

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

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

Form C-103
October 13, 2009

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.)		WELL API NO. 30-015-45532
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator COG Operating LLC		6. State Oil & Gas Lease No.
3. Address of Operator 2208 W. Main Street, Artesia, NM 88210		7. Lease Name or Unit Agreement Name SRO 5 State Com
4. Well Location Unit Letter <u>B</u> : <u>314</u> feet from the <u>North</u> line and <u>925</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		8. Well Number 505H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3007.5'		9. OGRID Number 229137
		10. Pool name or Wildcat Delaware River, Bone Spring

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

NOTICE OF INTENTION TO:
PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
OTHER: ☒ SHL Change

SUBSEQUENT REPORT OF:
REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
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: 314' FNL & 675' FEL Section 5, T26S, R28E
To: 314' FNL & 925' 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 M. Padany TITLE: Geologist DATE: 2-25-19
Conditions of Approval (if any):

DISTRICT I
1625 N. FRENCH DR., BOBBS, NM 88440
Phone: (505) 592-4181 Fax: (505) 592-9720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 86810
Phone: (505) 746-1855 Fax: (505) 746-9720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 534-6170 Fax: (505) 534-6170

DISTRICT IV
1250 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3450 Fax: (505) 476-3450

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 30-015-45532	Pool Code 16800	Pool Name Delaware River; Bone Spring
Property Code 322993	Property Name SRO 5 STATE COM	Well Number 505H
OCRD No. 229137	Operator Name COG OPERATING, LLC	Elevation 3007.5'

Surface Location

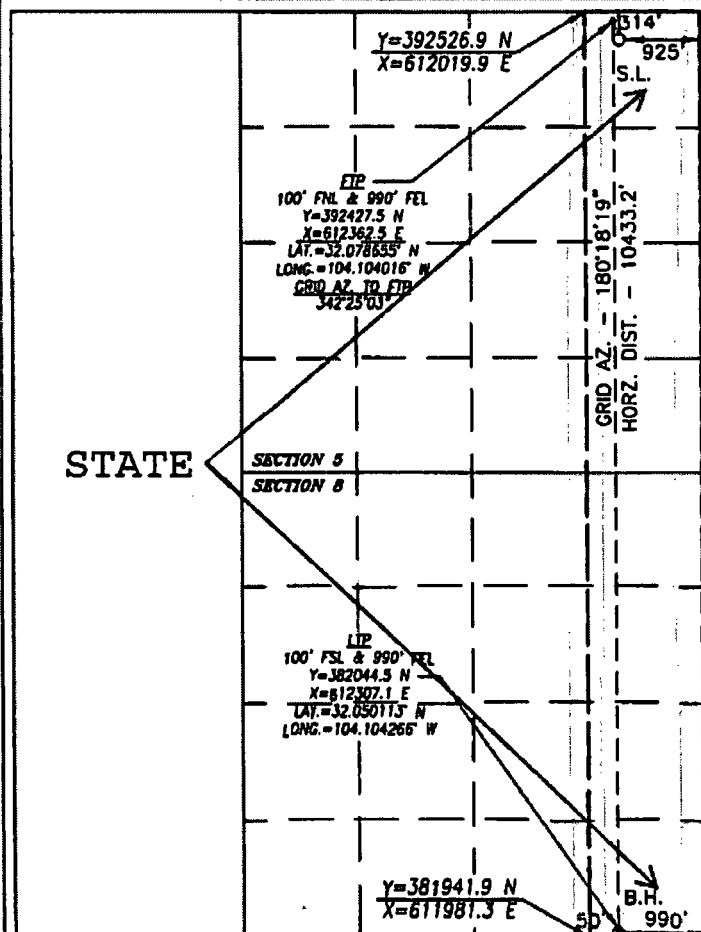
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	5	26-S	28-E		314	NORTH	925	EAST	EDDY

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
P	8	26-S	28-E		50	SOUTH	990	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**

	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> 1-29-19 Signature Date Mayte Reyes Printed Name mreyes1@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. JANUARY 14, 2018 Date of Survey Signature & Seal of Professional Surveyor  <i>Chad L. Harcrow</i> 1/16/19 Certificate No. CHAD HARCROW 17777 W.O. # 19-68 DRAWN BY: JR
	NAD 83 NME SURFACE LOCATION Y=392213.6 N X=612430.3 E LAT.=32.078067° N LONG.=104.103799° W NAD 83 NME PROPOSED BOTTOM HOLE LOCATION Y=381994.5 N X=612306.9 E LAT.=32.049976° N LONG.=104.104267° W

RWP 2-25-19



CONCHO

COG Operating L L C

Eddy County, NM (NAD 27 NME)

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

SRO 5 State Com 505H

NM OIL CONSERVATION
ARTESIA DISTRICT

JAN 31 2019

RECEIVED

Wellbore #1 30.01545532

Plan: Plan #2

Standard Survey Report

28 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 505H
Wellbore: Wellbore #1
Design: Plan #2

Local Co-ordinate Reference: Site Sec 05,T-26-S,R28-E
TVD Reference: KB=30' @ 3037.50usft (Nabors 894)
MD Reference: KB=30' @ 3037.50usft (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 505H			
Well Position	+N/-S	-0.10 usft	Northing:	392,156.10 usft
	+E/-W	-30.00 usft	Easting:	571,245.90 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	3,007.50 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/31/2018	7.13	59.77	47,874

Design	Plan #2				
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	-0.10	-30.00	180.69	

Survey Tool Program	Date 1/28/2019				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	18,222.63	Plan #2 (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	-0.10	-30.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	-0.10	-30.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	-0.10	-30.00	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 Corn 505H
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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	-0.10	-30.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	-0.10	-30.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	-0.10	-30.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	-0.10	-30.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	-0.10	-30.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	-0.10	-30.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	-0.10	-30.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	-0.10	-30.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	-0.10	-30.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	-0.10	-30.00	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 505H
Wellbore: Wellbore #1
Design: Plan #2

Local Co-ordinate Reference: Site Sec 05,T-26-S,R28-E
TVD Reference: KB=30' @ 3037.50usft (Nabors 894)
MD Reference: KB=30' @ 3037.50usft (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	-0.10	-30.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	-0.10	-30.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	-0.10	-30.00	0.00	0.00	0.00	0.00
Start Build 2.00									
5,700.00	2.00	342.41	5,699.98	1.56	-30.53	-1.66	2.00	2.00	0.00
5,800.00	4.00	342.41	5,799.84	6.55	-32.11	-6.63	2.00	2.00	0.00
5,900.00	6.00	342.41	5,899.45	14.86	-34.74	-14.90	2.00	2.00	0.00
6,000.00	8.00	342.41	5,998.70	26.48	-38.42	-26.47	2.00	2.00	0.00
6,009.26	8.19	342.41	6,007.87	27.72	-38.82	-27.71	2.00	2.00	0.00
Start 1371.07 hold at 6009.26 MD									
6,100.00	8.19	342.41	6,097.69	40.03	-42.72	-39.98	0.00	0.00	0.00
6,200.00	8.19	342.41	6,196.67	53.61	-47.02	-53.50	0.00	0.00	0.00
6,300.00	8.19	342.41	6,295.65	67.18	-51.33	-67.02	0.00	0.00	0.00
6,400.00	8.19	342.41	6,394.63	80.75	-55.63	-80.53	0.00	0.00	0.00
6,500.00	8.19	342.41	6,493.61	94.32	-59.93	-94.05	0.00	0.00	0.00
6,600.00	8.19	342.41	6,592.59	107.89	-64.23	-107.57	0.00	0.00	0.00
6,700.00	8.19	342.41	6,691.57	121.47	-68.53	-121.09	0.00	0.00	0.00
6,800.00	8.19	342.41	6,790.55	135.04	-72.83	-134.61	0.00	0.00	0.00
6,900.00	8.19	342.41	6,889.54	148.61	-77.14	-148.13	0.00	0.00	0.00
7,000.00	8.19	342.41	6,988.52	162.18	-81.44	-161.65	0.00	0.00	0.00
7,100.00	8.19	342.41	7,087.50	175.75	-85.74	-175.17	0.00	0.00	0.00
7,200.00	8.19	342.41	7,186.48	189.33	-90.04	-188.69	0.00	0.00	0.00
7,300.00	8.19	342.41	7,285.46	202.90	-94.34	-202.20	0.00	0.00	0.00
7,380.33	8.19	342.41	7,364.97	213.80	-97.80	-213.06	0.00	0.00	0.00
Start DLS 10.00 TFO -162.09									
7,400.00	6.34	336.93	7,384.48	216.13	-98.65	-215.39	10.00	-9.37	-27.87
7,500.00	4.87	211.11	7,484.25	217.59	-103.02	-216.79	10.00	-1.47	-125.82
7,600.00	14.39	189.98	7,582.75	201.68	-107.37	-200.83	10.00	9.52	-21.13
7,700.00	24.30	185.72	7,676.99	168.89	-111.59	-167.99	10.00	9.91	-4.26
7,800.00	34.25	183.84	7,764.11	120.21	-115.54	-119.27	10.00	9.96	-1.88
7,900.00	44.23	182.73	7,841.47	57.13	-119.09	-56.15	10.00	9.98	-1.11
8,000.00	54.21	181.96	7,906.70	-18.43	-122.15	19.44	10.00	9.98	-0.77
8,100.00	64.20	181.36	7,957.83	-104.19	-124.61	105.23	10.00	9.99	-0.60
8,200.00	74.19	180.86	7,993.30	-197.53	-126.41	198.58	10.00	9.99	-0.50
8,300.00	84.18	180.41	8,012.04	-295.62	-127.49	296.68	10.00	9.99	-0.46
8,358.21	89.99	180.15	8,015.00	-353.73	-127.77	354.79	10.00	9.99	-0.44
Start 9865.30 hold at 8358.21 MD									
8,400.00	89.99	180.15	8,015.01	-395.52	-127.88	396.58	0.00	0.00	0.00
8,500.00	89.99	180.15	8,015.02	-495.52	-128.14	496.57	0.00	0.00	0.00
8,600.00	89.99	180.15	8,015.03	-595.52	-128.40	596.57	0.00	0.00	0.00
8,700.00	89.99	180.15	8,015.04	-695.52	-128.66	696.57	0.00	0.00	0.00
8,800.00	89.99	180.15	8,015.05	-795.52	-128.92	796.56	0.00	0.00	0.00
8,900.00	89.99	180.15	8,015.06	-895.52	-129.19	896.56	0.00	0.00	0.00
9,000.00	89.99	180.15	8,015.07	-995.52	-129.45	996.55	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 505H
Wellbore: Wellbore #1
Design: Plan #2

Local Co-ordinate Reference: Site Sec 05,T-26-S,R28-E
TVD Reference: KB=30' @ 3037.50usft (Nabors 894)
MD Reference: KB=30' @ 3037.50usft (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)
9,100.00	89.99	180.15	8,015.08	-1,095.52	-129.71	1,096.55	0.00	0.00	0.00
9,200.00	89.99	180.15	8,015.09	-1,195.52	-129.97	1,196.54	0.00	0.00	0.00
9,300.00	89.99	180.15	8,015.10	-1,295.52	-130.23	1,296.54	0.00	0.00	0.00
9,400.00	89.99	180.15	8,015.11	-1,395.52	-130.50	1,396.53	0.00	0.00	0.00
9,500.00	89.99	180.15	8,015.12	-1,495.52	-130.76	1,496.53	0.00	0.00	0.00
9,600.00	89.99	180.15	8,015.13	-1,595.52	-131.02	1,596.52	0.00	0.00	0.00
9,700.00	89.99	180.15	8,015.14	-1,695.52	-131.28	1,696.52	0.00	0.00	0.00
9,800.00	89.99	180.15	8,015.15	-1,795.52	-131.54	1,796.52	0.00	0.00	0.00
9,900.00	89.99	180.15	8,015.16	-1,895.52	-131.81	1,896.51	0.00	0.00	0.00
10,000.00	89.99	180.15	8,015.17	-1,995.52	-132.07	1,996.51	0.00	0.00	0.00
10,100.00	89.99	180.15	8,015.18	-2,095.52	-132.33	2,096.50	0.00	0.00	0.00
10,200.00	89.99	180.15	8,015.19	-2,195.52	-132.59	2,196.50	0.00	0.00	0.00
10,300.00	89.99	180.15	8,015.20	-2,295.52	-132.85	2,296.49	0.00	0.00	0.00
10,400.00	89.99	180.15	8,015.21	-2,395.52	-133.11	2,396.49	0.00	0.00	0.00
10,500.00	89.99	180.15	8,015.22	-2,495.52	-133.38	2,496.48	0.00	0.00	0.00
10,600.00	89.99	180.15	8,015.23	-2,595.52	-133.64	2,596.48	0.00	0.00	0.00
10,700.00	89.99	180.15	8,015.24	-2,695.52	-133.90	2,696.48	0.00	0.00	0.00
10,800.00	89.99	180.15	8,015.25	-2,795.52	-134.16	2,796.47	0.00	0.00	0.00
10,900.00	89.99	180.15	8,015.26	-2,895.52	-134.42	2,896.47	0.00	0.00	0.00
11,000.00	89.99	180.15	8,015.27	-2,995.52	-134.69	2,996.46	0.00	0.00	0.00
11,100.00	89.99	180.15	8,015.28	-3,095.51	-134.95	3,096.46	0.00	0.00	0.00
11,200.00	89.99	180.15	8,015.29	-3,195.51	-135.21	3,196.45	0.00	0.00	0.00
11,300.00	89.99	180.15	8,015.30	-3,295.51	-135.47	3,296.45	0.00	0.00	0.00
11,400.00	89.99	180.15	8,015.31	-3,395.51	-135.73	3,396.44	0.00	0.00	0.00
11,500.00	89.99	180.15	8,015.32	-3,495.51	-135.99	3,496.44	0.00	0.00	0.00
11,600.00	89.99	180.15	8,015.33	-3,595.51	-136.26	3,596.44	0.00	0.00	0.00
11,700.00	89.99	180.15	8,015.34	-3,695.51	-136.52	3,696.43	0.00	0.00	0.00
11,800.00	89.99	180.15	8,015.35	-3,795.51	-136.78	3,796.43	0.00	0.00	0.00
11,900.00	89.99	180.15	8,015.36	-3,895.51	-137.04	3,896.42	0.00	0.00	0.00
12,000.00	89.99	180.15	8,015.37	-3,995.51	-137.30	3,996.42	0.00	0.00	0.00
12,100.00	89.99	180.15	8,015.38	-4,095.51	-137.57	4,096.41	0.00	0.00	0.00
12,200.00	89.99	180.15	8,015.39	-4,195.51	-137.83	4,196.41	0.00	0.00	0.00
12,300.00	89.99	180.15	8,015.40	-4,295.51	-138.09	4,296.40	0.00	0.00	0.00
12,400.00	89.99	180.15	8,015.41	-4,395.51	-138.35	4,396.40	0.00	0.00	0.00
12,500.00	89.99	180.15	8,015.42	-4,495.51	-138.61	4,496.39	0.00	0.00	0.00
12,600.00	89.99	180.15	8,015.43	-4,595.51	-138.88	4,596.39	0.00	0.00	0.00
12,700.00	89.99	180.15	8,015.44	-4,695.51	-139.14	4,696.39	0.00	0.00	0.00
12,800.00	89.99	180.15	8,015.45	-4,795.51	-139.40	4,796.38	0.00	0.00	0.00
12,900.00	89.99	180.15	8,015.46	-4,895.51	-139.66	4,896.38	0.00	0.00	0.00
13,000.00	89.99	180.15	8,015.47	-4,995.51	-139.92	4,996.37	0.00	0.00	0.00
13,100.00	89.99	180.15	8,015.48	-5,095.51	-140.18	5,096.37	0.00	0.00	0.00
13,200.00	89.99	180.15	8,015.49	-5,195.51	-140.45	5,196.36	0.00	0.00	0.00
13,300.00	89.99	180.15	8,015.50	-5,295.51	-140.71	5,296.36	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 505H
Wellbore: Wellbore #1
Design: Plan #2

Local Co-ordinate Reference: Site Sec 05,T-26-S,R28-E
TVD Reference: KB=30' @ 3037.50usft (Nabors 894)
MD Reference: KB=30' @ 3037.50usft (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	89.99	180.15	8,015.51	-5,395.51	-140.97	5,396.35	0.00	0.00	0.00
13,500.00	89.99	180.15	8,015.52	-5,495.51	-141.23	5,496.35	0.00	0.00	0.00
13,600.00	89.99	180.15	8,015.53	-5,595.51	-141.49	5,596.35	0.00	0.00	0.00
13,700.00	89.99	180.15	8,015.54	-5,695.51	-141.76	5,696.34	0.00	0.00	0.00
13,800.00	89.99	180.15	8,015.55	-5,795.51	-142.02	5,796.34	0.00	0.00	0.00
13,900.00	89.99	180.15	8,015.56	-5,895.51	-142.28	5,896.33	0.00	0.00	0.00
14,000.00	89.99	180.15	8,015.57	-5,995.50	-142.54	5,996.33	0.00	0.00	0.00
14,100.00	89.99	180.15	8,015.58	-6,095.50	-142.80	6,096.32	0.00	0.00	0.00
14,200.00	89.99	180.15	8,015.59	-6,195.50	-143.06	6,196.32	0.00	0.00	0.00
14,300.00	89.99	180.15	8,015.60	-6,295.50	-143.33	6,296.31	0.00	0.00	0.00
14,400.00	89.99	180.15	8,015.61	-6,395.50	-143.59	6,396.31	0.00	0.00	0.00
14,500.00	89.99	180.15	8,015.62	-6,495.50	-143.85	6,496.30	0.00	0.00	0.00
14,600.00	89.99	180.15	8,015.63	-6,595.50	-144.11	6,596.30	0.00	0.00	0.00
14,700.00	89.99	180.15	8,015.64	-6,695.50	-144.37	6,696.30	0.00	0.00	0.00
14,800.00	89.99	180.15	8,015.65	-6,795.50	-144.64	6,796.29	0.00	0.00	0.00
14,900.00	89.99	180.15	8,015.66	-6,895.50	-144.90	6,896.29	0.00	0.00	0.00
15,000.00	89.99	180.15	8,015.67	-6,995.50	-145.16	6,996.28	0.00	0.00	0.00
15,100.00	89.99	180.15	8,015.68	-7,095.50	-145.42	7,096.28	0.00	0.00	0.00
15,200.00	89.99	180.15	8,015.69	-7,195.50	-145.68	7,196.27	0.00	0.00	0.00
15,300.00	89.99	180.15	8,015.70	-7,295.50	-145.94	7,296.27	0.00	0.00	0.00
15,400.00	89.99	180.15	8,015.71	-7,395.50	-146.21	7,396.26	0.00	0.00	0.00
15,500.00	89.99	180.15	8,015.72	-7,495.50	-146.47	7,496.26	0.00	0.00	0.00
15,600.00	89.99	180.15	8,015.73	-7,595.50	-146.73	7,596.26	0.00	0.00	0.00
15,700.00	89.99	180.15	8,015.74	-7,695.50	-146.99	7,696.25	0.00	0.00	0.00
15,800.00	89.99	180.15	8,015.75	-7,795.50	-147.25	7,796.25	0.00	0.00	0.00
15,900.00	89.99	180.15	8,015.76	-7,895.50	-147.52	7,896.24	0.00	0.00	0.00
16,000.00	89.99	180.15	8,015.77	-7,995.50	-147.78	7,996.24	0.00	0.00	0.00
16,100.00	89.99	180.15	8,015.79	-8,095.50	-148.04	8,096.23	0.00	0.00	0.00
16,200.00	89.99	180.15	8,015.80	-8,195.50	-148.30	8,196.23	0.00	0.00	0.00
16,300.00	89.99	180.15	8,015.81	-8,295.50	-148.56	8,296.22	0.00	0.00	0.00
16,400.00	89.99	180.15	8,015.82	-8,395.50	-148.83	8,396.22	0.00	0.00	0.00
16,500.00	89.99	180.15	8,015.83	-8,495.50	-149.09	8,496.22	0.00	0.00	0.00
16,600.00	89.99	180.15	8,015.84	-8,595.50	-149.35	8,596.21	0.00	0.00	0.00
16,700.00	89.99	180.15	8,015.85	-8,695.50	-149.61	8,696.21	0.00	0.00	0.00
16,800.00	89.99	180.15	8,015.86	-8,795.50	-149.87	8,796.20	0.00	0.00	0.00
16,900.00	89.99	180.15	8,015.87	-8,895.49	-150.13	8,896.20	0.00	0.00	0.00
17,000.00	89.99	180.15	8,015.88	-8,995.49	-150.40	8,996.19	0.00	0.00	0.00
17,100.00	89.99	180.15	8,015.89	-9,095.49	-150.66	9,096.19	0.00	0.00	0.00
17,200.00	89.99	180.15	8,015.90	-9,195.49	-150.92	9,196.18	0.00	0.00	0.00
17,300.00	89.99	180.15	8,015.91	-9,295.49	-151.18	9,296.18	0.00	0.00	0.00
17,400.00	89.99	180.15	8,015.92	-9,395.49	-151.44	9,396.17	0.00	0.00	0.00
17,500.00	89.99	180.15	8,015.93	-9,495.49	-151.71	9,496.17	0.00	0.00	0.00
17,600.00	89.99	180.15	8,015.94	-9,595.49	-151.97	9,596.17	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 505H
Wellbore: Wellbore #1
Design: Plan #2

Local Co-ordinate Reference: Site Sec 05,T-26-S,R28-E
TVD Reference: KB=30' @ 3037.50usft (Nabors 894)
MD Reference: KB=30' @ 3037.50usft (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	89.99	180.15	8,015.95	-9,695.49	-152.23	9,696.16	0.00	0.00	0.00
17,800.00	89.99	180.15	8,015.96	-9,795.49	-152.49	9,796.16	0.00	0.00	0.00
17,900.00	89.99	180.15	8,015.97	-9,895.49	-152.75	9,896.15	0.00	0.00	0.00
18,000.00	89.99	180.15	8,015.98	-9,995.49	-153.01	9,996.15	0.00	0.00	0.00
18,100.00	89.99	180.15	8,015.99	-10,095.49	-153.28	10,096.14	0.00	0.00	0.00
18,200.00	89.99	180.15	8,016.00	-10,195.49	-153.54	10,196.14	0.00	0.00	0.00
18,223.51	89.99	180.15	8,016.00	-10,219.00	-153.60	10,219.65	0.00	0.00	0.00
TD at 18223.51									

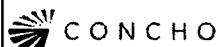
Design Targets
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SRO 5 State Com 50f - plan hits target center - Point	0.00	0.00	7,364.97	213.80	-97.80	392,370.00	571,178.10	32.07853	-104.10353
SRO 5 State Com 50f - plan misses target center by 0.17usft at 18173.51usft MD (8015.99 TVD, -10169.00 N, -153.47 E) - Point	0.00	0.00	8,015.99	-10,169.00	-153.30	381,987.20	571,122.60	32.04999	-104.10378
SRO 5 State Com 50f - plan misses target center by 0.40usft at 18223.51usft MD (8016.00 TVD, -10219.00 N, -153.60 E) - Point	0.00	0.00	8,016.40	-10,219.00	-153.60	381,937.20	571,122.30	32.04985	-104.10378

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5600	5600	0	-30	Start Build 2.00
6009	6008	28	-39	Start 1371.07 hold at 6009.26 MD
7380	7365	214	-98	Start DLS 10.00 TFO -162.09
8358	8015	-354	-128	Start 9865.30 hold at 8358.21 MD
18,224	8016	-10,219	-154	TD at 18223.51

Checked By: _____ Approved By: _____ Date: _____



COG Operating L.L.C
Project: Eddy County, NM (NAD 27 NME)
Site: Sec 05, T-28-S, R28-E
Well: SRO 5 State Com 505H
Wellbore: Wellbore #1
Plan: Plan #2 (SRO 5 State Com 505H/Wellbore #1)
Nabors 894

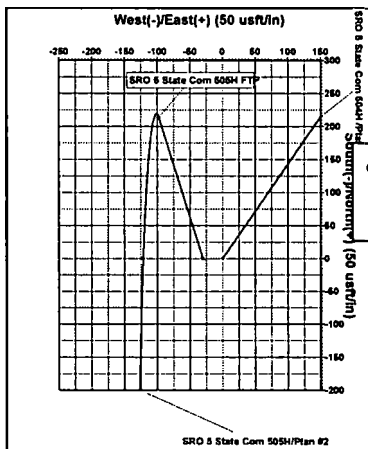
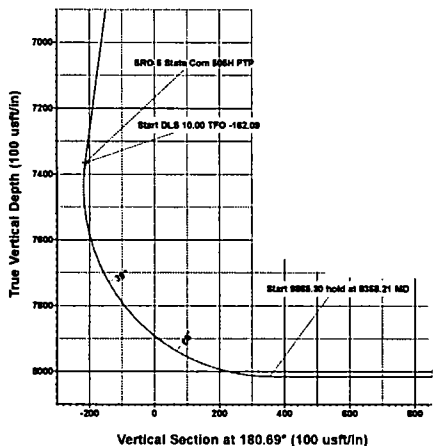
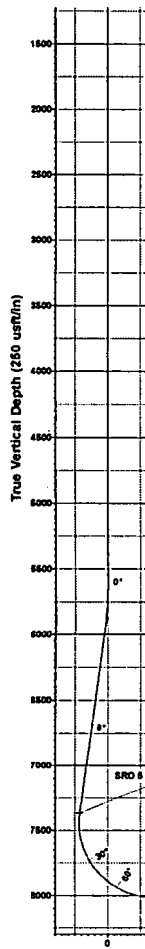
WELL DETAILS: SRO 5 State Com 505H

Ground Elevation:: 3007.50
RKB Elevation: KB=30' @ 3037.50usft (Nabors 894)
Rig Name: Nabors 894

Northing 392156.10 Easting 571245.90 Latitude 32.07794 Longitude -104.10331

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	-0.10	-30.00	0.00	0.00	0.00	Start Build 2.00
2	5600.00	0.00	0.00	5600.00	-0.10	-30.00	0.00	0.00	0.00	Start DLS 10.00 TFO -162.09
3	6009.26	8.19	342.41	6007.87	27.72	-38.82	2.00	342.41	-27.71	Start DLS 10.00 TFO -162.09
4	7380.33	8.19	342.41	7364.97	213.80	-97.80	0.00	0.00	-213.08	Start 9865.30 hold at 8358.21 MD
5	8358.21	89.99	180.15	8015.00	-353.73	-127.77	10.00	-162.09	354.79	TD at 18223.51
6	18223.51	89.99	180.15	8016.00	-10219.00	-153.60	0.00	0.00	0.00	



PROJECT DETAILS: Eddy County, NM (NAD 27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

