

COG OPERATING LLC

Daisy 24 State Com 501H, 502H, 503H & 504H

Section 24 & 25 - T25S-27E

Eddy County, New Mexico

BEFORE THE OIL CONSERVATION DIVISION EXAMINER HEARING APRIL 4, 2019

CASE NO. 20335



STATE OF NEW MEXICO
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES
OIL CONSERVATION DIVISION

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 20335

AFFIDAVIT OF TRAVIS MACHA IN SUPPORT OF CASE NO. 20335

Travis Macha, of lawful age and being first duly sworn, declares as follows:

1. My name is Travis Macha. I work for COG Operating LLC ("COG") as a

Landman.

2. I have not testified before the New Mexico Oil Conservation Division as an

expert witness in petroleum land matters. I graduated from Texas Tech University with a B.A. in

Energy Commerce in 2016. From January 2016 through January 2017, I worked as an

independent landman for Peak Land Services. In January 2017, I started working for Concho

Resources as a Lease Analyst. Since May 2018, I have been working as a Landman, including in

the Permian Basin. I am a member of the following professional organizations: PBLA (Permian

Basin Landman Association); AAPL (American Association of Professional Landmen); and

NALTA (National Association of Lease and Title Analysts).

3. I am familiar with the application filed by COG in this case, and I am familiar

with the status of the lands in the subject area.

4. None of the uncommitted parties has indicated opposition to this pooling

application, and therefore I do not expect any opposition at the hearing.

1

Submitted by: COG OPERATING, LLC Hearing Date: April 4, 2019

- 5. COG is seeking an order pooling all uncommitted interests in the Bone Spring formation underlying a 640-acre standard horizontal spacing unit comprised of the W/2 of Sections 24 and 25, Township 25 South, Range 27 East, Eddy County, New Mexico.
 - 6. COG seeks to dedicate this standard spacing unit to the following proposed wells:
 - The **Daisy 24 State Com 501H** well to be drilled from a surface hole location in NW/4 NW/4 (Unit D) of Section 24 to a bottom hole location in the SW/4 SW/4 (Unit M) of Section 25.
 - The **Daisy 24 State Com 502H** well to be drilled from a surface hole location in NW/4 NW/4 (Unit D) of Section 24 to a bottom hole location in the SW/4 SW/4 (Unit M) of Section 25.
 - The Daisy 24 State Com 503H well to be drilled from a surface hole location in NE/4 NW/4 (Unit C) of Section 24 to a bottom hole location in the SE/4 SW/4 (Unit N) of Section 25.
 - The **Daisy 24 State Com 504H** well to be drilled from a surface hole location in NE/4 NW/4 (Unit C) of Section 24 to a bottom hole location in the SE/4 SW/4 (Unit N) of Section 25.
- 7. COG has prepared draft Form C-102s to be filed with the Division for the proposed wells. Copies of the draft C-102s for these wells are attached hereto as **COG Exhibits A-1, A-2, A-3,** and **A-4,** respectively. The Pool Code assigned is 30216 (Hay Hollow; Bone Spring North Pool).
- 8. Incorporating the proximity tracts, the completed interval for all four wells will comply with the Division's setback requirements.
- 9. Because the proposed wells will be simultaneously drilled and completed, COG requests an extension of the time period to drill and complete the initial well from 120 days to 365 days.
 - 10. There are no depth severances in the Bone Spring formation.

- 11. COG Exhibit A-5 is an exhibit I prepared identifying the tracts of land comprising the spacing unit. This spacing unit includes state and fee land. This exhibit shows the interest owners and the percentage of and type of ownership interests in the proposed spacing unit. A unit recapitulation, showing the percentage of ownership interests in the spacing unit, is also included on the exhibit.
- 12. COG is seeking to pool two working interest owners only: Devon Energy Production Company LP and Chevron USA, Inc.
- 13. There is one overriding royalty interest, but the underlying instrument grants COG the authority to pool.
- 14. A copy of a well proposal letter, along with the AFEs, is attached as COG

 Exhibit A-6. The costs reflected in the AFEs are consistent with what COG and other operators have incurred for drilling similar horizontal wells in the area.
- 15. COG has been able to locate contact information for all of the parties it seeks to pool and has undertaken good faith efforts to reach an agreement with the uncommitted interest owners.
- 16. COG seeks approval of overhead and administrative costs at \$8,000/month while drilling and \$800/month while producing. These costs are consistent with what COG and other operators are charging in this area for these types of wells. COG respectfully requests that these administrative and overhead costs be incorporated into any order entered by the Division in this case.
- 17. I provided the law firm of Holland & Hart LLP a list of names and addresses for the uncommitted interest owners shown on Exhibit A-5. In compiling these addresses, COG

conducted a diligent search of all public records in the county where the proposed wells are located and of phone directories, including computer searches. All parties were locatable.

18. **COG Exhibit A-1 through A-6** were either prepared by me or compiled under my direction and supervision.

TRAVIS MACHA

STATE OF TEXAS

COUNTY OF Midland

SUBSCRIBED and SWORN to before me this <u></u>

day of April 2019 by Travis

Macha.

Brittany Hull

Notary Public, State of Texas

Notary ID 13118386-9

My Commission Eq.06-22-2021

NOTARY PUBLIC

My Commission Expires:

6.22.21

12246198_1

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240 Phone: (575) 393-6161 Fex: (575) 393-0720 State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 88210 Phone: (576) 748-1263 Fax: (575) 748-9720

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 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	Pool Code	Pool Name	
Property Code		perty Name 4 STATE COM	Well Number 501H
OGRID No.	•	erator Name ERATING, LLC	Elevation 3051.0'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	24	25-S	27-E		275	NORTH	385	WEST	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
М	25	25-S	27-E		50	SOUTH	330	WEST	EDDY
Dedicated Acres Joint or Infill Consolidation Code		Code Or	der No.						

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

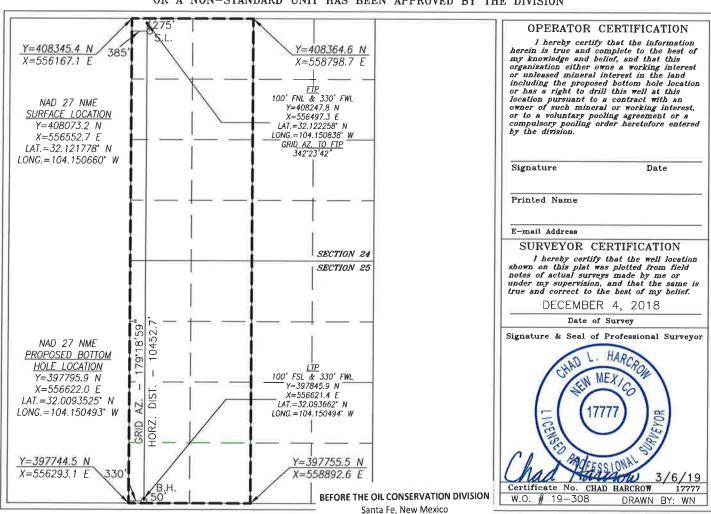


Exhibit No. A-1
Case No. 20335
Submitted by: COG OPERATING, LLC
Hearing Date: April 4, 2019

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240 Phone: (675) 363-6161 Fax: (676) 393-0720

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

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

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

□ AMENDED REPORT

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

one. (655) 110 6166 142. (666) 110 8462	WELL LOCATION AND A	CREAGE DEDICATION PLAT			
API Number	Pool Code	Pool Name			
Property Code	-	perty Name Well Number 4 STATE COM 502H			
OGRID No.	-	or Name ATING, LLC	Elevation 3051.0		
700					

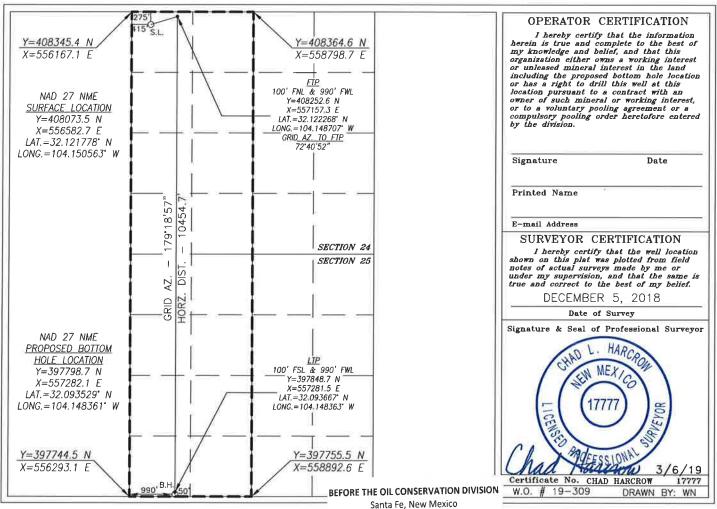
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	24	25-S	27-E		275	NORTH	415	WEST	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
М	25	25-S	27-E		50	SOUTH	990	WEST	EDDY
Dedicated Acres Joint or Infill Consolidation Code					ler No.			1	
							74		

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



Santa Fe, New Mexico
Exhibit No. A-2
Case No. 20335
Submitted by: COG OPERATING, LLC
Hearing Date: April 4, 2019

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

State of New Mexico Energy, Minerals & Natural Resources Department

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-6178 Fax: (506) 334-6170

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

API Number

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 Pool Code Pool Name

Property Code	Property Name	Well Number
	DAISY 24 STATE COM	503H
OGRID No.	Operator Name	Elevation
	COG OPERATING, LLC	3057.0

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
С	24	25-S	27-E		275	NORTH	1970	WEST	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
N	25	25-S	27-E		50	SOUTH	1645	WEST	EDDY
Dedicated Acres Joint or Infill Consolidation Code			Code Or	der No.					

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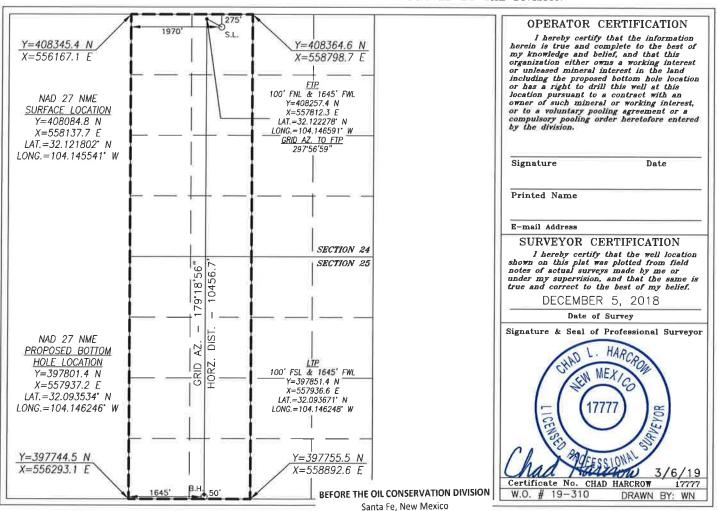


Exhibit No. A-3 Case No. 20335 Submitted by: COG OPERATING, LLC Hearing Date: April 4, 2019

DISTRICT I 1825 N. FRENCH DR., HOBBS, NM 88240 Phone: (575) 393-6161 Fax: (576) 393-0720

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-8178 Fax: (505) 334-8170

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

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

110101 (000) 110 0100 112. (000) 110 0100		ACREAGE DEDICATION	PLAT
API Number	Pool Code		Pool Name
Property Code	Prop	erty Name	Well Number
	DAISY 24	STATE COM	504H
OGRID No.		ator Name	Elevation
	COG OPE	RATING, LLC	3057.2'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
С	24	25-S	27-E		275	NORTH	2000	WEST	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
N	25	25-S	27-E	=	50	SOUTH	2310	WEST	EDDY
Dedicated Acres Joint or Infill Consolidation Code			Code Or	der No.	,,,				

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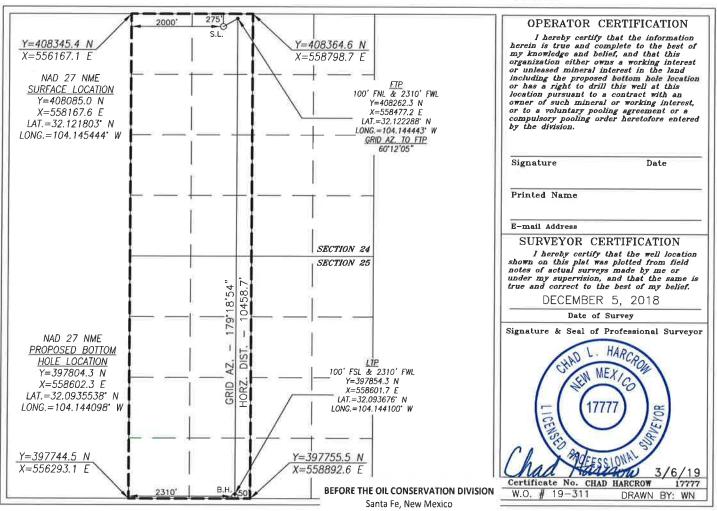
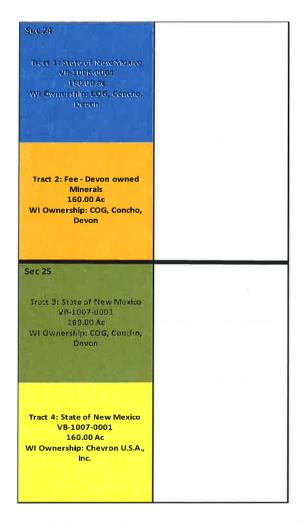
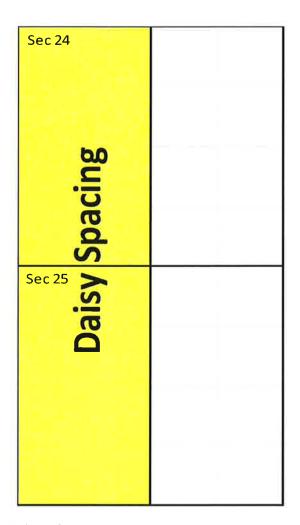


Exhibit No. A-4 Case No. 20335 Submitted by: COG OPERATING, LLC Hearing Date: April 4, 2019





Daisy 24 State Com 501H, 502H, 503H, 504H - Compulsory Pooling Info

Sec 24: W2, Sec 25: W2, T25S-R27E - Bone Spring

Leasehold Ownership

	COG WI	Concho WI	Devon WI	Chevron WI
Tract 1 - Sec 24: NW	63.51961%	1.73562%	34.74477%	0.0000%
Tract 2 - Sec 24: SW	63.51961%	1.73562%	34.74477%	0.0000%
Tract 3 - Sec 25: NW	63.51961%	1.73562%	34.74477%	0.0000%
Tract 4 - Sec 25: SW	0.0000%	0.0000%	0.0000%	100.0000%

Unit Recapitulation

Owner	Working Interest
COG Operating LLC	47.639705%
Concho Oil & Gas LLC	1.301718%
Devon Energy Prod Co LP	26.058577%
Chevron U.S.A., Inc.	25.000000%

Parties Being Pooled Are Highlighted in Yellow.

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico
Exhibit No. A-5
Case No. 20335

Submitted by: COG OPERATING, LLC Hearing Date: April 4, 2019



January 4, 2019

Via Certified Mail, Return Receipt Requested **WORKING INTEREST OWNERS ON ATTACHED EXHIBIT "A"**

Re: **Daisy 24 State Com #501H & 502H** (Daisy Pad 1) **Daisy 24 State Com #503H & 504H** (Daisy Pad 2)

> W/2 of Sections 24, 25, T25S-R27E Eddy County, New Mexico

Dear Sir or Madam:

COG Operating, LLC ("COG") hereby proposes the drilling of the following horizontal wells with productive laterals located in the W/2 of Sections 24 and 25, T25S-R27E, Eddy County, New Mexico. The surface pad locations will be located in Unit C and D of Section 24, T25S-R27E (subject to change).

- Daisy 24 State Com 501H, to be drilled to a depth sufficient to test the 2nd Bone Spring formation at a total measured depth of 17,500'. The surface location for this well is proposed at a legal location in Unit D of Section 24, and a bottom hole location at a legal location in Unit M of Section 25. The dedicated project area with be the W/2 of Sections 24 and 25, T25S-R27E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$10,672,200, as shown on the attached Authority for Expenditure ("AFE").
- Daisy 24 State Com 502H, to be drilled to a depth sufficient to test the 2nd Bone Spring formation at a total measured depth of 17,500'. The surface location for this well is proposed at a legal location in Unit D of Section 24, and a bottom hole location at a legal location in Unit M of Section 25. The dedicated project area with be the W/2 of Sections 24 and 25, T25S-R27E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$10,672,200, as shown on the attached Authority for Expenditure ("AFE").
- Daisy 24 State Com 503H, to be drilled to a depth sufficient to test the 2nd Bone Spring formation at a total measured depth of 17,500'. The surface location for this well is proposed at a legal location in Unit C of Section 24, and a bottom hole location at a legal location in Unit N of Section 25. The dedicated project area with be the W/2 of Sections 24 and 25, T25S-R27E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$10,672,200, as shown on the attached Authority for Expenditure ("AFE").
- Daisy 24 State Com 504H, to be drilled to a depth sufficient to test the 2nd Bone Spring formation at a total measured depth of 17,600'. The surface location for this well is proposed at a legal location in Unit C of Section 24, and a bottom hole location at a legal location in Unit N of Section 25. The dedicated project area with be the W/2 of Sections 24 and 25, T25S-R27E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$10,672,200, as shown on the attached Authority for Expenditure ("AFE").

COG is proposing this well under the terms of a new Operating Agreement which will follow under separate cover.

Hearing Date: April 4, 2019

January 4, 2019 – Page 2 Daisy 24 State Com 50H, 502H, 503H, 504H

If we do not reach an agreement within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well.

Please indicate your participation elections in the space provided below, sign and return this letter, along with a signed copy of the enclosed AFEs and a copy of your geologic requirements, to my attention at the letterhead address or by email to tmacha@concho.com. Should you have any questions, please do not hesitate to contact me at 432.221.0452.

Sincerely,

COG Operating LLC

Travis Macha Landman

TM:bh Enc

	I/We hereby elect to participate in the drilling and completion of the Daisy 24 State Com 501H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Daisy 24 State Com 501H.
	I/We hereby elect to participate in the drilling and completion of the Daisy 24 State Com 502H.
1.5	I/We hereby elect not to participate in the drilling and completion of the Daisy 24 State Com 502H.
	I/We hereby elect to participate in the drilling and completion of the Daisy 24 State Com 503H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Daisy 24 State Com 503H.
-	I/We hereby elect to participate in the drilling and completion of the Daisy 24 State Com 504H.
-	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Daisy 24 State Com 504H.
_	
By: Name:	
Date:	

EXHIBIT "A" WORKING INTEREST OWNERS

Via Certified Mail, Return Receipt Requested No. 91 7199 9991 7038 7465 6273 Chevron U.S.A. Inc. 6301 Deauville Midland, TX 79706 Attn: Kristen Hunter

Via Certified Mail, Return Receipt Requested No. 91 7199 9991 7038 7465 6266 Devon Energy Production Company LP 333 W Sheridan Ave. Oklahoma City, OK 73102 Attn: Land Department

COG OPERATING LLC AUTHORITY FOR EXPENDITURE **Drill & Complete**

DAISY 24 STATE COM #501H

Well Name SHL BHL Formation Legal AFE Numbers

2ND BONE SPRING 25S 27E 24 DRAFT-004452, DRAFT-004454, DRAFT-004455, DRAFT-004456, DRAFT-004458, DRAFT-004459

Prospect State & County Objective Depth TVD

#717054 ATLAS 2527 NEW MEXICO, EDDY Drill & Complete 17,500 7,756

Cost Description	Code	PreSpud (PS) Pre-Set Casing(PC	Drilling (DR)	Completions (C)	Tank Bity Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
Tangible Costs D-Surface Casing	401		\$13,000.00		ľ		\$0.00	\$13,000.00
D-Intermed Csg	402		\$72,000.00				\$0.00	\$72,000.00
D-Production Casing/Liner	403		\$306,000.00				\$0,00	\$306,000.00
D-Wellhead Equip	405 504		\$28,000.00	\$52,100.00			\$0.00	\$28,000.00
C-Tubing C-Wellhead Equip	505			\$13,200.00			\$0.00 \$0.00	\$52,100,00 \$13,200,00
PEQ-Pumping Unit	506					\$96,000.00	\$0.00	\$96,000,00
PEQ-Rods	508					\$55,000.00	\$0.00	\$55,000.00
TB-Tanks TB-Flowlines/Pipelines	510 511				\$50,000,00 \$50,000,00		\$0.00	\$50,000,00 \$50,000,00
TB-Hir Trir/Seprir	512				\$200,000.00		\$0.00	\$200,000,00
TB-Electrical System/Equipment	513				\$100,000.00		\$0.00	\$100,000.00
C-Pckrs/Anchors/Hgrs	514			\$65,000.00			\$0.00	\$65,000.00
TB-Couplings/Fittings/Valves TB-Gas Lift/Compression	515 516				\$100,000.00 \$30,000.00		\$0.00	\$100,000.00
TB-Pumps-Surface	521		-	-	\$10,000,00		\$0.00	\$10,000,00
TB-Instrumentation/SCADA/POC	522				\$10,000.00		\$0,00	\$10,000,00
TB-Melers/Lacls	525				\$35,000.00		\$0.00	\$35,000,00
TB-Flares/Combusters/Emission C-Gas Lift/Compression	526 527		-	\$10,000.00	\$35,000.00		\$0.00 \$0.00	\$35,000.00 \$10,000.00
PEQ-Instrumentation/SCADA/POC	529			\$10,000.00		\$7,000,00	\$0.00	\$7,000,00
PEQ-Tubing	530					\$5,000.00	\$0.00	\$5,000.00
PEQ-Wellhead Equipment	531					\$3,000.00	\$0,00	\$3,000.00
PEQ-Pumps PEQ Floatring! System	532					\$5,000.00	\$0.00	\$5,000.00
PEQ-Electrical System PEQ-Packers/Anchors/Hangers	533 534					\$15,000.00 \$2,000.00	\$0.00 \$0.00	\$15,000.00
PEQ-Miscellaneous	535					\$3,000.00	\$0.00	\$3,000.00
Total Tangible Costs		\$0.00 \$0.00	\$419,000.00	\$140,300.00	\$620,000.00	\$191,000.00	\$0.00	\$1,370,300.00
			177				=101/01/20	
Intangible Costs PS-Title/Permits	201	\$20,000.00	T		ľ		S0.00 T	\$20,000.00
D-Insurance	202	\$2,500 00					\$0.00	\$2,500,00
PS-Damages/ROW	203	\$20,000.00					\$0.00	\$20,000,00
PS-Survey/Stake Lctn D-Lcln/Pils/Roads	204 205	\$7,000.00	\$135,000.00				\$0.00 \$0.00	\$7,000.00 \$135,000.00
D-Drilling Overhead	205		\$135,000.00	-			\$0.00	\$5,700.00
D-Daywork Contract	209		\$552,000.00				\$0.00	\$552,000.00
D-Directional Drig Services	210		\$187,000.00				\$0.00	\$187,000.00
D-Fuel & Power	211		\$103,000.00				\$0.00	\$103,000.00
D-Water D-Bits	212 213		\$53,000.00 \$65,000.00				\$0.00 \$0.00	\$53,000.00 \$65,000.00
D-Mud & Chemicals	214		\$75,000.00				\$0.00	\$75,000.00
D-Cement Surface	217		\$16,000.00				\$0.00	\$16,000.00
D-Cement Intermed	218		\$23,000.00				\$0.00	\$23,000.00
D-Prod-2nd Int Cmt D-Float Equipment & Centralizers	219		\$110,000.00		-		\$0.00 \$0.00	\$110,000.00 \$45,000.00
D-Csg Crews & Equip	222		\$35,000.00				\$0.00	\$35,000.00
D-Geologic/Engnrg	224		\$6,000.00				\$0.00	\$6,000.00
D-Contract Labor	225		\$6,500.00				\$0.00	\$6,500.00
D-Company Sprvsn D-Contract Sprvsn	226 227		\$34,200,00 \$89,000,00				\$0.00 \$0.00	\$34,200.00 \$89,000.00
D-Tslg Csg/Tbg	228		\$30,000.00				\$0.00	\$30,000.00
D-Mud Logging Unil	229		\$18,000.00				\$0.00	\$18,000.00
D-Perf/Wireline Svc	231		\$4,000.00				\$0.00	\$4,000.00
D-Rentals-Surface D-Rentals-Subsrfc	235 236		\$115,000.00				\$0.00	\$115,000,00 \$90,000,00
D-Trucking/Forklift/Rig Mob	237		\$200,000.00				\$0.00	\$200,000.00
D-Welding Services	238		\$3,000.00				\$0.00	\$3,000.00
D-Miscellaneous	242		\$5,000.00				\$0.00	\$5,000.00
D-Contingency D-Envrnmtl/Clsd Loop	243		\$42,000.00 \$180.000.00				\$0.00 \$0.00	\$42,000.00 \$180,000.00
C-Lcin/Pits/Roads	305		#100,000,00	\$12,200.00			\$0.00	\$12,200.00
C-Completion OH	306			\$15,000.00			\$0.00	\$15,000.00
C-Frac Equipment	307			\$1,454,000.00			\$0.00	\$1,454,000.00
C-Frac Chemicals C-Frac Proppant	308			\$577,000.00 \$507,000.00			\$0.00 \$0.00	\$577,000.00 \$507,000.00
C-Frac Proppant Transportation	310			\$500,000.00			\$0.00	\$500,000.00
C-Fuel Delivery & Services	311			\$68,000.00			\$0.00	\$68,000.00
C-Water	312			\$1,205,000.00			\$0.00	\$1,205,000.00
C-Bits C-Mud & Chemicals	313 314			\$4,500.00 \$25,000.00			\$0.00	\$4,500.00 \$25,000.00
C-Contract Labor	325			\$40,000.00			\$0.00	\$25,000.00
C-Company Sprvsn	326			\$15,000.00			\$0.00	\$15,000,00
C-Contract Sprvsn	327			\$169,000.00			\$0.00	\$169,000.00
C-Tstg Csg/Tbg C-Perl/Wireline Svc	328			\$5,000.00			\$0.00 \$0.00	\$5,000.00 \$538,000.00
C-Stimulation/Treating	332			\$12,000.00			\$0.00	\$12,000.00
C-Completion Unit	333			\$43,000.00			\$0.00	\$43,000.00
C-Rentals-Surface	335			\$393,000.00			\$0.00	\$393,000,00
C-Rentals-Subsrfc	336			\$55,000.00			\$0.00	\$55,000.00
C-Trucking/Forklift/Rig Mob C-Welding Services	337 338			\$40,000.00			\$0.00 \$0.00	\$40,000.00 \$5,000.00
C-Water Disposal	339			\$60,000.00			\$0.00	\$60,000.00
C-Contingency	343			\$250,000.00			\$0.00	\$250,000.00
C-Envrnmtl/Clsd Loop	344			\$5,000.00			\$0.00	\$5,000.00
C-Dyed Diesel C-Flowback Crews & Equip	345 347			\$484,000.00			\$0.00 \$0.00	\$484,000.00 \$77,000.00
TB-Location/Pits/Roads	353			377,000.00	\$35,000.00		\$0.00	\$35,000.00
TB-Contract Labor	356				\$150,000.00		\$0.00	\$150,000.00
TB-Rentals-Surface	359				\$1,000.00		\$0.00	\$1,000.00
TB-Welding Services	361				\$50,000.00		\$0.00	\$50,000.00
TB-Water Disposal PEQ-Contract Labor	362 374				\$200,000,00	\$6,500.00	\$0.00 \$0.00	\$200,000.00 \$6,500.00
PEQ-Contract Supervision	376			Page 1 of 2		\$5,000.00	\$0.00	\$5,000.00
The state of the s					-	- CEASTINE -		

Note: The above costs are estimate:	only. Act	ual costs will be billed a	s incurred.						
Total Gross Cost		\$49,500.00	\$0.00	\$2,646,400.00	\$6,699,000.00	\$1,056,000.00	\$221,300.00	\$0.00	\$10,672,200.00
Total Intangible Costs		\$49,500.00	\$0.00	\$2,227,400.00	\$6,558,700.00	\$436,000.00	\$30,300.00	\$0.00	\$9,301,900.00
PEQ-Trkg/Forklift/Rig Mobilization	385						\$3,000.00	\$0.00	\$3,000.00
PEQ-Rentals-Surface	383						\$7,000,00	\$0.00	\$7,000.00
PEQ-Completion Unit	381						\$8,800.00	\$0.00	\$8,800.00

COG Operating LLC

Printed Name: Title: Date:

Date Prepared: COG Operating LLC Ву

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC **AUTHORITY FOR EXPENDITURE Drill & Complete**

DAISY 24 STATE COM #502H

Well Name SHL BHL Formation Legal AFE Numbers

2ND BONE SPRING 25S 27E 24D DRAFT-004460. DRAFT-004461. DRAFT-004462. DRAFT-004463. DRAFT-004464. DRAFT-004464.

Prospect State & County Objective Depth TVD

#717054 ATLAS 2527 NEW MEXICO, EDDY Drill & Complete 17,500 7,776

st Description	Code	PreSpud (PS) Pre-	Set Casing/PCI	Drilling (DP)	Completions (C)	Tank Bity Constrctn(TB)	Denna Equia (DEO)	Baulet	
ngible Costs	Code	riespud (PS) Pre-	Set Casing(PC)	Drilling (DR)	Completions (C)	rank Bity Constroin(TB)	Pmpq Equip (PEQ)	Revision	
Surface Casing	401		To the second	\$13,000.00	T			\$0.00	\$13
nlermed Csg	402			\$72,000.00				\$0.00	\$72
Production Casing/Liner	403			\$306,000.00				\$0.00	\$306
Wellhead Equip	405			\$28,000,00				\$0.00	\$28
Tubing	504				\$52,100.00			\$0.00	\$52
Velihead Equip	505				\$13,200,00		00,000,000	\$0.00	513
2-Pumping Unit 2-Rods	508 508						\$96,000.00	\$0.00	\$96
Tanks	510					650,000,00	\$55,000.00	\$0.00	\$55
Flowlines/Pipelines	511					\$50,000.00 \$50,000.00		\$0.00	\$50
Htr Trtr/Seprtr	512					\$200,000.00		\$0.00 \$0.00	\$50 \$200
Electrical System/Equipment	513					\$100,000.00		\$0.00	\$100
ckrs/Anchors/Hgrs	514				\$65,000.00	\$100,000,00		\$0.00	\$65
Couplings/Fittings/Valves	515					\$100,000.00		\$0.00	\$100
Gas Lift/Compression	516					\$30,000.00		\$0.00	\$30
Pumps-Surface	521					\$10,000.00		\$0.00	\$10
nstrumentation/SCADA/POC	522					\$10,000.00		\$0.00	\$10
Meters/Lacts	525					\$35,000.00		\$0.00	\$35
Tares/Combusters/Emission	526					\$35,000.00		\$0.00	\$35
as Lift/Compression	527				\$10,000.00			\$0,00	\$10
-Instrumentation/SCADA/POC	529						\$7,000.00	\$0.00	\$7
1-Tubing	530						\$5,000,00	\$0.00	\$5
-Wellhead Equipment -Pumps	531 532						\$3,000 00	\$0.00	\$3
2-Pumps 2-Electrical System	532						\$5,000.00 \$15,000.00	\$0.00 \$0.00	\$5, \$15,
-Packers/Anchors/Hangers	534						\$2,000.00	\$0.00	\$15.
-Miscellaneous	535						\$3,000.00	\$0.00	\$2 \$3
Il Tangible Costs	- 400	\$0.00	\$0.00	\$419,000.00	\$140,300.00	\$620,000.00	\$191,000.00	\$0.00	\$1,370
WHILE THE COURT OF			***************************************	THE PROPERTY OF THE PARTY OF TH		35.00.10.00	213.113.23.00	44,00	7.07.77
ngible Costs	. NOW .	STATE OF THE PARTY							ALS V.
itle/Permits	201	\$20,000.00						\$0.00	\$20
surance	202	\$2,500.00						\$0.00	\$2
Damages/ROW	203	\$20,000.00						\$0.00	\$20
Survey/Stake Lctn In/Pits/Roads	204	\$7,000.00		\$125,000,00				\$0.00	\$7
rilling Overhead	206			\$135,000.00 \$5,700.00				\$0.00 \$0.00	\$135
aywork Contract	209			\$552,000.00				\$0.00	\$5, \$552
rectional Drlg Services	210			\$187,000.00				\$0.00	\$187,
el & Power	211			\$103,000.00				\$0.00	\$103
aler	212			\$53,000.00				\$0.00	\$53
ts	213			\$65,000.00				\$0.00	\$65,
ud & Chemicals	214			\$75,000.00				\$0.00	\$75
ement Surface	217			\$16,000,00				\$0.00	\$16,
ement Intermed	218			\$23,000.00				\$0.00	\$23.
od-2nd Int Cmt	219			\$110,000.00				\$0.00	\$110
oat Equipment & Centralizers	221			\$45,000.00				\$0.00	\$45
g Crews & Equip	222			\$35,000.00				\$0.00	\$35
eologic/Engnrg	224			\$6,000.00				\$0.00	\$6
ontract Labor	225			\$6,500.00				\$0.00	\$6
ompany Sprvsn	226			\$34,200.00				\$0.00	\$34,
ontract Sprvsn	227			\$89,000.00				\$0.00	\$89,
tg Csg/Tbg ud Logging Unit	228			\$30,000,00 \$18,000,00				\$0.00	\$30,
rf/Wireline Svc	231			\$4,000.00				\$0.00	\$18, \$4,
entals-Surface	235			\$115,000.00				\$0.00 \$0.00	\$115.
intals-Subsrfc	236			\$90,000.00				\$0.00	\$90
cking/Forklifl/Rig Mob	237			\$200,000,00				\$0.00	\$200
elding Services	238			\$3,000.00				\$0.00	\$3
scellaneous	242			\$5,000.00				\$0.00	\$5.
ntingency	243			\$42,000.00				\$0.00	\$42
vrnmtl/Clsd Loop	244			\$180,000.00				\$0.00	\$180
tn/Pits/Roads	305				\$12,200.00			\$0.00	\$12
mplelion OH	306				\$15,000.00			\$0.00	\$15.
ac Equipment	307				\$1,454,000.00			\$0.00	\$1,454
ac Chemicals ac Proppant	308				\$577,000.00			\$0.00	\$577,
c Proppant Transportation	309				\$507,000.00			\$0.00	\$507,
el Delivery & Services	310				\$68,000.00			\$0.00 \$0.00	\$500, \$68,
aler	312				\$1,205,000.00			\$0.00	\$1,205
S	313				\$4,500.00			\$0.00	\$1,205
id & Chemicals	314				\$25,000.00			\$0.00	\$25,
ntract Labor	325				\$40,000.00			\$0.00	\$40.
mpany Sprvsn	326				\$15,000.00			\$0.00	\$15
ntract Sprvsn	327				\$169,000.00			\$0.00	\$169
g Csg/Tbg	328				\$5,000.00			\$0.00	\$5,
f/Wireline Svc	331				\$538,000.00			\$0.00	\$538.
mulation/Trealing	332				\$12,000.00			\$0.00	\$12,
mpletion Unit	333				\$43,000.00			\$0.00	\$43,
ntals-Surface	335				\$393,000.00			\$0.00	\$393
ntals-Subsrfc	336				\$55,000.00			\$0.00	\$55,
cking/Forklift/Rig Mob	337				\$40,000.00			\$0.00	\$40,
Iding Services	338				\$5,000.00			\$0,00	\$5,
iter Disposal	339				\$60,000.00			\$0.00	\$60,
ntingency	343				\$250,000.00			\$0.00	\$250,
vrnmtl/Clsd Loop	344				\$5,000.00			\$0.00	\$5,
ed Diesel	345				\$484,000.00			\$0.00	\$484
wback Crews & Equip cation/Pits/Roads	347 353				\$77,000.00	\$35,000.00		\$0.00	\$77,
ontract Labor	356					\$35,000.00		\$0.00	\$35,
entals-Surface	359					\$1,000.00		\$0.00	\$150.
felding Services	361					\$50,000.00		\$0.00	\$1, \$50,
	362					\$200,000.00		\$0.00	\$200,
ater Disposal								20.00	-5200
ater Disposal Contract Labor	374						\$6,500.00	\$0.00	\$6,

Note: The above costs are estimate:	only. Act	ual costs will be billed a	s incurred				4221,000.00	30.00	\$10,672,200.00
Total Gross Cost		\$49,500.00	\$0.00	\$2,646,400.00	\$6,699,000.00	\$1,056,000.00	\$221,300.00	\$0.00	\$10,672,200.00
Total Const Cons									
		TO THE PARTY OF TH	40.00	\$2,227,400.00	\$6,558,700.00	\$435,000.00	\$30,300.00	\$0.00	\$9,301,900.00
Total Intangible Costs		\$49,500.00	\$0.00	\$2,227,400.00	\$6,558,700,00		The second secon	30.00	\$3,000.00
	202						\$3,000.00	\$0.00	
PEQ-Trkg/Forklift/Rig Mobilization	385						\$7,000.00	\$0.00	\$7,000.00
PEQ-Rentals-Surface	383						\$8,800.00	\$0.00	\$8,800.00
PEQ-Completion Unit	381						60 000 on T		

COG Operating LLC	
By;	Date Prepared:
We approve:	COG Operating LLC
% Working Interest	By:
Cempany: By:	
Printed Name	
Cate:	This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC **AUTHORITY FOR EXPENDITURE** Drill & Complete

Well Name SHL BHL Formation Legal AFE Numbers

DAISY 24 STATE COM #503H

2ND BONE SPRING 25S 27E 24 DRAFT-004466, DRAFT-004467, E

Prospect State & County Objective

#717054 ATLAS 2527 NEW MEXICO, EDDY Drill & Complete 17,500 7,785

	Depth	
	TVD	
DRAFT-004468, DRAFT-004469, DRAFT-004470, DRAFT-004471		

Cost Description Tangible Costs	Code	PreSpud (PS) Pre-Set Casing(PC)	Drilling (DR)	Completions (C)	Tank Btty Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Tota
D-Surface Casing	401		\$13,000.00	T I			\$0.00	\$13,000.00
D-Intermed Csg	402		\$72,000.00				\$0.00	\$72,000.00
D-Production Casing/Liner	403		\$306,000.00				\$0.00	\$306,000.00
D-Wellhead Equip	405		\$28,000.00				\$0.00	\$28,000.00
C-Tubing	504			\$52,100.00			\$0.00	\$52,100.00
C-Wellhead Equip	505			\$13,200.00		*******	\$0.00	\$13,200.00
PEQ-Pumping Unit	506					\$96,000,00	\$0.00	\$96,000.00
PEQ-Rods	50B 510				850 000 00	\$55,000,00	\$0.00	\$55,000.00
TB-Tanks TB-Flowlines/Pipelines	511				\$50,000.00 \$50,000.00		\$0.00	\$50,000.00 \$50,000.00
TB-Htr Trtr/Seprtr	512				\$200,000.00		\$0.00	\$200,000.00
TB-Electrical System/Equipment	513				\$100,000.00		\$0.00	\$100,000.00
C-Pckrs/Anchors/Hgrs	514			\$65,000.00			\$0.00	\$65,000.00
TB-Couplings/Fillings/Valves	515				\$100,000.00		\$0.00	\$100,000.00
TB-Gas Lift/Compression	516				\$30,000.00		\$0.00	\$30,000.00
TB-Pumps-Surface	521				\$10,000.00		\$0.00	\$10,000.00
TB-Instrumentation/SCADA/POC	522				\$10,000.00		\$0.00	\$10,000.00
TB-Meters/Lacts	525				\$35,000.00		\$0.00	\$35,000.00
TB-Flares/Combusters/Emission	526			010 000 00	\$35,000.00		\$0.00	\$35,000.00
C-Gas Lift/Compression PEQ-Instrumentation/SCADA/PO(527 529			\$10,000.00		\$7,000,00	\$0.00 \$0.00	\$10,000.00 \$7,000.00
PEQ-Tubing	530					\$5,000.00	\$0.00	\$5,000.00
PEQ-Wellhead Equipment	531					\$3,000.00	\$0.00	\$3,000.00
PEQ-Pumps	532					\$5,000.00	\$0.00	\$5,000.00
PEQ-Electrical System	533					\$15,000.00	\$0.00	\$15,000.00
PEQ-Packers/Anchors/Hangers	534					\$2,000.00	\$0.00	\$2,000.00
PEQ-Miscellaneous	535		i i			\$3,000.00	\$0.00	\$3,000.00
Total Tangible Costs		\$0.00 \$0.00	\$419,000.00	\$140,300.00	\$620,000.00	\$191,000.00	\$0.00	\$1,370,300.00
								- HARRICALANA SANA
Intangible Costs	201	\$20,000,00				7.7.7.7.7.	42.221	\$80.000 co
PS-Title/Permits D-Insurance	201	\$20,000.00 \$2,500.00					\$0.00	\$20,000.00
PS-Damages/ROW	202	\$2,500,00					\$0.00 \$0.00	\$2,500.00 \$20,000.00
PS-Survey/Stake Lctn	203	\$7,000.00					\$0.00	\$7,000.00
D-Lctn/Pits/Roads	205		\$135,000.00				\$0.00	\$135,000.00
D-Drilling Overhead	206		\$5,700.00				\$0.00	\$5,700.00
D-Daywork Contract	209		\$552,000.00				\$0.00	\$552,000.00
D-Directional Drlg Services	210		\$187,000.00				\$0.00	\$187,000.00
D-Fuel & Power	211		\$103,000.00				\$0.00	\$103,000.00
D-Water	212		\$53,000.00				\$0.00	\$53,000.00
D-Bils	213		\$65,000.00				\$0.00	\$65,000.00
D-Mud & Chemicals D-Cement Surface	214 217		\$75,000.00 \$16,000.00				\$0.00	\$75,000.00
D-Cement Intermed	218		\$23,000.00				\$0.00 \$0.00	\$16,000.00 \$23,000.00
D-Prod-2nd Int Cmt	219		\$110,000.00				\$0.00	\$110,000.00
D-Float Equipment & Centralizers	221		\$45,000.00				\$0.00	\$45,000.00
D-Csg Crews & Equip	222		\$35,000.00				\$0.00	\$35,000.00
D-Geologic/Engnrg	224		\$6,000.00				\$0.00	\$6,000.00
D-Contract Labor	225		\$6,500.00				\$0.00	\$6,500.00
D-Company Sprvsn	226		\$34,200.00				\$0.00	\$34,200.00
D-Contract Sprvsn	227		\$89,000.00				\$0.00	\$89,000.00
D-Tstq Csq/Tbq D-Mud Logging Unit	228 229		\$30,000.00 \$18,000.00				\$0.00 \$0.00	\$30,000.00 \$18,000.00
D-Perf/Wireline Svc	231		\$4,000.00				\$0.00	54,000.00
D-Rentals-Surface	235		\$115,000.00				\$0.00	\$115,000.00
D-Rentals-Subsrfc	236		\$90,000.00				\$0.00	\$90,000.00
D-Trucking/Forklift/Rig Mob	237		\$200,000.00				\$0.00	\$200,000.00
D-Welding Services	238		\$3,000.00				\$0.00	\$3,000.00
D-Miscellaneous	242		\$5,000.00				\$0.00	\$5,000.00
D-Contingency	243		\$42,000.00				\$0.00	\$42,000.00
D-Envrnmtl/Clsd Loop	244		\$180,000.00	040 000 00			\$0.00	\$180,000.00
C-Lctn/Pils/Roads C-Completion OH	305 306			\$12,200.00			\$0.00 \$0.00	\$12,200.00 \$15,000.00
C-Frac Equipment	307			\$1,454,000.00			\$0.00	\$1,454,000.00
C-Frac Chemicals	308			\$577,000.00			\$0.00	\$577,000.00
C-Frac Proppant	309			\$507,000.00			\$0.00	\$507,000.00
C-Frac Proppant Transportation	310			\$500,000.00			\$0,00	\$500 ,000.00
C-Fuel Delivery & Services	311			\$68,000.00			\$0.00	\$68,000.00
C-Water	312			\$1,205,000.00			\$0.00	\$1,205,000.00
C-Bits C-Mud & Chemicals	313 314			\$4,500.00 \$25,000.00			\$0.00	\$4,500.00 \$25,000.00
C-Confract Labor	314			\$40,000.00			\$0.00 \$0.00	\$40,000.00
C-Company Sprvsn	326			\$15,000.00			\$0.00	\$15,000.00
C-Contract Sprvsn	327			\$169,000.00			\$0.00	\$169,000.00
C-Tsig Csg/Tbg	328			\$5,000.00			\$0.00	\$5,000.00
C-Perf/Wireline Svc	331			\$538,000.00			\$0.00	\$538,000.00
C-Stimulation/Treating	332			\$12,000.00			\$0.00	\$12,000.00
C-Completion Unit	333			\$43,000.00			\$0.00	\$43,000.00
C-Rentals-Surface	335			\$393,000.00			50.00	\$393,000.00
C-Rentals-Subsrfc	336			\$55,000,00			\$0.00	\$55,000.00
C-Trucking/Forklift/Rig Mob	337			\$40,000.00			\$0.00	\$40,000.00
C-Welding Services C-Water Disposal	338			\$5,000.00			\$0.00	\$5,000.00 \$60,000.00
C-Contingency	343			\$250,000.00			\$0.00	\$250,000.00
C-Envmmtl/Clsd Loop	344			\$5,000.00			\$0.00	\$5,000.00
C-Dved Diesel	345			\$484,000.00			\$0.00	\$484,000.00
C-Flowback Crews & Equip	347			\$77,000.00			\$0.00	\$77,000.00
FB-Location/Pits/Roads	353				\$35,000.00		\$0.00	\$35,000.00
FB-Contract Labor	356				\$150,000.00		\$0.00	\$150,000.00
B-Rentals-Surface	359				\$1,000.00		\$0.00	\$1,000.00
B-Welding Services	361				\$50,000.00		\$0.00	\$50,000.00
B-Water Disposal	362				\$200,000.00		\$0.00	
				Page 1 of 2	\$200,000.00	\$6,500.00 \$5,000.00	\$0.00 \$0.00 \$0.00	\$200,000,00 \$6,500,00 \$5,000,00

Note: The above costs are estimate	s only. Act	ual costs will be billed a	s incurred.						
Total Gross Cost		\$49,500.00	\$0.00	\$2,646,400.00	\$6,699,000.00	\$1,056,000.00	\$221,300.00	\$0.00	\$10,672,200.00
Total Intangible Costs		\$49,500.00	\$0.00	\$2,227,400.00	\$5,558,700.00	\$436,000.00	\$30,300.00	\$0.00	\$9,301,900.00
PEQ-Trkg/Forklift/Rig Mobilization	385						\$3,000.00	\$0.00	\$3,000.00
PEQ-Rentals-Surface	383						\$7,000.00	\$0.00	\$7,000.00
PEQ-Completion Unit	381						\$8,800.00	\$0.00	\$8,800.00

COG	Operating	LLC

Ву:	Date Prepared.
We approve:	COG Operating LLC
% Working Interest	Ву:
Company: By:	
Printed Name: Title:	This AFE is only an estimate. By signing you agree to pay
Title: Date:	your share of the actual costs incurred.

COG OPERATING LLC **AUTHORITY FOR EXPENDITURE** Drill & Complete

Well Name SHL BHL Formation Legal AFE Numbers DAISY 24 STATE COM #504H

2ND BONE SPRING 25S 27E 25N DRAFT-004472, DRAFT-004473, DRAFT-004474, DRAFT-004475, DRAFT-004476, DRAFT-004477

Prospect State & County Objective Depth TVD

#717054 ATLAS 2527 NEW MEXICO, EDDY Drill & Complete 17,600 7,800

Ingible Costs Surface Casing	401		Pre-Set Casing(PC) Drilling (DR)	North	ank Bity Constrctn(TB)	Pmpq Equip (PEQ)		610.6
Intermed Csg	401		\$72,000.00				\$0.00 \$0.00	\$13,0 \$72,0
Production Casing/Liner	403		\$306,000.00				\$0.00	\$306.0
Wellhead Equip	405		\$28,000.00				\$0,00	\$28,0
Tubing	504			\$52,100.00			\$0.00	\$52,1
Wellhead Equip Q-Pumping Unit	505 506			\$13,200.00			\$0.00	\$13,2
Q-Rods	508					\$96,000.00 \$55,000.00	\$0.00 \$0.00	\$96,0 \$55.0
-Tanks	510				\$50,000.00	200,000,00	\$0.00	\$50,0
-Flowlines/Pipelines	511				\$50,000.00		\$0.00	\$50,0
Htr Trtr/Seprtr	512				\$200,000,00		\$0.00	\$200,0
Electrical System/Equipment	513				\$100,000.00		\$0.00	\$100,0
ckrs/Anchors/Hgrs	514			\$65,000.00			\$0.00	\$65,0
Couplings/Fittings/Valves	515			. 1.5.1.54.1.4.54.5	\$100,000.00		\$0.00	\$100,0
Gas Lift/Compression	516				\$30,000 00		\$0.00	\$30,0
Pumps-Surface Instrumentation/SCADA/POC	521 522				\$10,000.00		\$0.00	\$10,0
Melers/Lacis	525				\$10,000 00 \$35 000 00		\$0.00 \$0.00	\$10,0
Flares/Combusters/Emission	526				\$35,000.00		\$0.00	\$35,0
as Lift/Compression	527			\$10,000.00	000,000,00		\$0.00	\$10,0
-Instrumentation/SCADA/PO(529					\$7,000.00	\$0.00	\$7.0
Q-Tubing	530					\$5,000.00	\$0.00	\$5,0
2-Wellhead Equipment	531					\$3,000.00	\$0.00	\$3,0
2-Pumps	532					\$5,000.00	\$0.00	\$5,0
2-Electrical System	533					\$15,000.00	\$0.00	\$15,0
Q-Packers/Anchors/Hangers Q-Miscellaneous	534					\$2,000.00	\$0.00	\$2,0
al Tangible Costs	535	\$0.00	\$0.00 \$440.000.00	\$440,200,00	#### ANA ##	\$3,000.00	\$0.00	53,0
ar ranginia Costs		\$0.00	\$0.00 \$419,000.00	\$140,300.00	\$620,000.00	\$191,000.00	\$0.00	\$1,370,3
ingible Costs								
Title/Permits	201	\$20,000.00					\$0.00	\$20,0
surance	202	\$2,500.00					\$0.00	\$2,5
Damages/ROW	203	\$20,000.00					50,00	\$20,0
Survey/Stake Lctn	204	\$7,000.00	*****				\$0.00	\$7,0
ctn/Pits/Roads rilling Overhead	205 206		\$135,000.00				\$0.00	\$135,0
Daywork Contract	200		\$5,700.00 \$552,000.00				\$0.00 \$0.00	\$5,7
Directional Drig Services	210		\$187,000.00				\$0.00	\$552,0 \$187,0
uel & Power	211		\$103,000.00				\$0.00	\$103,0
Vater	212		\$53,000.00				\$0.00	\$53,0
its	213		\$65,000.00				\$0.00	\$65,0
lud & Chemicals	214		\$75,000.00				\$0.00	\$75,0
ement Surface	217		\$16,000.00				\$0.00	\$16,0
ement Intermed	218		\$23,000.00				\$0.00	\$23,0
rod-2nd Int Cmt	219		\$110,000.00				\$0.00	\$110,0
loat Equipment & Centralizers sg Crews & Equip	222		\$45,000.00 \$35,000.00				\$0.00	\$45,0
Seologic/Engnrg	224		\$6,000.00				\$0.00	\$35,0
Contract Labor	225		\$6,500.00				\$0.00 \$0.00	\$6,0 \$6,5
Company Sprvsn	226		\$34,200.00				\$0.00	\$34,2
Contract Sprvsn	227		\$89,000.00				\$0.00	\$89,0
stg Csg/Tbg	228		\$30,000.00				\$0.00	\$30,0
Mud Logging Unit	229		\$18,000.00				\$0.00	\$18,0
erf/Wireline Svc	231		\$4,000.00				\$0.00	\$4,0
entals-Surface	235		\$115,000,00				\$0.00	\$115,0
entals-Subsrfc rucking/Forklift/Rig Mob	236		\$90,000.00 \$200,000.00				\$0.00	\$90,0
/elding Services	238		\$3,000.00				\$0,00	\$200,0
iscellaneous	242		\$5,000,00				\$0.00 \$0.00	\$3,0 \$5,0
ontingency	243		\$42,000,00				\$0.00	\$42.0
nvrnmll/Clsd Loop	244		\$180,000,00				\$0.00	\$180,0
tn/Pits/Roads	305			\$12,200.00			\$0.00	\$12,2
ompletion OH	306			\$15,000.00			\$0,00	\$15,0
rac Equipment	307			\$1,454,000.00			\$0.00	\$1,454,0
rac Chemicals rac Proppant	308			\$577,000.00			\$0.00	\$577,0
ac Proppant Transportation	310			\$507,000.00 \$500,000.00			\$0.00	\$507,0
uel Delivery & Services	311			\$68,000.00			\$0.00	\$500,0 \$68,0
ater	312			\$1,205,000.00			\$0.00	\$1,205,0
ts	313			\$4,500.00			\$0.00	\$4,5
ud & Chemicals	314			\$25,000.00			\$0.00	\$25,0
ontract Labor	325			\$40,000.00			\$0.00	\$40,0
ompany Sprvsn	326			\$15,000.00			\$0.00	\$15,0
ontract Sprvsn	327			\$169,000.00			\$0.00	\$169,0
lg Csg/Tbg er//Wireline Svc	328 331			\$5,000.00 \$538,000.00			\$0.00	\$5,0
mulation/Treating	332			\$12,000,00			\$0.00	\$538,0 \$12,0
ompletion Unit	333			\$43,000.00			\$0.00	\$12,0
ntals-Surface	335			\$393,000.00			\$0.00	\$393,0
ntals-Subsrfc	336			\$55,000.00			\$0.00	\$55,0
ucking/Forklift/Rig Mob	337			\$40,000.00			\$0.00	\$40,0
elding Services	338			\$5,000.00			\$0.00	\$5,0
aler Disposal	339			\$60,000.00			\$0.00	\$60,0
ontingency	343			\$250,000,00			\$0.00	\$250,0
ivrnmtl/Clsd Loop	344			\$5,000.00			\$0.00	\$5,0
red Diesel	345 347			\$484,000.00			\$0.00	\$484,0
owback Crews & Equip ocation/Pits/Roads	353			\$77,000.00	\$35,000.00		\$0.00	\$77,0
ontract Labor	356				\$150,000.00		\$0.00	\$35.0
entals-Surface	359				\$1,000.00		\$0.00	\$150,0 \$1,0
/elding Services	361				\$50,000.00		\$0.00	\$50,0
/ater Disposal	362				\$200,000.00		\$0,00	\$200.0
Contract Labor	374					\$6,500.00	\$0.00	\$6,5
Contract Supervision	376					\$5,000.00		

Total Gross Cost		\$49,500.00	\$0.00	\$2,645,400.00	\$6,699,000,00	\$1,056,000,00	\$221,300,00	\$0.00	\$10,672,200,00
Total Intangible Costs		\$49,500.00	\$0.00	\$2,227,400.00	\$6,558,700.00	\$436,000.00	\$30,300.00	\$0.00	\$9,301,900.00
PEQ-Trkg/Forklift/Rig Mobilization	385						\$3,000.00	\$0.00	\$3,000.00
PEQ-Rentals-Surface	383						\$7,000.00	\$0.00	\$7,000.00
PEQ-Completion Unit	381						\$8,800.00	\$0.00	\$8,800.00

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC	
By:	Date Prepared:
We approve:	COG Operating LLC
% Working Interest	Ву
Company: By:	
Printed Name:	
Title: Date:	This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NOS. 20335

AFFIDAVIT OF CHESNEY GILLELAND IN SUPPORT OF CASE NO. 20335

CHESNEY GILLELAND, of lawful age and being first duly sworn, declares as follows:

- My name is Chesney Gilleland. I work for COG Operating LLC ("COG") as a Geologist.
- 2. I have not previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum geology. I graduated from Appalachian State University with a B.S. in Geology in 2009. I hold a Masters in Geology from the University of Nebraska since 2011. Between 2011 and 2012, I worked as an Associate Geologist at Chesapeake Energy. Between 2012 and 2014, I worked as a Geologist III for Weatherford Labs. Since 2014, I have worked for COG as a Geologist, where I have been working in the Permian.
- 3. I am familiar with the application filed by COG in this case, and I have conducted a geologic study of the lands in the subject area.
 - 4. In this case, COG is targeting the Bone Spring formation.
- 5. COG Exhibit B-1 is a locator map. It shows COG's acreage in yellow. The path of the proposed wellbore for the proposed Daisy 24 State Com Nos. 501H, 502H, 503H, and 504H wells are marked and depicted with dashed lines. Existing Bone Spring producers are marked and depicted with solid lines.

1

- 6. COG Exhibit B-2 is a subsea structure map that I prepared off the top of the Bone Spring formation. As with the locator map, the wellbore paths for the proposed wells are marked with dashed lines. The contour interval is 25 feet. The structure map shows that the Bone Spring is dipping gently to the east. The structure appears consistent in this section. I do not observe any faulting, pinchouts, or other geologic hazards to developing a horizontal well.
- 7. COG Exhibit No. B-3 shows three producing wells, depicted by red circles, that were used to construct a cross-section from A to A'. I consider these wells to be representative of the geology of the area.
- 8. COG Exhibit No. B-4 is a stratigraphic cross section prepared by me for the three representative wells from A to A'. The exhibit shows logs for gamma ray, resistivity, and porosity for all three wells. The proposed target interval for the proposed Daisy 24 State Com Nos. 501H, 502H, 503H, and 504H wells is labeled and depicted in green. The logs in the cross-section demonstrate that the target intervals within the Bone Spring are consistent in thickness, across the entire spacing unit.
- 9. Based on my geologic study of the areas, I have not identified any geologic impediments to drilling horizontal wells in the area.
- 10. In my opinion, each tract comprising the proposed spacing unit will be productive and contribute more-or-less equally to production from the wellbore.
- 11. In my opinion, the granting of COG's application in this case is in the best interest of conservation, the prevention of waste, and protection of correlative rights.
- 12. COG Exhibit B-1 through B-4 were either prepared by me or compiled under my direction and supervision.

Chusney Hilldard

COUNTY OF Midland

SUBSCRIBED and SWORN to before me this ______ day of April 2019 by Chesney Gilleland.

Kathryn McMinn
Notary Public, State of Texas
Notary ID 13118382-3
My Commission Exp.06-22-2021

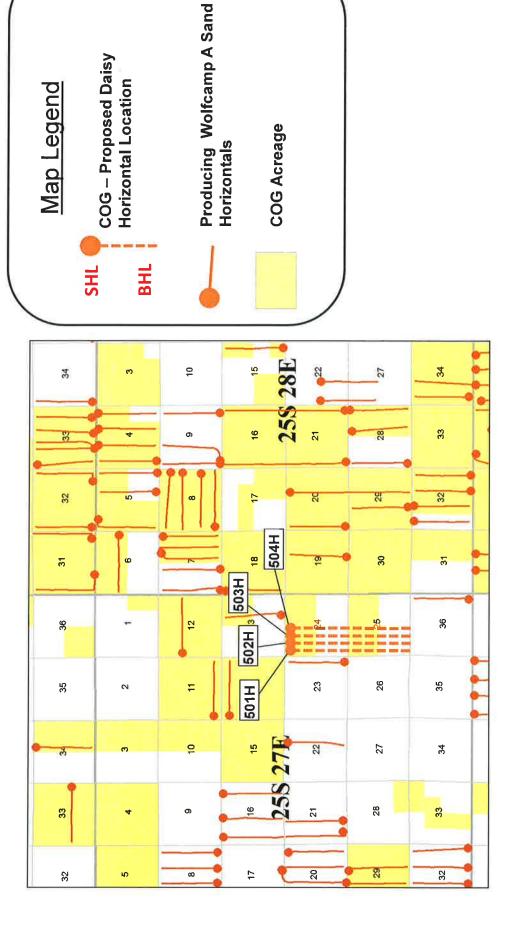
NOTARY PUBLIC

My Commission Expires:

6/22/21

12060625_1

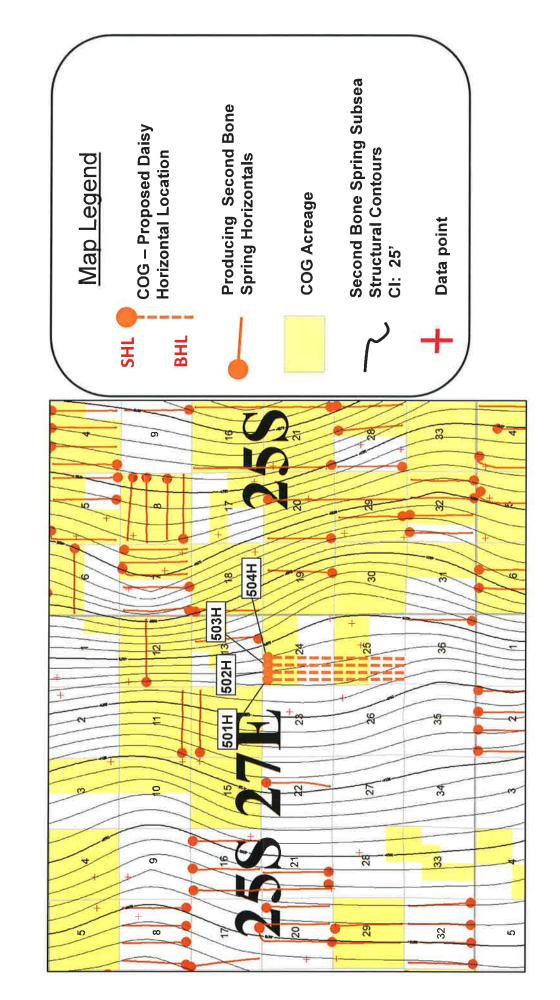
Bone Spring Pool Daisy 24 State Com Location Map





BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B-1
Case No. 20335
Submitted by: COG OPERATING, LLC
Hearing Date: April 4, 2019

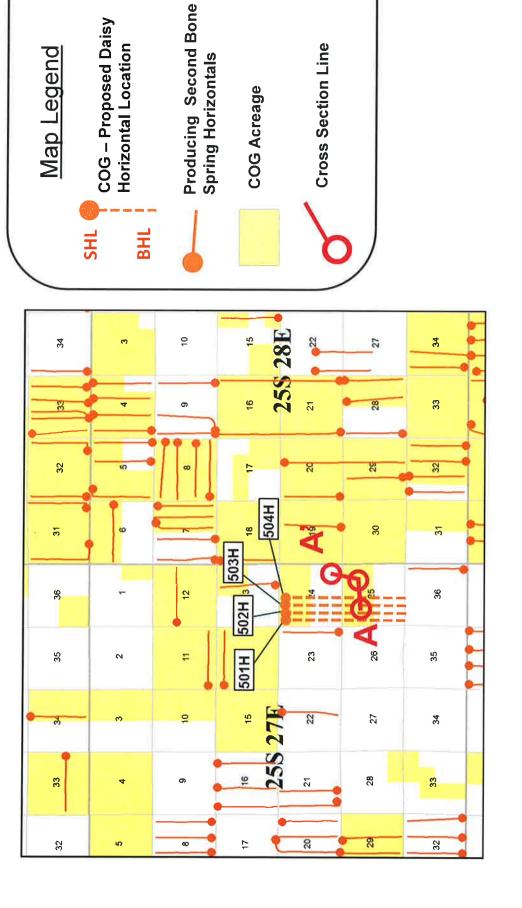
Bone Spring Pool Second Bone Spring Subsea Structure Map



BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B-2
Case No. 20335
Submitted by: COG OPERATING, LLC
Hearing Date: April 4, 2019



Bone Spring Pool Cross Section Location Map

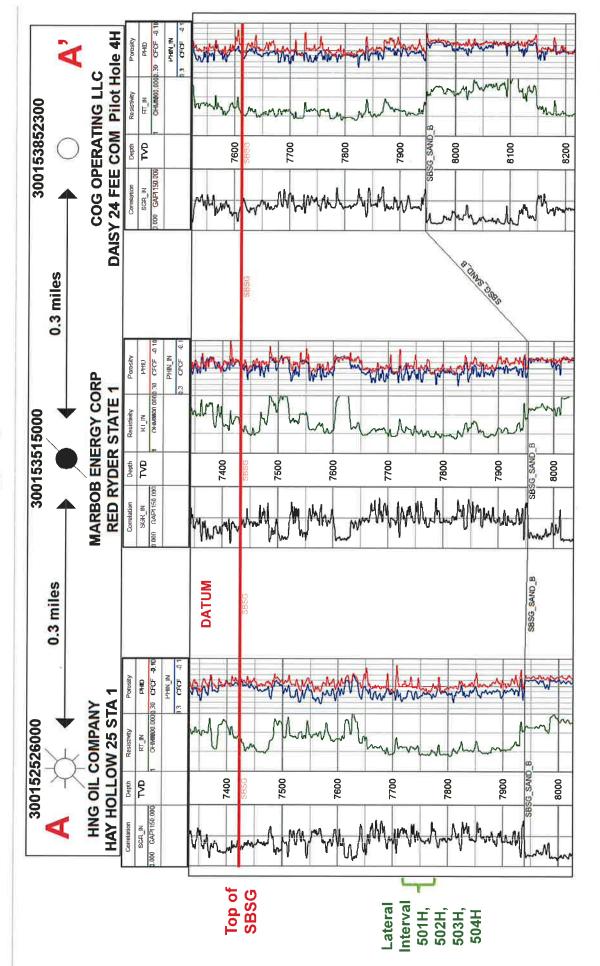


BEFORE THE OIL CONSERVATION DIVISIONSanta Fe, New Mexico

Exhibit No. B-3
Case No. 20335
Submitted by: COG OPERATING, LLC
Hearing Date: April 4, 2019



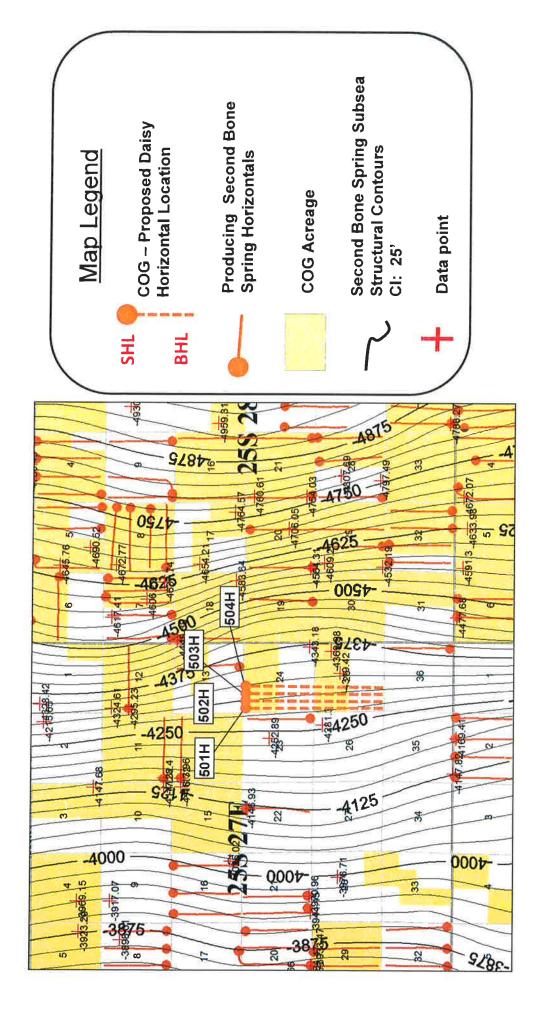
Stratigraphic Cross Section A - A'





BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. B-4
Case No. 20335
Submitted by: COG OPERATING, LLC
Hearing Date: April 4, 2019

Second Bone Spring Subsea Structure Map Bone Spring Pool





Case 20335 COG 13-5

STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES OIL CONSERVATION DIVISION

APPLICATION OF COG OPERATING, LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 20335

AFFIDAVIT

STATE OF NEW MEXICO)	
)	SS
COUNTY OF SANTA FE)	

Julia Broggi, attorney in fact and authorized representative of COG Operating, LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application has been provided under the notice letters and proof of receipts attached hereto.

Julia Broggi

SUBSCRIBED AND SWORN to before me this 3rd day of April 2019 by Julia Broggi.

Notary Public

My Commission

expires: August a



Michael H. Feldewert
Recognized Specialist in the
Area of Natural Resources —
Oil and Gas Law — New Mexico Board
of Legal Specification
mfeldewert@hollandhart.com

March 15, 2019

VIA CERTIFIED MAIL CERTIFIED RECEIPT REQUESTED

TO: ALL INTEREST OWNERS SUBJECT TO POOLING PROCEEDINGS

Re: Application of COG Operating LLC for compulsory pooling, Eddy County,

New Mexico.

Daisy 24 State 501H-504H Wells

Ladies & Gentlemen:

This letter is to advise you that COG Operating Inc. has filed the enclosed application with the New Mexico Oil Conservation Division. A hearing has been requested before a Division Examiner on April 4, 2019, and the status of the hearing can be monitored through the Division's website at http://www.emnrd.state.nm.us/ocd/. Division hearings will commence at 8:15 a.m. in Porter Hall at the Oil Conservation Division's Santa Fe Offices located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Pre-hearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter, please contact Travis Macha at (432) 683-7443 or TMacha@concho.com.

Sincerely

Michael H. Feldewert

ATTORNEY FOR COG OPERATING LLC



Shipment Confirmation Acceptance Notice

Note to Mailer: The labels and volume associated to this form online, must match the labeled packages being presented to the USPS® employee with this form.

COG Daisy 501H-504H CM# 51500.0010 Notice List

Shipment Date: 03/13/2019

Shipped From:

Name: HOLLAND & HART LLP

Address: 110 N GUADALUPE ST # 1

City: SANTA FE

State: NM

ZIP+4® 87501

Type of Mail	Volume
Priority Mail Express®*	
Priority Mail®	0
First-Class Package Service®	
Returns	
International*	
Other	2
Total	2

^{*}Start time for products with service guarantees will begin when mail arrives at the local Post Office™ and items receive individual processing and acceptance scans.

B. USPS Action

Note to RSS Clerk:

Home screen > Mailing/Shipping > More
 Select Shipment Confirm

Scan or enter the barcode/label number from PS Form 5630
 Confirm the volume count message by selecting Yes or No
 Select Pay and End Visit to complete transaction

USPS EMPLOYEE: Please scan upon pickup or receipt of mail. Leave form with customer or in customer's mail receptacle.

USPS SCAN AT ACCEPTANCE

9275 0901 1935 6200 0013 2533 79

Aail
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UNITED STATES	POSTAL SERVICE®
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		o Here	(if issued as an international certificate of mailing or for	additional copies of this receipt).		Handling Act			əı	nı	εv	uį	00	0,0	920) L	əΛ	o i	วน	e t	oə.	ıəj	si	ြ ြ	A I	hi .	· ə	arg	40	ე ნ	uill	plu	eh	ţ	
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rvice		☐ Adult Signature Restricted Delivery ☐ Registered Mail	Certified Mail Certified Mail Receipt for Certified Mail Receipt for Merchandice		☐ Insured Mail ☐ Signature Confirmation ☐ Priority Mail Restricted Delivery	Addressee (Name, Street, City, State, & ZIP Code [™])	Devon Energy Production Company LP Attn: Stephen Hoch Land	Department 333 W Sheridan Ave Oklahoma City OK 73102			Chevron U S A Inc attn: Kristen Hunter 6301 Deauville Midland TX	79706							* * * * * * * * * * * * * * * * * * *																
Name and Address of Sender	Holland & Hart LLP	1#1	-			USPS Tracking/Article Number	1. 9214 8901 9403 8380 0818 13	1			2. 9214 8901 9403 8380 0818 20		1																						

COG Daisy Postage Report 201904

Recipient	Status
Devon Energy Production Company LP Attn: Stephen Hoch Land Department 333 W Sheridan Ave Oklahoma City OK 73102	Delivered Signature Received
Chevron U S A Inc attn: Kristen Hunter 6301 Deauville Midland TX 79706	Delivered Signature Received