810.2	-879.9	5,864.2	0.70	-0.66	0.23	
13,970.0	89.68	183.45	8,016.4	-5,904.0	-885.7	5,958.2	0.55	-0.50	-0.23	
14,064.0	89.90	183.23	8,016.7	-5,997.9	-891.2	6,052.1	0.33	0.23	-0.23	
14,157.0	89.71	183.25	8,017.0	-6,090.7	-896.4	6,145.1	0.21	-0.20	0.02	
14,251.0	89.76	183.86	8,017.5	-6,184.5	-902.3	6,239.1	0.65	0.05	0.65	
14,345.0	88.98	183.22	8,018.5	-6,278.3	-908.1	6,333.0	1.07	-0.83	-0.68	
14,430.0	89.40	183.23	8,019.7	-6,363.2	-912.9	6,418.0	0.49	0.49	0.01	
14,524.0	89.34	178.32	8,020.7	-6,457.2	-914.1	6,511.7	5.22	-0.06	-5.22	
14,618.0	88.81	177.51	8,022.3	-6,551.1	-910.7	6,605.0	1.03	-0.56	-0.86	
14,712.0	89.99	177.79	8,023.2	-6,645.0	-906.9	6,698.2	1.29	1.26	0.30	
14,806.0	91.30	178.08	8,022.2	-6,738.9	-903.5	6,791.5	1.43	1.39	0.31	
14,900.0	90.88	178.91	8,020.4	-6,832.9	-901.0	6,884.9	0.99	-0.45	0.88	
14,993.0	91.72	178.91	8,018.3	-6,925.8	-899.2	6,977.4	0.90	0.90	0.00	
15,087.0	89.29	177.10	8,017.5	-7,019.8	-896.0	7,070.7	3.22	-2.59	-1.93	
15,181.0	86.76	176.76	8,020.7	-7,113.6	-890.9	7,163.7	2.72	-2.69	-0.36	
15,275.0	86.99	177.40	8,025.8	-7,207.3	-886.2	7,256.7	0.72	0.24	0.68	

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,369.0	88.28	178.11	8,029.7	-7,301.1	-882.5	7,349.9	1.57	1.37	0.76
15,462.0	89.79	178.96	8,031.3	-7,394.1	-880.1	7,442.3	1.86	1.62	0.91
15,556.0	89.71	179.73	8,031.7	-7,488.1	-879.0	7,535.8	0.82	-0.09	0.82
15,650.0	90.27	180.47	8,031.7	-7,582.1	-879.2	7,629.5	0.99	0.60	0.79
15,744.0	91.64	180.99	8,030.1	-7,676.1	-880.4	7,723.3	1.56	1.46	0.55
15,837.0	91.75	181.18	8,027.4	-7,769.0	-882.1	7,816.0	0.24	0.12	0.20
15,931.0	90.10	180.40	8,025.9	-7,863.0	-883.4	7,909.7	1.94	-1.76	-0.83
16,025.0	88.75	179.62	8,026.8	-7,957.0	-883.5	8,003.4	1.66	-1.44	-0.83
16,119.0	88.95	179.10	8,028.7	-8,050.9	-882.4	8,096.9	0.59	0.21	-0.55
16,213.0	90.13	179.01	8,029.4	-8,144.9	-880.9	8,190.4	1.26	1.26	-0.10
16,306.0	89.82	178.12	8,029.5	-8,237.9	-878.5	8,282.9	1.01	-0.33	-0.96
16,400.0	90.71	178.64	8,029.0	-8,331.9	-875.9	8,376.3	1.10	0.95	0.55
16,494.0	92.03	178.80	8,026.8	-8,425.8	-873.8	8,469.7	1.41	1.40	0.17
16,588.0	92.62	179.43	8,023.0	-8,519.7	-872.3	8,563.1	0.92	0.63	0.67
16,682.0	92.48	180.48	8,018.8	-8,613.6	-872.2	8,656.7	1.13	-0.15	1.12
16,776.0	89.90	182.13	8,016.9	-8,707.6	-874.4	8,750.5	3.26	-2.74	1.76
16,870.0	89.29	182.14	8,017.5	-8,801.5	-877.9	8,844.3	0.65	-0.65	0.01
16,964.0	87.86	181.48	8,019.9	-8,895.4	-880.9	8,938.2	1.68	-1.52	-0.70
17,057.0	87.97	181.31	8,023.2	-8,988.3	-883.1	9,030.9	0.22	0.12	-0.18
17,151.0	87.91	181.28	8,026.6	-9,082.2	-885.2	9,124.7	0.07	-0.06	-0.03
17,245.0	88.25	181.21	8,029.8	-9,176.2	-887.3	9,218.4	0.37	0.36	-0.07
17,339.0	88.16	180.67	8,032.7	-9,270.1	-888.8	9,312.2	0.58	-0.10	-0.57
17,432.0	88.14	180.15	8,035.7	-9,363.1	-889.5	9,404.8	0.56	-0.02	-0.56
17,526.0	88.61	180.69	8,038.4	-9,457.0	-890.2	9,498.5	0.76	0.50	0.57
17,620.0	89.43	180.38	8,040.0	-9,551.0	-891.1	9,592.2	0.93	0.87	-0.33
17,714.0	91.11	180.50	8,039.5	-9,645.0	-891.8	9,685.9	1.79	1.79	0.13
17,808.0	91.25	180.47	8,037.6	-9,739.0	-892.6	9,779.6	0.15	0.15	-0.03
17,901.0	90.91	179.98	8,035.9	-9,832.0	-892.9	9,872.3	0.64	-0.37	-0.53
17,995.0	91.33	180.55	8,034.0	-9,925.9	-893.4	9,966.0	0.75	0.45	0.61
18,089.0	91.39	181.15	8,031.8	-10,019.9	-894.8	10,059.7	0.64	0.06	0.64
18,183.0	91.64	181.51	8,029.3	-10,113.8	-896.9	10,153.5	0.47	0.27	0.38
18,191.0	91.72	181.77	8,029.1	-10,121.8	-897.2	10,161.5	3.40	1.00	3.25
18,265.0	91.72	181.77	8,026.8	-10,195.8	-899.5	10,235.3	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL (SRO 5 STATE COI	0.00	0.00	8,000.0	-10,228.3	-878.7	381,926.90	569,802.30	32° 2' 59.394 N	104° 6' 28.941 W
- actual wellpath misses target center by 47.0usft at 18265.0usft MD (8026.8 TVD, -10195.8 N, -899.5 E)									
- Point									



Survey Report

Company:	NORTHERN DELAWARE BASIN	Local Co-ordinate Reference:	Well SRO 5 STATE COM #507H
Project:	EDDY COUNTY, NM	TVD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Site:	ATLAS	MD Reference:	RKB = 3009.2' + 27' @ 3036.2usft (SCANDRILL FRDM)
Well:	SRO 5 STATE COM #507H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	ACTUAL WELLPLAN	Database:	EDM_Users

Checked By: _____	Approved By: _____	Date: _____
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