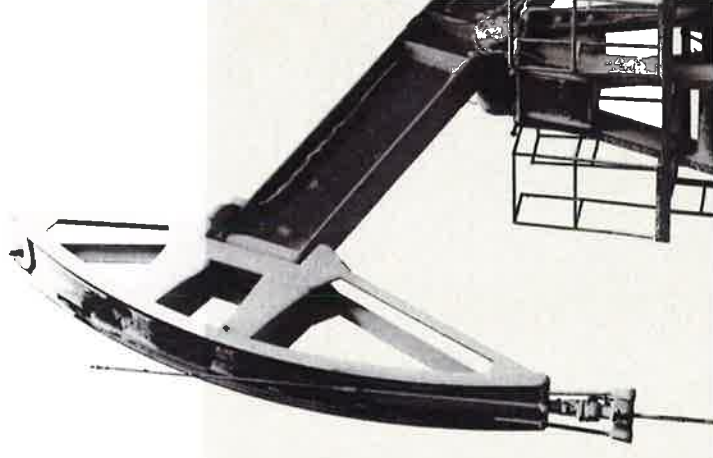


# COG OPERATING LLC

Bigfoot Fed Com 501H, 502H, 601H, & 602H  
Section 20 & 21 – T19S-28E  
Eddy County, New Mexico

Case Nos. 21322-21323  
BEFORE THE OIL CONSERVATION DIVISION  
EXAMINER HEARING July 23, 2020



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

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

**CASE NOS. 21322-21323**

**CONSOLIDATED HEARING PACKAGE  
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  - COG Exhibit A-3: General Location Map
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# COMPULSORY POOLING APPLICATION CHECKLIST

**ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS**

<b>Case: 21322</b>	<b>APPLICANT'S RESPONSE</b>
<b>Date: July 21, 2020</b>	
Applicant	COG Operating LLC
Designated Operator & OGRID (affiliation if applicable)	229137
Applicant's Counsel:	Holland & Hart
Case Title:	APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, Eddy COUNTY, NEW MEXICO.
Entries of Appearance/Intervenors:	EOG Resources, Inc.
Well Family	Bigfoot wells
<b>Formation/Pool</b>	
Formation Name(s) or Vertical Extent:	Bone Spring
Primary Product (Oil or Gas):	Oil
Pooling this vertical extent:	N/A
Pool Name and Pool Code:	Winchester; Bone Spring West Pool (97569)
Well Location Setback Rules:	Standard
Spacing Unit Size:	320-acres, more or less
<b>Spacing Unit</b>	
Type (Horizontal/Vertical)	Horizontal
Size (Acres)	320-acres, more or less
Building Blocks:	quarter-quarter sections
Orientation:	West-East
Description: TRS/County	S/2 S/2 of Secs. 20 & 21, T19S, R28E, Eddy County
Standard Horizontal Well Spacing Unit (Y/N), If No, describe	Yes
<b>Other Situations</b>	
Depth Severance: Y/N. If yes, description	No
Proximity Tracts: If yes, description	No
Proximity Defining Well: if yes, description	N/A
Applicant's Ownership in Each Tract	Exhibit A-4
<b>Well(s)</b>	
Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	

Well #1	<b><u>Bigfoot State Com 501H (30-015-45705)</u></b> SHL: 1065' FSL and 250' FEL (Unit P) of Section 19 BHL: 330' FSL and 50' FEL (Unit P) of Section 21 Township 22 South, Range 28 East Completion Target: Bone Spring formation Well Orientation: West - East Completion Location expected to be: Standard
Well #2	<b><u>Bigfoot State Com 601H (API # pending)</u></b> SHL: 1295' FSL and 250' FEL (Unit P) of Section 19 BHL: 330' FSL and 50' FEL (Unit P) of Section 21 Township 22 South, Range 28 East Completion Target: Bone Spring formation Well Orientation: West - East Completion Location expected to be: Standard
Horizontal Well First and Last Take Points	Exhibit A-2
Completion Target (Formation, TVD and MD)	Exhibit A-5
<b>AFE Capex and Operating Costs</b>	
Drilling Supervision/Month \$	\$7,000
Production Supervision/Month \$	\$700
Justification for Supervision Costs	Exhibit A
Requested Risk Charge	200%
<b>Notice of Hearing</b>	
Proposed Notice of Hearing	Exhibit C
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit C
Proof of Published Notice of Hearing (10 days before hearing)	N/A
<b>Ownership Determination</b>	
Land Ownership Schematic of the Spacing Unit	Exhibit A-4
Tract List (including lease numbers and owners)	Exhibit A-4
Pooled Parties (including ownership type)	Exhibit A-4
Unlocatable Parties to be Pooled	N/A
Ownership Depth Severance (including percentage above & below)	N/A
<b>Joinder</b>	
Sample Copy of Proposal Letter	Exhibit A-5
List of Interest Owners (ie Exhibit A of JOA)	Exhibit A-4
Chronology of Contact with Non-Joined Working Interests	Exhibit A-6
Overhead Rates In Proposal Letter	Exhibit A-5
Cost Estimate to Drill and Complete	Exhibit A-5
Cost Estimate to Equip Well	Exhibit A-5
Cost Estimate for Production Facilities	Exhibit A-5


<b>Geology</b>	
Summary (including special considerations)	Exhibit B
Spacing Unit Schematic	Exhibit A-3
Gunbarrel/Lateral Trajectory Schematic	Exhibit A-3
Well Orientation (with rationale)	Exhibit B
Target Formation	Exhibit B
HSU Cross Section	Exhibit B-3
Depth Severance Discussion	N/A
<b>Forms, Figures and Tables</b>	
C-102	Exhibit A-2
Tracts	Exhibit A-4
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit A-4
General Location Map (including basin)	Exhibit A-3
Well Bore Location Map	Exhibit A-3
Structure Contour Map - Subsea Depth	Exhibit B-1
Cross Section Location Map (including wells)	Exhibit B-2
Cross Section (including Landing Zone)	Exhibit B-3
<b>Additional Information</b>	
Special Provisions/Stipulations	None
<b>CERTIFICATION: I hereby certify that the information provided in this checklist is complete and accurate.</b>	
<b>Printed Name</b> (Attorney or Party Representative):	Michael H. Feldewert
<b>Signed Name</b> (Attorney or Party Representative):	
<b>Date:</b>	21-Jul-20

# COMPULSORY POOLING APPLICATION CHECKLIST

**ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS**

<b>Case: 21323</b>	<b>APPLICANT'S RESPONSE</b>
<b>Date: July 21, 2020</b>	
Applicant	COG Operating LLC
Designated Operator & OGRID (affiliation if applicable)	229137
Applicant's Counsel:	Holland & Hart
Case Title:	APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, Eddy COUNTY, NEW MEXICO.
Entries of Appearance/Intervenors:	EOG Resources, Inc.
Well Family	Bigfoot wells
<b>Formation/Pool</b>	
Formation Name(s) or Vertical Extent:	Bone Spring
Primary Product (Oil or Gas):	Oil
Pooling this vertical extent:	N/A
Pool Name and Pool Code:	Winchester; Bone Spring West Pool (97569)
Well Location Setback Rules:	Standard
Spacing Unit Size:	320-acres, more or less
<b>Spacing Unit</b>	
Type (Horizontal/Vertical)	Horizontal
Size (Acres)	320-acres, more or less
Building Blocks:	quarter-quarter sections
Orientation:	West-East
Description: TRS/County	N/2 S/2 of Secs. 20 & 21, T19S, R28E, Eddy County
Standard Horizontal Well Spacing Unit (Y/N), If No, describe	Yes
<b>Other Situations</b>	
Depth Severance: Y/N. If yes, description	No
Proximity Tracts: If yes, description	No
Proximity Defining Well: if yes, description	N/A
Applicant's Ownership in Each Tract	Exhibit A-4
<b>Well(s)</b>	
Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	

Well #1	<b>Bigfoot State Com 502H (30-015-45706)</b> SHL: 1095' FSL and 250' FEL (Unit P) of Section 19 BHL: 1650' FSL and 50' FEL (Unit I) of Section 21 Township 22 South, Range 28 East Completion Target: Bone Spring formation Well Orientation: West - East Completion Location expected to be: Standard
Well #2	<b>Bigfoot State Com 602H (API # pending)</b> SHL: 1325' FSL and 250' FEL (Unit I) of Section 19 BHL: 1650' FSL and 50' FEL (Unit I) of Section 21 Township 22 South, Range 28 East Completion Target: Bone Spring formation Well Orientation: West - East Completion Location expected to be: Standard
Horizontal Well First and Last Take Points	Exhibit A-2
Completion Target (Formation, TVD and MD)	Exhibit A-5
<b>AFE Capex and Operating Costs</b>	
Drilling Supervision/Month \$	\$7,000
Production Supervision/Month \$	\$700
Justification for Supervision Costs	Exhibit A
Requested Risk Charge	200%
<b>Notice of Hearing</b>	
Proposed Notice of Hearing	Exhibit C
Proof of Mailed Notice of Hearing (20 days before hearing)	Exhibit C
Proof of Published Notice of Hearing (10 days before hearing)	N/A
<b>Ownership Determination</b>	
Land Ownership Schematic of the Spacing Unit	Exhibit A-4
Tract List (including lease numbers and owners)	Exhibit A-4
Pooled Parties (including ownership type)	Exhibit A-4
Unlocatable Parties to be Pooled	N/A
Ownership Depth Severance (including percentage above & below)	N/A
<b>Joinder</b>	
Sample Copy of Proposal Letter	Exhibit A-5
List of Interest Owners (ie Exhibit A of JOA)	Exhibit A-4
Chronology of Contact with Non-Joined Working Interests	Exhibit A-6
Overhead Rates In Proposal Letter	Exhibit A-5
Cost Estimate to Drill and Complete	Exhibit A-5
Cost Estimate to Equip Well	Exhibit A-5
Cost Estimate for Production Facilities	Exhibit A-5

<b>Geology</b>	
Summary (including special considerations)	Exhibit B
Spacing Unit Schematic	Exhibit A-3
Gunbarrel/Lateral Trajectory Schematic	Exhibit A-3
Well Orientation (with rationale)	Exhibit B
Target Formation	Exhibit B
HSU Cross Section	Exhibit B-3
Depth Severance Discussion	N/A
<b>Forms, Figures and Tables</b>	
C-102	Exhibit A-2
Tracts	Exhibit A-4
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit A-4
General Location Map (including basin)	Exhibit A-3
Well Bore Location Map	Exhibit A-3
Structure Contour Map - Subsea Depth	Exhibit B-1
Cross Section Location Map (including wells)	Exhibit B-2
Cross Section (including Landing Zone)	Exhibit B-3
<b>Additional Information</b>	
Special Provisions/Stipulations	None
<b>CERTIFICATION: I hereby certify that the information provided in this checklist is complete and accurate.</b>	
<b>Printed Name</b> (Attorney or Party Representative):	Michael H. Feldewert
<b>Signed Name</b> (Attorney or Party Representative):	
<b>Date:</b>	21-Jul-20



**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. 21322**

**APPLICATION**

COG Operating LLC ("COG"), through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-17, for an order pooling all uncommitted interests in the Bone Spring formation [Winchester; Bone Spring West Pool (97569)] underlying a 320-acre standard horizontal spacing unit comprised of the S/2 S/2 of Sections 20 and 21, Township 19 South, Range 28 East, NMPM, Eddy County, New Mexico. In support of its application, COG states:

1. COG Operating LLC (OGRID No. 229137) is a working interest owner in the proposed horizontal spacing unit and has the right to drill thereon.
2. COG seeks to dedicate the above-referenced horizontal spacing unit to the proposed **Bigfoot State Com 501H** and the **Bigfoot State Com 601H** to be drilled from a surface hole location in SE/4 SE/4 (Unit P) of Section 19 to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 21.
3. COG has sought and been unable to obtain voluntary agreement for the development of these lands from all the interest owners in the subject spacing unit.
4. The pooling of interests will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.


5. In order to permit COG to obtain its just and fair share of the oil and gas underlying the subject lands, all uncommitted interests in this horizontal spacing unit should be pooled and COG Operating LLC should be designated the operator of this proposed horizontal wells and spacing unit.

WHEREFORE, COG requests that this application be set for hearing before an Examiner of the Oil Conservation Division on July 9, 2020, and, after notice and hearing as required by law, the Division enter an order:

- A. Pooling all uncommitted interests in the horizontal spacing unit and approving the initial wells;
- B. Designating COG Operating LLC operator of this spacing unit and the horizontal wells to be drilled thereon;
- C. Authorizing COG to recover its costs of drilling, equipping and completing the wells;
- D. Approving the actual operating charges and costs of supervision, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and
- E. Imposing a 200% charge for the risk assumed by COG in drilling and completing the wells against any working interest owner who does not voluntarily participate in the drilling of the wells.

Respectfully submitted,

HOLLAND & HART LLP

By:   
\_\_\_\_\_  
Michael H. Feldewert  
Adam G. Rankin  
Post Office Box 2208  
Santa Fe, New Mexico 87504-2208  
(505) 988-4421  
(505) 983-6043 Facsimile  
mfeldewert@hollandhart.com  
agrarkin@hollandhart.com

**ATTORNEYS FOR COG OPERATING LLC**

**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. 21323**

**APPLICATION**

COG Operating LLC (“COG”), through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-17, for an order pooling all uncommitted interests in the Bone Spring formation [Winchester; Bone Spring West Pool (97569)] underlying a 320-acre standard horizontal spacing unit comprised of the N/2 S/2 of Sections 20 and 21, Township 19 South, Range 28 East, NMPM, Eddy County, New Mexico. In support of its application, COG states:

1. COG Operating LLC (OGRID No. 229137) is a working interest owner in the proposed horizontal spacing unit and has the right to drill thereon.
2. COG seeks to dedicate the above-referenced horizontal spacing unit to the following proposed initial wells:
  - **Bigfoot State Com 502H** to be drilled from a surface hole location in SE/4 SE/4 (Unit P) of Section 19 to a bottom hole location in the NE/4 SE/4 (Unit I) of Section 21; and
  - **Bigfoot State Com 602H** to be drilled from a surface hole location in NE/4 SE/4 (Unit I) of Section 19 to a bottom hole location in the NE/4 SE/4 (Unit I) of Section 21.
3. COG has sought and been unable to obtain voluntary agreement for the development of these lands from all the interest owners in the subject spacing unit.

4. The pooling of interests will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

5. In order to permit COG to obtain its just and fair share of the oil and gas underlying the subject lands, all uncommitted interests in this horizontal spacing unit should be pooled and COG Operating LLC should be designated the operator of this proposed horizontal wells and spacing unit.

WHEREFORE, COG requests that this application be set for hearing before an Examiner of the Oil Conservation Division on July 9, 2020, and, after notice and hearing as required by law, the Division enter an order:

- A. Pooling all uncommitted interests in the horizontal spacing unit and approving the initial wells;
- B. Designating COG Operating LLC operator of this spacing unit and the horizontal wells to be drilled thereon;
- C. Authorizing COG to recover its costs of drilling, equipping and completing the wells;
- D. Approving the actual operating charges and costs of supervision, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and
- E. Imposing a 200% charge for the risk assumed by COG in drilling and completing the wells against any working interest owner who does not voluntarily participate in the drilling of the wells.

Respectfully submitted,

HOLLAND & HART LLP

By:   
\_\_\_\_\_  
Michael H. Feldewert  
Adam G. Rankin  
Post Office Box 2208  
Santa Fe, New Mexico 87504-2208  
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**ATTORNEYS FOR COG OPERATING LLC**

**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. 21322 & 21323**

**AFFIDAVIT OF JEFF STOUT, LANDMAN**

Jeffrey S. Stout, being of lawful age and duly sworn, states the following:

1. My name is Jeffry S. Stout and I am employed by COG Operating LLC ("COG") as a Landman. I am familiar with the applications filed by COG these consolidated matters and the status of the lands in the subject area.
2. **Exhibit A-1** is a copy of my resume. I seek to be qualified by the Division as an expert witness in petroleum land matters and believe my credentials warrant that qualification.
3. None of the mineral owners to be pooled have expressed opposition to these proceedings, so I do not expect any opposition at the hearing.
4. COG seeks orders pooling all uncommitted interests in the Bone Spring formation [Winchester; Bone Spring West Pool (97569)] underlying two standard 320-acre horizontal spacing units comprised of the S/2 S/2 and the N/2 S/2 of Sections 20 and 21, Township 19 South, Range 28 East, NMPM, Eddy County, New Mexico.
5. Under Case 21322, COG seeks to form and initially dedicate the S/2 S/2 of Sections 20 and 21 to the proposed **Bigfoot State Com 501H** and the **Bigfoot State Com 601H** wells to be drilled from a surface hole location in SE/4 SE/4 (Unit P) of Section 19 to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 21.
6. Under Case 21323, COG seeks to form and initially dedicate the N/2 S/2 of Sections 20 and 21 to the following proposed initial wells:

- **Bigfoot State Com 502H** well to be drilled from a surface hole location in SE/4 SE/4 (Unit P) of Section 19 to a bottom hole location in the NE/4 SE/4 (Unit I) of Section 21; and

- **Bigfoot State Com 602H** well to be drilled from a surface hole location in NE/4 SE/4 (Unit I) of Section 19 to a bottom hole location in the NE/4 SE/4 (Unit I) of Section 21.

7. **Exhibit A-2** contains Form C-102s for the proposed initial wells for each spacing unit in numerical order.

8. **Exhibit A-3** is a general location map outlining the acreage being pooled and the lateral trajectory of the proposed wells. The acreage is comprised of state land.

9. **Exhibit A-4** identifies the tracts of land comprising the proposed spacing units, the working interest ownership in each tract and their respective interest in the horizontal spacing units. COG has highlighted on Exhibit A-4 the mineral owners that remain to be pooled for each proposed spacing unit. COG has also listed an overriding royalty interest owner that requires pooling.

9. No ownership depth severances exist within in the Bone Spring formation underlying the subject acreage.

10. COG has conducted a diligent search of company records, county records, telephone directories and conducted computer searches to locate contact information for each of the mineral owners that it seeks to pool. All of the pooled mineral owners have been located.

11. **Exhibit A-5** contains a sample of the letters and AFE's for the proposed wells sent to the working interest owners that COG has been able to locate. The costs reflected on these



AFE's are consistent with what COG and other operators have incurred for drilling similar horizontal wells in the area in these formations.

12. **Exhibit A-6** contains a chronology of the contacts with the uncommitted mineral owners COG was able to locate. COG has made a good faith effort to obtain voluntary joinder of these owners in the proposed wells.

13. COG requests overhead and administrative rates of \$7,000 per month for drilling and \$700 per month for a producing well. These rates are consistent with the rates charged by COG and other operators for similar wells in this area.

14. I have provided the law firm of Holland and Hart, LLP, with the names and addresses of the mineral owners that COG seeks to pool and instructed that they be notified of this hearing.

15. Exhibits A-1 through A-6 were prepared by me or compiled under my direction from company business records.

FURTHER AFFIANT SAYETH NAUGHT

  
\_\_\_\_\_  
JEFFREY S. STOUT

STATE OF TEXAS                     )  
  )  
COUNTY OF MIDLAND            )

SUBSCRIBED and SWORN to before me this 20 day of July 2020 by  
Jeffrey S. Stout.

  
NOTARY PUBLIC

My Commission Expires:

2-26-2023



# JEFFREY S. STOUT

2509 Seaboard Avenue, Midland, Texas 79705 • (972) 814-2681 • [jeffstout30@hotmail.com](mailto:jeffstout30@hotmail.com)

---

## EDUCATION

**University of Kansas**, Lawrence, Kansas  
Bachelor of Science, Business Administration, 1996  
Bachelor of Arts, Communications Studies, 1992

## EXPERIENCE

**RSP Permian, L.L.C.**, Midland, Texas  
Delaware Basin Land Lead

January 2017 - Present

- Manage and support Delaware Basin Land Team, consisting of three landmen and one land tech.
- Organize and supervise efforts of outside lease brokers, contract Landmen and title attorneys.
- Interpret, prepare, and negotiate various oil and gas land related contracts.
- Interact with internal drilling and planning groups to facilitate and support exploration, drilling, and production activities.
- Interact with Dallas Land to update and maintain Land Pro records.

**Apache Corporation**, Midland, Texas  
Landman & Land Analyst

August 2010 – December 2016

- Managed Apache's leasehold position across Glasscock County, Texas, Eddy County, New Mexico, and Lea County, New Mexico in the Permian Basin.
- Interpret, prepare, and negotiate various oil and gas land related contracts.
- Interacted with internal drilling operations and planning groups as well as with outside third party operators.
- Organized and supervised efforts of outside lease brokers, contract Landmen and title attorneys.
- Prepared title clearance memorandums and ownership reports to facilitate and support exploration, drilling, and production activities.
- Proficient with Tobin Land System for tracking property summary reports, ownership decks, and lease expiration calendars and view property summary reports and ownership decks.

**Veritas 321 Energy Partners, L.P.**, Midland, Texas  
Contract Landman, Curative Specialist

October 2008 – August 2010

- Extensive courthouse experience with an emphasis on curing title. Regularly prepared and interpreted various oil and gas contracts. Direct dealings with mineral, surface, royalty and working interest owners.

**Beretta Gallery**, Dallas, Texas  
Premium Firearm Sales and Assistant Buyer

June 2006 – September 2008

**Harolds Stores, Inc.**, Dallas, Texas  
Men's Sales Manager; Assistant Buyer; Assistant General Manager

September 1996 – May 2006

**Lawrence Masters Swim Club, Inc.**, Lawrence, Kansas  
Head Coach

August 1995 – August 1996

**University of Kansas Athletic Department**, Lawrence, Kansas  
Graduate Assistant Coach, Swimming and Diving Teams

August 1993 – August 1995

## PROFESSIONAL ASSOCIATIONS

**American Association of Petroleum Landmen**  
RPL - Registered Professional Landman  
**Permian Basin Landman Association**, Midland, Texas

June 2012 – Present

**BEFORE THE OIL CONSERVATION DIVISION**

Santa Fe, New Mexico

**Exhibit No. A1**

Submitted by: **COG OPERATING LLC**

Hearing Date: July 23, 2020

Case Nos. 21322-21323

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-45705	2 Pool Code 97569	3 Pool Name Winchester; Bone Spring, West
4 Property Code 316035	5 Property Name BIGFOOT STATE COM	6 Well Number 501H
7 OGRID No. 229137	8 Operator Name COG OPERATING LLC	9 Elevation 3502'

10 Surface Location

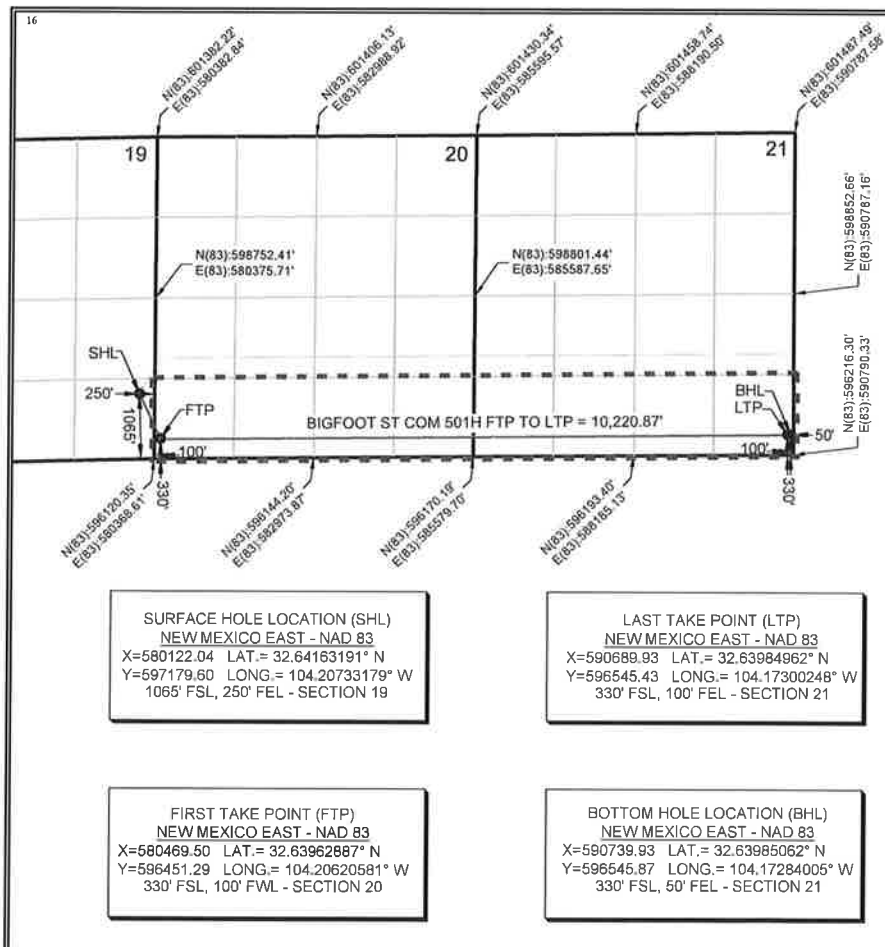
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	19-S	28-E		1065'	SOUTH	250'	EAST	EDDY

11 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	21	19-S	28-E		330'	SOUTH	50'	EAST	EDDY

12 Dedicated Acres 320	13 Joint or Infill	14 Consolidation Code	15 Order 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.



17 OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: 07/07/2020

Printed Name: Robyn M. Russell

E-mail Address: Rrussell@concho.com

18 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.

Date of Survey: 05/12/2020  
Signature and Seal of Professional Surveyor: *[Signature]*  
Certificate Number: 25036

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. A2  
Submitted by: COG OPERATING LLC  
Hearing Date: July 23, 2020  
Case Nos. 21322-21323

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-45706		2 Pool Code 97569		3 Pool Name Winchester; Bone Spring, West	
4 Property Code 316035		5 Property Name BIGFOOT STATE COM			6 Well Number 502H
7 OGRID No. 229137		8 Operator Name COG OPERATING LLC			9 Elevation 3502'

10 Surface Location

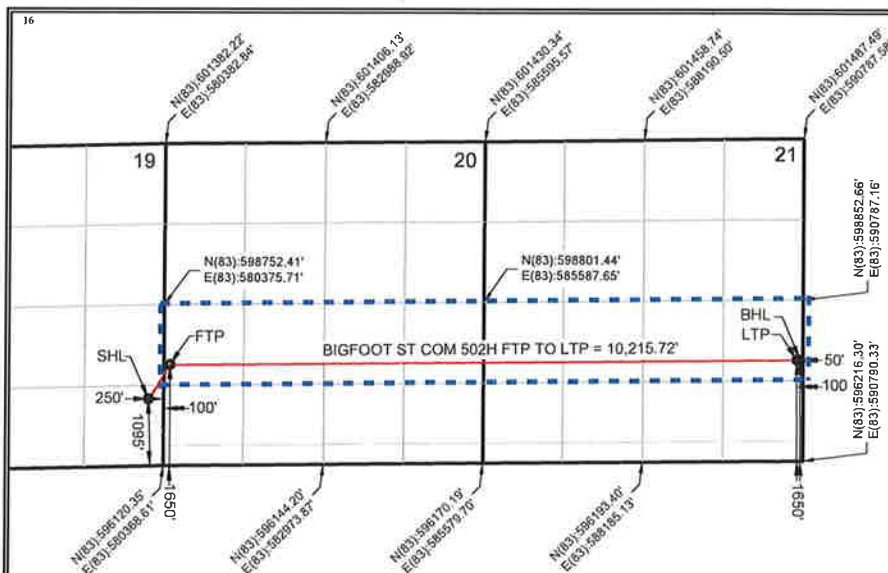
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	19	19-S	28-E		1095'	SOUTH	250'	EAST	EDDY

11 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
I	21	19-S	28-E		1650'	SOUTH	50'	EAST	EDDY

12 Dedicated Acres 320	13 Joint or Infill	14 Consolidation Code	15 Order 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.



SURFACE HOLE LOCATION (SHL)  
NEW MEXICO EAST - NAD 83  
X=580121.25 LAT.= 32.64171435° N  
Y=597209.59 LONG.= 104.20733425° W  
1095' FSL, 250' FEL - SECTION 19

LAST TAKE POINT (LTP)  
NEW MEXICO EAST - NAD 83  
X=590688.34 LAT.= 32.64347803° N  
Y=597865.47 LONG.= 104.17300117° W  
1650' FSL, 100' FEL - SECTION 21

FIRST TAKE POINT (FTP)  
NEW MEXICO EAST - NAD 83  
X=580473.06 LAT.= 32.64325740° N  
Y=597771.38 LONG.= 104.20618911° W  
1650' FSL, 100' FWL - SECTION 20

BOTTOM HOLE LOCATION (BHL)  
NEW MEXICO EAST - NAD 83  
X=590738.34 LAT.= 32.64347903° N  
Y=597865.90 LONG.= 104.17283873° W  
1650' FSL, 50' FEL - SECTION 21

17 OPERATOR CERTIFICATION

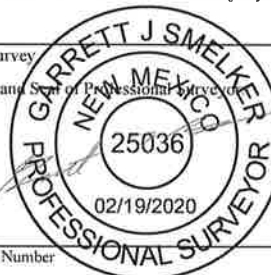
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this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

Signature: *Robyn M. Russell* Date: 07/07/2020  
Printed Name: Robyn M. Russell  
E-mail Address: Russell@concho.com

18 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.

Date of Survey: 02/19/2020  
Signature and Seal of Professional Surveyor: *Garrett J. Smelker*  
Certificate Number: 25036



District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<b>1 API Number</b> 30-015-		<b>2 Pool Code</b> 97569		<b>3 Pool Name</b> Winchester; Bone Spring, West	
<b>4 Property Code</b> 316035		<b>5 Property Name</b> BIGFOOT STATE COM			<b>6 Well Number</b> 602H
<b>7 OGRID No.</b> 229137		<b>8 Operator Name</b> COG OPERATING LLC			<b>9 Elevation</b> 3505'

**10 Surface Location**

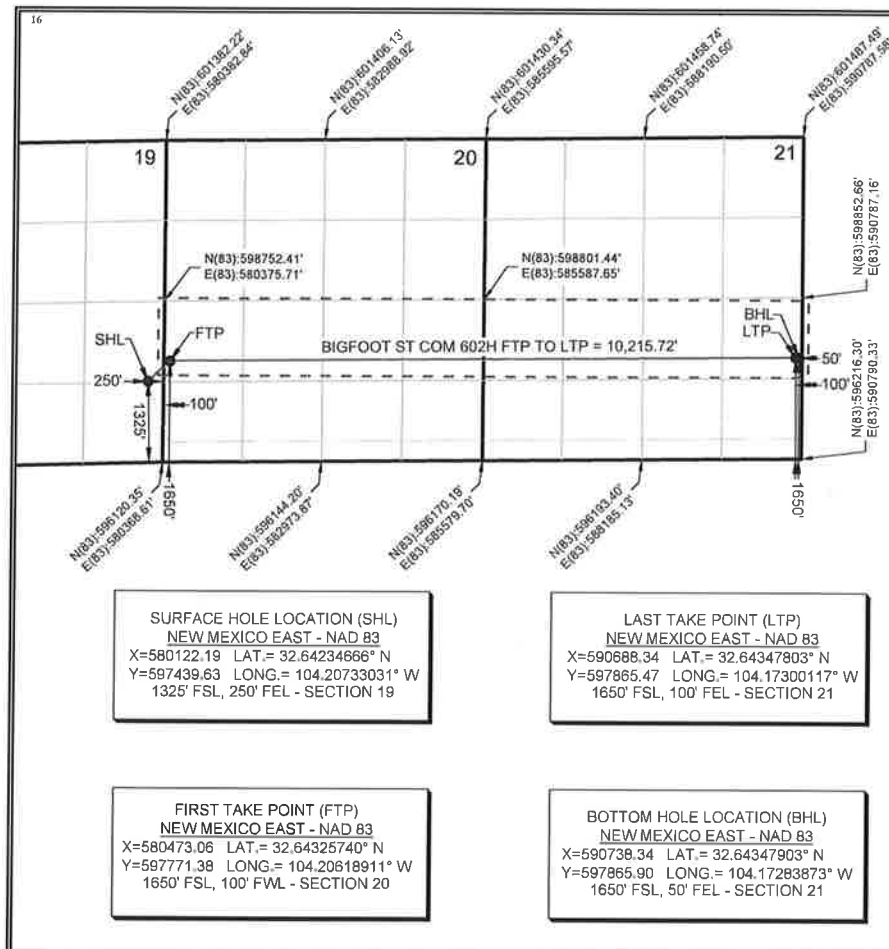
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	19	19-S	28-E		1325'	SOUTH	250'	EAST	EDDY

**11 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
I	21	19-S	28-E		1650'	SOUTH	50'	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



**17 OPERATOR CERTIFICATION**

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: 06/01/2020

Printed Name: Robyn M. Russell

E-mail Address: Rrussell@concho.com

**18 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.

Date of Survey

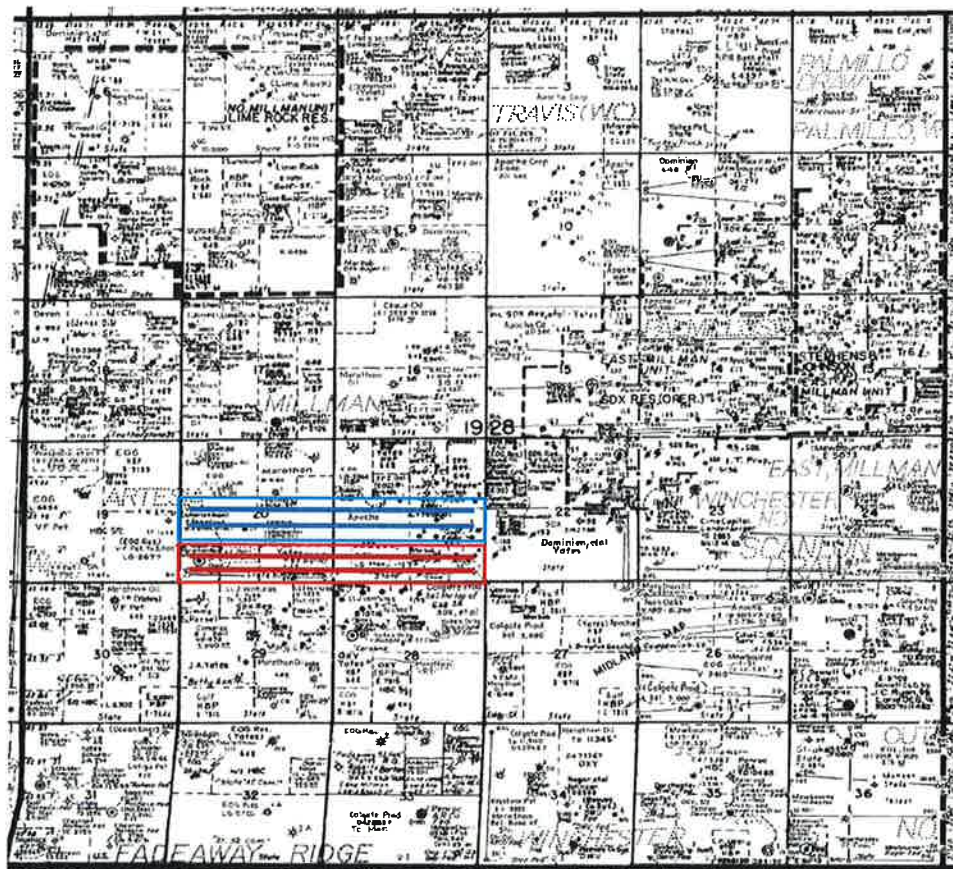
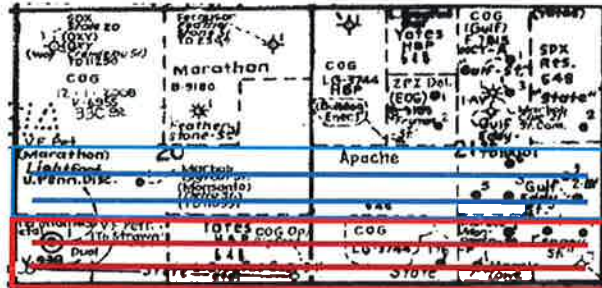
Signature and Seal of Registered Surveyor

*[Signature]*  
GARRETT J. SMELKER  
NEW MEXICO  
25036  
02/19/2020  
PROFESSIONAL SURVEYOR

Certificate Number



Bigfoot State Com #501H, #502H, #601H & #602H will be utilizing "lay down" laterals with Surface Hole Locations in Section 19, T19S-R28E with producing laterals in Sections 20 & 21, T19S-R28E, Lea County, NM.





**Bigfoot State Com Project – Section 20 & 21, T19S-R28E**

Section 20				Section 21			
Bigfoot State Com #502H							
#602H							
#501H							
#601H							

**Bigfoot State Com Project – Section 20 & 21, T19S-R28E**

Section 20				Section 21			
Tract 1A: State of NM V0-6955 WI Owners: COG, Concho Oil & Gas				Tract 4A: State of NM X0-848 WI Owners: COG, EOG	Tract 5A: State of NM E0-7815 WI Owners: COG, Concho Oil & Gas		
Tract 2: State of NM VA-938 WI Owners: Marathon	Tract 1B: State of NM V0-6955 WI Owners: COG, Concho Oil & Gas	Tract 3: State of NM X0-848 WI Owners: COG, WPX, Marathon	Tract 4A: State of NM X0-848 WI Owners: COG, EOG	Tract 6: State of NM X0-848 WI Owners: COG, Concho Oil & Gas	Tract 5A: State of NM E0-7815 WI Owners: COG, Concho Oil & Gas		

Bigfoot State Com 501H, 502H, 601H, & 602H

502H & 602H - N2S2 Sections 20 & 21 of T19S-R28E

501H & 601H - S2S2 Sections 20 & 21 of T19S-R28E

**BEFORE THE OIL CONSERVATION DIVISION**

Santa Fe, New Mexico

**Exhibit No. A4**

Submitted by: **COG OPERATING LLC**

Hearing Date: July 23, 2020

Case Nos. 21322-21323

**N2N2 - Tract Leasehold Ownership**

	COG WI	Concho WI	EOG WI
Tract 1A - Sec 20: N/2S/2	95.000000%	5.000000%	0.000000%
Tract 4A - Sec 21: N/2SW/4	81.944444%	0.000000%	18.055556%
Tract 5A - Sec 21: N/2SE/4	95.000000%	5.000000%	0.000000%

**S2S2 - Tract Leasehold Ownership**

	COG WI	Concho WI	Marathon WI	EOG WI	WPX WI
Tract 1B - Sec 20: SE/4SW/4	95.000000%	5.000000%	0.000000%	0.000000%	0.000000%
Tract 2 - Sec 20: SW/4SW/4	0.000000%	0.000000%	100.000000%	0.000000%	0.000000%
Tract 3 - Sec 20: S/2SE/4	68.055556%	0.000000%	15.972222%	0.000000%	15.972222%
Tract 4B - Sec 21: S/2SW/4	81.944444%	0.000000%	0.000000%	18.055556%	0.000000%
Tract 5B - Sec 21: SE/4SE/4	95.000000%	5.000000%	0.000000%	0.000000%	0.000000%
Tract 6 - Sec 21: SW/4SE/4	95.000000%	5.000000%	0.000000%	0.000000%	0.000000%

**N/2S/2 Unit Recapitulation**

Owner	Working Interest
COG Operating LLC	91.736111%
Concho Oil & Gas LLC	3.750000%
<b>EOG Resources, Inc.</b>	4.513889%
	100.000000%

**S/2S/2 Unit Recapitulation**

Owner	Working Interest
COG Operating LLC	73.125000%
Concho Oil & Gas LLC	1.875000%
<b>Marathon Oil Company</b>	16.493056%
<b>EOG Resources, Inc.</b>	4.513889%

Participating Parties  
Parties We Seek to Pool

WPX Energy Permian, LLC	3.993055%
	100.000000%
Participating Parties	
Parties We Seek to Pool	

**N/2S/2 Unit ORRI**

**Owner**

\*Nest Egg Energy Corporation

**\*Yates Brothers**

**\*Marathon Oil Company**

**Participating Parties**

**Parties We Seek to Pool**

**S/2S/2 Unit ORRI**

**Owner**

Nest Egg Energy Corporation

COG Operating LLC

Concho Oil & Gas LLC

**\*Yates Brothers**

**\*Marathon Oil Company**

**Participating Parties**

**Parties We Seek to Pool**



January 23, 2020

Via CMRRR No. 91 7199 9991 7039 7971 8739

**EOG Resources LLC**

5509 Champions Drive

Midland, TX 79706

Attn: Land Manager

**RECEIVED**

JAN 27 2020

**EOG RESOURCES, INC  
MIDLAND DIVISION**

Re: **Bigfoot State Com 501H & 601H**  
S/2 S/2 of Sections 20 & 21, T19S-R28E  
Eddy County, New Mexico

Dear Sir or Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes the drilling of the following horizontal wells with productive laterals located in S/2 S/2 of Sections 20 & 21, Township 19 South, Range 28 East, Eddy County, New Mexico (collectively, the "Operation"). The surface pad location will be located in Units I and P of Section 19, T19S-R28E (subject to change).

- **Bigfoot State Com 501H**, to be drilled to a depth sufficient to test the 2<sup>nd</sup> BSS formation at an approximate total vertical depth of 7,200'. The surface location for this well is proposed at a legal location in Unit P of Section 19, and a bottom hole location at a legal location in Unit P of Section 21. The dedicated horizontal spacing unit will be the S/2 S/2 of Sections 20 & 21, T19S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$8,873,300.00, as shown on the attached Authority for Expenditure ("AFE").
- **Bigfoot State Com 601H**, to be drilled to a depth sufficient to test the 3<sup>rd</sup> BSS formation at an approximate total vertical depth of 8,500'. The surface location for this well is proposed at a legal location in Unit P of Section 19, and a bottom hole location at a legal location in Unit P of Section 21. The dedicated horizontal spacing unit will be the S/2 S/2 of Sections 20 & 21, T19S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$8,873,300.00, as shown on the attached AFE.

COG is proposing to drill these wells under the terms of a new Operating Agreement for the S/2 S/2 Unit which is included for your review and approval. It has the following general provisions:

- 100/300/300 Non-Consenting Penalty;
- \$7,000/\$700 Drilling and Producing Rate; and
- COG Operating LLC named as Operator.

In the interest of time, 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 horizontal spacing unit for the proposed wells.

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 [bunderwood@concho.com](mailto:bunderwood@concho.com). Should you have any questions, please do not hesitate to contact me at 432.688.6644.

January 23, 2020 – Page 2  
Well Proposals

Sincerely,

**COG Operating LLC**



Buck Underwood  
Senior Landman

BU:bh  
Enc

Please Indicate your election below:

<u>WELL NAME</u>	<b>PARTICIPATE</b> Elect to participate in drilling & completion of well	<b>DO NOT PARTICIPATE</b> Elect <b>NOT</b> to participate in drilling & completion of well
<b>Bigfoot State Com 501H</b>		
<b>Bigfoot State Com 601H</b>		

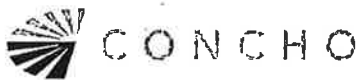
**EOG RESOURCES LLC**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



January 23, 2020

Via CMRRR No. 91 7199 9991 7039 7971 8685

**EOG Resources LLC**  
5509 Champions Drive  
Midland, TX 79706  
Attn: Land Manager

**RECEIVED**

JAN 27 2020

**EOG RESOURCES, INC**  
**MIDLAND DIVISION**

Re: **Bigfoot State Com 502H & 602H**  
N/2 S/2 of Sections 20 & 21, T19S-R28E  
Eddy County, New Mexico

Dear Sir or Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes the drilling of the following horizontal wells with productive laterals located in N/2 S/2 of Sections 20 & 21, Township 19 South, Range 28 East, Eddy County, New Mexico (collectively, the "Operation"). The surface pad location will be located in Unit P of Section 19, T19S-R28E (subject to change).

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- **Bigfoot State Com 602H**, to be drilled to a depth sufficient to test the 3<sup>rd</sup> BSS formation at an approximate total vertical depth of 8,500'. The surface location for this well is proposed at a legal location in Unit I of Section 19, and a bottom hole location at a legal location in Unit I of Section 21. The dedicated horizontal spacing unit will be the N/2 S/2 of Sections 20 & 21, T19S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$8,873,300.00, as shown on the attached AFE.

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- \$7,000/\$700 Drilling and Producing Rate; and
- COG Operating LLC named as Operator.

In the interest of time, 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 horizontal spacing unit for the proposed wells.

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 [bunderwood@concho.com](mailto:bunderwood@concho.com). Should you have any questions, please do not hesitate to contact me at 432.688.6644.

January 23, 2020 – Page 2  
Well Proposals

Sincerely,

COG Operating LLC



Buck Underwood  
Senior Landman

BU:bh  
Enc

Please Indicate your election below:

<u>WELL NAME</u>	<b>PARTICIPATE</b> Elect to participate in drilling & completion of well	<b>DO NOT PARTICIPATE</b> Elect <b>NOT</b> to participate in drilling & completion of well
Bigfoot State Com 502H		
Bigfoot State Com 602H		

EOG RESOURCES LLC

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

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

Well Name	BIGFOOT STATE COM 501H	Prospect	ZEUS 1928/17090					
SHL	1,085 FSL & 230 FEL, SEC. 19	State & County	NEW MEXICO, EDDY					
BHL	330 FSL 50 FEL, SEC. 21	Objective	DRILL & COMPLETE					
Formation	2ND BONE SPRING	Depth	17,500'					
Legal	T19S-R28E SEC. 19, UNIT P	TVD	7,200'					
APE Numbers								
Cost Description	Code	PreSpud (PS)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
Tangible Costs								
D-Surface Casing	401		\$17,500.00				\$0.00	\$17,500.00
D-Intermediate Csg	402		\$96,800.00				\$0.00	\$96,800.00
D-Production Casing/Liner	403		\$293,200.00				\$0.00	\$293,200.00
D-Wellhead Equip	495		\$47,000.00				\$0.00	\$47,000.00
C-Tubing	504			\$21,300.00			\$0.00	\$21,300.00
C-Wellhead Equip	505			\$12,200.00			\$0.00	\$12,200.00
PEO-Pumping Unit	506						\$0.00	\$0.00
PEO-Roads	506						\$0.00	\$0.00
TB-Tanks	510				\$65,100.00		\$0.00	\$65,100.00
TB-Flowlines/Pipelines	511				\$29,600.00		\$0.00	\$29,600.00
TB-Htz Tr/Segtr	512				\$146,400.00		\$0.00	\$146,400.00
TB-Electrical System/Equipment	513				\$97,600.00		\$0.00	\$97,600.00
C-Pkrs/Anchors/Hgns	514			\$29,800.00			\$0.00	\$29,800.00
TB-Couplings/Joints/Valves	515				\$146,400.00		\$0.00	\$146,400.00
TB-Gas Lift/Compression	516				\$103,500.00		\$0.00	\$103,500.00
TB-Pumps-Surface	521				\$15,200.00		\$0.00	\$15,200.00
TB-Meters/Locks	525				\$19,000.00		\$0.00	\$19,000.00
TB-Flares/Combustors/Emission	526				\$19,000.00		\$0.00	\$19,000.00
C-Gas Lift/Compression	527			\$7,300.00			\$0.00	\$7,300.00
PEO-Instrumentation/CADA/POC	529					\$21,700.00	\$0.00	\$21,700.00
PEO-Tubing	530					\$15,500.00	\$0.00	\$15,500.00
PEO-Wellhead Equipment	531					\$9,300.00	\$0.00	\$9,300.00
PEO-Pumps	532					\$15,500.00	\$0.00	\$15,500.00
PEO-Electrical System	533					\$46,400.00	\$0.00	\$46,400.00
PEO-Packers/Anchors/Hangers	534					\$216,500.00	\$0.00	\$216,500.00
PEO-Miscellaneous	535					\$9,300.00	\$0.00	\$9,300.00
Total Tangible Costs		\$0.00	\$454,500.00	\$70,600.00	\$871,300.00	\$334,200.00	\$0.00	\$1,530,600.00
Intangible Costs								
PS-Title/Permits	201	\$6,600.00					\$0.00	\$6,600.00
D-Insurance	202	\$1,800.00					\$0.00	\$1,800.00
PS-Damages/RCOV	203	\$11,000.00					\$0.00	\$11,000.00
PS-Survey/State Lotn	204	\$700.00					\$0.00	\$700.00
D-City/Highways	205		\$94,800.00				\$0.00	\$94,800.00
D-Drilling Overhead	206		\$5,500.00				\$0.00	\$5,500.00
D-Daywork Contract	209		\$635,500.00				\$0.00	\$635,500.00
D-Directional Drtg Services	210		\$269,600.00				\$0.00	\$269,600.00
D-Fuel & Power	211		\$152,100.00				\$0.00	\$152,100.00
D-Water	212		\$35,300.00				\$0.00	\$35,300.00
D-Bits	213		\$71,300.00				\$0.00	\$71,300.00
D-Mud & Chemicals	214		\$179,400.00				\$0.00	\$179,400.00
D-Cement Surface	217		\$14,000.00				\$0.00	\$14,000.00
D-Cement Intermed	218		\$65,400.00				\$0.00	\$65,400.00
D-Prod 2nd Int Cmt	219		\$71,300.00				\$0.00	\$71,300.00
D-Plant Equipment & Centralizers	221		\$55,100.00				\$0.00	\$55,100.00
D-Csg Crews & Equip	222		\$36,000.00				\$0.00	\$36,000.00
D-Contract Labor	225		\$11,000.00				\$0.00	\$11,000.00
D-Company Srvsn	226		\$44,100.00				\$0.00	\$44,100.00
D-Contract Srvsn	227		\$71,300.00				\$0.00	\$71,300.00
D-Tag Csg/Tbg	228		\$36,000.00				\$0.00	\$36,000.00
D-Mud Logging Unit	229		\$23,500.00				\$0.00	\$23,500.00
D-Perf/Wireline Svc	231		\$2,900.00				\$0.00	\$2,900.00
D-Rentals-Surface	235		\$189,500.00				\$0.00	\$189,500.00
D-Rentals-Subsrfc	236		\$163,100.00				\$0.00	\$163,100.00
D-Trucking/Forklift/Htg Mob	237		\$124,200.00				\$0.00	\$124,200.00
D-Welding Services	238		\$3,700.00				\$0.00	\$3,700.00
D-Contingency	243		\$45,500.00				\$0.00	\$45,500.00
D-Envrmtl/Cld Loop	244		\$254,900.00				\$0.00	\$254,900.00
C-Loc/Plat/Roads	305			\$4,300.00			\$0.00	\$4,300.00
C-Frac Equipment	307			\$789,700.00			\$0.00	\$789,700.00
C-Frac Chemicals	308			\$481,100.00			\$0.00	\$481,100.00
C-Frac Proppant	309			\$748,700.00			\$0.00	\$748,700.00
C-Frac Proppant Transportation	310			\$116,900.00			\$0.00	\$116,900.00
C-Fuel & Power	311			\$7,300.00			\$0.00	\$7,300.00
C-Water	312			\$566,800.00			\$0.00	\$566,800.00
C-Bits	313			\$8,600.00			\$0.00	\$8,600.00
C-Mud & Chemicals	314			\$15,900.00			\$0.00	\$15,900.00
C-Contract Labor	325			\$8,600.00			\$0.00	\$8,600.00
C-Company Srvsn	326			\$13,500.00			\$0.00	\$13,500.00
C-Contract Srvsn	327			\$184,900.00			\$0.00	\$184,900.00
C-Tag Csg/Tbg	328			\$2,400.00			\$0.00	\$2,400.00
C-Perf/Wireline Svc	331			\$317,100.00			\$0.00	\$317,100.00
C-Stimulation/Treating	332			\$5,500.00			\$0.00	\$5,500.00
C-Completion Unit	333			\$27,500.00			\$0.00	\$27,500.00
C-Rentals-Surface	335			\$211,200.00			\$0.00	\$211,200.00
C-Rentals-Subsrfc	336			\$30,000.00			\$0.00	\$30,000.00
C-Trucking/Forklift/Htg Mob	337			\$9,500.00			\$0.00	\$9,500.00
C-Welding Services	338			\$2,400.00			\$0.00	\$2,400.00
C-Water Disposal	339			\$27,500.00			\$0.00	\$27,500.00
C-Contingency	343			\$178,100.00			\$0.00	\$178,100.00
C-Envrmtl/Cld Loop	344			\$2,400.00			\$0.00	\$2,400.00
C-Dyed Diesel	345			\$294,400.00			\$0.00	\$294,400.00
C-Crsl Tubing	346			\$279,800.00			\$0.00	\$279,800.00
C-Flowback Crews & Equip	347			\$28,200.00			\$0.00	\$28,200.00
TB-Location/Plat/Roads	353				\$57,300.00		\$0.00	\$57,300.00
TB-Contract Labor	356				\$138,300.00		\$0.00	\$138,300.00
TB-Water Disposal	362				\$81,900.00		\$0.00	\$81,900.00
PEO-Contract Labor	374					\$6,500.00	\$0.00	\$6,500.00
PEO-Contract Supervision	376					\$5,900.00	\$0.00	\$5,900.00
PEO-Completion Unit	381					\$12,400.00	\$0.00	\$12,400.00
PEO-Rentals-Surface	383					\$8,200.00	\$0.00	\$8,200.00
PEO-Trkg/Forklift/Htg Mobilization	385					\$3,500.00	\$0.00	\$3,500.00
Total Intangible Costs		\$20,100.00	\$2,846,000.00	\$4,362,600.00	\$277,500.00	\$38,500.00	\$0.00	\$7,342,700.00
Total Gross Cost		\$20,100.00	\$3,100,500.00	\$4,433,200.00	\$948,800.00	\$370,700.00	\$0.00	\$8,873,300.00

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

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 1/27/2020

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

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.



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

Well Name	BIGFOOT STATE COM 601H						Prospect	ZEUS 1928/717090
BHL	1,315' FSL & 250' FEL, SEC. 19						State & County	NEW MEXICO, EDDY
Formation	330' FSL & 50' FEL, SEC. 21						Objective	DRILL & COMPLETE
Legal	3RD BONE SPRING						Depth	19,000'
AFE Numbers	T19S-R28E SEC. 19, UNIT P						TVD	8,500'
Cost Description	Code	PreSpud (PS)	Drilling (DR)	Completions (C)	Tank Btty Constrcn(TB)	Pmpq Equip (PEQ)	Revision	Total
Tangible Costs								
D-Surface Casing	401		\$17,500.00				\$0.00	\$17,500.00
D-Intermediate Csg	402		\$96,800.00				\$0.00	\$96,800.00
D-Production Casing/Liner	403		\$293,200.00				\$0.00	\$293,200.00
D-Wellhead Equip	405		\$47,000.00				\$0.00	\$47,000.00
C-Tubing	504			\$21,300.00			\$0.00	\$21,300.00
C-Wellhead Equip	505			\$12,200.00			\$0.00	\$12,200.00
PEQ-Pumping Unit	506						\$0.00	\$0.00
PEQ-Rods	508						\$0.00	\$0.00
TB-Tanks	510				\$65,100.00		\$0.00	\$65,100.00
TB-Flowlines/Pipelines	511				\$59,600.00		\$0.00	\$59,600.00
TB-Hy Trn/Seprtr	512				\$146,400.00		\$0.00	\$146,400.00
TB-Electrical System/Equipment	513				\$97,600.00		\$0.00	\$97,600.00
C-Hous/Anchors/Hgns	514			\$29,600.00			\$0.00	\$29,600.00
TB-Couplings/Flttings/Valves	515				\$146,400.00		\$0.00	\$146,400.00
TB-Gas Lift/Compression	516				\$103,000.00		\$0.00	\$103,000.00
TB-Pumps-Surface	521				\$15,200.00		\$0.00	\$15,200.00
TB-Meters/Lacts	525				\$19,000.00		\$0.00	\$19,000.00
TB-Flares/Combustion/Emission	526				\$19,000.00		\$0.00	\$19,000.00
C-Gas Lift/Compression	527		\$7,300.00				\$0.00	\$7,300.00
PEQ-Instrumentation/SCADA/PLC	529					\$21,700.00	\$0.00	\$21,700.00
PEQ-Tubing	530					\$15,500.00	\$0.00	\$15,500.00
PEQ-Wellhead Equipment	531					\$9,300.00	\$0.00	\$9,300.00
PEQ-Pumps	532					\$15,500.00	\$0.00	\$15,500.00
PEQ-Electrical System	533					\$46,400.00	\$0.00	\$46,400.00
PEQ-Packers/Anchors/Hangers	534					\$216,500.00	\$0.00	\$216,500.00
PEQ-Miscellaneous	535					\$9,300.00	\$0.00	\$9,300.00
Total Tangible Costs		\$0.00	\$454,900.00	\$70,600.00	\$671,300.00	\$334,200.00	\$8.00	\$1,536,600.00
Intangible Costs								
PS-Title/Permits	201	\$6,600.00					\$0.00	\$6,600.00
D-Insurance	202	\$1,800.00					\$0.00	\$1,800.00
PS-Damages/Row	203	\$11,000.00					\$0.00	\$11,000.00
PS-Survey/State Ldn	204	\$700.00					\$0.00	\$700.00
D-Local Pits/Roads	205		\$94,800.00				\$0.00	\$94,800.00
D-Mining Overhead	206		\$5,500.00				\$0.00	\$5,500.00
D-Daywork Contract	209		\$635,500.00				\$0.00	\$635,500.00
D-Directional Drng Services	210		\$269,600.00				\$0.00	\$269,600.00
D-Fuel & Power	211		\$152,100.00				\$0.00	\$152,100.00
D-Water	212		\$35,300.00				\$0.00	\$35,300.00
D-Bits	213		\$71,300.00				\$0.00	\$71,300.00
D-Mud & Chemicals	214		\$170,400.00				\$0.00	\$170,400.00
D-Cement Surface	217		\$14,000.00				\$0.00	\$14,000.00
D-Cement Internal	218		\$65,400.00				\$0.00	\$65,400.00
D-Prod 2nd Int Cmt	219		\$71,300.00				\$0.00	\$71,300.00
D-Float Equipment & Centralizers	221		\$55,100.00				\$0.00	\$55,100.00
D-Cat Crews & Equip	222		\$36,000.00				\$0.00	\$36,000.00
D-Contract Labor	225		\$11,000.00				\$0.00	\$11,000.00
D-Company Spvsn	226		\$44,100.00				\$0.00	\$44,100.00
D-Contract Spvsn	227		\$71,300.00				\$0.00	\$71,300.00
D-Trip Cag/Tbg	228		\$36,000.00				\$0.00	\$36,000.00
D-Mud Logging Unit	229		\$23,500.00				\$0.00	\$23,500.00
D-Perf Wireline Svc	231		\$2,900.00				\$0.00	\$2,900.00
D-Rentals-Surface	235		\$189,500.00				\$0.00	\$189,500.00
D-Rentals-Subsurb	236		\$163,100.00				\$0.00	\$163,100.00
D-Trucking/Forklft/Rtg Mob	237		\$124,200.00				\$0.00	\$124,200.00
D-Welding Services	238		\$3,700.00				\$0.00	\$3,700.00
D-Contingency	243		\$45,500.00				\$0.00	\$45,500.00
D-Envrnmnt/Clted Loop	244		\$254,900.00				\$0.00	\$254,900.00
C-Ldn Pits/Roads	305			\$4,300.00			\$0.00	\$4,300.00
C-Frac Equipment	307			\$789,700.00			\$0.00	\$789,700.00
C-Frac Chemicals	308			\$481,100.00			\$0.00	\$481,100.00
C-Frac Proppant	309			\$748,700.00			\$0.00	\$748,700.00
C-Frac Proppant Transportation	310			\$116,900.00			\$0.00	\$116,900.00
C-Fuel & Power	311			\$7,300.00			\$0.00	\$7,300.00
C-Water	312			\$566,800.00			\$0.00	\$566,800.00
C-Bits	313			\$8,600.00			\$0.00	\$8,600.00
C-Mud & Chemicals	314			\$15,900.00			\$0.00	\$15,900.00
C-Contract Labor	315			\$8,600.00			\$0.00	\$8,600.00
C-Company Spvsn	320			\$13,500.00			\$0.00	\$13,500.00
C-Contract Spvsn	322			\$184,900.00			\$0.00	\$184,900.00
C-Trip Cag/Tbg	328			\$2,400.00			\$0.00	\$2,400.00
C-Perf Wireline Svc	331			\$317,100.00			\$0.00	\$317,100.00
C-Simulation/Trtating	332			\$5,500.00			\$0.00	\$5,500.00
C-Completion Unit	333			\$27,500.00			\$0.00	\$27,500.00
C-Rentals-Surface	335			\$211,200.00			\$0.00	\$211,200.00
C-Rentals-Subsurb	336			\$30,000.00			\$0.00	\$30,000.00
C-Trucking/Forklft/Rtg Mob	337			\$9,600.00			\$0.00	\$9,600.00
C-Welding Services	338			\$2,400.00			\$0.00	\$2,400.00
C-Water Disposal	339			\$27,500.00			\$0.00	\$27,500.00
C-Contingency	343			\$178,100.00			\$0.00	\$178,100.00
C-Envrnmnt/Clted Loop	344			\$2,400.00			\$0.00	\$2,400.00
C-Dyed Diesel	345			\$294,400.00			\$0.00	\$294,400.00
C-Cat Tubing	346			\$279,800.00			\$0.00	\$279,800.00
C-Flowback Crews & Equip	347			\$28,200.00			\$0.00	\$28,200.00
TB-Location/Pits/Roads	353				\$57,300.00		\$0.00	\$57,300.00
TB-Contract Labor	356				\$138,300.00		\$0.00	\$138,300.00
TB-Water Disposal	362				\$81,900.00		\$0.00	\$81,900.00
PEQ-Contract Labor	374					\$6,500.00	\$0.00	\$6,500.00
PEQ-Contract Supervision	376					\$5,900.00	\$0.00	\$5,900.00
PEQ-Completion Unit	381					\$12,400.00	\$0.00	\$12,400.00
PEQ-Rentals-Surface	383					\$8,200.00	\$0.00	\$8,200.00
PEQ-Trkg/Forklft/Rtg Mobilization	385					\$3,500.00	\$0.00	\$3,500.00
Total Intangible Costs		\$20,100.00	\$2,048,000.00	\$4,362,600.00	\$277,500.00	\$36,500.00	\$0.00	\$7,342,700.00
total Gross Cost		\$20,100.00	\$3,100,900.00	\$4,433,200.00	\$948,800.00	\$370,700.00	\$0.00	\$8,873,300.00

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

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 1/27/2023

We approve:  
N. Working Interest

COG Operating LLC

By: \_\_\_\_\_

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.

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

Well Name	BIGFOOT STATE COM 502H	Prospect	ZEUS 1029/117990
SHL	1,115 FSL & 250 FEL SEC. 18	State & County	NEW MEXICO, EDDY
BHL	1,650 FSL & 30 FEL SEC. 21	Objective	DRILL & COMPLETE
Formation	2ND BONE SPRING	Depth	17,500'
Legal	T19S-R28E SEC. 19, UNIT P	TVD	7,200'
AFE Number			

Cost Description	Code	PreSpud (PS)	Drilling (DR)	Completion (C)	Tank Btly Constrctn(TB)	Pmpq Equip (PEQ)	Revision	Total
<b>Tangible Costs</b>								
D-Surface Casing	401		\$17,500.00				\$0.00	\$17,500.00
D-Intermediate Casing	402		\$96,800.00				\$0.00	\$96,800.00
D-Production Casing/Liner	403		\$299,200.00				\$0.00	\$299,200.00
D-Wellhead Equip	405		\$47,000.00				\$0.00	\$47,000.00
C-Tubing	504			\$21,300.00			\$0.00	\$21,300.00
C-Wellhead Equip	505			\$12,200.00			\$0.00	\$12,200.00
PEQ-Pumping Unit	506						\$0.00	\$0.00
PEQ-Racks	508						\$0.00	\$0.00
TB-Tanks	510				\$65,100.00		\$0.00	\$65,100.00
TB-Flowlines/Pipelines	511				\$59,600.00		\$0.00	\$59,600.00
TB-Hor. Trp/Separ	512				\$146,400.00		\$0.00	\$146,400.00
TB-Electrical System/Equipment	513				\$97,600.00		\$0.00	\$97,600.00
C-Point/Anchors/Signs	514			\$29,800.00			\$0.00	\$29,800.00
TB-Couplings/Fittings/Valves	515				\$146,400.00		\$0.00	\$146,400.00
TB-Gas Lift/Compression	516				\$103,000.00		\$0.00	\$103,000.00
TB-Pumps-Surface	521				\$15,200.00		\$0.00	\$15,200.00
TB-Minors/Lacts	525				\$19,000.00		\$0.00	\$19,000.00
TB-Flares/Combustors/Emission	526				\$19,000.00		\$0.00	\$19,000.00
C-Gas Lift/Compression	527			\$7,300.00			\$0.00	\$7,300.00
PEQ-Instrumentation/SCADA/POD	529					\$21,700.00	\$0.00	\$21,700.00
PEQ-Tubing	530					\$15,500.00	\$0.00	\$15,500.00
PEQ-Wellhead Equipment	531					\$9,300.00	\$0.00	\$9,300.00
PEQ-Pumps	532					\$15,200.00	\$0.00	\$15,200.00
PEQ-Electrical System	533					\$46,400.00	\$0.00	\$46,400.00
PEQ-Packers/Anchors/Hangers	534					\$216,500.00	\$0.00	\$216,500.00
PEQ-Miscellaneous	535					\$9,300.00	\$0.00	\$9,300.00
<b>Total Tangible Costs</b>		\$0.00	\$454,900.00	\$70,600.00	\$871,300.00	\$334,200.00	\$0.00	\$1,530,600.00
<b>Intangible Costs</b>								
PS-Tide/Permits	201	\$6,600.00					\$0.00	\$6,600.00
D-Insurance	202	\$1,800.00					\$0.00	\$1,800.00
PS-Damages/ROW	203	\$11,000.00					\$0.00	\$11,000.00
PS-Survey/State Lctn	204	\$700.00					\$0.00	\$700.00
D-LowPits/Roads	205		\$94,600.00				\$0.00	\$94,600.00
D-Grilling Overhead	206		\$1,500.00				\$0.00	\$1,500.00
D-Daywork Contract	209		\$635,500.00				\$0.00	\$635,500.00
D-Directional Drig Services	210		\$269,600.00				\$0.00	\$269,600.00
D-Fuel & Power	211		\$152,100.00				\$0.00	\$152,100.00
D-Water	212		\$35,300.00				\$0.00	\$35,300.00
D-Bits	213		\$71,300.00				\$0.00	\$71,300.00
D-Mud & Chemicals	214		\$170,400.00				\$0.00	\$170,400.00
D-Cement Surface	217		\$14,000.00				\$0.00	\$14,000.00
D-Cement Intermed	218		\$65,400.00				\$0.00	\$65,400.00
D-Prod-2nd Int Cmt	219		\$71,300.00				\$0.00	\$71,300.00
D-Fleet Equipment & Centralizers	221		\$55,100.00				\$0.00	\$55,100.00
D-Csg Crews & Equip	223		\$36,000.00				\$0.00	\$36,000.00
D-Contract Labor	225		\$11,000.00				\$0.00	\$11,000.00
D-Company Spvrn	226		\$44,100.00				\$0.00	\$44,100.00
D-Contract Spvrn	227		\$71,300.00				\$0.00	\$71,300.00
D-Trip Csg/Tbg	228		\$36,000.00				\$0.00	\$36,000.00
D-Mud Logging Unit	229		\$23,500.00				\$0.00	\$23,500.00
D-Perf/Wireline Svc	231		\$2,950.00				\$0.00	\$2,950.00
D-Rentals-Surface	235		\$169,500.00				\$0.00	\$169,500.00
D-Rentals-Subsrfc	236		\$183,100.00				\$0.00	\$183,100.00
D-Trucking/Forklift/Rig Mob	237		\$124,200.00				\$0.00	\$124,200.00
D-Welding Services	238		\$3,700.00				\$0.00	\$3,700.00
D-Contingency	243		\$45,500.00				\$0.00	\$45,500.00
D-Environmnt/Cldst Loop	244		\$254,900.00				\$0.00	\$254,900.00
C-LowPits/Roads	305			\$4,300.00			\$0.00	\$4,300.00
C-Frac Equipment	307			\$789,700.00			\$0.00	\$789,700.00
C-Frac Chemicals	308			\$481,100.00			\$0.00	\$481,100.00
C-Frac Proppant	309			\$748,700.00			\$0.00	\$748,700.00
C-Frac Proppant Transportation	310			\$116,900.00			\$0.00	\$116,900.00
C-Fuel & Power	311			\$7,300.00			\$0.00	\$7,300.00
C-Water	312			\$566,800.00			\$0.00	\$566,800.00
C-Bits	313			\$8,600.00			\$0.00	\$8,600.00
C-Mud & Chemicals	314			\$15,900.00			\$0.00	\$15,900.00
C-Contract Labor	325			\$8,600.00			\$0.00	\$8,600.00
C-Company Spvrn	326			\$13,500.00			\$0.00	\$13,500.00
C-Contract Spvrn	327			\$164,000.00			\$0.00	\$164,000.00
C-Trip Csg/Tbg	328			\$2,400.00			\$0.00	\$2,400.00
C-Perf/Wireline Svc	331			\$317,100.00			\$0.00	\$317,100.00
C-Stimulation/foaming	332			\$5,500.00			\$0.00	\$5,500.00
C-Completion Unit	333			\$27,500.00			\$0.00	\$27,500.00
C-Rentals-Surface	335			\$211,200.00			\$0.00	\$211,200.00
C-Rentals-Subsrfc	336			\$30,000.00			\$0.00	\$30,000.00
C-Trucking/Forklift/Rig Mob	337			\$9,800.00			\$0.00	\$9,800.00
C-Welding Services	338			\$2,400.00			\$0.00	\$2,400.00
C-Water Disposal	339			\$27,500.00			\$0.00	\$27,500.00
C-Contingency	343			\$178,100.00			\$0.00	\$178,100.00
C-Environmnt/Cldst Loop	344			\$2,400.00			\$0.00	\$2,400.00
C-Dyed Diesel	345			\$294,400.00			\$0.00	\$294,400.00
C-Coil Tubing	346			\$279,800.00			\$0.00	\$279,800.00
C-Flowback Crews & Equip	347			\$28,200.00			\$0.00	\$28,200.00
TB-Location/Pits/Roads	353				\$57,300.00		\$0.00	\$57,300.00
TB-Contract Labor	356				\$138,300.00		\$0.00	\$138,300.00
TB-Water Disposal	362				\$81,900.00		\$0.00	\$81,900.00
PEQ-Contract Labor	374					\$6,600.00	\$0.00	\$6,600.00
PEQ-Contract Supervision	376					\$5,900.00	\$0.00	\$5,900.00
PEQ-Completion Unit	381					\$12,400.00	\$0.00	\$12,400.00
PEQ-Rentals-Surface	383					\$8,200.00	\$0.00	\$8,200.00
PEQ-Trip/Forklift/Rig Mobilization	385					\$3,500.00	\$0.00	\$3,500.00
<b>Total Intangible Costs</b>		\$20,100.00	\$2,646,000.00	\$4,362,600.00	\$277,500.00	\$36,500.00	\$0.00	\$7,342,700.00
<b>Total Gross Cost</b>		\$20,100.00	\$3,106,500.00	\$4,433,200.00	\$948,800.00	\$370,700.00	\$0.00	\$8,673,300.00

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

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 12/12/2020

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

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.

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

Well Name	BIGFOOT STATE COM 602H						Prospect	ZEUS 1928/17090
SHL	1,345 PSL & 250' FEL SEC. 19						State & County	NEW MEXICO, EDDY
BHL	1,650' PSL & 50' FEL SEC 21						Objective	DRILL & COMPLETE
Formation	3RD BONE SPRING						Depth	19,000'
Legal	T19S-R2BE SEC. 19, UNIT P						TVD	8,500'
APE Number								
Cost Description	Code	PreSpud (PS)	Drilling (DR)	Completions (C)	Tank Btly Constrcn(TB)	Pmpg Equip (PEQ)	Revision	Total
Tangible Costs								
D-Surface Casing	401		\$17,500.00				\$0.00	\$17,500.00
D-Intermediate Csg	402		\$91,800.00				\$0.00	\$91,800.00
D-Production Casing/Liner	403		\$293,200.00				\$0.00	\$293,200.00
D-Wellhead Equip	405		\$47,000.00				\$0.00	\$47,000.00
C-Tubing	504			\$21,300.00			\$0.00	\$21,300.00
C-Wellhead Equip	505			\$12,200.00			\$0.00	\$12,200.00
PEQ-Pumping Unit	506						\$0.00	\$0.00
PEQ-Roads	508						\$0.00	\$0.00
TB-Tanks	510				\$65,100.00		\$0.00	\$65,100.00
TB-Flowlines/Pipelines	511				\$59,600.00		\$0.00	\$59,600.00
TB-Hr Trn/Septr	512				\$146,400.00		\$0.00	\$146,400.00
TB-Electrical System/Equipment	513				\$97,600.00		\$0.00	\$97,600.00
C-Packs/Anchors/Hgts	514			\$29,800.00			\$0.00	\$29,800.00
TB-Couplings/Pinangs/Valves	515				\$146,400.00		\$0.00	\$146,400.00
TB-Gas Lift/Compression	516				\$103,300.00		\$0.00	\$103,300.00
TB-Pumps-Surface	521				\$15,200.00		\$0.00	\$15,200.00
TB-Meters/Lacs	525				\$19,000.00		\$0.00	\$19,000.00
TB-Flares/Combusters/Emission	526				\$19,000.00		\$0.00	\$19,000.00
C-Gas Lift/Compression	527			\$7,300.00			\$0.00	\$7,300.00
PEQ-Instrumentation/SCADA/POD	529					\$21,700.00	\$0.00	\$21,700.00
PEQ-Tubing	530					\$15,500.00	\$0.00	\$15,500.00
PEQ-Wellhead Equipment	531					\$9,300.00	\$0.00	\$9,300.00
PEQ-Pumps	532					\$15,500.00	\$0.00	\$15,500.00
PEQ-Electrical System	533					\$46,400.00	\$0.00	\$46,400.00
PEQ-Packs/Anchors/Hangers	534					\$216,500.00	\$0.00	\$216,500.00
PEQ-Miscellaneous	535					\$9,300.00	\$0.00	\$9,300.00
Total Tangible Costs		\$0.00	\$454,500.00	\$70,600.00	\$671,300.00	\$334,200.00	\$0.00	\$1,530,600.00
Intangible Costs								
PS-Title/Permits	201	\$6,600.00					\$0.00	\$6,600.00
D-Insurance	202	\$1,800.00					\$0.00	\$1,800.00
PS-Damages/ROW	203	\$11,000.00					\$0.00	\$11,000.00
PS-Survey/State Ldn	204	\$700.00					\$0.00	\$700.00
D-Local/Roads	205		\$94,000.00				\$0.00	\$94,000.00
D-Drilling Overhead	206		\$5,500.00				\$0.00	\$5,500.00
D-Daywork Contract	209		\$635,500.00				\$0.00	\$635,500.00
D-Directional Drig Services	210		\$269,600.00				\$0.00	\$269,600.00
D-Fuel & Power	211		\$152,100.00				\$0.00	\$152,100.00
D-Water	212		\$35,300.00				\$0.00	\$35,300.00
D-Bits	213		\$71,300.00				\$0.00	\$71,300.00
D-Mud & Chemicals	214		\$176,400.00				\$0.00	\$176,400.00
D-Cement Surface	217		\$14,000.00				\$0.00	\$14,000.00
D-Cement Intermediate	218		\$65,400.00				\$0.00	\$65,400.00
D-Prod-2nd Int Cmt	219		\$71,300.00				\$0.00	\$71,300.00
D-Plant Equipment & Centralizers	221		\$55,100.00				\$0.00	\$55,100.00
D-Csg Crews & Equip	222		\$36,000.00				\$0.00	\$36,000.00
D-Contract Labor	225		\$11,000.00				\$0.00	\$11,000.00
D-Company Supervn	226		\$44,100.00				\$0.00	\$44,100.00
D-Contract Supervn	227		\$71,300.00				\$0.00	\$71,300.00
D-Tstg Csg/Tbg	228		\$36,000.00				\$0.00	\$36,000.00
D-Mud Logging Unit	229		\$23,500.00				\$0.00	\$23,500.00
D-Perf/Wireline Svc	231		\$2,900.00				\$0.00	\$2,900.00
D-Rentals-Surface	235		\$189,500.00				\$0.00	\$189,500.00
D-Rentals-Subsrfc	236		\$163,100.00				\$0.00	\$163,100.00
D-Trucking/Forklift/Rtg Mob	237		\$124,200.00				\$0.00	\$124,200.00
D-Welding Services	238		\$3,700.00				\$0.00	\$3,700.00
D-Contingency	243		\$45,500.00				\$0.00	\$45,500.00
D-Envrnmnt/Cld Loop	244		\$254,900.00				\$0.00	\$254,900.00
C-Lctr/Pwr/Roads	305			\$4,300.00			\$0.00	\$4,300.00
C-Frac Equipment	307			\$789,700.00			\$0.00	\$789,700.00
C-Frac Chemicals	308			\$481,100.00			\$0.00	\$481,100.00
C-Frac Proppant	309			\$748,700.00			\$0.00	\$748,700.00
C-Frac Proppant Transportation	310			\$116,900.00			\$0.00	\$116,900.00
C-Fuel & Power	311			\$7,300.00			\$0.00	\$7,300.00
C-Water	312			\$566,600.00			\$0.00	\$566,600.00
C-Bits	313			\$8,600.00			\$0.00	\$8,600.00
C-Mud & Chemicals	314			\$15,900.00			\$0.00	\$15,900.00
C-Contract Labor	325			\$8,600.00			\$0.00	\$8,600.00
C-Company Supervn	326			\$13,500.00			\$0.00	\$13,500.00
C-Contract Supervn	327			\$184,900.00			\$0.00	\$184,900.00
C-Tstg Csg/Tbg	328			\$2,400.00			\$0.00	\$2,400.00
C-Perf/Wireline Svc	331			\$317,100.00			\$0.00	\$317,100.00
C-Stimulation/Treating	332			\$5,500.00			\$0.00	\$5,500.00
C-Completion Unit	333			\$27,500.00			\$0.00	\$27,500.00
C-Rentals-Surface	335			\$211,200.00			\$0.00	\$211,200.00
C-Rentals-Subsrfc	336			\$30,000.00			\$0.00	\$30,000.00
C-Trucking/Forklift/Rtg Mob	337			\$9,800.00			\$0.00	\$9,800.00
C-Welding Services	338			\$2,400.00			\$0.00	\$2,400.00
C-Water Disposal	339			\$27,500.00			\$0.00	\$27,500.00
C-Contingency	343			\$178,100.00			\$0.00	\$178,100.00
C-Envrnmnt/Cld Loop	344			\$2,400.00			\$0.00	\$2,400.00
C-Dyed Diesel	345			\$294,400.00			\$0.00	\$294,400.00
C-Csl Tubing	346			\$279,800.00			\$0.00	\$279,800.00
C-Flowback Crews & Equip	347			\$28,200.00			\$0.00	\$28,200.00
TB-Location/Pwr/Roads	353				\$57,300.00		\$0.00	\$57,300.00
TB-Contract Labor	356				\$138,300.00		\$0.00	\$138,300.00
TB-Water Disposal	362				\$81,900.00		\$0.00	\$81,900.00
PEQ-Contract Labor	374					\$6,500.00	\$0.00	\$6,500.00
PEQ-Contract Supervision	376					\$5,000.00	\$0.00	\$5,000.00
PEQ-Completion Unit	381					\$12,400.00	\$0.00	\$12,400.00
PEQ-Rentals-Surface	383					\$8,200.00	\$0.00	\$8,200.00
PEQ-Trng/Forkl/Rtg Mobilization	385					\$3,500.00	\$0.00	\$3,500.00
Total Intangible Costs		\$20,100.00	\$2,646,000.00	\$4,362,600.00	\$277,500.00	\$36,500.00	\$0.00	\$7,342,700.00
Total Gross Cost		\$20,100.00	\$3,100,500.00	\$4,433,200.00	\$948,800.00	\$370,700.00	\$0.00	\$8,873,300.00

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

COG Operating LLC

By: \_\_\_\_\_

Date Prepared: 1/27/2023

We approve:  
% Working Interest

COG Operating LLC

By: \_\_\_\_\_

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.

**Communication Log – Bigfoot State Com #501H, #502H, #601H, & #602H**

- 1/23/2020 – 501H & 601H Well Proposals sent to Marathon and EOG
- 1/23/2020 – 502H & 602H Well Proposals sent to EOG
- 1/30/2020 – 501H Well Proposal sent to Pivotal Permian/WPX
- 1/23/2020 – S2S2 OA sent to Marathon, EOG
- 1/23/2020 – N2S2 OA sent to EOG
- 1/30/2020 – S2S2 OA sent to Pivotal Permian
- 4/6/2020 – State CAs sent to Apache, WPX, Marathon (LOR in State Leases)
- 4/6/2020 – Ratifications of ORRIs sent Marathon Oil and Yates Brothers

**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. 21322 & 21323**

**AFFIDAVIT OF TRAVIS SPARKS, GEOLOGIST**

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

1. My name is Travis Sparks and I am employed by COG Operating LLC ("COG") as a geologist.
2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum geology. I am familiar with the applications filed by COG in these consolidated cases and have conducted a geologic study of the lands in the subject area.
3. The target interval for the proposed wells is the Second and Third Sands in the Bone Spring formation.
4. **Exhibit B-1** consist of subsea structure maps that I prepared for the Second Bone Spring formation and Third Bone Spring formation. The S/2 of Sections 20 and 21 is identified and the initial wells in the proposed spacing units are depicted with dashed lines. The contour intervals are 25 feet and show the Second Bone Spring and Third Bone Spring formation dipping to the east. The structure appears consistent across the proposed spacing units and I do not observe any faulting, pinch outs, or other geologic impediments to drilling horizontal wells.
5. **Exhibit B-2** contains a line of cross sections from A to A' using three wells. I chose these wells to create the cross section because they are the closest offsets with the correct set of logs. In my opinion, these well logs are representative of the geology in the subject area.

6. **Exhibit B-3** is a stratigraphic cross-section that I prepared for the Bone Spring formation using the logs from the representative wells shown on Exhibit B-2. Each well on the cross-section contains gamma ray, resistivity, and porosity logs. The target interval for the proposed wells are bracketed on the cross section. The cross-section demonstrates that the targeted intervals are continuous across the proposed spacing unit.

7. Based on my geologic study, the Bone Spring formation underlying the subject area is suitable for development by horizontal wells and the acreage comprising the proposed horizontal spacing units will be productive and contribute proportionately to the production from the wells.

8. **COG Exhibit B-4** shows the orientation of the wells drilled in the Second and Third Sands of the Bone Spring formation in the surrounding area. The laydown orientation of the proposed wells matches that of the existing wells and is appropriate because it is in the preferred orientation.

9. In my opinion, the approval of COG's applications in these consolidated cases is in the best interest of conservation, the prevention of waste, and protection of correlative rights.

10. COG Exhibits B-1 and B-4 were either prepared by me or compiled under my direction and supervision.

FURTHER AFFIANT SAYETH NOT

  
TRAVIS SPARKS

STATE OF TEXAS                   )  
  )  
COUNTY OF MIDLAND            )

SUBSCRIBED and SWORN to before me this 21 day of July, 2020, by Travis Sparks.

  
NOTARY PUBLIC

My Commission Expires:

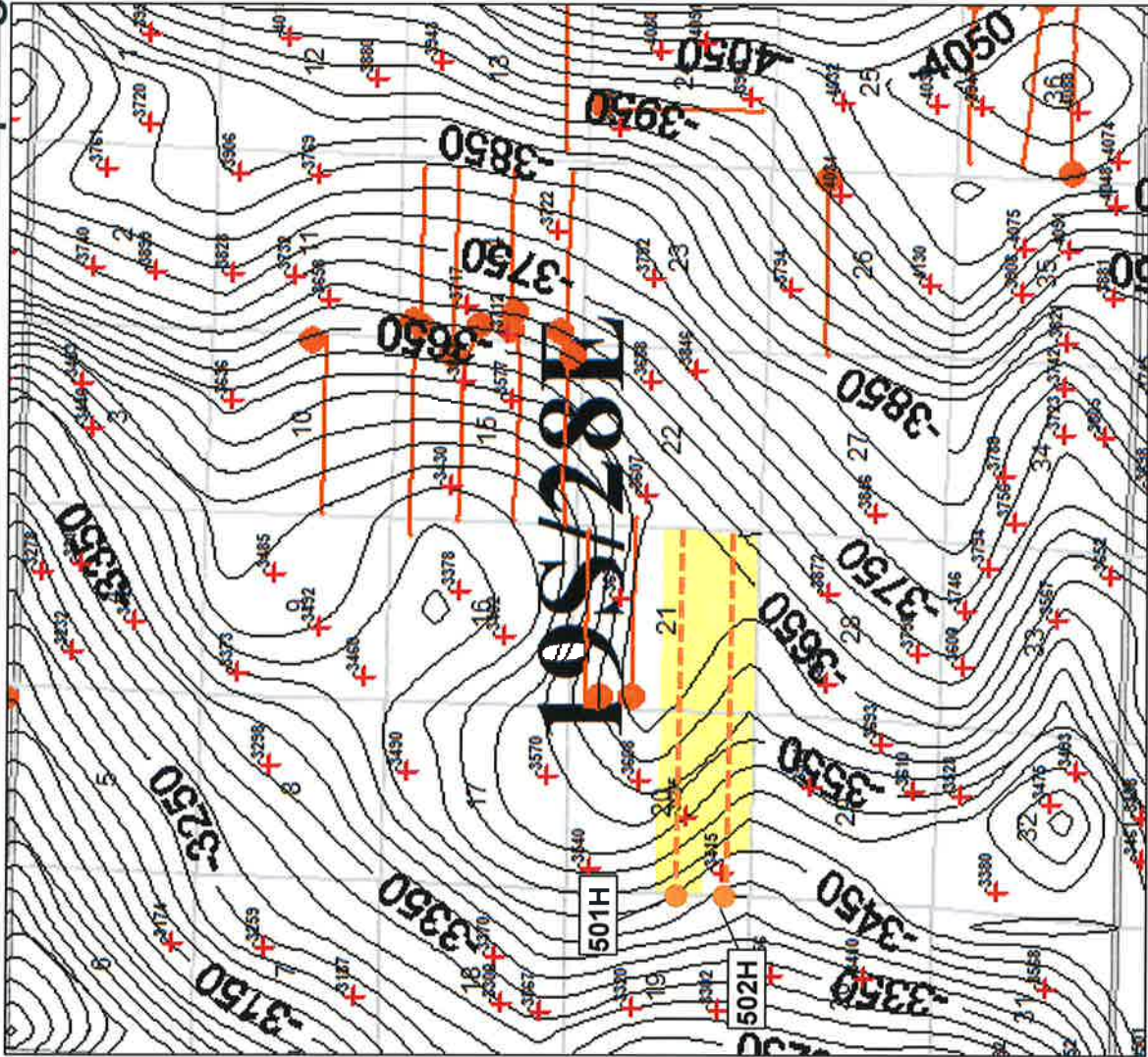
2-26-2023





# Bone Spring Pool

## Second Bone Spring Subsea Structure Map



### Map Legend

SHL  
BHL

COG – Proposed Bigfoot  
501H & 502H Locations

Producing Second Bone  
Spring Horizontals

COG Acreage

Sub Sea Structure Data Point

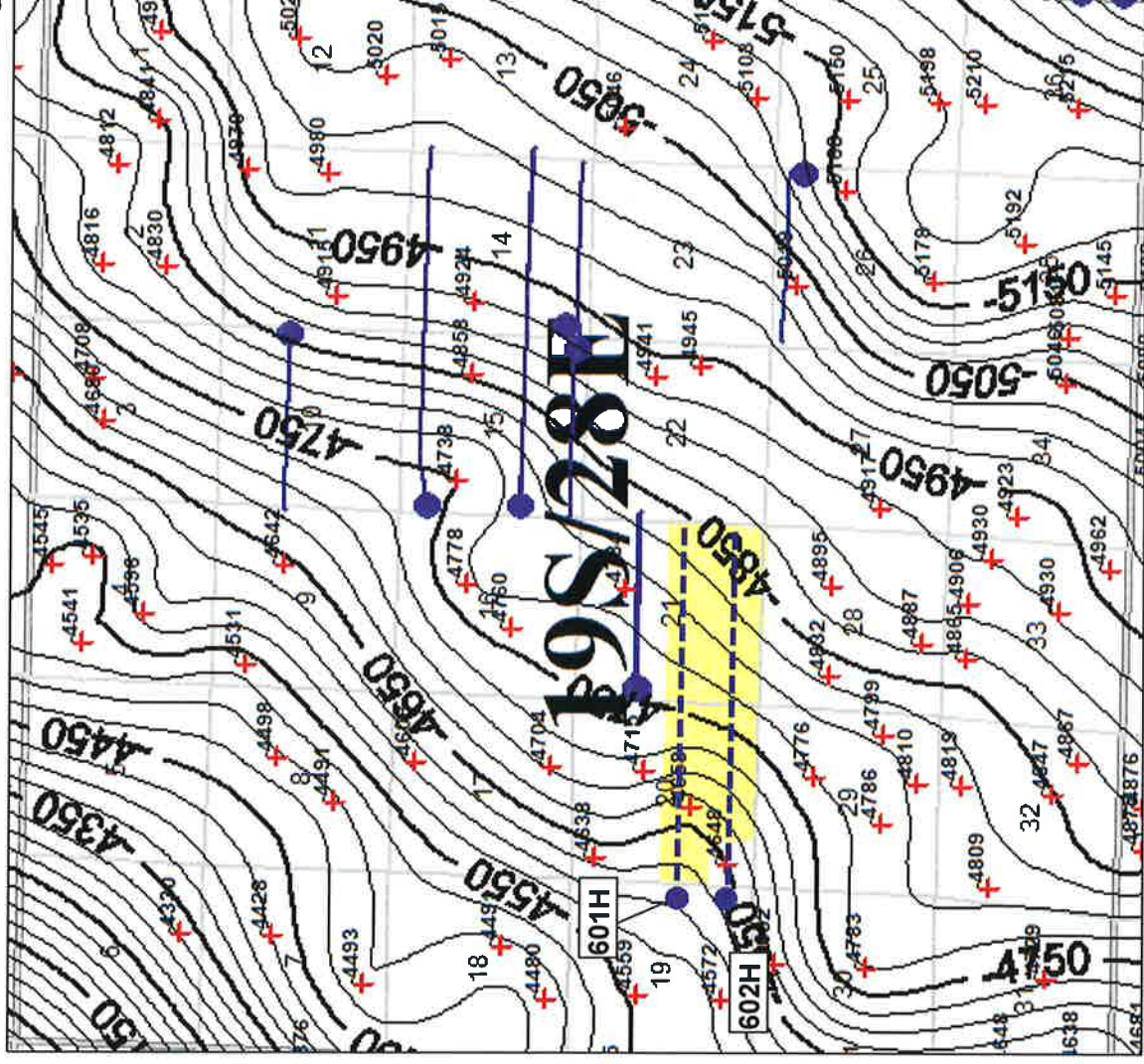
Contour Interval: 25FT

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. B1  
Submitted by: COG OPERATING LLC  
Hearing Date: July 23, 2020  
Case Nos. 21322-21323



# Bone Spring Pool

## Third Bone Spring Subsea Structure Map



### Map Legend

SHL  
BHL

COG – Proposed Bigfoot  
601H & 602H Locations

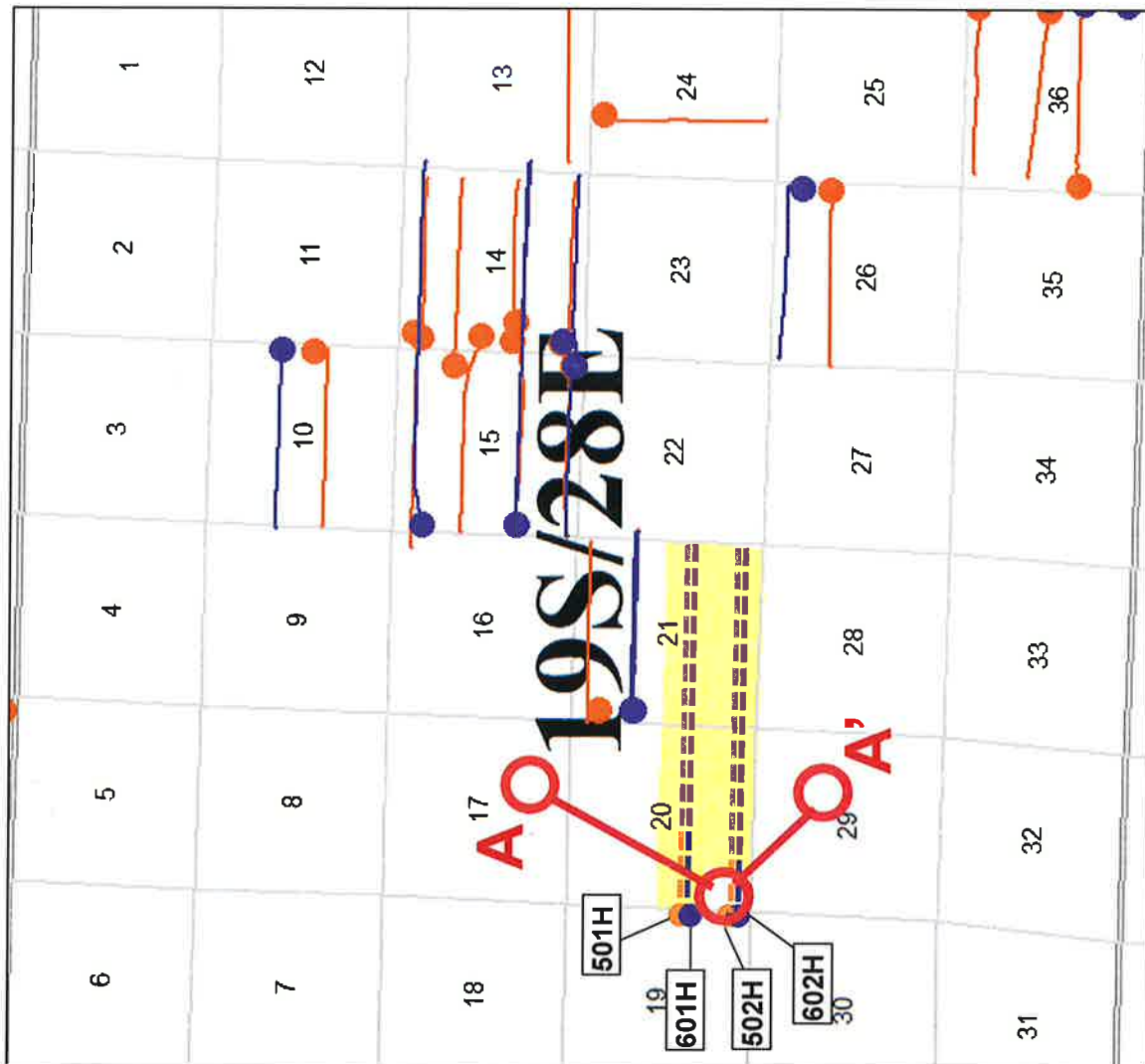
Producing Third Bone Spring  
Horizontals

COG Acreage









Sub Sea Structure Data Point

Contour Interval: 25FT

# Bone Spring Pool Cross Section Location Map



## Map Legend

-  **SHL**  
 **BHL**  
 COG – Proposed Bigfoot  
 501H & 502H Locations
-  **SHL**  
 Producing Second Bone  
 Spring Horizontals
-  **SHL**  
 **BHL**  
 COG – Proposed Bigfoot  
 601H & 602H Locations
-  **SHL**  
 Producing Third Bone Spring  
 Horizontals
-  **SHL**  
 COG Acreage
-  **SHL**  
 Cross Section Line

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

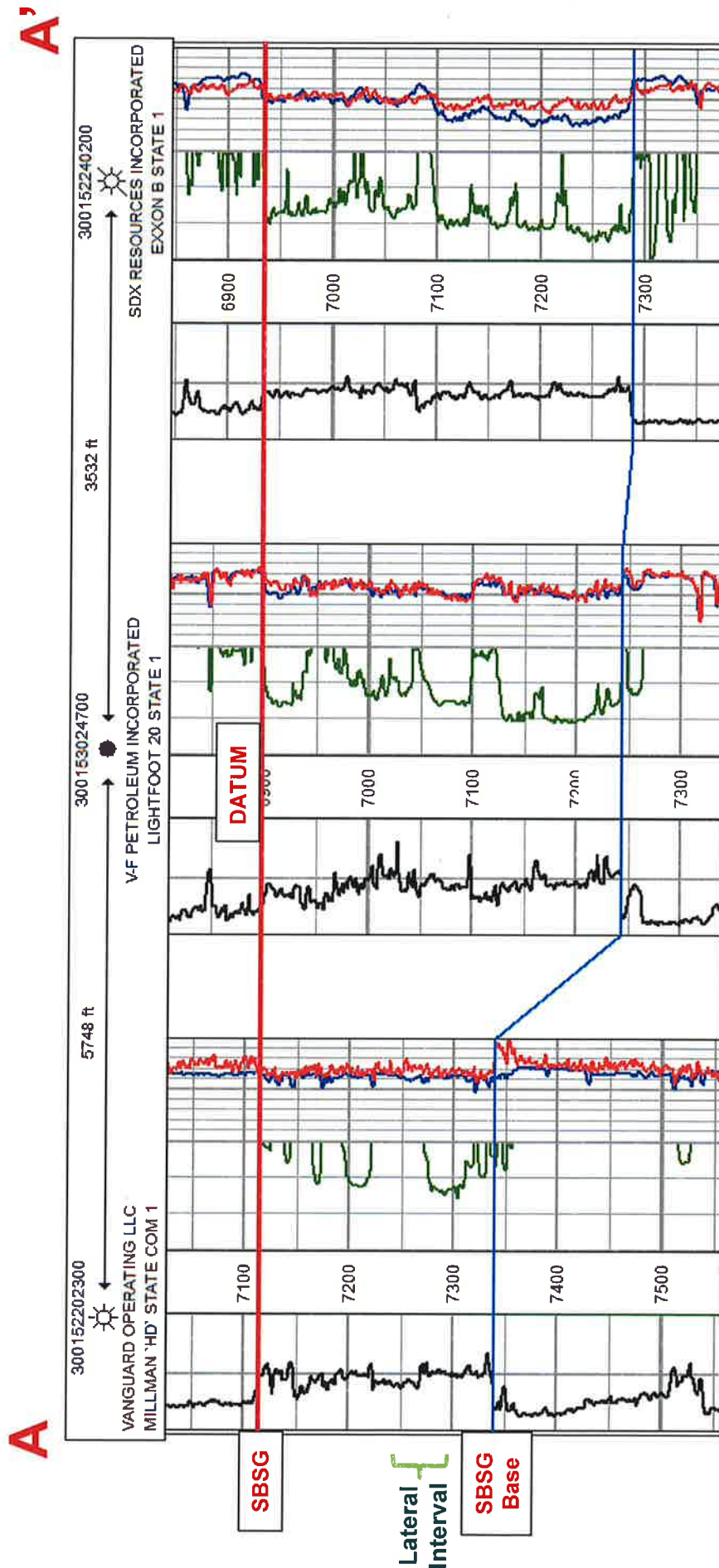
Exhibit No. B2

Submitted by: COG OPERATING LLC

Hearing Date: July 23, 2020

Case Nos. 21322-21323

# SBSG Stratigraphic Cross Section A – A'

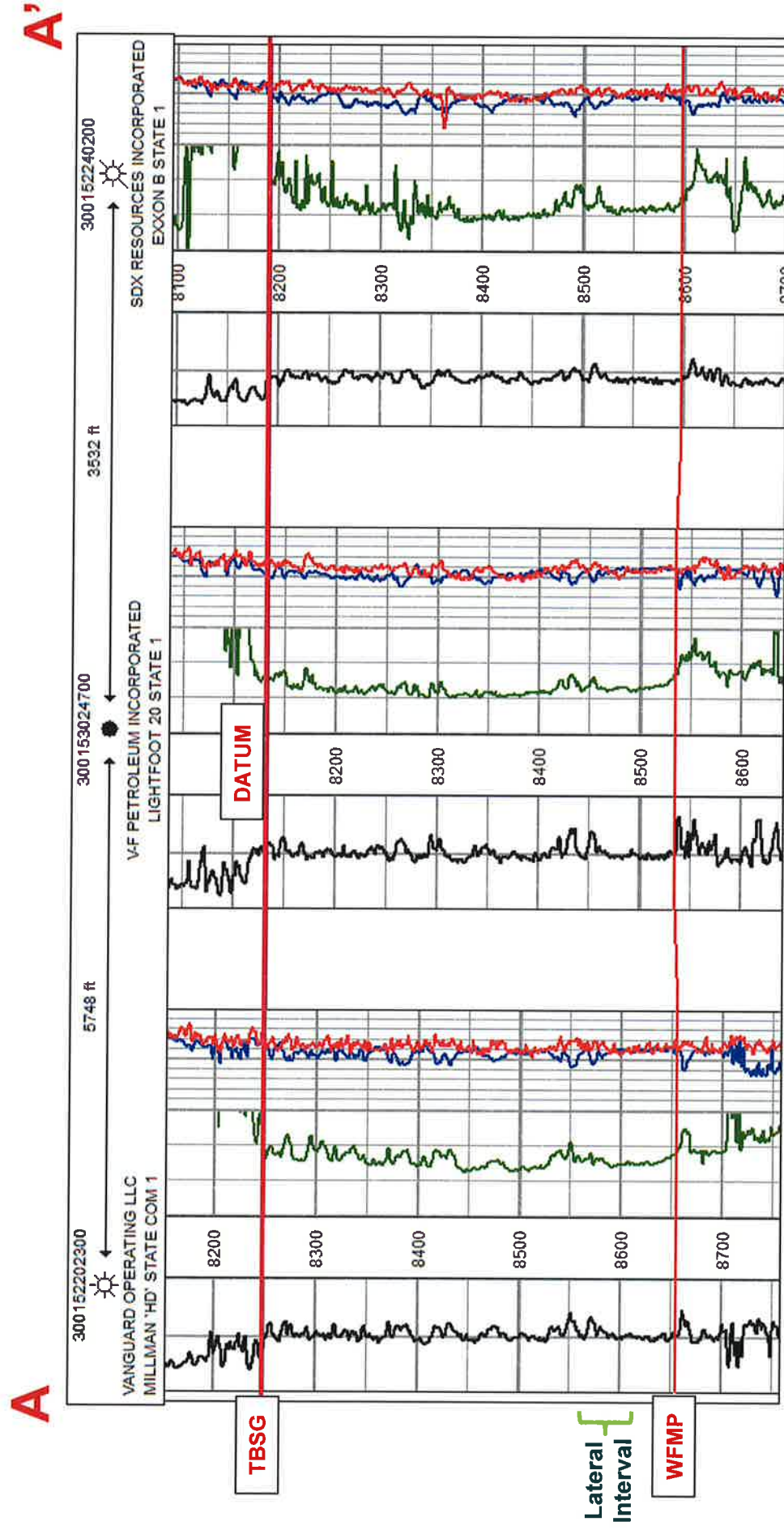


BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. B3  
Submitted by: COG OPERATING LLC  
Hearing Date: July 23, 2020  
Case Nos. 21322-21323

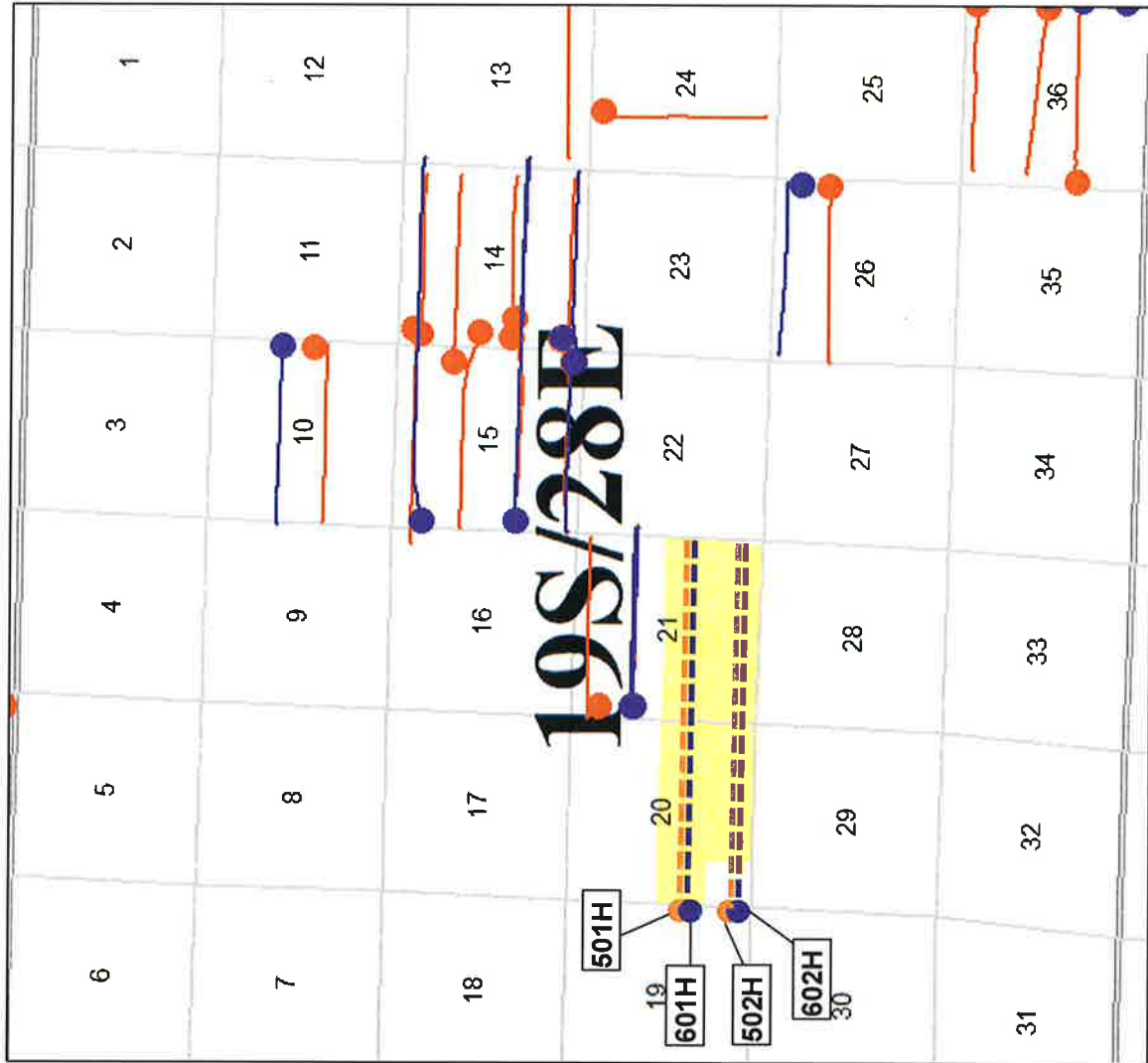




# TBSG Stratigraphic Cross Section A – A'



# Bone Spring Pool Bigfoot Fed Com Location Map



## Map Legend

- SHL** COG – Proposed Bigfoot 501H & 502H Locations
- BHL**
- Producing Second Bone Spring Horizontals**
- SHL** COG – Proposed Bigfoot 601H & 602H Locations
- BHL**
- Producing Third Bone Spring Horizontals**
- COG Acreage**

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
Exhibit No. B4  
Submitted by: **COG OPERATING LLC**  
Hearing Date: July 23, 2020  
Case Nos. 21322-21323

**BEFORE THE OIL CONSERVATION DIVISION**  
Santa Fe, New Mexico  
**Exhibit No. C**  
Submitted by: **COG OPERATING LLC**  
Hearing Date: July 23, 2020  
Case Nos. 21322-21323

COG - Bigfoot 501H-502H, 601H-602H  
Case No. 21322-21323 - Postal Delivery Report

TrackingNo	ToName	DeliveryAddress	City	State	Zip
9414810898765061581359	EOG Resources, Inc.	5509 Champions Dr	Midland	TX	79706-2843
9414810898765061581366	Marathon Oil Company	5555 San Felipe St	Houston	TX	77056-2701
9414810898765061581373	WPX Energy Permian, LLC	3500 One Williams Ctr Ste 400	Tulsa	OK	74172-0135
9414810898765061581380	Yates Brothers, a Partnership	PO Box 1394	Artesia	NM	88211-1394
9414810898765061581410	EOG Resources, Inc.	5509 Champions Dr	Midland	TX	79706-2843
9414810898765061581434	Yates Brothers, a Partnership	PO Box 1394	Artesia	NM	88211-1394

ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...



FAQs >

Track Another Package +

Tracking Number: 9414810898765061581359

Remove X

Your item was picked up at a postal facility at 7:36 am on June 23, 2020 in MIDLAND, TX 79702.

**Delivered**

June 23, 2020 at 7:36 am  
Delivered, Individual Picked Up at Postal Facility  
MIDLAND, TX 79702

Feedback

Get Updates ▾

Text & Email Updates	▾
Return Receipt Electronic	▾
Tracking History	▾
Product Information	▾

See Less ^

Can't find what you're looking for?



**ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...****USPS Tracking®****FAQs >****Track Another Package +****Tracking Number:** 9414810898765061581366

Remove X

Your item was delivered to the front desk, reception area, or mail room at 2:38 pm on June 22, 2020 in HOUSTON, TX 77056.

 **Delivered**

June 22, 2020 at 2:38 pm  
Delivered, Front Desk/Reception/Mail Room  
HOUSTON, TX 77056

Feedback

**Get Updates** ▼**Text & Email Updates****Return Receipt Electronic****Tracking History****Product Information****See Less** ^

ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...



FAQs >

Track Another Package +

Tracking Number: 9414810898765061581373

Remove X

Your item was picked up at a postal facility at 6:15 am on June 25, 2020 in TULSA, OK 74101.

**Delivered**

June 25, 2020 at 6:15 am  
Delivered, Individual Picked Up at Postal Facility  
TULSA, OK 74101

Feedback

Get Updates ▾

Text & Email Updates	▾
Return Receipt Electronic	▾
Tracking History	▾
Product Information	▾

See Less ^

Can't find what you're looking for?

**ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...****USPS Tracking®****FAQs >****Track Another Package +****Tracking Number:** 9414810898765061581380

Remove X

Your item was delivered at 10:25 am on June 22, 2020 in ARTESIA, NM 88210.

 **Delivered**

June 22, 2020 at 10:25 am

Delivered

ARTESIA, NM 88210

**Get Updates** ▼

Feedback

**Text & Email Updates****Return Receipt Electronic****Tracking History****Product Information****See Less** ^**Can't find what you're looking for?**

**ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...****USPS Tracking®****FAQs >****Track Another Package +****Tracking Number:** 9414810898765061581410

Remove X

Your item was picked up at a postal facility at 7:36 am on June 23, 2020 in MIDLAND, TX 79702.

 **Delivered**

June 23, 2020 at 7:36 am

Delivered, Individual Picked Up at Postal Facility  
MIDLAND, TX 79702

Feedback

**Get Updates** ▼**Text & Email Updates****Return Receipt Electronic****Tracking History****Product Information****See Less** ^**Can't find what you're looking for?**

ALERT: DUE TO LIMITED TRANSPORTATION AVAILABILITY AS A RESULT OF NATIONWIDE CO...



FAQs >

Track Another Package +

Tracking Number: 9414810898765061581434

Remove X

Your item was delivered at 10:25 am on June 22, 2020 in ARTESIA, NM 88210.



June 22, 2020 at 10:25 am  
Delivered  
ARTESIA, NM 88210

Feedback

Get Updates ▾

Text & Email Updates



Return Receipt Electronic



Tracking History



Product Information



See Less ^

Can't find what you're looking for?