

Submit 1 Copy To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
October 13, 2009

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-015-45533
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name SRO 5 State Com
8. Well Number 506H
9. OGRID Number 229137
10. Pool name or Wildcat Delaware River, Bone Spring

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator COG Operating LLC	
3. Address of Operator 2208 W. Main Street, Artesia, NM 88210	
4. Well Location Unit Letter <u>B</u> : <u>314</u> feet from the <u>North</u> line and <u>1460</u> feet from the <u>East</u> line Section <u>5</u> Township <u>26S</u> Range <u>28E</u> NMPM <u>Eddy</u> County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3009.2'	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☒ SHL Change		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating LLC respectfully requests approval for the following changes to the original approved APD.

SHL

From: 255' FNL & 2195' FEL Section 5, T26S, R28E
To: 314' FNL & 1460' FEL Section 5, T26S, R28E

*C102 attached.

*Directional plan attached.

*AC attached

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mayte Reyes TITLE: Senior Regulatory Analyst DATE: 1/30/2019
Type or print name: Mayte Reyes E-mail address: mreyes1@conchoresources.com PHONE: (575) 748-6945
For State Use Only
APPROVED BY: Raymond D. Rodary TITLE: Geology DATE: 2-25-19
Conditions of Approval (if any):

DISTRICT I
1623 N. FRANKS DR., SUEBBS, NM 88240
Phone: (505) 829-6191 Fax: (505) 829-0720

DISTRICT II
811 S. PINEY ST., ARTESIA, NM 88210
Phone: (505) 748-1223 Fax: (505) 748-0720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6179

DISTRICT IV
1223 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 479-3400 Fax: (505) 479-3428

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 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 30-015-45533	Pool Code 16800	Pool Name Delaware River; Bone Spring
Property Code 322993	Property Name SRO 5 STATE COM	Well Number 506H
OGED 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	1460	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		50	SOUTH	1650	EAST	EDDY

Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

STATE	Y=392524.6 N X=610688.4 E 100' FSL & 1650' FEL Y=392426.4 N X=611702.4 E LAT.=32.078636° N LONG.=104.106147° W GRID AZ. TO FIP 31°52'45"	314' 1460' S.L. Y=392526.9 N X=612019.9 E NAD 83 NME <u>SURFACE LOCATION</u> Y=392212.8 N X=611895.4 E LAT.=32.078068° N LONG.=104.105526° W	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. <i>Mayte Reyes</i> 1-29-29 Signature Date Mayte Reyes Printed Name mreyes1@concho.com E-mail Address
	SECTION 5 SECTION 8 100' FSL & 1650' FEL Y=382039.3 N X=611847.1 E LAT.=32.050102° N LONG.=104.106396° W Y=381931.6 N X=610665.9 E 50' B.H. 1650' Y=381941.9 N X=611981.3 E NAD 83 NME <u>PROPOSED BOTTOM HOLE LOCATION</u> Y=381989.3 N X=611646.8 E LAT.=32.049965° N LONG.=104.106397° W	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. JANUARY 14, 2019 Date of Survey Signature & Seal of Professional Surveyor CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR <i>Chad Harcrow</i> 1/16/19 Certificate No. CHAD HARCROW 17777 W.O. # 19-71 DRAWN BY: JR	

Rvf 2-26-19



CONCHO

COG Operating L L C

Eddy County, NM (NAD 27 NME)

Sec 05,T-26-S,R28-E

SRO 5 State Com 506H

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 31 2019

RECEIVED

Wellbore #1 30.015-45533

Plan: Plan #1

Standard Survey Report

29 January, 2019



INTEGRITY
DIRECTIONAL

Company: COG Operating L L C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05,T-26-S,R28-E
Well: SRO 5 State Com 506H
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well SRO 5 State Com 506H
TVD Reference: KB=30' @ 3039.20usft (Nabors 894)
MD Reference: KB=30' @ 3039.20usft (Nabors 894)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1

Project	Eddy County, NM (NAD 27 NME)		
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	Sec 05,T-26-S,R28-E			
Site Position:		Northing:	392,156.20 usft	Latitude: 32.07794
From: Map		Easting:	571,275.90 usft	Longitude: -104.10322
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.12 °

Well	SRO 5 State Com 506H			
Well Position	+N/-S	0.00 usft	Northing:	392,155.30 usft
	+E/-W	0.00 usft	Easting:	570,711.00 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	3,009.20 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/31/2018	7.15	59.77	47,873

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	181.39	

Survey Tool Program	Date 1/29/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	18,125.28	Plan #1 (Wellbore #1)	MWD	MWD - Standard

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00

Company: COG Operating L L C
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

Company: COG Operating L L C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05,T-26-S,R28-E
Well: SRO 5 State Com 506H
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well SRO 5 State Com 506H
TVD Reference: KB=30' @ 3039.20usft (Nabors 894)
MD Reference: KB=30' @ 3039.20usft (Nabors 894)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
5,700.00	2.00	328.48	5,699.98	1.49	-0.91	-1.47	2.00	2.00	0.00
5,800.00	4.00	328.48	5,799.84	5.95	-3.65	-5.86	2.00	2.00	0.00
5,900.00	6.00	328.48	5,899.45	13.38	-8.20	-13.17	2.00	2.00	0.00
6,000.00	8.00	328.48	5,998.70	23.77	-14.58	-23.40	2.00	2.00	0.00
6,100.00	10.00	328.48	6,097.47	37.10	-22.75	-36.54	2.00	2.00	0.00
6,110.71	10.21	328.48	6,108.01	38.70	-23.74	-38.11	2.00	2.00	0.00
Start 1157.00 hold at 6110.71 MD									
6,200.00	10.21	328.48	6,195.88	52.20	-32.01	-51.41	0.00	0.00	0.00
6,300.00	10.21	328.48	6,294.30	67.32	-41.29	-66.29	0.00	0.00	0.00
6,400.00	10.21	328.48	6,392.71	82.43	-50.56	-81.18	0.00	0.00	0.00
6,500.00	10.21	328.48	6,491.13	97.55	-59.83	-96.07	0.00	0.00	0.00
6,600.00	10.21	328.48	6,589.54	112.67	-69.10	-110.95	0.00	0.00	0.00
6,700.00	10.21	328.48	6,687.96	127.78	-78.37	-125.84	0.00	0.00	0.00
6,800.00	10.21	328.48	6,786.38	142.90	-87.64	-140.73	0.00	0.00	0.00
6,900.00	10.21	328.48	6,884.79	158.02	-96.91	-155.61	0.00	0.00	0.00
7,000.00	10.21	328.48	6,983.21	173.13	-106.18	-170.50	0.00	0.00	0.00
7,100.00	10.21	328.48	7,081.62	188.25	-115.45	-185.39	0.00	0.00	0.00
7,200.00	10.21	328.48	7,180.04	203.37	-124.72	-200.27	0.00	0.00	0.00
7,267.71	10.21	328.48	7,246.67	213.60	-131.00	-210.35	0.00	0.00	0.00
Start DLS 10.00 TFO -147.77									
7,300.00	7.68	315.48	7,278.57	217.58	-134.01	-214.26	10.00	-7.86	-40.25
7,400.00	7.09	230.14	7,377.99	218.39	-143.45	-214.84	10.00	-0.59	-85.34
7,500.00	15.52	200.30	7,476.04	201.85	-152.85	-198.07	10.00	8.43	-29.84
7,600.00	25.12	191.99	7,569.72	168.45	-161.93	-164.46	10.00	9.60	-8.31
7,700.00	34.93	188.12	7,656.20	119.22	-170.40	-115.04	10.00	9.82	-3.87
7,800.00	44.82	185.79	7,732.85	55.65	-178.02	-51.30	10.00	9.89	-2.33
7,900.00	54.75	184.15	7,797.34	-20.33	-184.54	24.82	10.00	9.92	-1.63
8,000.00	64.69	182.88	7,847.71	-106.42	-189.78	111.00	10.00	9.94	-1.27
8,100.00	74.63	181.80	7,882.43	-199.99	-193.56	204.63	10.00	9.95	-1.08
8,200.00	84.59	180.82	7,900.44	-298.20	-195.79	302.87	10.00	9.95	-0.98
8,253.90	89.95	180.30	7,903.00	-352.02	-196.31	356.69	10.00	9.96	-0.95
Start 9871.43 hold at 8253.90 MD									
8,300.00	89.95	180.30	7,903.04	-398.11	-196.56	402.77	0.00	0.00	0.00
8,400.00	89.95	180.30	7,903.12	-498.11	-197.09	502.76	0.00	0.00	0.00
8,500.00	89.95	180.30	7,903.20	-598.11	-197.62	602.74	0.00	0.00	0.00
8,600.00	89.95	180.30	7,903.28	-698.11	-198.15	702.72	0.00	0.00	0.00
8,700.00	89.95	180.30	7,903.37	-798.11	-198.68	802.70	0.00	0.00	0.00
8,800.00	89.95	180.30	7,903.45	-898.11	-199.21	902.68	0.00	0.00	0.00
8,900.00	89.95	180.30	7,903.53	-998.10	-199.74	1,002.67	0.00	0.00	0.00
9,000.00	89.95	180.30	7,903.61	-1,098.10	-200.27	1,102.65	0.00	0.00	0.00

Company: COG Operating L L C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05,T-26-S,R28-E
Well: SRO 5 State Com 506H
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,100.00	89.95	180.30	7,903.69	-1,198.10	-200.80	1,202.63	0.00	0.00	0.00
9,200.00	89.95	180.30	7,903.77	-1,298.10	-201.33	1,302.61	0.00	0.00	0.00
9,300.00	89.95	180.30	7,903.85	-1,398.10	-201.86	1,402.59	0.00	0.00	0.00
9,400.00	89.95	180.30	7,903.93	-1,498.10	-202.40	1,502.58	0.00	0.00	0.00
9,500.00	89.95	180.30	7,904.01	-1,598.10	-202.93	1,602.56	0.00	0.00	0.00
9,600.00	89.95	180.30	7,904.09	-1,698.09	-203.46	1,702.54	0.00	0.00	0.00
9,700.00	89.95	180.30	7,904.18	-1,798.09	-203.99	1,802.52	0.00	0.00	0.00
9,800.00	89.95	180.30	7,904.26	-1,898.09	-204.52	1,902.50	0.00	0.00	0.00
9,900.00	89.95	180.30	7,904.34	-1,998.09	-205.05	2,002.49	0.00	0.00	0.00
10,000.00	89.95	180.30	7,904.42	-2,098.09	-205.58	2,102.47	0.00	0.00	0.00
10,100.00	89.95	180.30	7,904.50	-2,198.09	-206.11	2,202.45	0.00	0.00	0.00
10,200.00	89.95	180.30	7,904.58	-2,298.09	-206.64	2,302.43	0.00	0.00	0.00
10,300.00	89.95	180.30	7,904.66	-2,398.08	-207.17	2,402.41	0.00	0.00	0.00
10,400.00	89.95	180.30	7,904.74	-2,498.08	-207.70	2,502.39	0.00	0.00	0.00
10,500.00	89.95	180.30	7,904.82	-2,598.08	-208.23	2,602.38	0.00	0.00	0.00
10,600.00	89.95	180.30	7,904.90	-2,698.08	-208.76	2,702.36	0.00	0.00	0.00
10,700.00	89.95	180.30	7,904.99	-2,798.08	-209.29	2,802.34	0.00	0.00	0.00
10,800.00	89.95	180.30	7,905.07	-2,898.08	-209.83	2,902.32	0.00	0.00	0.00
10,900.00	89.95	180.30	7,905.15	-2,998.08	-210.36	3,002.30	0.00	0.00	0.00
11,000.00	89.95	180.30	7,905.23	-3,098.07	-210.89	3,102.29	0.00	0.00	0.00
11,100.00	89.95	180.30	7,905.31	-3,198.07	-211.42	3,202.27	0.00	0.00	0.00
11,200.00	89.95	180.30	7,905.39	-3,298.07	-211.95	3,302.25	0.00	0.00	0.00
11,300.00	89.95	180.30	7,905.47	-3,398.07	-212.48	3,402.23	0.00	0.00	0.00
11,400.00	89.95	180.30	7,905.55	-3,498.07	-213.01	3,502.21	0.00	0.00	0.00
11,500.00	89.95	180.30	7,905.63	-3,598.07	-213.54	3,602.20	0.00	0.00	0.00
11,600.00	89.95	180.30	7,905.71	-3,698.07	-214.07	3,702.18	0.00	0.00	0.00
11,700.00	89.95	180.30	7,905.80	-3,798.06	-214.60	3,802.16	0.00	0.00	0.00
11,800.00	89.95	180.30	7,905.88	-3,898.06	-215.13	3,902.14	0.00	0.00	0.00
11,900.00	89.95	180.30	7,905.96	-3,998.06	-215.66	4,002.12	0.00	0.00	0.00
12,000.00	89.95	180.30	7,906.04	-4,098.06	-216.19	4,102.10	0.00	0.00	0.00
12,100.00	89.95	180.30	7,906.12	-4,198.06	-216.72	4,202.09	0.00	0.00	0.00
12,200.00	89.95	180.30	7,906.20	-4,298.06	-217.25	4,302.07	0.00	0.00	0.00
12,300.00	89.95	180.30	7,906.28	-4,398.05	-217.79	4,402.05	0.00	0.00	0.00
12,400.00	89.95	180.30	7,906.36	-4,498.05	-218.32	4,502.03	0.00	0.00	0.00
12,500.00	89.95	180.30	7,906.44	-4,598.05	-218.85	4,602.01	0.00	0.00	0.00
12,600.00	89.95	180.30	7,906.52	-4,698.05	-219.38	4,702.00	0.00	0.00	0.00
12,700.00	89.95	180.30	7,906.61	-4,798.05	-219.91	4,801.98	0.00	0.00	0.00
12,800.00	89.95	180.30	7,906.69	-4,898.05	-220.44	4,901.96	0.00	0.00	0.00
12,900.00	89.95	180.30	7,906.77	-4,998.05	-220.97	5,001.94	0.00	0.00	0.00
13,000.00	89.95	180.30	7,906.85	-5,098.04	-221.50	5,101.92	0.00	0.00	0.00
13,100.00	89.95	180.30	7,906.93	-5,198.04	-222.03	5,201.91	0.00	0.00	0.00
13,200.00	89.95	180.30	7,907.01	-5,298.04	-222.56	5,301.89	0.00	0.00	0.00
13,300.00	89.95	180.30	7,907.09	-5,398.04	-223.09	5,401.87	0.00	0.00	0.00

Company: COG Operating L L C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05,T-26-S,R28-E
Well: SRO 5 State Com 506H
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well SRO 5 State Com 506H
TVD Reference: KB=30' @ 3039.20usft (Nabors 894)
MD Reference: KB=30' @ 3039.20usft (Nabors 894)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.00	89.95	180.30	7,907.17	-5,498.04	-223.62	5,501.85	0.00	0.00	0.00
13,500.00	89.95	180.30	7,907.25	-5,598.04	-224.15	5,601.83	0.00	0.00	0.00
13,600.00	89.95	180.30	7,907.33	-5,698.04	-224.68	5,701.82	0.00	0.00	0.00
13,700.00	89.95	180.30	7,907.42	-5,798.03	-225.22	5,801.80	0.00	0.00	0.00
13,800.00	89.95	180.30	7,907.50	-5,898.03	-225.75	5,901.78	0.00	0.00	0.00
13,900.00	89.95	180.30	7,907.58	-5,998.03	-226.28	6,001.76	0.00	0.00	0.00
14,000.00	89.95	180.30	7,907.66	-6,098.03	-226.81	6,101.74	0.00	0.00	0.00
14,100.00	89.95	180.30	7,907.74	-6,198.03	-227.34	6,201.72	0.00	0.00	0.00
14,200.00	89.95	180.30	7,907.82	-6,298.03	-227.87	6,301.71	0.00	0.00	0.00
14,300.00	89.95	180.30	7,907.90	-6,398.03	-228.40	6,401.69	0.00	0.00	0.00
14,400.00	89.95	180.30	7,907.98	-6,498.02	-228.93	6,501.67	0.00	0.00	0.00
14,500.00	89.95	180.30	7,908.06	-6,598.02	-229.46	6,601.65	0.00	0.00	0.00
14,600.00	89.95	180.30	7,908.14	-6,698.02	-229.99	6,701.63	0.00	0.00	0.00
14,700.00	89.95	180.30	7,908.23	-6,798.02	-230.52	6,801.62	0.00	0.00	0.00
14,800.00	89.95	180.30	7,908.31	-6,898.02	-231.05	6,901.60	0.00	0.00	0.00
14,900.00	89.95	180.30	7,908.39	-6,998.02	-231.58	7,001.58	0.00	0.00	0.00
15,000.00	89.95	180.30	7,908.47	-7,098.02	-232.11	7,101.56	0.00	0.00	0.00
15,100.00	89.95	180.30	7,908.55	-7,198.01	-232.64	7,201.54	0.00	0.00	0.00
15,200.00	89.95	180.30	7,908.63	-7,298.01	-233.18	7,301.53	0.00	0.00	0.00
15,300.00	89.95	180.30	7,908.71	-7,398.01	-233.71	7,401.51	0.00	0.00	0.00
15,400.00	89.95	180.30	7,908.79	-7,498.01	-234.24	7,501.49	0.00	0.00	0.00
15,500.00	89.95	180.30	7,908.87	-7,598.01	-234.77	7,601.47	0.00	0.00	0.00
15,600.00	89.95	180.30	7,908.95	-7,698.01	-235.30	7,701.45	0.00	0.00	0.00
15,700.00	89.95	180.30	7,909.04	-7,798.01	-235.83	7,801.43	0.00	0.00	0.00
15,800.00	89.95	180.30	7,909.12	-7,898.00	-236.36	7,901.42	0.00	0.00	0.00
15,900.00	89.95	180.30	7,909.20	-7,998.00	-236.89	8,001.40	0.00	0.00	0.00
16,000.00	89.95	180.30	7,909.28	-8,098.00	-237.42	8,101.38	0.00	0.00	0.00
16,100.00	89.95	180.30	7,909.36	-8,198.00	-237.95	8,201.36	0.00	0.00	0.00
16,200.00	89.95	180.30	7,909.44	-8,298.00	-238.48	8,301.34	0.00	0.00	0.00
16,300.00	89.95	180.30	7,909.52	-8,398.00	-239.01	8,401.33	0.00	0.00	0.00
16,400.00	89.95	180.30	7,909.60	-8,498.00	-239.54	8,501.31	0.00	0.00	0.00
16,500.00	89.95	180.30	7,909.68	-8,597.99	-240.07	8,601.29	0.00	0.00	0.00
16,600.00	89.95	180.30	7,909.76	-8,697.99	-240.61	8,701.27	0.00	0.00	0.00
16,700.00	89.95	180.30	7,909.85	-8,797.99	-241.14	8,801.25	0.00	0.00	0.00
16,800.00	89.95	180.30	7,909.93	-8,897.99	-241.67	8,901.24	0.00	0.00	0.00
16,900.00	89.95	180.30	7,910.01	-8,997.99	-242.20	9,001.22	0.00	0.00	0.00
17,000.00	89.95	180.30	7,910.09	-9,097.99	-242.73	9,101.20	0.00	0.00	0.00
17,100.00	89.95	180.30	7,910.17	-9,197.99	-243.26	9,201.18	0.00	0.00	0.00
17,200.00	89.95	180.30	7,910.25	-9,297.98	-243.79	9,301.16	0.00	0.00	0.00
17,300.00	89.95	180.30	7,910.33	-9,397.98	-244.32	9,401.15	0.00	0.00	0.00
17,400.00	89.95	180.30	7,910.41	-9,497.98	-244.85	9,501.13	0.00	0.00	0.00
17,500.00	89.95	180.30	7,910.49	-9,597.98	-245.38	9,601.11	0.00	0.00	0.00
17,600.00	89.95	180.30	7,910.57	-9,697.98	-245.91	9,701.09	0.00	0.00	0.00

Company: COG Operating L L C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05,T-26-S,R28-E
Well: SRO 5 State Com 506H
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference: Well SRO 5 State Com 506H
TVD Reference: KB=30' @ 3039.20usft (Nabors 894)
MD Reference: KB=30' @ 3039.20usft (Nabors 894)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,700.00	89.95	180.30	7,910.66	-9,797.98	-246.44	9,801.07	0.00	0.00	0.00
17,800.00	89.95	180.30	7,910.74	-9,897.98	-246.97	9,901.05	0.00	0.00	0.00
17,900.00	89.95	180.30	7,910.82	-9,997.97	-247.50	10,001.04	0.00	0.00	0.00
18,000.00	89.95	180.30	7,910.90	-10,097.97	-248.03	10,101.02	0.00	0.00	0.00
18,100.00	89.95	180.30	7,910.98	-10,197.97	-248.57	10,201.00	0.00	0.00	0.00
18,125.33	89.95	180.30	7,911.00	-10,223.30	-248.70	10,226.32	0.00	0.00	0.00
TD at 18125.33									

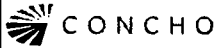
Design Targets
Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
SRO 5 State Com 506	0.00	0.00	7,307.63	213.60	-192.90	392,368.90	570,518.10	32.07853	-104.10566
- plan misses target center by 56.24usft at 7334.51usft MD (7312.85 TVD, 219.83 N, -137.25 E)									
- Point									
SRO 5 State Com 506	0.00	0.00	7,909.66	-10,173.30	-248.50	381,982.00	570,462.50	32.04998	-104.10591
- plan misses target center by 1.30usft at 18075.33usft MD (7910.96 TVD, -10173.30 N, -248.43 E)									
- Point									
SRO 5 State Com 506	0.00	0.00	7,911.00	-10,223.30	-248.70	381,932.00	570,462.30	32.04984	-104.10591
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5600	5600	0	0	Start Build 2.00
6111	6108	39	-24	Start 1157.00 hold at 6110.71 MD
7268	7247	214	-131	Start DLS 10.00 TFO -147.77
8254	7903	-352	-196	Start 9871.43 hold at 8253.90 MD
18,125	7911	-10,223	-249	TD at 18125.33

Checked By: _____ Approved By: _____ Date: _____



COG Operating L.L.C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05, T-26-S, R28-E
Well: SRO 5 State Com 506H
Wellbore: Wellbore #1
Plan: Plan #1 (SRO 5 State Com 506H/Wellbore #1)
Nabors 894

WELL DETAILS: SRO 5 State Com 506H

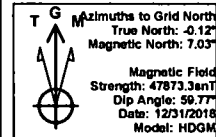
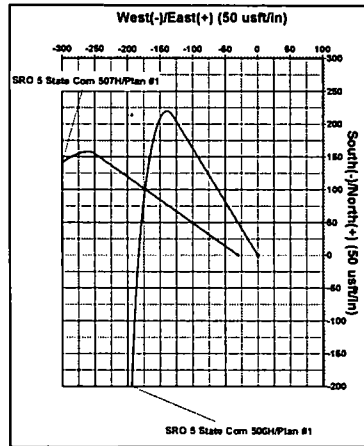
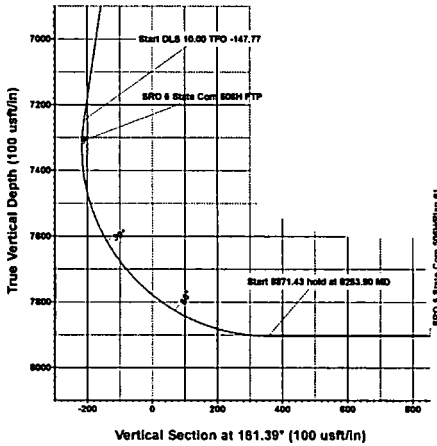
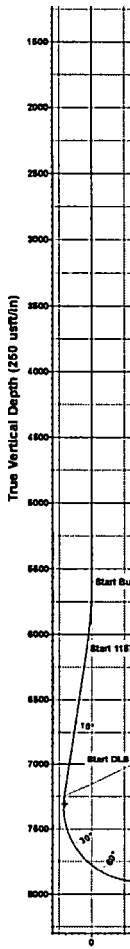
Ground Elevation:: 3009.20
RKB Elevation: KB=30' @ 3039.20usft (Nabors 894)
Rig Name: Nabors 894

Northing 392155.30 Easting 570711.00 Latitude 32.07794 Longitude -104.10504

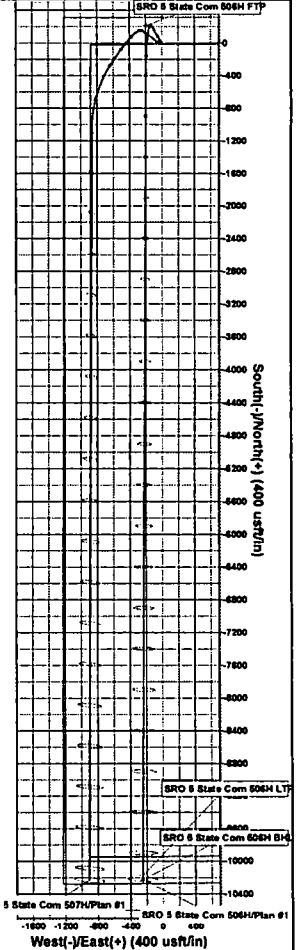


Planned Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
2	5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	0.00	Start DLS 10.00 TFO -147.77
3	6110.71	10.21	328.48	6108.01	38.70	-23.74	2.00	328.48	-38.11	Start DLS 10.00 TFO -147.77
4	7267.71	10.21	328.48	7246.87	213.60	-131.00	0.00	0.00	-210.35	Start 9871.43 hold at 8253.90 MD
5	8253.90	89.95	180.30	7903.00	-352.02	-196.31	10.00	-147.77	358.89	TD at 18125.33
6	18125.33	89.95	180.30	7911.00	-10223.30	-248.70	0.00	0.0010226.32		



PROJECT DETAILS: Eddy County, NM (NAD 27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1858
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid



Vertical Section at 181.39° (250 usft/in)