

**BEFORE THE OIL CONSERVATION DIVISION
EXAMINER HEARING JULY 20, 2023**

**APPLICATION OF CIMAREX ENERGY CO.
FOR A COMPULSORY POOLING, LEA COUNTY, NEW MEXICO**

Case Nos. 23594, 23595, 23596, 23597, 23598, 23599, 23600, 23601

CIMAREX ENERGY CO.

TABLE OF CONTENTS FOR CASE NOS. 23594-23601

TAB 1	Reference for Case Nos. 23594-23601 Applications for Case Nos. 23594-23601 Prehearing Statement Case Nos. 23594-23601 with Attached Motion
TAB 2	Exhibit A: Self-Affirmed Statement of John Coffman Landman
TAB 3	Exhibit B: Self-Affirmed Statement of Staci Mueller, Geologist Exhibit B-1: Locator Map & Stress Direction Exhibit B-2: Permit Status Exhibit B-3: Gun Barrel View Exhibit B-4: Development Plan Comparison Exhibit B-5: Subsea Structure Map Exhibit B-6: 3rd Bone Spring Isopach Map Exhibit B-7: Structural Cross Section Exhibit B-8: 3rd Bone Spring Producers vs. all Wolfcamp Producers Exhibit B-9: All 3rd Bone Spring and Wolfcamp Producers Exhibit B-10: Comparing 3rd Sand to Wolfcamp Reservoir (SoPhiH) Exhibit B-11: 2nd Bone Spring Structure Map Exhibit B-12: 2nd Bone Spring Sand Isopach Exhibit B-13: 2nd Bone Spring Sand Cross Section Exhibit B-14: 2nd Bone Spring Sand vs. 3rd Bone Spring Carbonate Producers Exhibit B-15: PhilH L 2nd Sand vs. 3rd Carbonate Exhibit B-16: 1st Bone Spring Sand Structure Exhibit B-17: 1st Bone Spring Sand Isopach Exhibit B-18: 1st Bone Spring Structural Cross Section Exhibit B-19: Wolfcamp Structure Map (Subsea TVD) Exhibit B-20: Wolfcamp XY Isopach Exhibit B-21: Wolfcamp XY West to East Cross Section
TAB 4	Exhibit C: Self-Affirmed Statement of Eddie Behm, Petroleum Engineer Exhibit C-1: Mighty Pheasant Loosey Goosey Development Plan Exhibit C-2: Capital Plan Comparison Cimarex vs. Permian Exhibit C-3: Map of 3rd Bone Spring Sand Producers Exhibit C-4: 3rd Sand Well Count by Landing and Operators Exhibit C-5: Black and Tan 3rd Sand Composite Forecast 6 wells (Before WC completion) Exhibit C-6: Black and Tan 3rd Sand Composite Forecast 6 Wells Post Wolfcamp Frac Exhibit C-7: Black and Tan Wolfcamp Composite Forecast 5 wells Exhibit C-8: Lessons Learned from the Black and Tan Development Exhibit C-9: Diagram of Staggered Landing Wolfcamp 3rd SS Vs. 3rd SS Flat Exhibit C-10: Black and Tan Analog comparison to MP/LG

Exhibit C-11: Landing Zone Matters; Five Years Ago, Cimarex's Perry Test
Confirmed 3rd SS Landing as Best Target
Exhibit C-12: Dataset Identifying all Wells in Area of Interest

TAB 1

Reference for Case Nos. 23594-23601

Applications Case Nos. 23594-23601

Prehearing Statement Case No. 23594-23601 with Attached Motion

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23594

APPLICATION

Cimarex Energy Co. (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division (“Division”) pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.01-acre, more or less, spacing and proration unit comprised of Lot 4 (NW/4 NW/4 equivalent), the SW/4 NW/4, and the W/2 SW/4 of Section 5 and the W/2 W/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit (“HSU”) and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Mighty Pheasant 5-8 Fed Com 301H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 301H well described in the application filed by Cimarex in Case No. 23449. Cimarex’s geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

formation, based on the geology of the lands, is achieved by drilling the **Mighty Pheasant 5-8 Fed Com 301H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23520, for the Wolfcamp formation.

3. Cimarex proposes the **Mighty Pheasant 5-8 Fed Com 301H Well**, an oil well, to be horizontally drilled from a surface location in Lot 4 (NW/4 NW/4 equivalent) of Section 5 to a bottom hole location in the SW/4 SW/4 (Unit M) of Section 8.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted interests in the Wolfcamp formation underlying the proposed HSU.

B. Approving the **Mighty Pheasant 5-8 Fed Com 301H Well** as the proper well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **301H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.01-acre, more or less, spacing and proration unit comprised of Lot 4 (NW/4 NW/4 equivalent), the SW/4 NW/4, and the W/2 SW/4 of Section 5 and the W/2 W/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Mighty Pheasant 5-8 Fed Com 301H Well**, an oil well, to be horizontally drilled from a surface location in Lot 4 (NW/4 NW/4 equivalent) of Section 5 to a bottom hole location in the SW/4 SW/4 (Unit M) of Section 8. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23595

APPLICATION

Cimarex Energy Co. (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division (“Division”) pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.04-acre, more or less, spacing and proration unit comprised of Lot 3 (NE/4 NW/4 equivalent), the SE/4 NW/4, and the E/2 SW/4 of Section 5 and the E/2 W/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit (“HSU”) and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Mighty Pheasant 5-8 Fed Com 302H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 302H well described in the application filed by Cimarex in Case No. 23450. Cimarex’s geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

formation, based on the geology of the lands, is achieved by drilling the **Mighty Pheasant 5-8 Fed Com 302H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23521, for the Wolfcamp formation.

3. Cimarex proposes the **Mighty Pheasant 5-8 Fed Com 302H Well**, an oil well, to be horizontally drilled from a surface location in Lot 4 (NW/4 NW/4 equivalent) of Section 5 to a bottom hole location in the SE/4 SW/4 (Unit N) of Section 8.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted interests in the Wolfcamp formation underlying the proposed HSU.

B. Approving the **Mighty Pheasant 5-8 Fed Com 302H Well** as the proper well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **302H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.04-acre, more or less, spacing and proration unit comprised of Lot 3 (NE/4 NW/4 equivalent), the SE/4 NW/4, and the E/2 SW/4 of Section 5 and the E/2 W/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Mighty Pheasant 5-8 Fed Com 302H Well**, an oil well, to be horizontally drilled from a surface location in Lot 4 (NW/4 NW/4 equivalent) of Section 5 to a bottom hole location in the SE/4 SW/4 (Unit N) of Section 8. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

formation, based on the geology of the lands, is achieved by drilling the **Mighty Pheasant 5-8 Fed Com 303H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23522, for the Wolfcamp formation.

3. Cimarex proposes the **Mighty Pheasant 5-8 Fed Com 303H Well**, an oil well, to be horizontally drilled from a surface location in SW/4 SE/4 (Unit O) of Section 32, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SW/4 SE/4 (Unit O) of Section 8, Township 20 South, Range 34 East, NMPM.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23596

APPLICATION

Cimarex Energy Co. ("Cimarex"), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division ("Division") pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.06-acre, more or less, spacing and proration unit comprised of Lot 2 (NW/4 NE/4 equivalent), the SW/4 NE/4, and the W/2 SE/4 of Section 5 and the W/2 E/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit ("HSU") and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Mighty Pheasant 5-8 Fed Com 303H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 303H well described in the application filed by Cimarex in Case No. 23451. Cimarex's geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted interests in the Wolfcamp formation underlying the proposed HSU.

B. Approving the **Mighty Pheasant 5-8 Fed Com 303H Well** as the proper well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **303H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.06-acre, more or less, spacing and proration unit comprised of Lot 2 (NW/4 NE/4 equivalent), the SW/4 NE/4, and the W/2 SE/4 of Section 5 and the W/2 E/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Mighty Pheasant 5-8 Fed Com 303H Well**, an oil well, to be horizontally drilled from a surface location in SW/4 SE/4 (Unit O) of Section 32, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SW/4 SE/4 (Unit O) of Section 8, Township 20 South, Range 34 East, NMPM. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23597

APPLICATION

Cimarex Energy Co. ("Cimarex"), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division ("Division") pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.09-acre, more or less, spacing and proration unit comprised of Lot 1 (NE/4 NE/4 equivalent), the SE/4 NE/4, and the E/2 SE/4 of Section 5 and the E/2 E/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit ("HSU") and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Mighty Pheasant 5-8 Fed Com 304H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 304H well described in the application filed by Cimarex in Case No. 23448. Cimarex's geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

formation, based on the geology of the lands, is achieved by drilling the **Mighty Pheasant 5-8 Fed Com 304H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23523, for the Wolfcamp formation.

3. Cimarex proposes the **Mighty Pheasant 5-8 Fed Com 304H Well**, an oil well, to be horizontally drilled from a surface location in SW/4 SE/4 (Unit O) of Section 32, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 8, Township 20 South, Range 34 East, NMPM.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted interests in the Wolfcamp formation underlying the proposed HSU.

B. Approving the **Mighty Pheasant 5-8 Fed Com 304H Well** as the proper well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **304H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.09-acre, more or less, spacing and proration unit comprised of Lot 1 (NE/4 NE/4 equivalent), the SE/4 NE/4, and the E/2 SE/4 of Section 5 and the E/2 E/2 of Section 8, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 5 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Mighty Pheasant 5-8 Fed Com 304H Well**, an oil well, to be horizontally drilled from a surface location in SW/4 SE/4 (Unit O) of Section 32, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 8, Township 20 South, Range 34 East, NMPM. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23598

APPLICATION

Cimarex Energy Co. (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division (“Division”) pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.21-acre, more or less, spacing and proration unit comprised of Lot 4 (NW/4 NW/4 equivalent), the SW/4 NW/4, and the W/2 SW/4 of Section 4 and the W/2 W/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit (“HSU”) and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Loosey Goosey 4-9 Fed Com 301H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 301H well described in the application filed by Cimarex in Case No. 23453. Cimarex’s geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

formation, based on the geology of the lands, is achieved by drilling the **Loosey Goosey 4-9 Fed Com 301H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23512, for the Wolfcamp formation.

3. Cimarex proposes the **Loosey Goosey 4-9 Fed Com 301H Well**, an oil well, to be horizontally drilled from a surface location in the SE/4 SW/4 (Unit N) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SW/4 SW/4 (Unit M) of Section 9, Township 20, Range 34 East, NMPM.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted mineral interests in the Wolfcamp formation underlying the proposed HSU;

B. Approving the **Loosey Goosey 4-9 Fed Com 301H Well** as the proper well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **301H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order from the Division pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.21-acre, more or less, horizontal spacing and proration unit comprised of Lot 4 (NW/4 NW/4 equivalent), the SW/4 NW/4, and the W/2 SW/4 of Section 4 and the W/2 W/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Loosey Goosey 4-9 Fed Com 301H Well**, an oil well, to be horizontally drilled from a surface location in the SE/4 SW/4 (Unit N) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SW/4 SW/4 (Unit M) of Section 9, Township 20 South, Range 34 East, NMPM. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23599

APPLICATION

Cimarex Energy Co. (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division (“Division”) pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.44-acre, more or less, spacing and proration unit comprised of Lot 3 (NE/4 NW/4 equivalent), the SE/4 NW/4, and the E/2 SW/4 of Section 4 and the E/2 W/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit (“HSU”) and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Loosey Goosey 4-9 Fed Com 302H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 302H well described in the application filed by Cimarex in Case No. 23454. Cimarex’s geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

formation, based on the geology of the lands, is achieved by drilling the **Loosey Goosey 4-9 Fed Com 302H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23513, for the Wolfcamp formation.

3. Cimarex proposes the **Loosey Goosey 4-9 Fed Com 302H Well**, an oil well, to be horizontally drilled from a surface location in the SE/4 SW/4 (Unit N) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SE/4 SW/4 (Unit N) of Section 9, Township 20, Range 34 East, NMPM.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted mineral interests in the Wolfcamp formation underlying the proposed HSU;

B. Approving the **Loosey Goosey 4-9 Fed Com 302H Well** as the well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **302H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order from the Division pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.44-acre, more or less, horizontal spacing and proration unit comprised of Lot 3 (NE/4 NW/4 equivalent), the SE/4 NW/4, and the E/2 SW/4 of Section 4 and the E/2 W/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Loosey Goosey 4-9 Fed Com 302H Well**, an oil well, to be horizontally drilled from a surface location in the SE/4 SW/4 (Unit N) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SE/4 SW/4 (Unit N) of Section 9, Township 20 South, Range 34 East, NMPM. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23600

APPLICATION

Cimarex Energy Co. (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division (“Division”) pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.66-acre, more or less, spacing and proration unit comprised of Lot 2 (NW/4 NE/4 equivalent), the SW/4 NE/4, and the W/2 SE/4 of Section 4 and the W/2 E/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit (“HSU”) and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Loosey Goosey 4-9 Fed Com 303H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 303H well described in the application filed by Cimarex in Case No. 23455. Cimarex’s geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp

formation, based on the geology of the lands, is achieved by drilling the **Loosey Goosey 4-9 Fed Com 303H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23514, for the Wolfcamp formation.

3. Cimarex proposes the **Loosey Goosey 4-9 Fed Com 303H Well**, an oil well, to be horizontally drilled from a surface location in the SW/4 SE/4 (Unit O) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SW/4 SE/4 (Unit O) of Section 9, Township 20, Range 34 East, NMPM.

4. The proposed well is orthodox in its location, and the take points and completed interval comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on July 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted mineral interests in the Wolfcamp formation underlying the proposed HSU;

B. Approving the **Loosey Goosey 4-9 Fed Com 303H Well** as the well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **303H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order from the Division pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.66-acre, more or less, horizontal spacing and proration unit comprised of Lot 2 (NW/4 NE/4 equivalent), the SW/4 NE/4, and the W/2 SE/4 of Section 4 and the W/2 E/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Loosey Goosey 4-9 Fed Com 303H Well**, an oil well, to be horizontally drilled from a surface location in the SW/4 SE/4 (Unit O) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SW/4 SE/4 (Unit O) of Section 9, Township 20 South, Range 34 East, NMPM. The well will be orthodox, and the take points and completed interval will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATION OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case No. 23601

APPLICATION

Cimarex Energy Co. (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, hereby files this Application with the Oil Conservation Division (“Division”) pursuant to the provisions of NMSA 1978, Section 70-2-17, seeking an order pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.89-acre, more or less, spacing and proration unit comprised of Lot 1 (NE/4 NE/4 equivalent), the SE/4 NE/4, and the E/2 SE/4 of Section 4 and the E/2 E/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section with correction Lots.

In support of its Application, Cimarex states the following:

1. Cimarex is a working interest owner in the proposed horizontal spacing and proration unit (“HSU”) and has a right to drill a well thereon.
2. Cimarex proposes and dedicates to the HSU the **Loosey Goosey 4-9 Fed Com 304H Well**, as the initial well, to be drilled to a sufficient depth to test production and ultimately produce from the Wolfcamp formation. This well is the same 304H well described in the application filed by Cimarex in Case No. 23452. Cimarex’s geology shows that, because there are no natural barriers between formation, the hydrocarbons freely communicate between the Third Sand of the Bone Spring and the Wolfcamp, and thus, optimal development of the Wolfcamp formation, based on the

geology of the lands, is achieved by drilling the **Loosey Goosey 4-9 Fed Com 304H Well**, which will properly produce both the Wolfcamp and Third Bone Spring, as demonstrated by the history of production in this area, and the drilling of this one well will avoid the drilling of unnecessary wells into the Wolfcamp, a practice shown to be inefficient, uneconomical, and wasteful for these particular lands based on their unique geology. This application competes with the application filed by Read & Stevens, Inc., in Case No. 23515, for the Wolfcamp formation.

3. Cimarex proposes the **Loosey Goosey 4-9 Fed Com 304H Well**, an oil well, to be horizontally drilled from a surface location in the SW/4 SE/4 (Unit O) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 9, Township 20, Range 34 East, NMPM.

4. The proposed well is orthodox in their locations, and the take points and completed intervals comply with setback requirements under the statewide rules.

5. Cimarex's review of the land records did not reveal any overlapping units.

6. Cimarex has sought in good faith but has been unable to obtain voluntary agreement from all interest owners to participate in the drilling of the well or the commitment of their interests to the well for their development within the proposed HSU.

7. The pooling of all interests in the Wolfcamp formation within the proposed HSU will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.

8. In order to provide for its just and fair share of the oil and gas underlying the subject lands, Cimarex requests that all uncommitted interests in this HSU be pooled and that Cimarex be designated the operator of the proposed horizontal well and HSU.

WHEREFORE, Cimarex requests that this Application be set for hearing on April 6, 2023, before an Examiner of the Oil Conservation Division, and after notice and hearing as required by law, the Division enter an order:

A. Pooling all uncommitted mineral interests in the Wolfcamp formation underlying the proposed HSU;

B. Approving the **Loosey Goosey 4-9 Fed Com 304H Well** as the well for the HSU, and recognizing, based on geological evidence to be provided by Cimarex, that the **304H Well** is properly placed and located to develop the hydrocarbons of the HSU in a manner that will avoid the drilling of unnecessary wells.

C. Designating Cimarex as operator of this HSU and the horizontal well drilled to produce from the HSU, and because of the communication between the Wolfcamp and Bone Spring, restricting to the extent prescribed by statewide rules, other operators from drilling into the Wolfcamp formation;

D. Authorizing Cimarex to recover its costs of drilling, equipping, and completing the well;

E. Approving actual operating charges and costs of supervision, to the maximum extent allowable, while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures;

F. To the extent necessary, approving downhole commingling, or in the alternative, allowing Cimarex to seek, if necessary, administrative approval for downhole commingling; and

G. Setting a 200% charge for the risk assumed by Cimarex in drilling and completing the well in the event a working interest owner elects not to participate in the well.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

William E. Zimsky
Andrew D. Schill
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
bill@abadieschill.com
andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

Application of Cimarex Energy Co. for Compulsory Pooling, Lea County, New Mexico.

Applicant in the above-styled cause seeks an order from the Division pooling all uncommitted interests in the Wolfcamp formation, designated as an oil pool, underlying a standard 320.89-acre, more or less, horizontal spacing and proration unit comprised of Lot 1 (NE/4 NE/4 equivalent), the SE/4 NE/4, and the E/2 SE/4 of Section 4 and the E/2 E/2 of Section 9, in Township 20 South, Range 34 East, NMPM, Lea County, New Mexico. Section 4 is an irregular section containing correction lots. The proposed well to be dedicated to the horizontal spacing unit is the **Loosey Goosey 4-9 Fed Com 304H Well**, an oil well, to be horizontally drilled from a surface location in the SW/4 SE/4 (Unit O) of Section 33, Township 19 South, Range 34 East, NMPM, to a bottom hole location in the SE/4 SE/4 (Unit P) of Section 9, Township 20 South, Range 34 East, NMPM. The well will be orthodox, and the take points and completed intervals will comply with the setback requirements under the statewide Rules; also to be considered will be the cost of drilling and completing the well and the allocation of the costs thereof; actual operating costs and charges for supervision; downhole commingling, to the extent and if necessary; the designation of the Applicant as Operator of the well and unit; and a 200% charge for the risk involved in drilling and completing the well. The well and lands are located approximately 40 miles northeast of Carlsbad, New Mexico.

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

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

**Case Nos. 23594, 23595, 23596, 23597,
23598, 23599, 23600 & 23601**

PREHEARING STATEMENT

Cimarex Energy Co., (“Cimarex”), OGRID No. 215099, through its undersigned attorneys, submits the following Prehearing Statement pursuant to the rules of the Oil Conservation Division (“Division”) for the above referenced Cases which are consolidated with the Case Nos. 23452-23455, and 23508 – 23523 for a contested hearing pursuant to that certain “Further Amended Pre-Hearing Order” issued on June 8, 2023. This Prehearing Statement describes the status of Cimarex’s Case Nos. 23594 - 23601, which were originally filed in response to Read & Stevens, Inc., in association with Permian Resources Operating, LLC (collectively referred to herein as “Permian Resources”) proposing to pool the Wolfcamp formation underlying Sections 5 and 8, and Sections 4 and 9, in Township 20 South, Range 34 East, NMPM, Lea County (“Subject Lands”) in Case Nos. 23512-23515 and 23520 – 23523.

APPEARANCES

APPLICANT

Cimarex Energy Co.

ATTORNEY

Darin C. Savage
Andrew D. Schill
William E. Zimsky
Abadie & Schill, PC
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901

darin@abadieschill.com
andrew@abadieschill.com
bill@abadieschill.com

COMPETING PARTY

Read & Stevens, Inc., in association
with Permian Resources Operating, LLC

Michael H. Feldewert
Adam G. Rankin
Julia Broggi
Paula M. Vance
Holland & Hart LLP
Post Office Box 2208
Santa Fe, NM 87504
505-988-4421
Facsimile: 505-983-6043
mfeldewert@hollandhart.com
agrarkin@hollandhart.com
jbroggi@hollandhart.com
pmvance@hollandhart.com

ADDITIONAL PARTIES

Sandstone Properties, LLC

Sealy Cavin, Jr.
Scott S. Morgan
Brandon D. Hajny
P.O. Box 1216
Albuquerque, NM 87103
505-243-5400
scavin@cilawnm.com
smorgan@cilawnm.com
bhajny@cilawnm.com

Northern Oil and Gas, Inc.

Blake C. Jones
Steptoe & Johnson PLLC
1780 Hughes Landing Blvd., Ste 750
The Woodlands, TX 77380
281-203-5730
Facsimile: 281-203-5701
blake.jones@steptoe-johnson.com

APPLICANT'S STATEMENT OF THE CASES

Cimarex provides this Prehearing Statement to inform the Division of the current status of Case Nos. 23594, 23595, 23596 and 23597, 23598, 23599, 23600 & 23601. A little more than a month after Cimarex filed its applications to develop and pool the Bone Spring formation in the Subject Lands, Permian Resources not only filed applications for the Bone Spring but also filed applications for drilling and pooling the Wolfcamp formation in the Subject Lands in Case Nos. 23512-23515 and 23520 – 23523, and proposed to drill wells in the Upper Wolfcamp of the Subject Lands despite the fact that, based on the geological and reservoir data, those wells would drain the 3rd Bone Spring Sand and would likely result in permanent damage to the target reservoir located in the Bone Spring where the target reservoir is located.

Permian Resources' decision to propose to develop the Upper Wolfcamp created a dilemma for Cimarex. On the one hand, Cimarex understood, based on clear geological and reservoir data, that the Upper Wolfcamp should not be developed in the Subject Lands but, on the other hand, Cimarex understood that once Permian Resources filed its application to pool the Upper Wolfcamp, Cimarex needed to provide a counter proposal that would oppose Permian Resources' Upper Wolfcamp applications.

Consequently, Cimarex drafted competing pooling applications for the Wolfcamp in which it explained that the best way to develop the target reservoir is by drilling wells in the 3rd Bone Springs Sands, the same wells proposed by Cimarex's Bone Spring applications and prohibit the drilling of wells in Upper Wolfcamp to prevent drainage from and damage to the target reservoir. Cimarex filed its Wolfcamp applications in Case Nos. 23594 – 23601, in which it dedicated the Wolfcamp units exclusively to wells drilled in the 3rd Bone Spring Sands, and not in the Upper Wolfcamp, in order preserve the Upper Wolfcamp from being drilled and thereby protect the 3rd Bone Spring Sand from drainage and damage.

Cimarex has further evaluated its applications in Case Nos. 23594 – 23601 as a response to the applications filed by Permian Resources in Case Nos. 23512 – 23515 and 23520 – 23523, and Cimarex has determined that the best way to develop the Subject Lands and both protect the primary reservoir of said Lands while optimizing production is to request that the Division establish a protective zone covering the Upper Wolfcamp in order to protect correlative rights and prevent waste.

As a result, Cimarex has filed a Motion for an Order to Prohibit the Drilling of Wells in the Upper Wolfcamp in Order to Protect Correlative Rights and Optimize Production of the Subject Lands (“Motion”), attached hereto as Exhibit 1, in which it has asked the Division to consider and rule on the Motion as part of the Division’s ruling in the contested hearing. Should the Division decide that Cimarex has the better development plan, then the Upper Wolfcamp would not be drilled.

APPLICANT’S PROPOSED EVIDENCE AND WITNESS QUALIFICATIONS

WITNESS	ESTIMATED TIME	EXHIBITS
Landman: John Coffman Qualifications: I graduated in 2018 from Texas Tech University with a bachelor’s degree in Business Administration with an emphasis on Energy Commerce. I have worked at Cimarex for approximately 4 years, and I have been working in New Mexico for 4 years. My credentials as an expert witness in petroleum land matters have been accepted by the Division and made a matter of record.	Approx. 5 min	Approx. 1
Geologist: Staci Meuller Qualifications: I have a Bachelor of Science Degree in Geophysical Engineering from Colorado School of Mines, and a Master of Science Degree in Geophysics from Colorado School of Mines. I have worked on New Mexico Oil and Gas matters since July 2018. My credentials as an expert witness in geology have been accepted by the Division and made a matter of record.	Approx. min	Approx. 21
Reservoir Engineer: Eddie Behm Qualifications: I attended the University of Tulsa and graduated with a bachelor’s in petroleum engineering in 2011. I have worked for Occidental, California Resources prior to working for Cimarex and have been employed as a Production and Reservoir engineer for Cimarex for the last 6 years, working in the Delaware Basin with a primary focus on Lea County, New Mexico. I have	Approx. 45 minutes	Approx. 17

previously testified before the Division as an expert reservoir engineer, and my credentials have been accepted of record.

Facilities Engineer: Calvin Boyle Available for questions (15 min) Approx. 1

Qualifications: I attended the University of Oklahoma and graduated with a bachelor's in petroleum engineering in 2016 followed by Oklahoma State University where I graduated with a Master of Business Administration in 2018. I worked for Halliburton prior to working for Cimarex Energy Co. ("Cimarex") and have been employed as a Field, Production, and Facilities engineer for Cimarex for the last 4 years, working in the Delaware Basin with a primary focus on Lea County, New Mexico. I am familiar with the subject applications filed in the above-referenced Cases and the engineering involved. I have not testified previously before the Division and am providing a one-page resume.

LIST OF MATERIAL FACTS NOT IN DISPUTE

Parties are in general agreement that the Bone Spring formation underlying the Subject Lands would be productive if drilled and developed and should be developed; however, there is disagreement about whether the Upper Wolfcamp should be drilled and developed simultaneously with the Bone Spring.

LIST OF DISPUTED FACTS AND ISSUES

The central issue in Cimarex's Case Nos. 23594 - 23601 and Permian Resources' competing Case Nos. 23512 - 23515 and 23520 - 23523 is whether the Upper Wolfcamp should be drilled and developed (Cimarex asserts that the drilling of the Upper Wolfcamp would result in waste and harm to correlative rights and to the target reservoir, and therefore the Upper Wolfcamp should not be drilled; while Permian Resources proposes to drill the Upper Wolfcamp). As an alternative to drilling the Upper Wolfcamp, Cimarex has filed a Motion to establish a protective buffer zone in the Upper Wolfcamp to prevent it from being drilled.

PROCEDURAL MATTERS

For Cimarex's Case Nos. 23594 - 23601 and Permian Resources' Case Nos. 23512 - 23515 and 23520 - 23523, Cimarex requests that the Division review and consider the Motion (attached

hereto as Exhibit 1) that Cimarex has filed concerning the Wolfcamp formation and how best to develop the Subject Lands.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

Andrew D. Schill
William E. Zimsky
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com
andrew@abadieschill.com
bill@abadieschill.com

Attorneys for Cimarex Energy Co.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was filed with the New Mexico Oil Conservation Division and was served on counsel of record via electronic mail on July 13, 2023:

Michael H. Feldewert – mfeldewert@hollandhart.com
Adam G. Rankin – agrankin@hollandhart.com
Julia Broggi – jbroggi@hollandhart.com
Paula M. Vance – pmvance@hollandhart.com

*Attorneys for Read & Stevens, Inc.;
and Permian Resources Operating, LLC*

Blake C. Jones – blake.jones@steptoe-johnson.com

Attorney for Northern Oil and Gas, Inc.

Sealy Cavin, Jr. – scavin@cilawnm.com
Scott S. Morgan – smorgan@cilawnm.com
Brandon D. Hajny – bhajny@cilawnm.com

Attorneys for Sandstone Properties, LLC

/s/ Darin C. Savage

Darin C. Savage

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

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR A HORIZONTAL SPACING UNIT
AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO**

Case Nos. 23448 – 23455

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case Nos. 23594 – 23601

**APPLICATIONS OF READ & STEVENS, INC.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

Case Nos. 23508 – 23523

**MOTION FOR AN ORDER TO PROHIBIT THE DRILLING OF WELLS IN THE
UPPER WOLFCAMP IN ORDER TO PROTECT CORRELATIVE RIGHTS AND
OPTIMIZE PRODUCTION OF THE SUBJECT LANDS**

Cimarex Energy Co., (“Cimarex”), through its undersigned attorneys, respectfully requests that the New Mexico Oil Conservation Division (“Division”) issue an order prohibiting the drilling of horizontal wells in the Upper Wolfcamp in Sections 4, 5, 8 and 9, Township 20 South, Range 34 East, NMPM, Lea County (“Subject Lands”) to protect correlative rights and optimize production of the Subject Lands. In support of its Motion, Cimarex submits the following:

I. Factual and procedural background

1. Cimarex has been preparing to develop Subject Lands since 2018. Based on its detailed analysis of the specific geology and reservoir characteristics of this area, on March 9, 2023, Cimarex filed applications in Case Nos. 23448 through 23455 for the compulsory pooling

**EXHIBIT
1**

of the Bone Spring formation underlying the Subject Lands, proposing the Mighty Pheasant Wells for units in Sections 5 and 8, and proposing the Loosey Goosey Wells for units in Sections 4 and 9.

2. As a result of its evaluation of the Subject Lands, as well as the surrounding area, Cimarex found that not only were the best reserves of oil and gas residing in the 3rd Bone Spring Sand but also that the Upper Wolfcamp reservoir under the Subject Lands and surrounding area was significantly below average in quality and potential, rendering Wolfcamp wells economically unfeasible. *See* Exhibit 1, attached hereto, showing that the consensus landing for optimal development is the 3rd Bone Spring Sands, not the Upper Wolfcamp.

3. Cimarex has also determined that there are no indications of any major geomechanical changes/frac baffles in between Cimarex's 3rd Sand target and Permian Resources' Wolfcamp Sands target, indicating that these two intervals are most likely one shared reservoir tank. Due to the absence of the baffle between the 3rd Bone Spring Sand and the Upper Wolfcamp, Cimarex has concluded that if Upper Wolfcamp wells were to be completed while drilling and developing the 3rd Bone Spring Sand, those wells would drain much of the reserves in the 3rd Bone Spring Sand, where the best reserves are located, and would likely result in permanent damage to the target reservoir in the 3rd Bone Spring Sand.

4. Thus, Cimarex limited its proposed development and applications for compulsory pooling to the Bone Spring and did not seek to pool the Upper Wolfcamp. Cimarex's analysis of the Subject Lands comports to how other operators are developing the surrounding areas that share the same three fundamental characteristics, *viz.*, excellent reserves in the 3rd Bone Spring Sand, poor quality reservoir in the Upper Wolfcamp, and the lack of a baffle between the two. *See* Exhibit 2, attached hereto, showing the overwhelming predominance of Bone Spring development

and the dearth and rarity of the Wolfcamp development.

5. A little more than a month after Cimarex filed its applications to develop and pool the Bone Spring Formation, Read & Stevens, Inc., in association with Permian Resources Operating, LLC (collectively referred to as “Permian Resources”), filed competing applications to pool the Bone Spring formation of the Subject Lands in Case Nos. 23508-23511 and 23516-23519. Permian Resources also filed applications for drilling and pooling the Wolfcamp formation in Case Nos. 23512-23515 and 23520-23523, proposing to drill eight wells in the Upper Wolfcamp despite the fact that those wells would drain the 3rd Bone Spring Sand and would likely result in permanent damage to the target reservoir located in the Bone Spring where the best reservoirs are located.

6. Given the poor quality of the Upper Wolfcamp reservoir, the lack of the baffle that would otherwise minimize drainage of the 3rd Bone Spring, the fact that additional Upper Wolfcamp wells will not increase EUR, and the recent history of developing the lands in the area that account for these facts, Permian Resources’ decision to seek to develop the Upper Wolfcamp Formation is baffling. The geological data demonstrates that expending tens of millions of dollars¹ drilling unnecessary wells in the Upper Wolfcamp that will not increase EUR, but instead would place a substantial financial burden on Working Interest owners, incur environmental risks of drilling additional and unnecessary wells, undermine overall production, and likely result in permanent damage to the target reservoir, creating waste of oil and gas that would be forever lost through the misguided development of the Upper Wolfcamp. See Exhibit 4

7. Permian Resources’ decision to propose to develop the Upper Wolfcamp created a dilemma for Cimarex. On the one hand, based on clear geological and reservoir data, Cimarex

¹ Permian Resources is proposing to drill eight Upper Wolfcamp wells on the Subject Lands at a total estimated cost of \$95,022,896. See: Permian Well Proposals, a copy of which are attached hereto as Exhibit 3.

knew, that the Upper Wolfcamp should not be developed on the Subject Lands but, on the other hand, Cimarex understood that once Permian Resources filed its application to pool the Upper Wolfcamp, Cimarex needed to provide a counter proposal that would oppose Permian Resources' Upper Wolfcamp applications.

8. Consequently, Cimarex drafted competing pooling applications for the Upper Wolfcamp in which it explained that the best way to develop the target reservoir is by drilling wells in the 3rd Bone Springs Sands, the same wells proposed by Cimarex's Bone Spring applications and prohibit the drilling of wells in Upper Wolfcamp to prevent drainage from and damage to the target reservoir. Cimarex filed its Wolfcamp applications on June 5, 2023, in Case Nos. 23594 – 23601, in which it dedicated the Wolfcamp units exclusively to wells drilled in the 3rd Bone Spring Sands, and not in the Upper Wolfcamp, in order preserve the Upper Wolfcamp from being drilled and thereby protect the 3rd Bone Spring Sand from drainage and damage.

II. Argument

A. The optimal development of the Subject Lands is to drill wells in the 3rd Bone Spring Sand and create a protective buffer zone that would prohibit the drilling of wells in the Upper Wolfcamp.

9. In order to protect the abundant reserves in the 3rd Bone Spring Sand and avoid the inherent damage that Permian Resources' proposed Upper Wolfcamp wells would inflict on the reservoir, the Division should create a buffer zone that prohibits development of the subpar Upper Wolfcamp. The history and practice of achieving optimal development in the area surrounding the Subject Lands has repeatedly been demonstrated over the years by the fact the operators who were free to drill in both the Bone Spring and Wolfcamp decided to develop the 3rd Bone Spring Sands and to forego drilling any Upper Wolfcamp wells. *See* Exhibits 1 and 2, attached hereto.

10. Cimarex filed its Wolfcamp applications only as a response to Permian Resources'

unexpected and imprudent Wolfcamp applications as a means to prevent Permian Resources from making the mistake of drilling the costly, wasteful, and unnecessary Upper Wolfcamp wells. In its competing Wolfcamp applications, Cimarex emphasized that only the 3rd Bone Spring Sands should be drilled and not the Upper Wolfcamp, consistently advocating that the Division should not allow the drilling of Upper Wolfcamp wells on the Subject Lands.

11. Cimarex recognizes that filing its competing applications for pooling the Upper Wolfcamp based on wells drilled in 3rd Bone Spring Sand may not be the best way to protect correlative rights and counter Permian Resources' plan for the Upper Wolfcamp. Cimarex submits that the best course of action for the Division to follow, in order to ensure achieving optimal production from the rich reserves located in the 3rd Bone Spring Sand and to protect correlative rights, would be to allow the drilling of the 3rd Bone Spring Sand wells, as proposed by Cimarex, and to establish a vertical protective zone that would preclude the drilling of wells in the subpar Upper Wolfcamp. Such a protective zone would prevent drainage of the 3rd Bone Spring, thus protecting the correlative rights of the owners in the 3rd Bone Spring. In addition, the protective zone would spare the working interest owners approximately \$95 Million for wells that not only fail to increase the EUR but would also likely damage the reservoir. Cimarex has carefully analyzed the need for such a protective buffer zone and provides in Exhibit 5, attached hereto, a graphic depiction and quantification of the area and extent of the Upper Wolfcamp that needs to be protected.

12. The Division has the clear authority to fashion such a necessary solution and establish a protective zone under NMSA 1978 Section 70-2-11, which grants the Division authority "to do whatever may be reasonably necessary" to protect correlative rights, prevent waste, and prevent the drilling of unnecessary wells. The wells proposed to be drilled by Permian

Resources in the Upper Wolfcamp are clearly unnecessary, wasteful, and unwarranted based on the geological and reservoir data.

13. When Cimarex drafted its competing application to pool the Wolfcamp formation as a counter to Permian Resources' Wolfcamp application, it did so with the intent of dedicating the Wolfcamp unit to a well drilled in the 3rd Bone Spring in order to prevent the Upper Wolfcamp from being drilled and establishing the Upper Wolfcamp as a buffer zone. Cimarex submits this Motion with the same intent - to prohibit the drilling of wells in the Upper Wolfcamp by creating a protective buffer zone that would prevent drainage of the target reservoir, protect correlative rights, prevent waste, avoid the drilling of unnecessary wells, and protect the target reservoir from harm and damage. Thus, Cimarex by this Motion respectfully requests that its competing applications in Case Nos. 23594, 23595, 23596, 23597, 23598, 23599, 23600, and 23601 to pool the Wolfcamp formation be dismissed; that the Division establish a protective buffer zone that prohibits the drilling of wells in the Upper Wolfcamp; and that the Division require any operator who wants develop the Lower Wolfcamp, below the proposed buffer zone, to file a separate pooling application that specifically targets the Lower Wolfcamp.

III. Conclusion:

Cimarex respectfully requests that the Division consider this Motion as part of the contested hearing for the above-referenced cases during which Cimarex and Permian Resources will be presenting their respective plans for the development of the Subject Lands. Permian Resources' development plans consist of drilling both the Bone Spring and Upper Wolfcamp formations; whereas, Cimarex's development plans consist of drilling only the Bone Spring formation to achieve optimal production of the Subject Lands that protects correlative rights and avoids waste.

If the Division finds Cimarex's production data and analysis of the geology and target reservoir to be accurate and persuasive, and as a result, decides to grant Cimarex operatorship of the Subject Lands by approving its applications for the Bone Spring, then concurrently with the Division's decision, Cimarex respectfully asks the Division to grant this Motion by enacting the following: (1) Dismiss Cimarex's applications for the Wolfcamp in Case Nos. 23594, 23595, 23596, 23597, 23598, 23599, 23600, and 23601, and as an alternative to pooling the Wolfcamp, pool only the Bone Spring formation underlying the units proposed by Cimarex in Case Nos. 23448 – 23455; (2) establish a protective buffer zone covering the Upper Wolfcamp below the base of the Bone Spring that would prohibit the drilling of wells in the Upper Wolfcamp in order to protect the correlative rights of the owners, prevent waste and optimize production from the Subject Lands; and (3) deny the applications filed by Permian Resources that propose to pool the Wolfcamp formation for the purpose of drilling the Upper Wolfcamp and require any operator wanting to develop the Lower Wolfcamp, below the protective zone, to file separate applications that actually target the Lower Wolfcamp, and not the Upper Wolfcamp.

Respectfully submitted,

ABADIE& SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

Andrew D. Schill
William E. Zimsky
214 McKenzie Street
Santa Fe, New Mexico 87501
Telephone: 970.385.4401
Facsimile: 970.385.4901
darin@abadieschill.com

andrew@abadieschill.com
bill@abadieschill.com

Attorneys for Cimarex Energy Co.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was filed with the New Mexico Oil Conservation Division and was served on counsel of record via electronic mail on July 13, 2023:

Michael H. Feldewert – mfeldewert@hollandhart.com
Adam G. Rankin – agrankin@hollandhart.com
Julia Broggi – jbroggi@hollandhart.com
Paula M. Vance – pmvance@hollandhart.com

Attorneys for Read & Stevens, Inc.;
and Permian Resources Operating, LLC

Blake C. Jones – blake.jones@steptoe-johnson.com

Attorney for Northern Oil and Gas, Inc.

Sealy Cavin, Jr. – scavin@cilawnm.com
Scott S. Morgan – smorgan@cilawnm.com
Brandon D. Hajny – bhajny@cilawnm.com

Attorneys for Sandstone Properties, LLC

/s/ Darin C. Savage

Darin C. Savage

Well Count by Landing and Operators Shows 3rd Sand is the Consensus Landing

- 3rd Sand / single bench landing supported by 236 wells, 97%.
- 13 of 22 WCMP were drilled instead of 3rd SS
- 5 of 22 WCMP drilled as a separate bench
- 3 WCMP stack tests with 3rd Sand

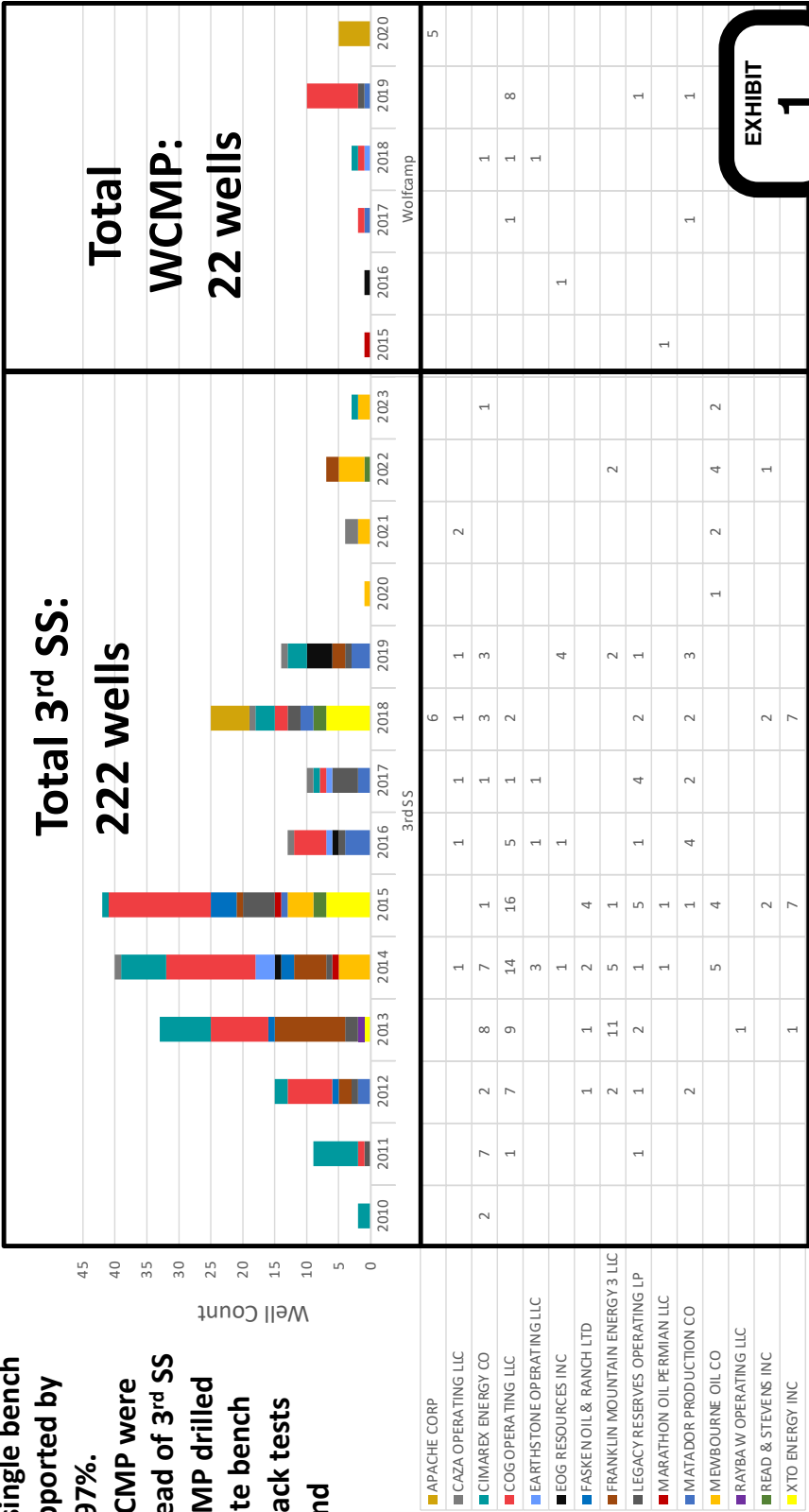


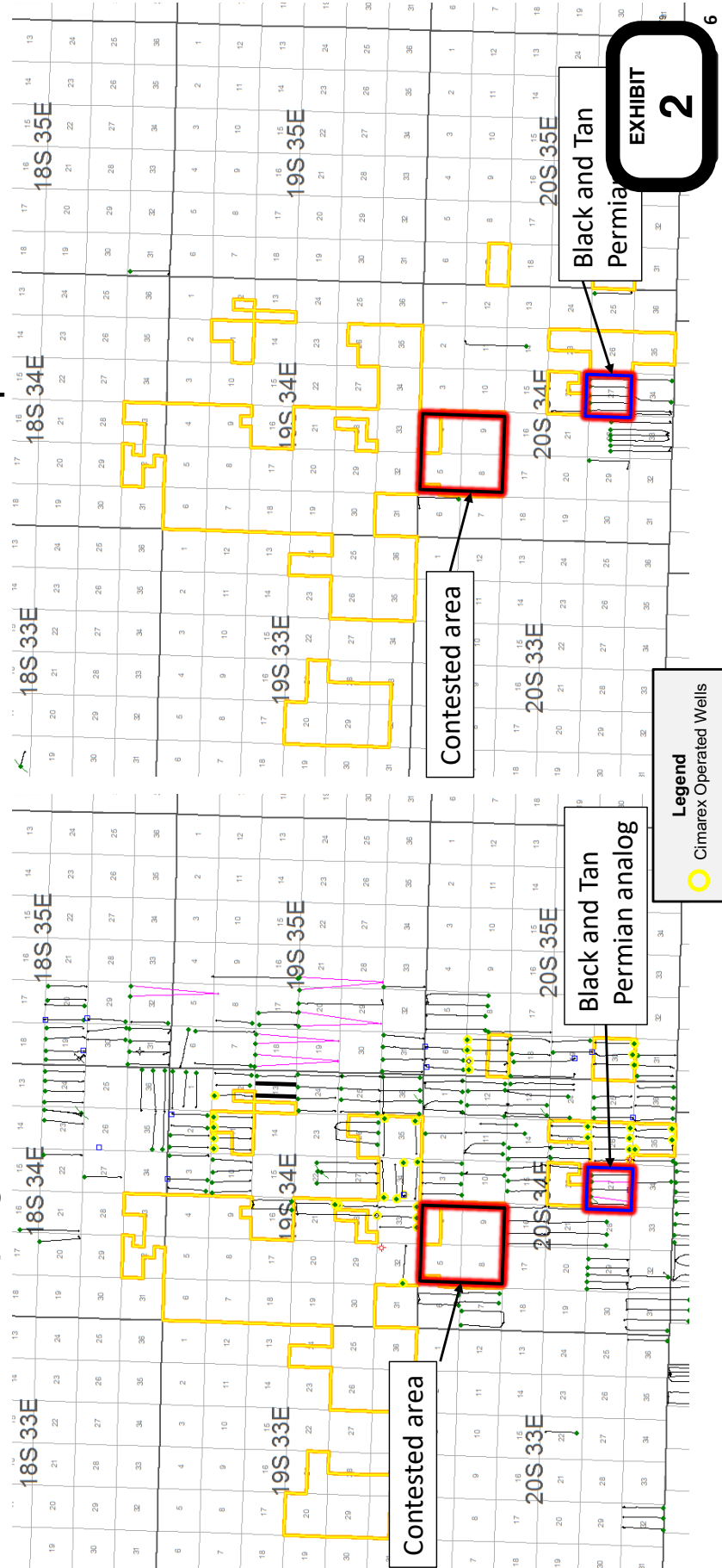
EXHIBIT 1

3rd Bone Spring Sand is the Established Single Bench Target at 4 WPS within AOI

42,650 acres developed with more than 1 well, all but one development, 98.5% of sections similar to Cimarex proposal

3rd Bone Spring Sand Producers

Wolfcamp Producers



Permian Resources Operating, LLC

300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701

Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2/17/2023	AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 201H	FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T20S-R34E	MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian Wt:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost		

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
INTANGIBLE COSTS				
1 Land / Legal / Regulatory	\$ 99,066	-	\$7,380	\$6,566
2 Location, Surveys & Damages	288,079	18,067	2,500	308,647
4 Freight / Transportation	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment	124,327	215,417	105,000	444,744
6 Rental - Downhole Equipment	205,424	99,805	-	265,229
7 Rental - Living Quarters	48,083	54,480	-	102,562
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	753,820	-	-	753,820
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	188,935	725,061	-	913,996
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CTU	-	-	15,000	15,000
16 Perforating, Wireline, Slickline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, CTU	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Disp	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,254
30 Rig Supervision / Engineering	121,196	133,420	21,667	276,283
32 Drilg & Completion Overhead	10,423	-	-	10,423
33 Labor	153,358	49,489	101,667	324,514
54 Proppant	-	1,255,227	-	1,255,227
95 Insurance	14,660	-	-	14,660
97 Contingency	-	24,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
TANGIBLE COSTS				
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	40,000	-	104,820
67 Packers, Liner Hangers	14,732	-	20,000	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	43,333	43,333
83 Flare Stack	-	-	16,667	16,667
84 Electrical / Grounding	-	-	30,000	30,000
85 Communications / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer: PS
 Completions Engineer: ML
 Production Engineer: DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO: WH Co-CEO: JW VP - Operations: CRM
 VP - Land & Legal: BG VP - Geosciences: SO

NON OPERATING PARTNER APPROVAL:

Company Name: Working Interest (%): Tax ID:
 Signed by: Date:
 Title: Approval: ☐ Yes ☐ No

The costs on this AFE are estimates only and may not be consistent with actual costs incurred on any specific item or the total costs of the project. Taking installation approved under the AFE may be delayed up to 30 days after the well has been completed. In executing this AFE, the Permian Resources Operating, LLC and its affiliates warrant that the costs are reasonable and will not exceed the total costs of the project. The Permian Resources Operating, LLC and its affiliates warrant that the costs are reasonable and will not exceed the total costs of the project. The Permian Resources Operating, LLC and its affiliates warrant that the costs are reasonable and will not exceed the total costs of the project.

EXHIBIT

3

Permian Resources Operating, LLC

300 N. Marienfeld St., Ste. 1000 Midland, TX 79701
Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2/17/2023	AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Comm 202H	FIELDS:	Tonto, Wolfcamp
LOCATION:	Section 4, T20S-R34E	MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permit Wt:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost		

INTANGIBLE COSTS	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
1 Land / Legal / Regulatory	\$ 59,866	-	37,500	\$ 96,366
2 Location, Surveys & Damages	288,079	18,067	2,500	308,646
4 Freight / Transportation	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment	124,327	215,417	105,000	444,744
6 Rental - Downhole Equipment	205,424	59,805	-	265,229
7 Rental - Living Quarters	48,083	54,480	-	102,562
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	753,820	-	-	753,820
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	188,935	725,061	-	913,996
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CTU	-	-	15,000	15,000
16 Perforating, Wireline, Silckline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, CTU	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	-	800,020
24 Water	43,599	561,625	300,000	1,005,283
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Disp	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,254
30 Rig Supervision / Engineering	121,196	133,420	21,667	276,283
32 Drig & Completion Overhead	10,423	-	-	10,423
35 Labor	193,358	69,489	101,667	324,514
54 Proppant	-	1,255,227	-	1,255,227
95 Insurance	14,660	-	-	14,660
97 Contingency	-	24,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

TANGIBLE COSTS	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	-	40,900	104,820
67 Packers, Liner Hangers	14,732	-	20,900	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	43,333	43,333
83 Flare Stack	-	-	16,667	16,667
84 Electrical / Grounding	-	-	50,000	50,000
85 Communication / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer:	PS
Completions Engineer:	ML
Production Engineer:	DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO	_____	Co-CEO	_____	VP - Operations	_____
	WH		JW		CRM
VP - Land & Legal	_____	VP - Geosciences	_____		
	BG		SO		

NON OPERATING PARTNER APPROVAL:

Company Name: _____ Working Interest (%): _____ Tax ID: _____
Signed by: _____ Date: _____
Title: _____ Approval: ☐ Yes ☐ No (mark one)

The costs on this AIT are maximum only and may not be construed as ceilings on any specific item or the total cost of the project. Tabling installation approved under the AIT may be delayed up to a year after the well has been completed. In executing this AIT, the Participant agrees to pay its proportionate share of actual costs incurred including local creation, installation, hook-ups and small costs under the terms of the creditable joint operation agreement, installation order or other agreement governing this well. Participants shall be covered by and hold harmless for Oronot's

Permian Resources Operating, LLC

300 N. Marienfeld St., Ste. 1000 Midland, TX 79701
Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2/17/2023	AFE NO.:	1
WELL NAME:	Banc 4-9 Federal Com 203H	FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T20S-R34E	MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian Wt:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost		

INTANGIBLE COSTS	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
1 Land / Legal / Regulatory	\$ 59,066	-	37,500	\$ 96,566
2 Location, Surveys & Damages	288,099	18,067	2,500	308,667
4 Freight / Transportation	17,238	43,778	25,000	116,406
5 Rental - Surface Equipment	124,327	215,417	105,000	444,744
6 Rental - Downhole Equipment	205,424	39,805	-	265,229
7 Rental - Living Quarters	48,083	54,480	-	102,562
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	753,820	-	-	753,820
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	188,935	725,061	-	913,996
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CTU	-	-	15,000	15,000
16 Perforating, Wireline, Slickline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	723,274	-	723,274
18 Completion Unit, Swab, CTU	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Disp	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,254
30 Rig Supervision / Engineering	121,156	133,420	21,667	276,263
32 Drig & Completion Overhead	10,423	-	-	10,423
35 Labor	153,358	69,489	101,667	324,514
54 Proppant	-	1,255,227	-	1,255,227
95 Insurance	14,660	-	-	14,660
97 Contingency	-	21,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

TANGIBLE COSTS	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	40,000	40,000	104,820
67 Packers, Liner Hangers	14,732	-	20,000	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	43,333	43,333
83 Flare Stack	-	-	16,667	16,667
84 Electrical / Grounding	-	-	50,000	50,000
85 Communications / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer: PS
Completions Engineer: ML
Production Engineer: DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO: WH Co-CEO: JW VP - Operations: CRM
VP - Land & Legal: BG VP - Geosciences: SO

NON OPERATING PARTNER APPROVAL:

Company Name: _____ Working Interest (%): _____ Tax ID: _____
Signed by: _____ Date: _____
Title: _____ Approval: ☐ Yes ☐ No (mark one)

The costs on this AFE are estimates only and may not be identical to actual costs on any specific item or the total cost of the project. Taking installation approved under the AFE may be delayed up to a year after the well has been completed. In executing this AFE, the Participant agrees to pay no more than the actual cost incurred by the Participant. The Participant shall be responsible for the actual cost of the well and shall be responsible for the actual cost of the well. The Participant shall be responsible for the actual cost of the well.

Permian Resources Operating, LLC

300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701

Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023	AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 204H	FIELD:	Tonko; Wolfcamp
LOCATION:	Section 4, T20S-R34E	MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian WI:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and initial AL install cost		

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
INTANGIBLE COSTS				
1 Land / Legal / Regulatory	\$ 39,066	-	37,500	\$ 76,566
2 Location, Surveys & Damages	288,099	18,067	2,500	308,667
4 Freight / Transportation	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment	174,327	215,417	105,000	494,744
6 Rental - Downhole Equipment	205,424	99,805	-	305,229
7 Rental - Living Quarters	48,083	54,480	-	102,562
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	733,820	-	-	733,820
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	188,935	725,061	-	913,996
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CTU	-	-	15,000	15,000
16 Perforating, Wireline, Slickline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, CTU	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Disp	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,254
30 Rig Supervision / Engineering	121,196	133,420	21,667	276,283
32 Drilg & Completion Overhead	10,423	-	-	10,423
35 Labor	153,358	69,489	101,667	324,514
54 Proppant	-	1,255,227	-	1,255,227
95 Insurance	14,660	-	-	14,660
97 Contingency	-	24,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
TANGIBLE COSTS				
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	40,000	-	104,820
67 Packers, Liner Hangers	14,732	-	20,000	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	43,333	43,333
83 Flare Stack	-	-	16,667	16,667
84 Electrical / Grounding	-	-	50,000	50,000
85 Communications / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer: PS
 Completions Engineer: ML
 Production Engineer: DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO: WH Co-CEO: JW VP - Operations: CRM
 VP - Land & Legal: BG VP - Geosciences: SO

NON OPERATING PARTNER APPROVAL:

Company Name: Working Interest (%): Tax ID: Signed by: Date: Title: Approval: ☐ Yes ☐ No (mark one)

The costs on this AFE are estimates only and may not be considered as a ceiling on the total cost of the project. Taking installation approval under the AFE may be delayed up to a year after the well has been completed. In exercising this AFE, the Participant agrees to pay no more than the actual cost incurred in furtherance of the well. The Participant shall be deemed to have accepted the actual cost of the well if the Participant does not object to the actual cost of the well within 90 days of the completion of the well. The Participant shall be deemed to have accepted the actual cost of the well if the Participant does not object to the actual cost of the well within 90 days of the completion of the well.

Permian Resources Operating, LLC

300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701
Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023	AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 201H	FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E	MD/TVD:	21,211' / 10,926'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian WI:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and initial AL install cost		

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
INTANGIBLE COSTS				
1 Land / Legal / Regulatory	\$ 59,066	-	37,500	\$ 96,566
2 Location, Surveys & Damages	288,079	18,067	2,500	308,647
4 Freight / Transportation	47,528	43,778	25,000	116,406
5 Rental - Surface Equipment	124,327	215,417	105,000	444,744
6 Rental - Downhole Equipment	205,424	59,805	-	265,229
7 Rental - Living Quarters	48,083	54,480	-	102,562
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	735,820	-	-	735,820
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	188,935	725,061	-	913,996
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CIU	-	-	15,000	15,000
16 Perforating, Wireline, Slickline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, CIU	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Disposal	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,254
30 Rig Supervision / Engineering	121,196	133,420	21,667	276,283
32 Drig & Completion Overhead	104,423	69,489	101,667	324,514
35 Labor	153,558	1,255,227	-	1,408,785
54 Property	-	-	-	-
95 Insurance	14,680	-	-	14,680
97 Contingency	-	24,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585
TANGIBLE COSTS				
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	-	40,000	104,820
67 Packers, Liner Hangers	14,732	-	20,000	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	116,667	116,667
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	43,333	43,333
83 Haze Stack	-	-	16,667	16,667
84 Electrical / Grounding	-	-	50,000	50,000
85 Communications / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer:	PS
Completions Engineer:	ML
Production Engineer:	DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO	WH	Co-CEO	JW	VP - Operations	CRM
VP - Land & Legal	BC	VP - Geosciences	SO		

NON OPERATING PARTNER APPROVAL:

Company Name:	Working Interest (%):	Tax ID:
Signed by:	Date:	
Title:	Approve: ☐ Yes ☐ No (mark one)	

The costs on this AFE are estimates only and may not be considered as a ceiling on any specific item or the total cost of the project. Taking installation approved under the AFE may be delayed up to a year after the well has been completed. In executing this AFE, the Participant agrees to pay its proportionate share of actual costs incurred, including legal, costs, regulatory, technology and well costs under the terms of the applicable joint operating agreement, regulatory order or other agreement covering the well. Participants shall be covered by and held proportionately for Operator's well control and general liability insurance unless participant provides Operator a certificate evidencing its own insurance is an interest acceptable to the Operator by the date of sign.

Permian Resources Operating, LLC

300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701

Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023	AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 202H	FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T205-R34E	MD/TVD:	21,211' / 10,926'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian WL:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost		

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
1 Land/ Legal/ Regulatory	\$ 39,066	-	37,500	\$ 96,566
2 Location, Surveys & Damages	288,079	18,067	2,500	308,647
4 Freight/ Transportation	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment	124,327	215,417	105,000	444,744
6 Rental - Downhole Equipment	205,424	59,805	-	265,229
7 Rental - Living Quarters	48,083	34,480	-	102,563
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	753,820	-	-	753,820
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	108,303	725,061	-	833,364
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CTU	-	-	15,000	15,000
16 Perforating, Wireline, Silhouette	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, CTU	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging/ Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Dlep	-	121,606	150,000	271,606
28 Mud/ Wastewater Disposal	193,104	61,751	-	254,855
30 Rig Supervision/ Engineering	121,196	133,420	21,667	276,283
32 Drig & Completion Overhead	10,425	-	-	10,425
35 Labor	133,358	69,489	101,667	304,514
54 Proppant	-	1,259,227	-	1,259,227
95 Insurance	14,660	-	-	14,660
97 Contingency	-	24,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	-	40,000	104,820
67 Packers, Liner Hangers	14,732	-	20,000	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning/ Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering/ Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank/ Facility Containment	-	-	43,333	43,333
83 Flare Stack	-	-	16,667	16,667
84 Electrical/ Grounding	-	-	50,000	50,000
85 Communications/ SCADA	-	-	36,667	36,667
86 Instrumentation/ Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer:	PS
Completions Engineer:	ML
Production Engineer:	DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO	WH	Co-CEO	JW	VP - Operations	CRM
VP - Land & Legal	BC	VP - Geosciences	SO		

NON OPERATING PARTNER APPROVAL:

Company Name:	Working Interest (%):	Tax ID:
Signed by:	Date:	
Title:	Approval: ☐ Yes ☐ No (mark one)	

The costs on this AFE are estimates only and may not be considered as a ceiling on the total cost of the project. Taking limitations approved under the AFE may be delayed up to a year after the well has been completed. In executing this AFE, the Participant agrees to pay its proportionate share of actual costs incurred, including, but not limited to, regulatory, permitting, and well costs under the terms of the applicable joint operating agreement, regulatory orders or other agreements covering this well. Participants shall be covered by wellbore completion for Operator's well control and general liability insurance unless participant provides Operator a certificate evidencing its own insurance to its extent applicable to the Operator by the date of sign-off.

Permian Resources Operating, LLC

300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701
Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023	AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 203H	FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E	MD/TVD:	21,191' / 10,906'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian Well:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost		

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
INTANGIBLE COSTS				
1 Land / Legal / Regulatory	\$ 59,066	-	37,500	\$ 96,566
2 Location, Surveys & Damages	288,079	18,067	2,500	308,647
4 Freight / Transportation	47,528	43,778	25,000	116,306
5 Rental - Surface Equipment	124,327	215,417	105,000	444,744
6 Rental - Downhole Equipment	205,424	59,805	-	265,229
7 Rental - Living Quarters	46,083	54,480	-	100,563
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	753,800	-	-	753,800
12 Drill Bits	100,176	-	-	100,176
13 Fuel & Power	188,935	725,061	-	913,996
14 Cementing & Float Equip	243,296	-	-	243,296
15 Completion Unit, Swab, C/U	-	-	15,000	15,000
16 Perforating, Wireline, Slickline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, C/U	-	146,484	-	146,484
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Disposal	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,255
29 Rig Supervision / Engineering	121,196	133,420	21,667	276,283
32 Drig & Completion Overhead	10,423	-	-	10,423
35 Labor	153,358	69,489	101,667	324,514
54 Proppant	-	1,255,227	-	1,255,227
95 Insurance	14,680	-	-	14,680
97 Contingency	-	28,421	3,833	32,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
TANGIBLE COSTS				
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,620	-	40,000	104,620
67 Packers, Liner Hangers	14,732	-	20,000	34,732
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	45,333	45,333
83 Flare stack	-	-	16,667	16,667
84 Electrical / Grounding	-	-	50,000	50,000
85 Communications / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer:	PS
Completions Engineer:	ML
Production Engineer:	DC

Permian Resources Operating, LLC APPROVAL:

Co-CEO	WH	Co-CEO	JW	VP - Operations	CRM
VP - Land & Legal	BC	VP - Geosciences	SO		

NON OPERATING PARTNER APPROVAL:

Company Name:	Working Interest (%):	Tax ID:
Signed by:	Date:	
Title:	Approval: ☐ Yes ☐ No (mark one)	

The costs on this AFE are estimates only and may not be considered as a ceiling on any specific item or the total cost of the project. Taking finalization approved under the AFE may be delayed up to a year after the well has been completed. In executing this AFE, the Participant agrees to pay its proportionate share of actual costs incurred, including legal, overhead, regulatory, landings and well costs under the terms of the applicable joint operating agreement, regulatory order or other agreement covering this well. Participants shall be covered by and added proportionately to the Operator's well control and general liability insurance unless participant provides Operator a certificate evidencing its own insurance in an amount acceptable to the Operator by the date of sign.

Permian Resources Operating, LLC

300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701
Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023	AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 204H	FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E	MD/TVD:	21,181' / 10,896'
COUNTY/STATE:	Lea County, New Mexico	LATERAL LENGTH:	10,000'
Permian WI:		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY	COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost		

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
INTANGIBLE COSTS				
1 Land / Legal / Regulatory	\$ 59,066	-	37,500	\$ 96,566
2 Location, Surveys & Damages	288,079	18,067	2,900	308,647
4 Freight / Transportation	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment	124,327	215,117	105,000	444,744
6 Rental - Downhole Equipment	205,424	59,805	-	265,229
7 Rental - Living Quarters	46,083	54,480	-	100,562
10 Directional Drilling, Surveys	429,543	-	-	429,543
11 Drilling	753,820	-	-	753,820
12 Drill Bits	106,176	-	-	106,176
13 Fuel & Power	186,935	725,061	-	913,996
14 Cementing & Host Equip	243,296	-	-	243,296
15 Completion Unit, Swab, CUI	-	-	15,000	15,000
16 Perforating, Wireline, Slickline	-	393,136	-	393,136
17 High Pressure Pump Truck	-	123,274	-	123,274
18 Completion Unit, Swab, CUI	-	146,384	-	146,384
20 Mud Circulation System	105,209	-	-	105,209
21 Mud Logging	17,529	-	-	17,529
22 Logging / Formation Evaluation	7,270	8,339	-	15,609
23 Mud & Chemicals	361,835	438,185	10,000	810,020
24 Water	43,459	661,625	300,000	1,005,083
25 Stimulation	-	814,033	-	814,033
26 Stimulation Flowback & Dip	-	121,606	150,000	271,606
28 Mud / Wastewater Disposal	193,104	61,151	-	254,254
30 Rig Supervision / Engineering	121,196	135,420	21,667	278,283
32 Drig & Completion Overhead	10,425	-	-	10,425
35 Labor	135,358	69,489	101,667	306,514
54 Proppant	-	1,255,227	-	1,255,227
95 Insurance	14,660	-	-	14,660
97 Contingency	-	24,421	3,833	28,254
99 Plugging & Abandonment	-	-	-	-
TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,585

	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
TANGIBLE COSTS				
60 Surface Casing	\$ 122,234	-	-	\$ 122,234
61 Intermediate Casing	344,284	-	-	344,284
62 Drilling Liner	-	-	-	-
63 Production Casing	687,039	-	-	687,039
64 Production Liner	-	-	-	-
65 Tubing	-	-	140,000	140,000
66 Wellhead	64,820	-	40,000	104,820
67 Packers, Liner Hangers	147,332	-	20,000	167,332
68 Tanks	-	-	45,833	45,833
69 Production Vessels	-	-	126,667	126,667
70 Flow Lines	-	-	66,667	66,667
71 Rod string	-	-	-	-
72 Artificial Lift Equipment	-	-	90,000	90,000
73 Compressor	-	-	5,833	5,833
74 Installation Costs	-	-	-	-
75 Surface Pumps	-	-	61,667	61,667
76 Downhole Pumps	-	-	-	-
77 Measurement & Meter Installation	-	-	116,667	116,667
78 Gas Conditioning / Dehydration	-	-	-	-
79 Interconnecting Facility Piping	-	-	20,000	20,000
80 Gathering / Bulk Lines	-	-	-	-
81 Valves, Dumps, Controllers	-	-	108,333	108,333
82 Tank / Facility Containment	-	-	43,333	43,333
83 Flow Block	-	-	16,667	16,667
84 Electrical / Grounding	-	-	50,000	50,000
85 Communications / SCADA	-	-	36,667	36,667
86 Instrumentation / Safety	-	-	833	833
TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,276
TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,862

PREPARED BY Permian Resources Operating, LLC:

Drilling Engineer:	PS
Completions Engineer:	ML
Production Engineer:	DC

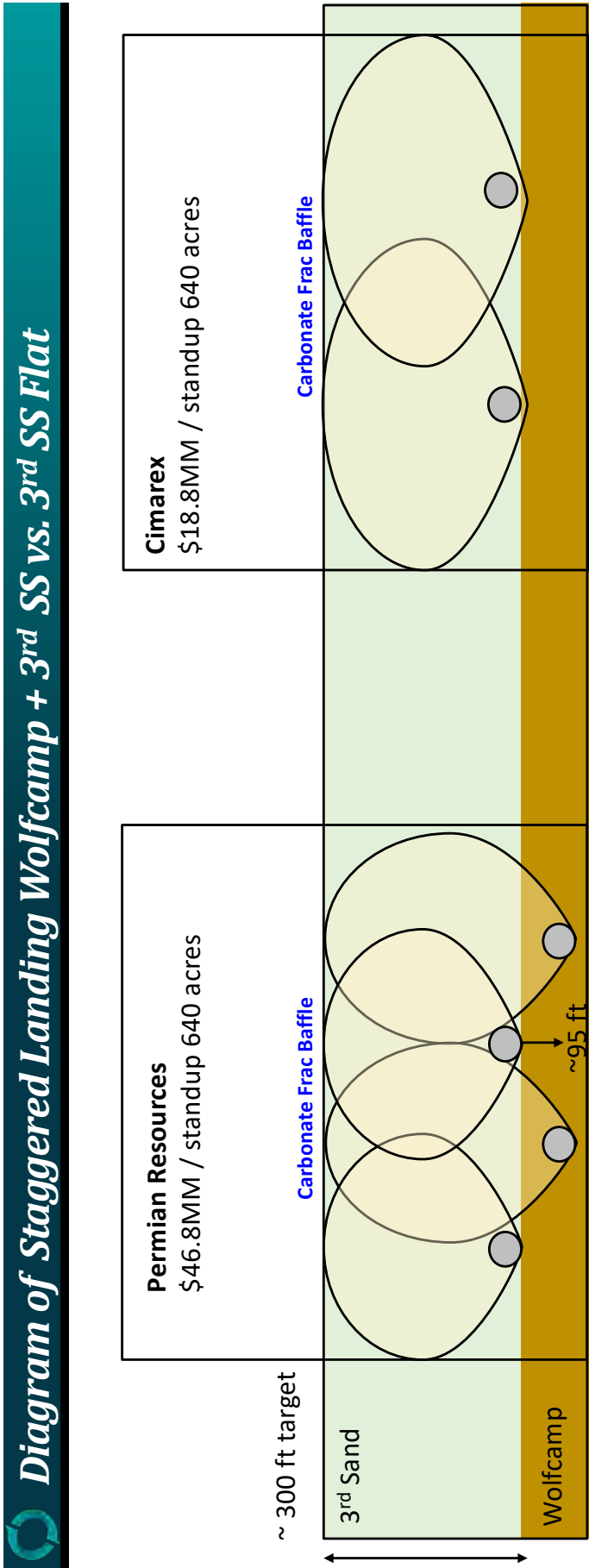
Permian Resources Operating, LLC APPROVAL:

Co-CEO	WH	Co-CEO	JW	VP - Operations	CRM
VP - Land & Legal	BG	VP - Geosciences	SO		

NON OPERATING PARTNER APPROVAL:

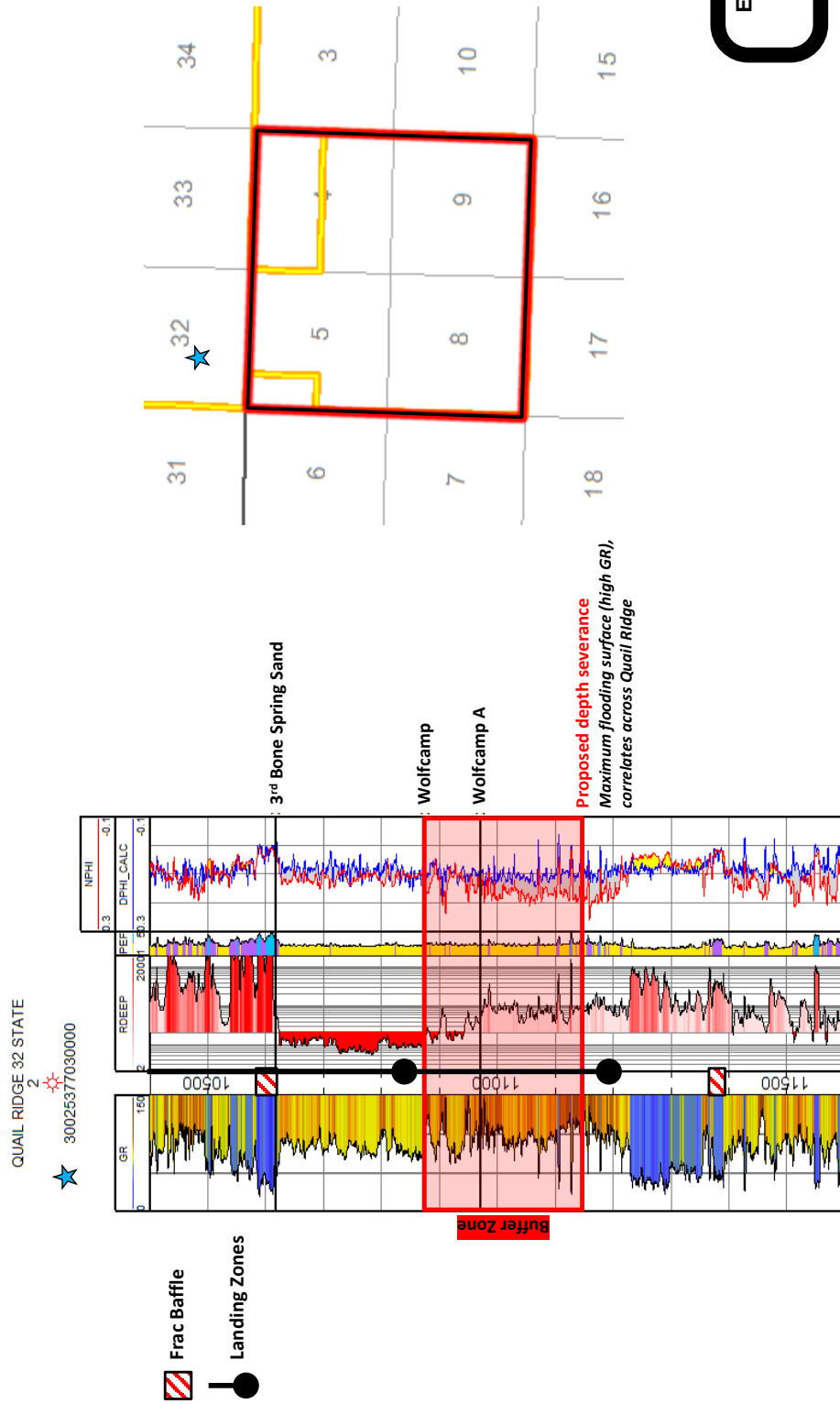
Company Name:	Working Interest (%):	Tax ID:
Signed by:	Date:	
Title:	Approve: ☐ Yes ☐ No (mark one)	

The costs on this AFE are estimates only and may not be considered as ceilings on any specific item or the total cost of the project. Taking finalization approval under the AFE may be delayed up to a year after the well has been completed. In executing this AFE, the Participant agrees to pay its proportionate share of actual costs incurred, including legal, insurance, regulatory, permitting and well costs under the terms of the applicable joint operating agreement, regulatory orders or other agreements covering this well. Participants shall be covered by and held proportionately for Operator's well control and general liability (because various participants provide Operator a certificate evidencing its own insurance to its maximum payable to the Operator by the date of sign).



- Cimarex has experience developing as many as 8 landings within a DSU successfully in Lea county with 9th drilling now, 35 to 38 wells / section. The difference is the combination of geology (barriers, reservoir height, and flow units) don't support the proposed staggers at Mighty Pheasant Loosey Goosey as demonstrated by area developments like Black and Tan.
- 3rd and Wolfcamp landed this close together are equivalent to 8 WPS flat in the 3rd Sand, double the AOI proven density.
- A wealth of data from the DOE and industry funded Hydraulic Fracture Test Site 2 supports an upper Wolfcamp buffer zone in this specific location to protect proven 3rd Sand correlative rights and prevent capital waste.

Proposed Wolfcamp Depth Severance to Minimize Interaction with 3rd Bone Spring Sand



TAB 2

Case Nos. 23594-23601

Exhibit A: Self-Affirmed Statement of John Coffman Landman

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

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

**Case Nos. 23594, 23595, 23596, 23597,
23598, 23599, 23600, & 23601**

SELF-AFFIRMED STATEMENT OF JOHN COFFMAN

I, being duly sworn on oath, state the following:

1. I am over the age of eighteen years and have the capacity to execute this Self-Affirmed Statement, which is based on my personal knowledge.
2. I am employed as a Landman with Coterra Energy, Inc., and its subsidiary Cimarex Energy Co. ("Cimarex"), the applicant in this case, and I am familiar with the subject application and the lands involved.
3. I graduated in 2018 from Texas Tech University with a bachelor's degree in Business Administration with an emphasis on Energy Commerce. I have worked at Cimarex for approximately 4 years, and I have been working in New Mexico for 5 years. My credentials as an expert witness in petroleum land matters have been accepted by the New Mexico Oil Conservation Division ("Division") and made a matter of record.
4. This Statement concerns the status of Cimarex's Case Nos. 23594 - 23601, which were originally filed in response to Read & Stevens, Inc., in association with Permian Resources Operating, LLC (collectively referred to herein as "Permian Resources") proposing to pool the Wolfcamp formation underlying Sections 5 and 8, and Sections 4 and 9, in Township 20 South,

**EXHIBIT
A**

Range 34 East, NMPM, Lea County ("Subject Lands") in Case Nos. 23512-23515 and 23520 – 23523.

5. A little over a month after Cimarex filed its applications to develop and pool the Bone Spring formation in the Subject Lands, Permian Resources not only filed competing applications for the Bone Spring but also -- unexpectedly and surprisingly -- filed applications for drilling and pooling Wolfcamp formation in the Subject Lands in Case Nos. 23512-23515 and 23520 – 23523, proposing to drill wells in the Upper Wolfcamp of the Subject Lands despite the fact that, based on the geological and reservoir data, those wells would drain the 3rd Bone Spring Sand, would not contribute or add to the overall EUR, would incur excessive costs, and would likely result in permanent damage to the target reservoir located in the Bone Spring where the best reservoirs are located.

6. Permian Resources' decision to propose to develop the Upper Wolfcamp created a dilemma for Cimarex, as we understood, based on clear geological and reservoir data, that the Upper Wolfcamp should not be developed in the Subject Lands, but also, we understood that once Permian Resources filed its application to pool the Upper Wolfcamp, Cimarex needed to provide a counter proposal that would oppose Permian Resources' Upper Wolfcamp applications.

7. As a result, Cimarex drafted competing pooling applications for the Wolfcamp in which we explained that the best way to develop the target reservoir is by drilling wells in the 3rd Bone Springs Sands, the same wells proposed by Cimarex's Bone Spring applications, and prohibit the drilling of wells in Upper Wolfcamp to prevent drainage from and damage to the target reservoir. Cimarex filed its Wolfcamp applications in Case Nos. 23594 – 23601, in which it dedicated the Wolfcamp units exclusively to wells drilled in the 3rd Bone Spring Sands, and not in

the Upper Wolfcamp, in order to preserve the Upper Wolfcamp from being drilled and thereby protect the 3rd Bone Spring Sand from drainage and damage.

8. Cimarex has further evaluated its applications in Case Nos. 23594 – 23601 as a response to the applications filed by Permian Resources in Case Nos. 23512 – 23515 and 23520 – 23523, and Cimarex has determined that the best way to develop the Subject Lands and protect the primary reservoir of said Lands while optimizing production is to request that the Division establish a protective zone covering the Upper Wolfcamp in order to protect correlative rights and prevent waste.

9. As a result, Cimarex has filed a Motion for an Order to Prohibit the Drilling of Wells in the Upper Wolfcamp in Order to Protect Correlative Rights and Optimize Production of the Subject Lands in which it has asked the Division to consider and rule on the Motion as part of the contested hearing process.

10. Cimarex respectfully submits that the best way to optimize production of the Subject Lands, prevent waste, protect correlative rights, and avoid the unnecessary and risky drilling of numerous and very expensive additional wells is to drill and pool the Bone Spring formation underlying the Subject Lands, including the 3rd Bone Spring Sand, and establish a protective buffer zone that prohibits drilling the Upper Wolfcamp.

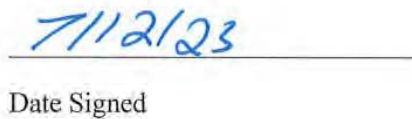
11. The geology and engineering exhibits provided herein, which describe and analyze the Wolfcamp formation, support Cimarex's approach that only the Bone Spring should be drilled and developed and not the Upper Wolfcamp.

[Signature page follows]

Signature page of Self-Affirmed Statement of John Coffman:

I understand that this Self-Affirmed Statement will be used as written testimony before the Division in Case Nos. 23594 – 23601 and affirm that my testimony herein is true and correct, to the best of my knowledge and belief and made under penalty of perjury under the laws of the State of New Mexico.


John Coffman


Date Signed

TAB 3

Case Nos. 23594-23601

Exhibit B: Self-Affirmed Statement of Staci Mueller, Geologist
Exhibit B-1: Locator Map & Stress Direction
Exhibit B-2: Permit Status
Exhibit B-3: Gun Barrel View
Exhibit B-4: Development Plan Comparison
Exhibit B-5: Subsea Structure Map
Exhibit B-6: 3rd Bone Spring Isopach Map
Exhibit B-7: Structural Cross Section
Exhibit B-8: 3rd Bone Spring Producers vs. all Wolfcamp Producers
Exhibit B-9: All 3rd Bone Spring and Wolfcamp Producers
Exhibit B-10: Comparing 3rd Sand to Wolfcamp Reservoir (SoPhiH)
Exhibit B-11: 2nd Bone Spring Structure Map
Exhibit B-12: 2nd Bone Spring Sand Isopach
Exhibit B-13: 2nd Bone Spring Sand Cross Section
Exhibit B-14: 2nd Bone Spring Sand vs. 3rd Bone Spring Carbonate Producers
Exhibit B-15: PhilH L 2nd Sand vs. 3rd Carbonate
Exhibit B-16: 1st Bone Spring Sand Structure
Exhibit B-17: 1st Bone Spring Sand Isopach
Exhibit B-18: 1st Bone Spring Structural Cross Section
Exhibit B-19: Wolfcamp Structure Map (Subsea TVD)
Exhibit B-20: Wolfcamp XY Isopach
Exhibit B-21: Wolfcamp XY West to East Cross Section

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

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR A HORIZONTAL SPACING UNIT AND
COMPULSORY POOLING, LEA COUNTY, NEW MEXICO**

**Case Nos. 23448 – 23451
(Mighty Pheasant; Bone Spring)**

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

**Case Nos. 23594 – 23597
(Mighty Pheasant; Wolfcamp)**

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR A HORIZONTAL SPACING UNIT AND
COMPULSORY POOLING, LEA COUNTY, NEW MEXICO**

**Case Nos. 23452 – 23455
(Loosey Goosey; Bone Spring)**

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

**Case Nos. 23598 – 23601
(Loosey Goosey; Wolfcamp)**

SELF-AFFIRMED STATEMENT OF STACI MUELLER

I, being duly sworn on oath, state the following:

1. I am over the age of 18, and I have personal knowledge of the matters stated herein.
2. I am employed as a petroleum geologist for Cimarex Energy Co. (“Cimarex”), and I am familiar with the subject application and the geology involved.
3. This testimony is submitted in connection with the filing by Cimarex in the above-referenced compulsory pooling application pursuant to 19.15.4.12.A(1) NMAC.

4. I have testified previously by affidavit before the Oil Conservation Division (“Division”) as an expert petroleum geologist; my credentials have been made a matter of record, and I have been qualified as an expert by the Division.
 - a. I have a Bachelor of Science Degree in Geophysical Engineering from Colorado School of Mines, and a Master of Science Degree in Geophysics from Colorado School of Mines.
 - b. I have worked on New Mexico Oil and Gas matters since July 2018.
5. Cimarex is an established operator in the Quail Ridge area, with 35 horizontal wells drilled within the basal 3rd Bone Spring Sand starting in 2010 through 2022. In most of the 3rd Sand developments, Triple Combo logs were taken to further the reservoir characterization of both the Bone Spring and Wolfcamp formations. From these extensive mapping efforts along with offset production analyses, Cimarex has verified that the 3rd Sand is the most economic target at the Mighty Pheasant and Loosey Goosey proposed development.
6. **Exhibit B-1** shows a map made by Jens-Erik Lund Snee and Mark D. Zoback from Stanford University, which depicts the maximum horizontal stress direction throughout the Delaware and Midland Basins. The map on the right is a zoomed in portion of the regional map (red outline), where the blue lines represent the digitized version of the same stress directions. Based on the regional trend observed by Lund Snee and Zoback, the estimated stress direction at Mighty Pheasant and Loosey Goosey is approximately N70E, which means the favorable well orientation is north-south instead of east-west. Both Cimarex and Permian Resources plan to drill in the north-south orientation.
7. **Exhibit B-2** is a table summarizing the permit status for the Mighty Pheasant and Loosey Goosey developments. Highlighted in yellow are the wells that Cimarex has submitted to the BLM,

and each well has “AFMSS-Accepted” noted to show that these wells are high enough on Cimarex’s priority list for the BLM to be currently working on them. Ten permits were submitted between February and March 2022 for a 3rd Bone Spring Sand development (tier 1 target in area) plus a 1st Sand or 2nd Sand well to de-risk the sections in more highly channelized reservoirs.

8. **Exhibit B-3** is a gun barrel view of Cimarex’s development plan across both Mighty Pheasant (Sections 5 & 8) and Loosey Goosey (Sections 4 & 9). Cimarex plans to develop the 1st, 2nd, and 3rd Bone Spring Sands at 4 wells per section spacing. The 1st Sand target is the high porosity, clean sand in the upper half of the interval. The 2nd Sand target is the basal siltstone/sandstone interval, and the 3rd Sand target is the basal clean sand lobe, which is also the established target across several townships.

9. **Exhibit B-4** is a gun barrel view of Cimarex’s plan (left side) versus Permian Resources (right side). Permian Resources plans to include 3 additional landing zones in their full section development: the Upper 2nd Bone Spring Sand, the 3rd Carbonate, and the Wolfcamp XY Sands. This is a risky development scenario, because the 3rd Sand & Wolfcamp XY vertical spacing is about 95 ft, which is not considered a true stagger and subsequently treated as a flat development. Therefore, Permian Resource plans to develop the 3rd Sand & Wolfcamp XY combined reservoir tank at 8 wells per section, which is over-spaced for this area, where almost every operator has developed the 3rd Sand with 4 wells per section. Permian Resources’ 3rd Carbonate target is approximately 135 ft vertical distance from their proposed Lower 2nd Sand target, which is also very tight vertical spacing when there is no frac baffle in between (no tight carbonates). The Lower 2nd Sand is the established target across several townships, while there has only been one well landed in the 3rd Carbonate (with no 2nd Sand above). The Upper 2nd Sand is a target that Cimarex has investigated and determined to be too risky to drill before collecting data.

10. **Exhibit B-5** is a structure map (Subsea TVD) of the top of the Wolfcamp, which is about 50 ft below the 3rd Bone Spring Sand Target, as noted by the type log located at the blue star. The contour interval is 100 ft, well control points are displayed, and structure is dipping to the south. From the first take point to the last take point of the Mighty Pheasant and Loosey Goosey wells (located within black and red box), there is approximately 100 ft of relief.

11. **Exhibit B-6** is an isopach map of the 3rd Bone Spring Sand, as noted by the type log located at the blue star. The contour interval is 20 ft, well control points are displayed, and the 3rd Sand is consistently between 260-280 ft at the Mighty Pheasant and Loosey Goosey development (located within black and red box).

12. **Exhibit B-7** is a structural cross section from west to east on the northern end of the Mighty Pheasant and Loosey Goosey sections. Gamma Ray is displayed in the first log track, on a scale from 0 to 150 API, shaded to the right with blue representing low Gamma Ray, brown representing high Gamma Ray, and yellow in between. The second track is deep resistivity (RDEEP), on a scale from 2 to 2000 Ohms, with RDEEP less than 20 Ohms shaded solid red to represent the Bone Spring Sand reservoirs. The third track is the photoelectric log (PEF) which is shaded blue and purple for higher values and yellow for lower values. The fourth track is neutron and density porosity (NPHI and DPHI). NPHI is shown in red, while DPHI is blue, and when DPHI crosses to the left of NPHI, the space in between the two curves is shaded yellow. Otherwise, it is shaded grey. The basal 3rd Sand target is often characterized by the yellow crossover shading in the NPHI and DPHI track, Gamma Ray around 50-70 API, and RDEEP below 20 Ohms. Cimarex's target is the standard basal 3rd Bone Spring Sand target across the area (a few townships), which is shown as a green stick in all three logs. Frac baffles are shown in red and white striped boxes within the depth track, and there are only a couple frac baffles present within the 3rd Bone Spring Carbonate.

These baffles are characterized by low Gamma Ray <50 API, indicating carbonate, along with high resistivity, and low neutron and density porosities (0-4%). There are no indications of any major geomechanical changes/frac baffles in between Cimarex's 3rd Sand target and Permian Resources' Wolfcamp Sands target, indicating that these two intervals are most likely one shared reservoir tank.

13. **Exhibit B-8** is showing a map with all the producing 3rd Bone Spring Sand wells across almost three townships (left), versus all of the Wolfcamp producers across the area (right). This Exhibit highlights the fact that the 3rd Sand is the established target in the area surrounding the Mighty Pheasant and Loosey Goosey sections (black and red box), while there have only been two Wolfcamp developments plus some parent well tests. Cimarex is also an established operator in this area, with 36 wells drilled including a Wolfcamp test.

14. **Exhibit B-9** shows all of the 3rd Bone Spring Sand producing wells with blue diamonds, and all of the Wolfcamp Sands producing wells with orange diamonds. Mighty Pheasant and Loosey Goosey are located within the black and red box which lies among almost all 3rd Sand wells. There are a couple of Wolfcamp development tests two miles to the south, but the majority of Wolfcamp and 3rd Sand co-development occurs 3 townships to the south, where the total 3rd Sand and Wolfcamp Sands reservoir tank is much thicker and deeper into the basin.

15. **Exhibit B-10** shows the PhiH (porosity*height) of the 3rd Bone Spring Sand (left) versus the Wolfcamp X and Y Sands (right) as shown by the type log located at the blue star. PhiH is one of the most common reservoir maps to identify ideal target areas within the Bone Spring Sands because it represents total pore space, and more pore space means more room for hydrocarbon storage. Both maps have the same color scale, with a contour interval of 2 pore-ft. The Mighty Pheasant and Loosey Goosey sections are shown in the black and red box, and the well control

points are displayed, along with the values of the closest control points to the subject development. Higher PhiH values are indicated in yellow and red, while lower values are shown in blue. The average PhiH within the 3rd Sand, based on the closest control points, is 26.75 pore-ft. While the average PhiH within the Wolfcamp X and Y Sands is 10 pore-ft, which means that the 3rd Sand is at least 72.8% of the total reservoir, while the Wolfcamp Sands are 27.2% of the total reservoir. However, because there are no frac baffles separating the 3rd Sand and Wolfcamp Sands, and because the two Permian Resource targets would have about 95 ft of vertical separation, their Wolfcamp wells would drain a significant portion of the 3rd Sand reservoir that the four 3rd Sand wells would already be targeting.

16. **Exhibit B-11** is a structure map (Subsea TVD) of the top of the 3rd Bone Spring Carbonate, which is about 40 ft below the 2nd Bone Spring Sand Target, as noted by the type log located at the blue star. The contour interval is 100 ft, well control points are displayed, and structure is dipping to the south. From the first take point to the last take point of the Mighty Pheasant and Loosey Goosey wells (located within black and red box), there is approximately 200 ft of relief on the eastern edge of the proposed development, and about 100 ft of relief on the western edge.

17. **Exhibit B-12** is an isopach map of the 2nd Bone Spring Sand, as noted by the type log located at the blue star. The contour interval is 20 ft, well control points are displayed, and the 2nd Sand is consistently between 420-440 ft at the Mighty Pheasant and Loosey Goosey development (located within black and red box).

18. **Exhibit B-13** is a structural cross section from west to east on the northern end of the Mighty Pheasant and Loosey Goosey sections. Gamma Ray is displayed in the first log track, on a scale from 0 to 150 API, shaded to the right with blue representing low Gamma Ray, brown representing high Gamma Ray, and yellow in between. The second track is deep resistivity

(RDEEP), on a scale from 2 to 2000 Ohms, with RDEEP less than 20 Ohms shaded solid red to represent the Bone Spring Sand reservoirs. The third track is the photoelectric log (PEF) which is shaded blue and purple for higher values and yellow for lower values. The fourth track is neutron and density porosity (NPHI and DPHI). NPHI is shown in red, while DPHI is blue, and when DPHI crosses to the left of NPHI, the space in between the two curves is shaded yellow. Otherwise, it is shaded grey. The Lower 2nd Sand target is often characterized by the yellow crossover shading in the NPHI and DPHI track, Gamma Ray around 50-70 API, and RDEEP below 200 Ohms (not as low as basal 3rd Sand target). Cimarex's target is the standard Lower 2nd Bone Spring Sand target across the area (a few townships), which is shown as a green stick in all three logs. Frac baffles are shown in red and white striped boxes within the depth track, and there are only a couple frac baffles present within the 2nd Bone Spring Carbonate and in the middle of the 2nd Sand. These baffles are characterized by low Gamma Ray <50 API, indicating carbonate, along with high resistivity, and low neutron and density porosities (0-4%). These frac baffles within the 2nd Sand, plus the vertical distance of approximately 400 ft, indicate that there may be another target within the Upper 2nd Sand (similar log characteristics as the Lower Sand target). However, this would be a several mile step-out test, so Cimarex is planning advanced logging/data collection through this interval to de-risk it while drilling the 3rd Sand wells.

19. **Exhibit B-14** is showing a map with all the producing Lower 2nd Bone Spring Sand wells across almost nine townships (left), versus all of the 3rd Bone Spring Carbonate producers across the area (right). This Exhibit highlights the fact that the Lower 2nd Sand is the established target in the area surrounding the Mighty Pheasant and Loosey Goosey sections (black and red box), while there has only been one well landed in the 3rd Carbonate, with no 2nd Sand development above.

20. **Exhibit B-15** shows the PhiH (porosity*height) of the 2nd Bone Spring Sand (left) versus the 3rd Bone Spring Carbonate (right) as shown by the type log located at the blue star. PhiH is one of the most common reservoir maps to identify ideal target areas within the Bone Spring Sands because it represents total pore space, and more pore space means more room for hydrocarbon storage. Both maps have the same color scale, with a contour interval of 2 pore-ft. The Mighty Pheasant and Loosey Goosey sections are shown in the black and red box, and the well control points are displayed. Higher PhiH values are indicated in yellow and red, while lower values are shown in blue. The average PhiH within the 2nd Sand, based on the closest control points, is 30 pore-ft. While the average PhiH within the 3rd Carbonate is 20 pore-ft, which means that the 2nd Sand is at least 60% of the total reservoir, while the 3rd Carbonate is 40% of the total reservoir. However, because there are no frac baffles separating the 2nd Sand and 3rd Carbonate, and because the two Permian Resource targets would have about 135 ft of vertical separation, their 3rd Carbonate wells would drain a significant portion of the 2nd Sand reservoir that the four 2nd Sand wells would already be targeting.

21. **Exhibit B-16** is a structure map (Subsea TVD) of the top of the 1st Bone Spring Sand, which is about 40 ft above the 1st Bone Spring Sand Target, as noted by the type log located at the blue star. The contour interval is 100 ft, well control points are displayed, and structure is dipping to the south. From the first take point to the last take point of the Mighty Pheasant and Loosey Goosey wells (located within black and red box), there is approximately 85 ft of relief.

22. **Exhibit B-17** is an isopach map of the 1st Bone Spring Sand, as noted by the type log located at the blue star. The contour interval is 20 ft, well control points are displayed, and the 1st Sand is consistently between 280-300 ft at the Mighty Pheasant and Loosey Goosey development (located within black and red box).

23. **Exhibit B-18** is a structural cross section from west to east on the northern end of the Mighty Pheasant and Loosey Goosey sections. Gamma Ray is displayed in the first log track, on a scale from 0 to 150 API, shaded to the right with blue representing low Gamma Ray, brown representing high Gamma Ray, and yellow in between. The second track is deep resistivity (RDEEP), on a scale from 2 to 2000 Ohms, with RDEEP less than 20 Ohms shaded solid red to represent the Bone Spring Sand reservoirs. The third track is the photoelectric log (PEF) which is shaded blue and purple for higher values and yellow for lower values. The fourth track is neutron and density porosity (NPHI and DPHI). NPHI is shown in red, while DPHI is blue, and when DPHI crosses to the left of NPHI, the space in between the two curves is shaded yellow. Otherwise, it is shaded grey. The 1st Sand target is often characterized by the yellow crossover shading in the NPHI and DPHI track, Gamma Ray around 50-70 API, and RDEEP below 20 Ohms. Cimarex's target is the standard 1st Bone Spring Sand target across the area (a few townships), which is shown as a green stick in all three logs.

WOLFCAMP STATEMENT

(See Cimarex's Motion for an Order to Prohibit the Drilling of Wells in the Upper Wolfcamp in Order to Protect Correlative Rights and Optimize Production of the Subject Lands, filed as an Exhibit in Cases 23594 – 23597 and Cases 23598 - 23601)

24. **Exhibit B-19** is a structure map (Subsea TVD) of the top of the Wolfcamp, which is about 50 ft below the 3rd Bone Spring Sand Target, as noted by the type log located at the blue star. The contour interval is 100 ft, well control points are displayed, and structure is dipping to the south. From the first take point to the last take point of the Mighty Pheasant and Loosey Goosey wells (located within black and red box), there is approximately 100 ft of relief.

25. **Exhibit B-20** is an isopach map of the Wolfcamp X and Y Sands, as noted by the type log located at the blue star. The contour interval is 20 ft, well control points are displayed, and the

Wolfcamp X and Y Sands are consistently about 100 ft at the Mighty Pheasant and Loosey Goosey development (located within black and red box).

26. **Exhibit B-21** is a structural cross section from west to east on the northern end of the Mighty Pheasant and Loosey Goosey sections. Gamma Ray is displayed in the first log track, on a scale from 0 to 150 API, shaded to the right with blue representing low Gamma Ray, brown representing high Gamma Ray, and yellow in between. The second track is deep resistivity (RDEEP), on a scale from 2 to 2000 Ohms, with RDEEP less than 20 Ohms shaded solid red to represent the Bone Spring Sand reservoirs. The third track is the photoelectric log (PEF) which is shaded blue and purple for higher values and yellow for lower values. The fourth track is neutron and density porosity (NPHI and DPHI). NPHI is shown in red, while DPHI is blue, and when DPHI crosses to the left of NPHI, the space in between the two curves is shaded yellow. Otherwise, it is shaded grey. The basal 3rd Sand target is often characterized by the yellow crossover shading in the NPHI and DPHI track, Gamma Ray around 50-70 API, and RDEEP below 20 Ohms. Cimarex's target is the standard basal 3rd Bone Spring Sand target across the area (a few townships), which is located above the Wolfcamp X & Y Sands (highlighted yellow on the left side). Frac baffles are shown in red and white striped boxes within the depth track, and there are only a couple frac baffles present within the 3rd Bone Spring Carbonate. These baffles are characterized by low Gamma Ray <50 API, indicating carbonate, along with high resistivity, and low neutron and density porosities (0-4%). There are no indications of any major geomechanical changes/frac baffles in between Cimarex's 3rd Sand target and Permian Resources' Wolfcamp Sands target, indicating that these two intervals are most likely one shared reservoir tank; therefore, Permian Resources' Wolfcamp XY Sands target will primarily produce from the 3rd Bone Spring Sand.

27. The Exhibits to this Affidavit were prepared by me or compiled from Cimarex's company business records under my supervision.

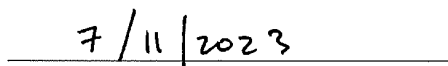
28. The granting of this Application is in the interests of conservation, the prevention of waste, and the protection of correlative rights.

29. The foregoing is correct and complete to the best of my knowledge and belief.

[Signature page follows]

Signature page of Self-Affirmed Statement of Staci Mueller:

I understand that this Self-Affirmed Statement will be used as written testimony before the Division in Case Nos. 23448-23455 and 23594 – 23601 and affirm that my testimony herein is true and correct, to the best of my knowledge and belief and made under penalty of perjury under the laws of the State of New Mexico.


STACI MUELLER
7 / 11 / 2023

Date Signed

Geology Exhibits



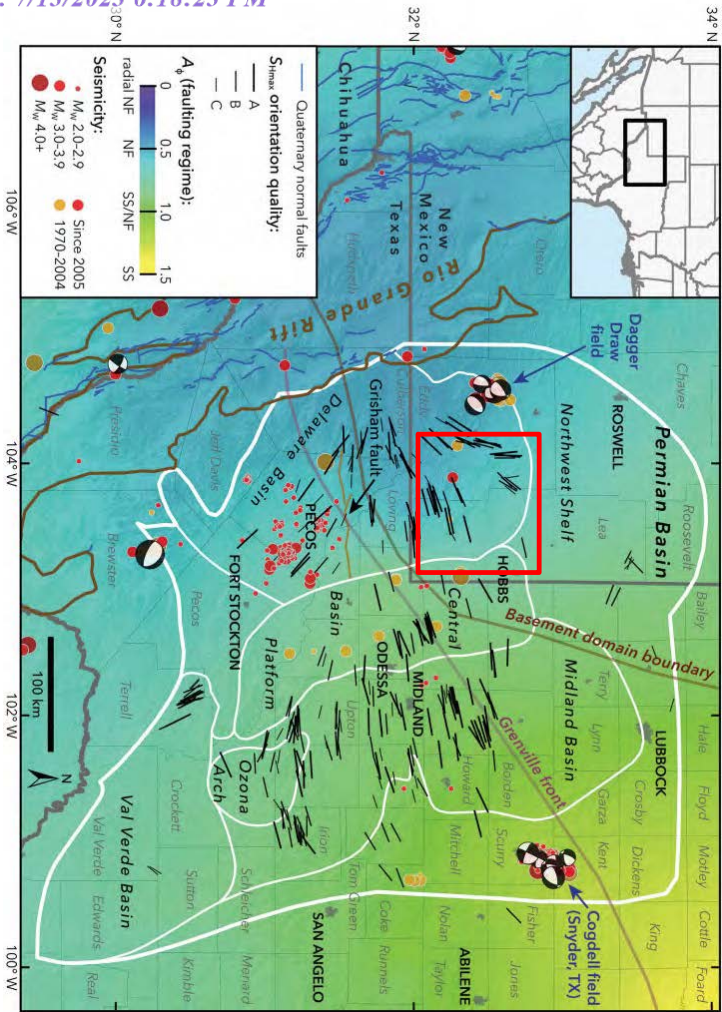
COTERRA

Coterra plans to develop Sections 4-9 and 5-8 with 2-mile laterals

1. 8 Lower 3rd Bone Spring Sand
2. 8 2nd Bone Spring Sand
3. 8 1st Bone Spring Sand

The wells will be drilled north to south from 2 pads/ Section

State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity

Jens-Erik Lund Snee¹ and Mark D. Zoback¹



Permit Status

State	County	Well Name & Number	Permit Status	Permit Submission Due Date	Permit Submitted Date	10-Day Letter Date	10-Day Letter Due
NM	Lea	Mighty Pheasant 5-8 Fed Com 101H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 102H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 103H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 104H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 201H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 202H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 203H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 204H	AFMSS-Accepted	2/14/2022	2/14/2022	6/2/2023	7/17/2023
NM	Lea	Mighty Pheasant 5-8 Fed Com 301H	AFMSS-Accepted	3/1/2022	3/1/2022		
NM	Lea	Mighty Pheasant 5-8 Fed Com 302H	AFMSS-Accepted	3/2/2022	3/2/2022		
NM	Lea	Mighty Pheasant 5-8 Fed Com 303H	AFMSS-Accepted	2/14/2022	2/14/2022	6/2/2023	7/17/2023
NM	Lea	Mighty Pheasant 5-8 Fed Com 304H	AFMSS-Accepted	3/1/2022	3/1/2022	6/2/2023	7/17/2023
NM	Lea	Loosey Goosey 4-9 Fed Com 101H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 102H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 103H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 104H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 201H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 202H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 203H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 204H	AFMSS-Accepted	3/15/2022	3/15/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 301H	AFMSS-Accepted	3/9/2022	3/9/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 302H	AFMSS-Accepted	3/9/2022	3/9/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 303H	AFMSS-Accepted	3/15/2022	3/15/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 304H	AFMSS-Accepted	3/15/2022	3/15/2022		

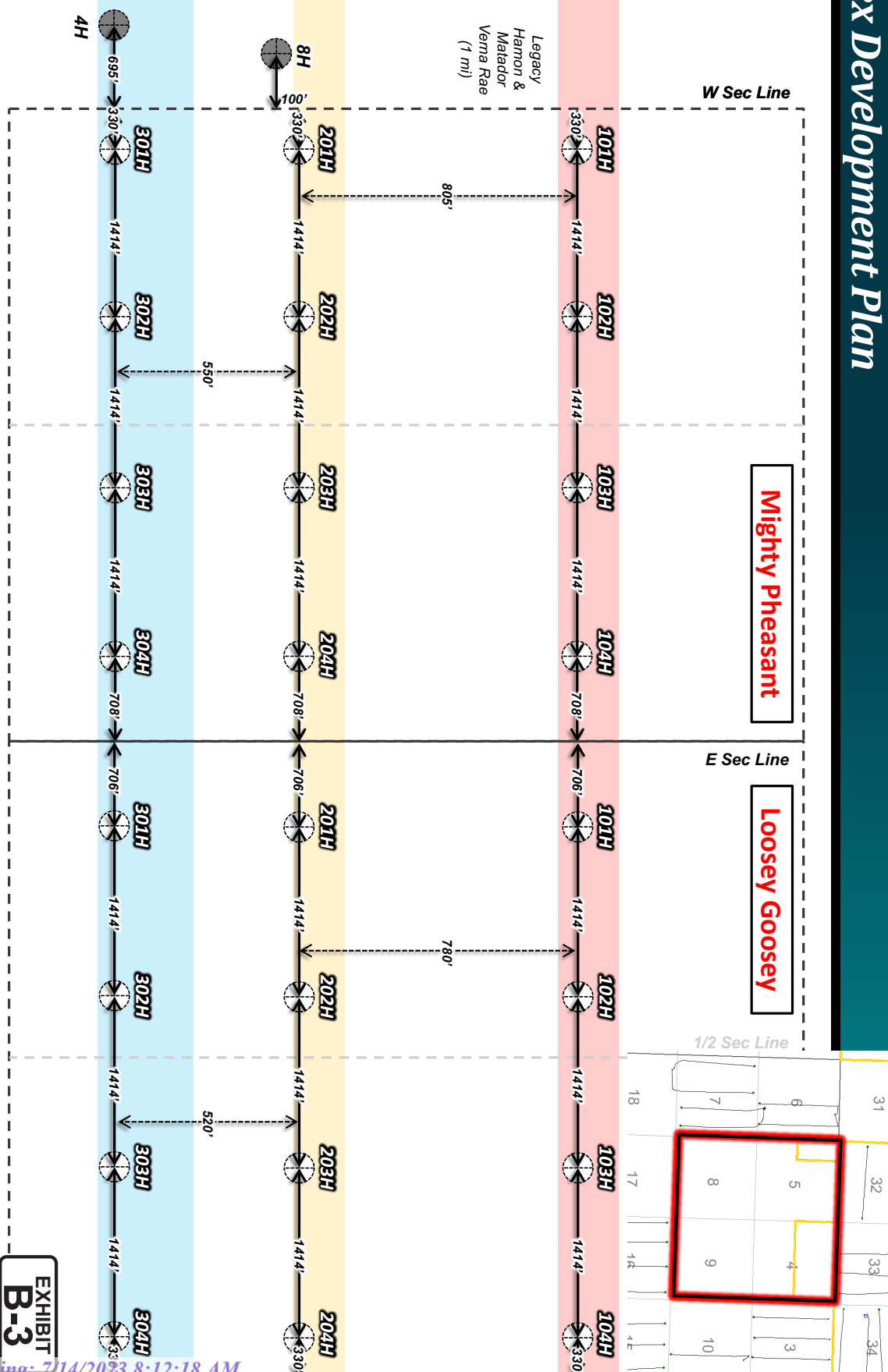
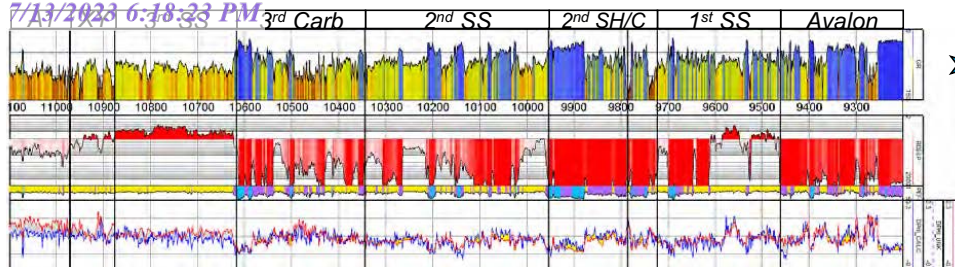
Submitted permits for 3rd Sand development & 1st Sand/2nd Sand test
BLM is currently working on these

EXHIBIT
B-2



Cinmarex Development Plan

Quail Ridge 32
State 2



**EXHIBIT
B-3**

Development Plan Comparison

Quail Ridge 32
State 2

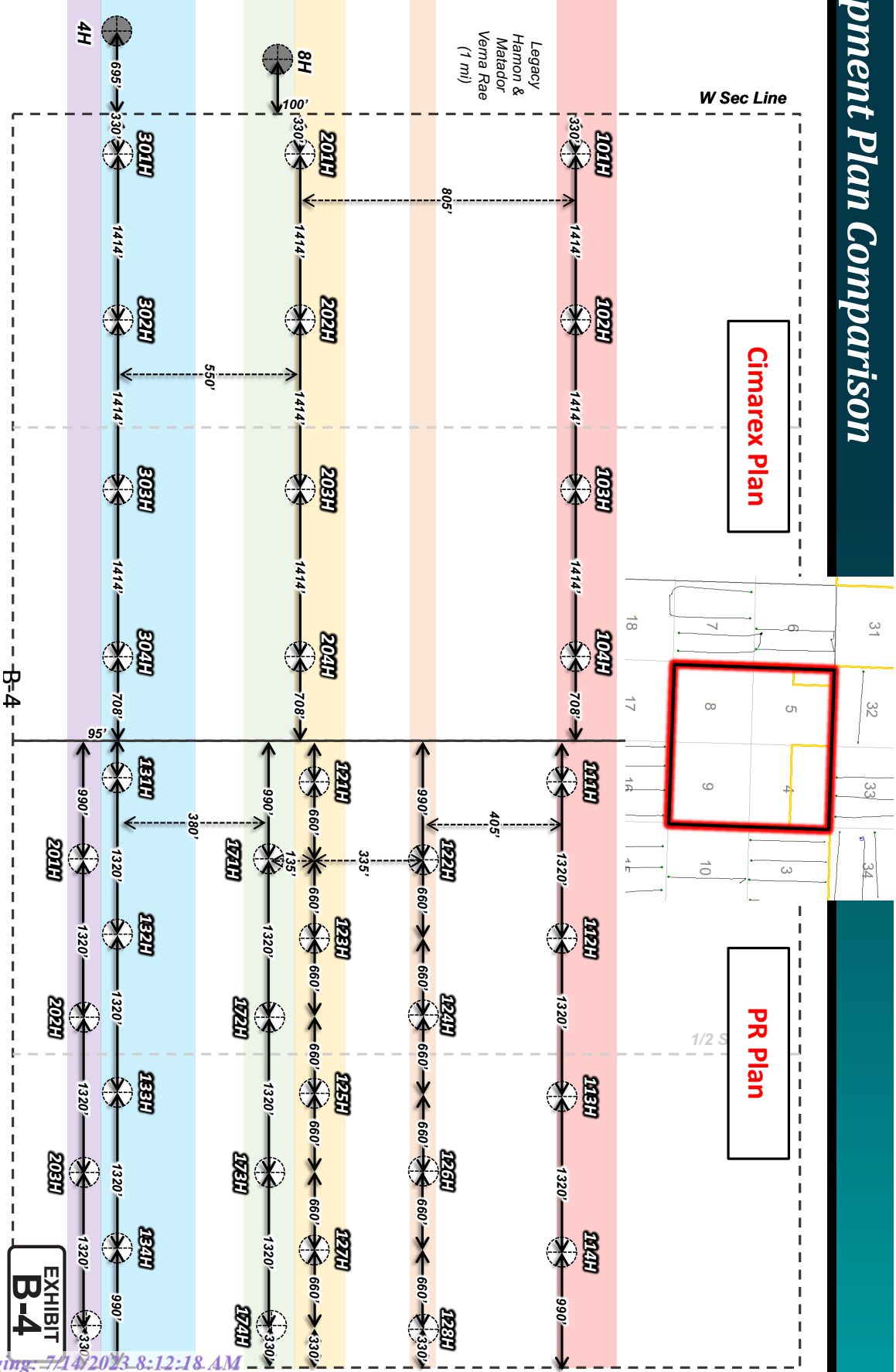
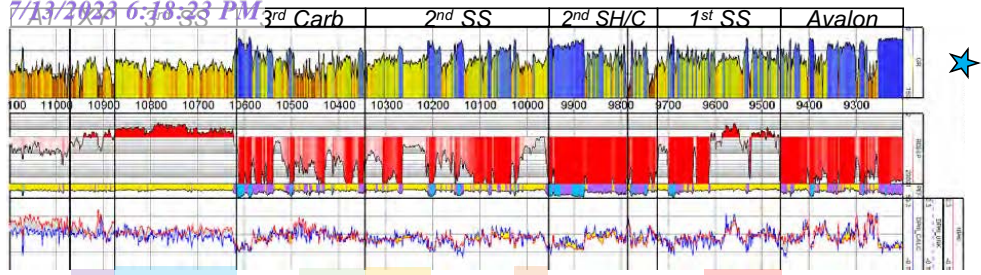


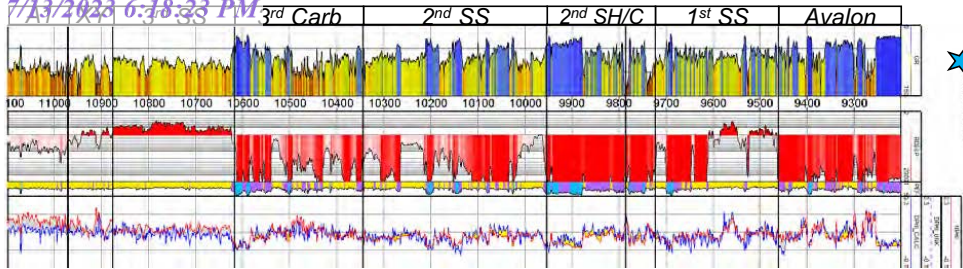
EXHIBIT
B-4

3rd Bone Spring Sand



3rd Bone Spring Sand Structure

Quail Ridge 32
State 2



MAPPED

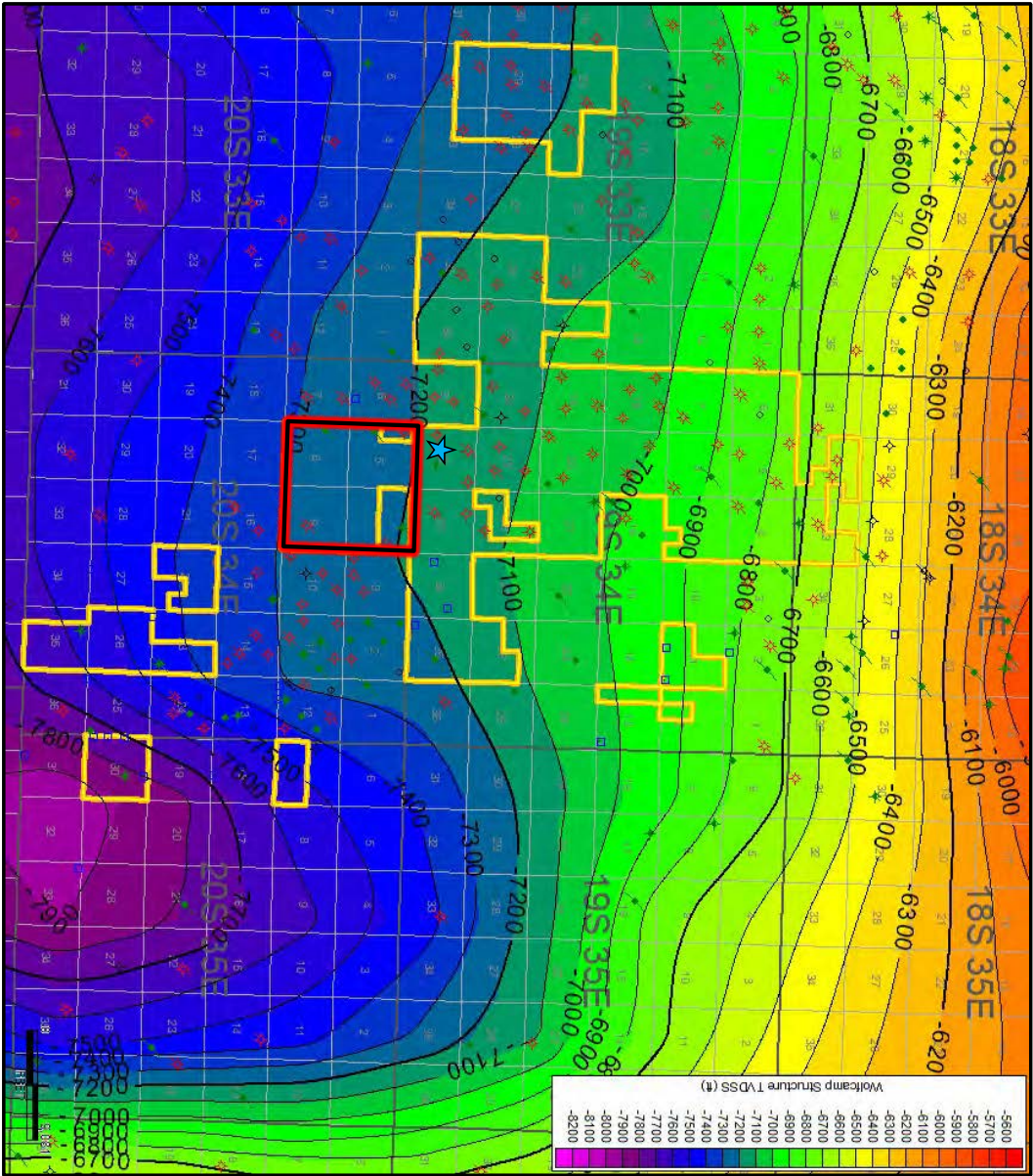
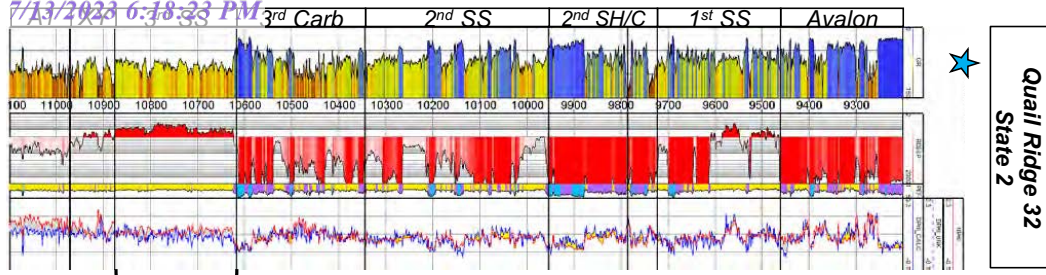


EXHIBIT
B-5



Quail Ridge 32
State 2

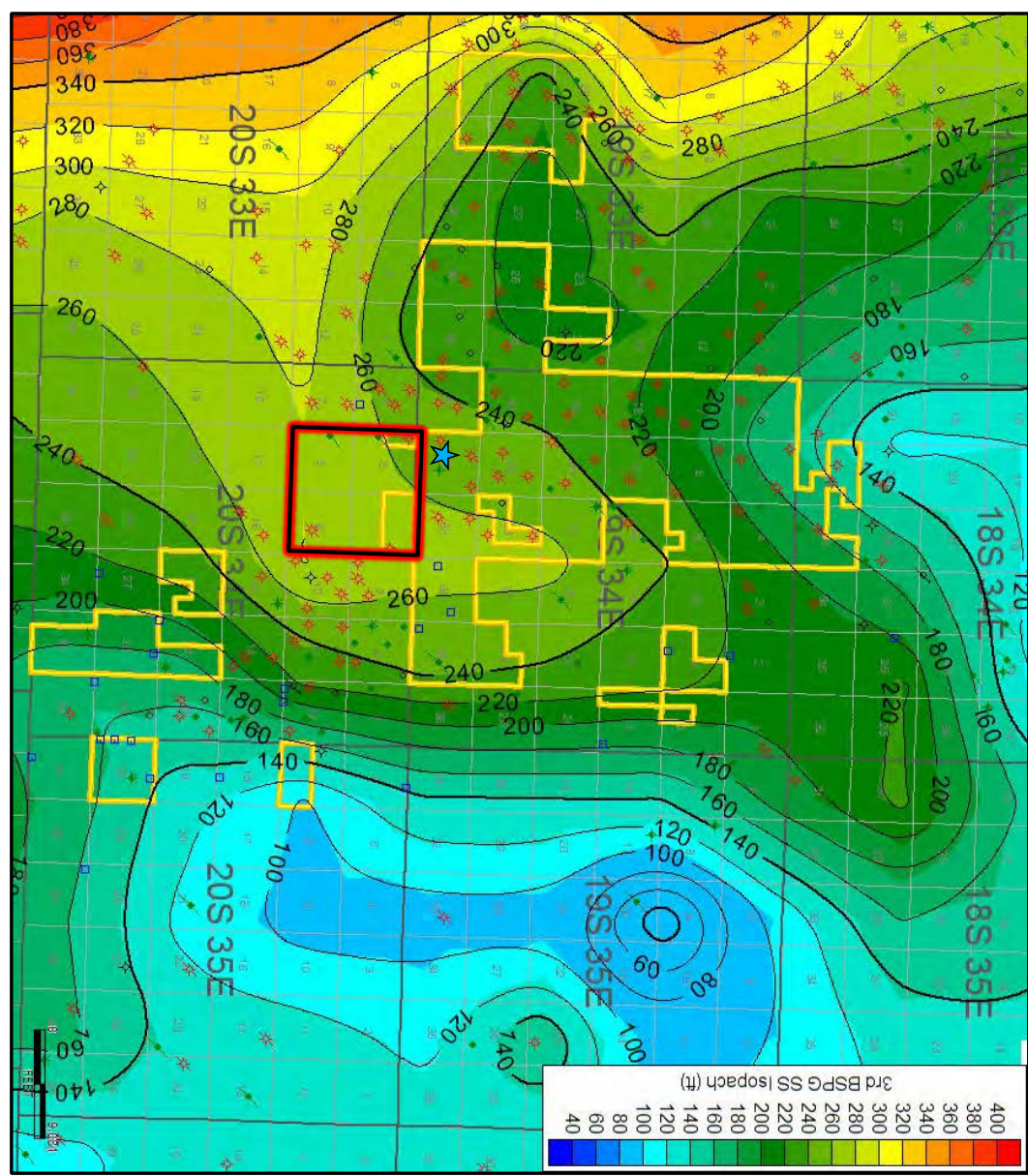
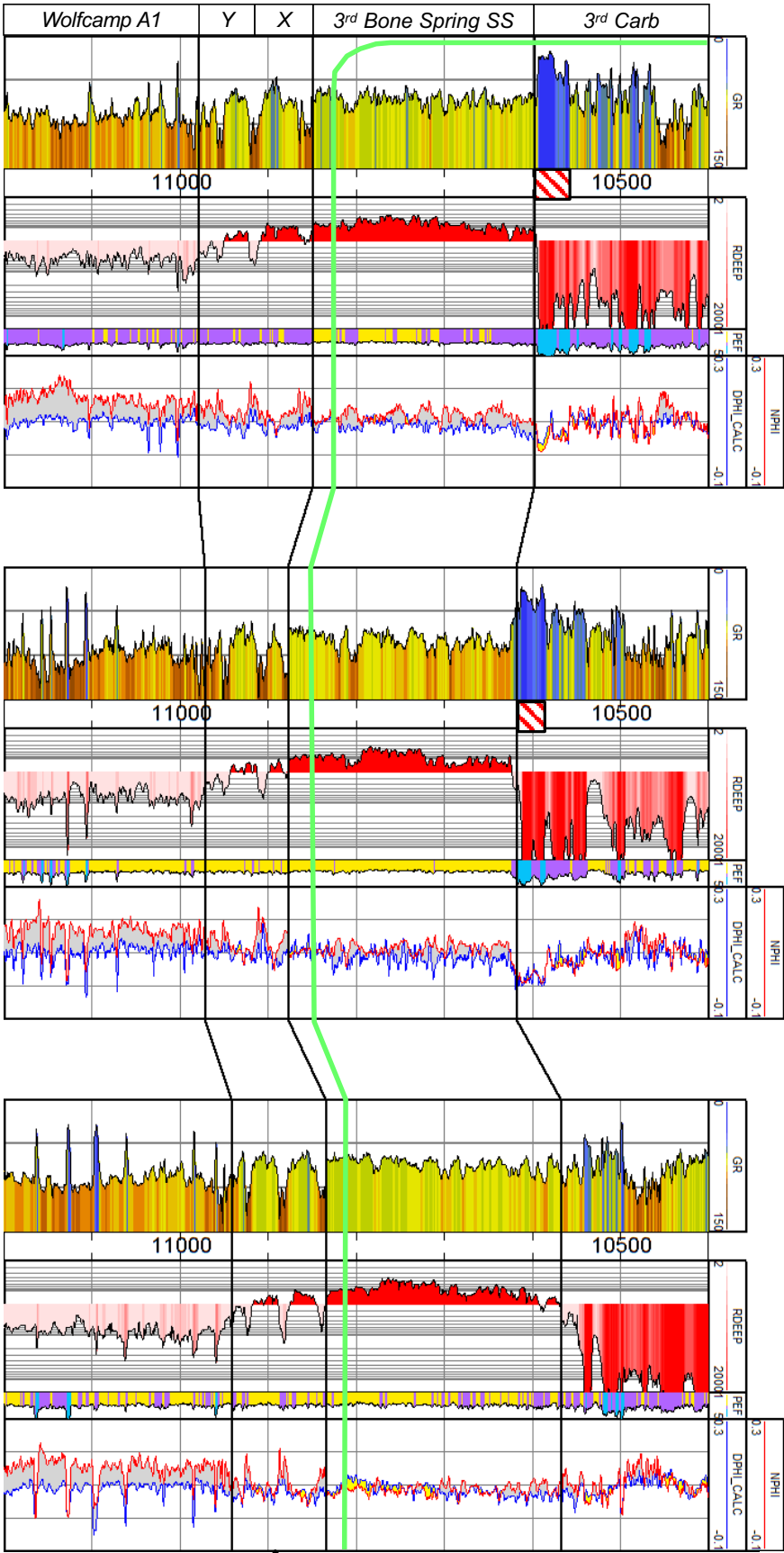


EXHIBIT
B-6



3rd Bone Spring Sand Cross Section



A

FEDERAL 6 COM
30025360030000

<1.06MI>

QUAL RIDGE 32 STATE
3002537030000

<1.00MI>

LEA CHAPARRAL FEDERAL COM
30025304130000

A'

PR's additional
Wolfcamp target lies
~95' below the 3rd
Sand target. No
significant frac baffle
separates the two
reservoirs.

EXHIBIT
B-7



3rd Bone Spring Sand is Established Target

3rd Bone Spring Sand Producers

Wolfcamp Producers



Legend
Cimarex Operated Wells

EXHIBIT
B-8



Co-Wolfcamp SS/3rd SS Development Begins Further South

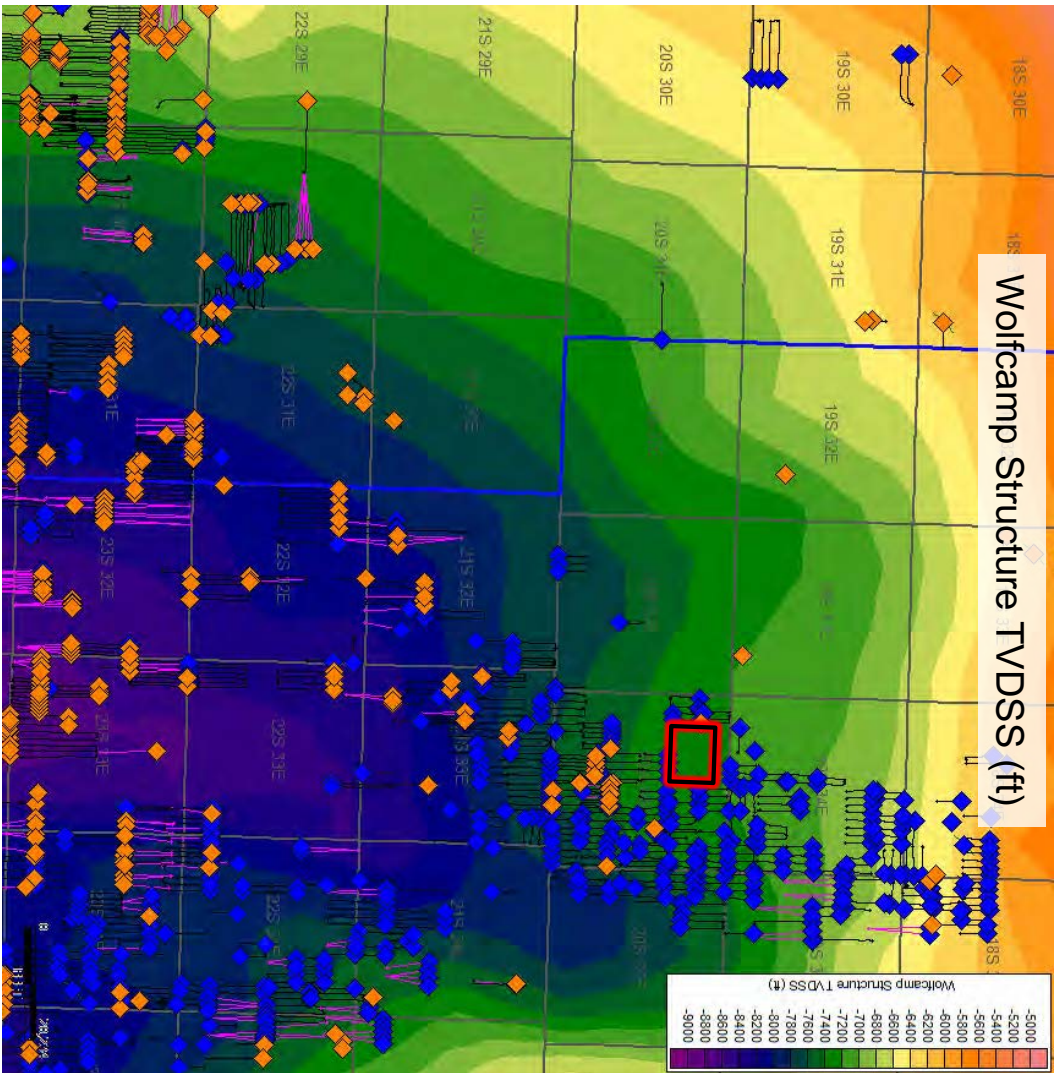


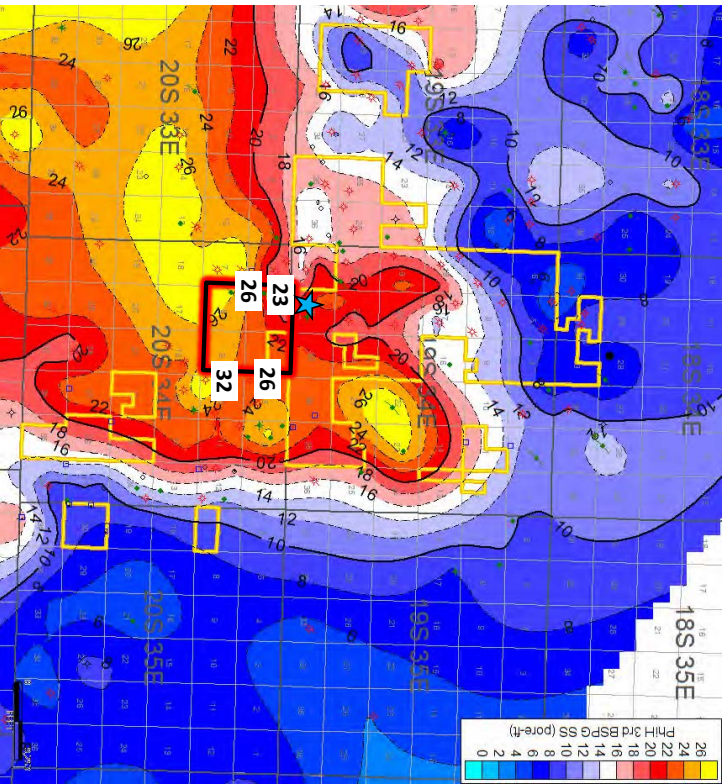
EXHIBIT
B-9

Comparing 3rd Sand to Wolfcamp Reservoir (SoPhiH)

Quail Ridge 32
State 2

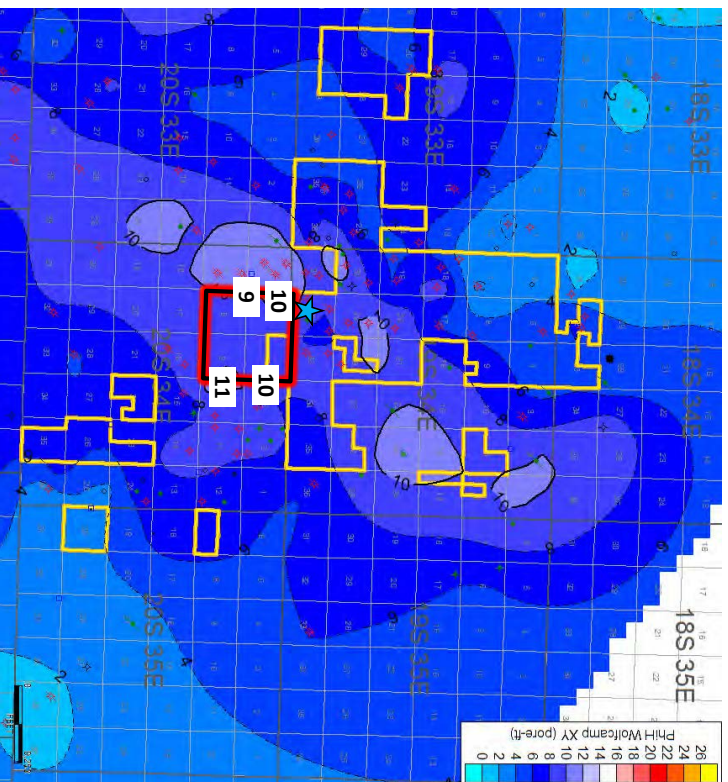


PhiH 3rd Bone Spring Sand
CTRA Target



Avg PhiH in 3rd SS = 26.75
72.8% of total reservoir

PhiH Wolfcamp X & Y Sands
Permian Resources Additional Target

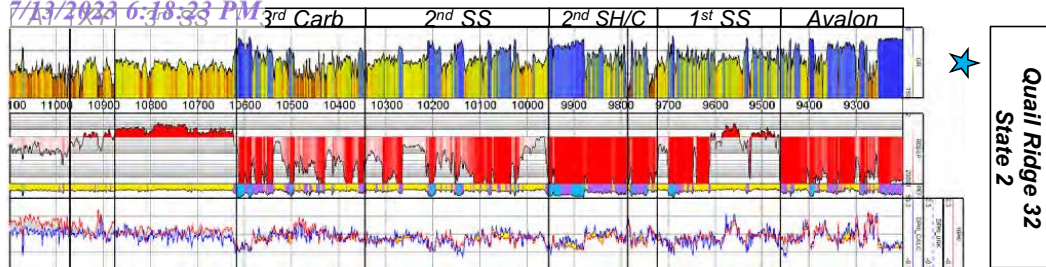


Avg PhiH in WFMP XY = 10
27.2% of total reservoir

EXHIBIT
B-10

2nd Bone Spring Sand





↑ MAPPED

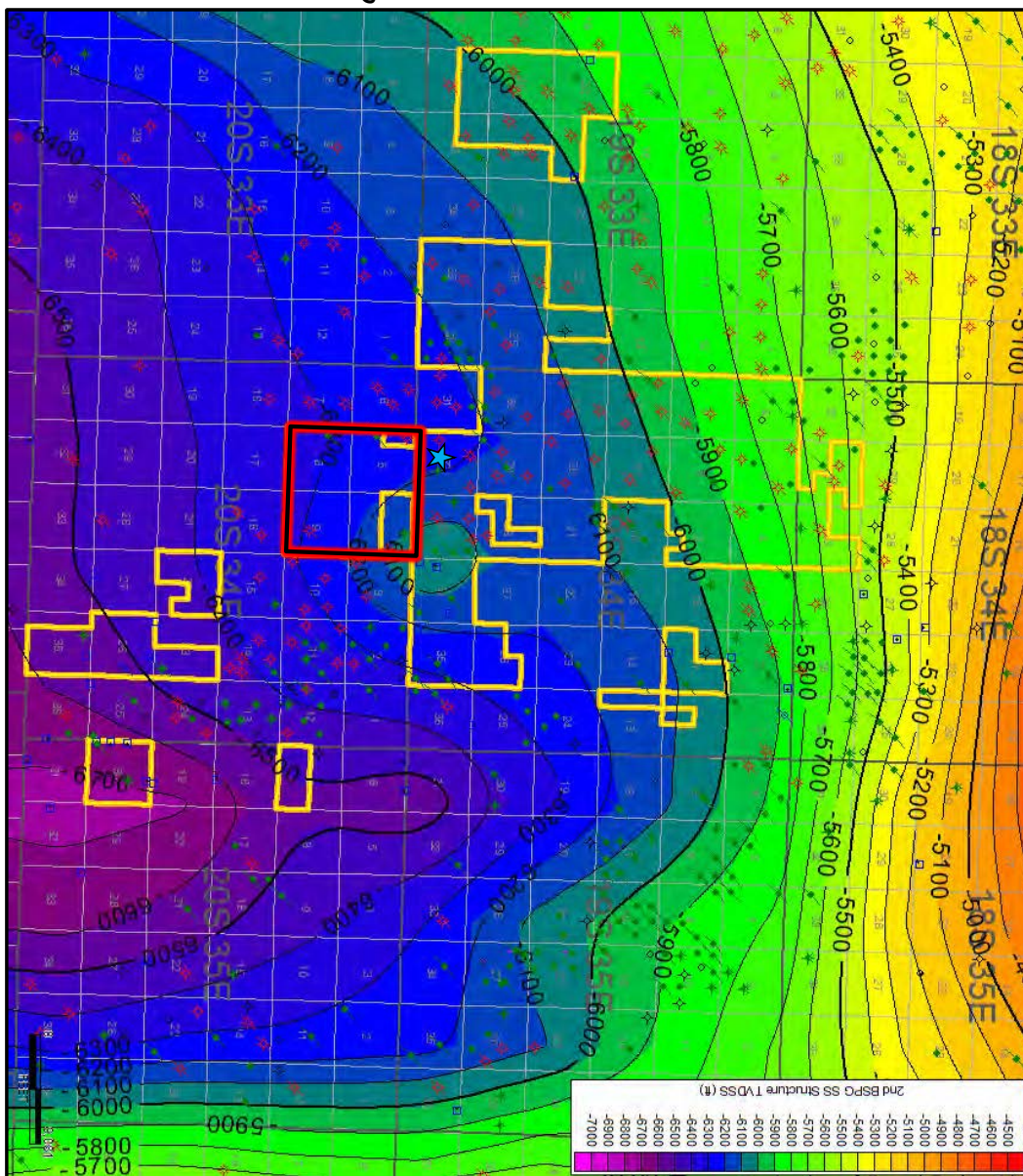
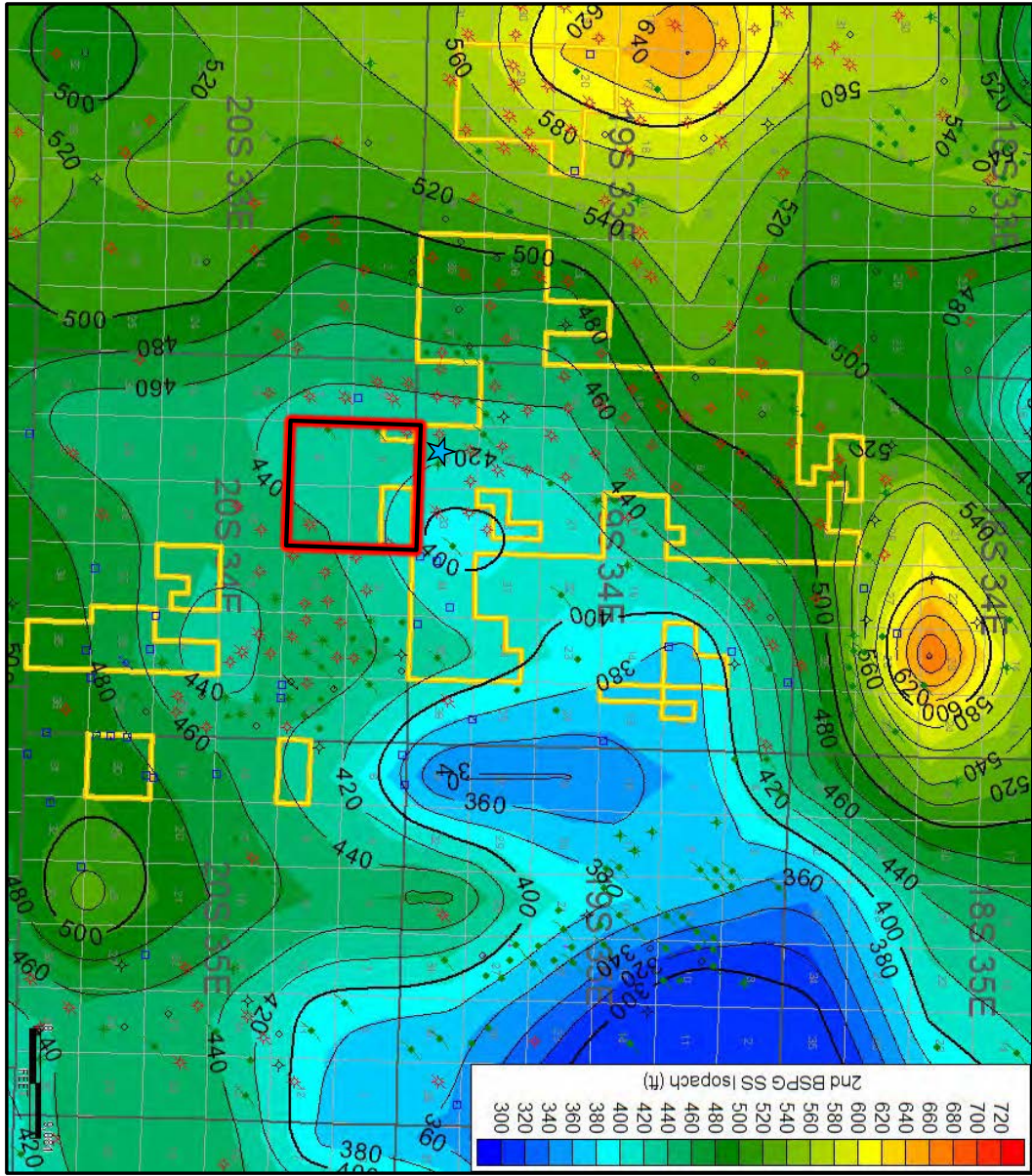
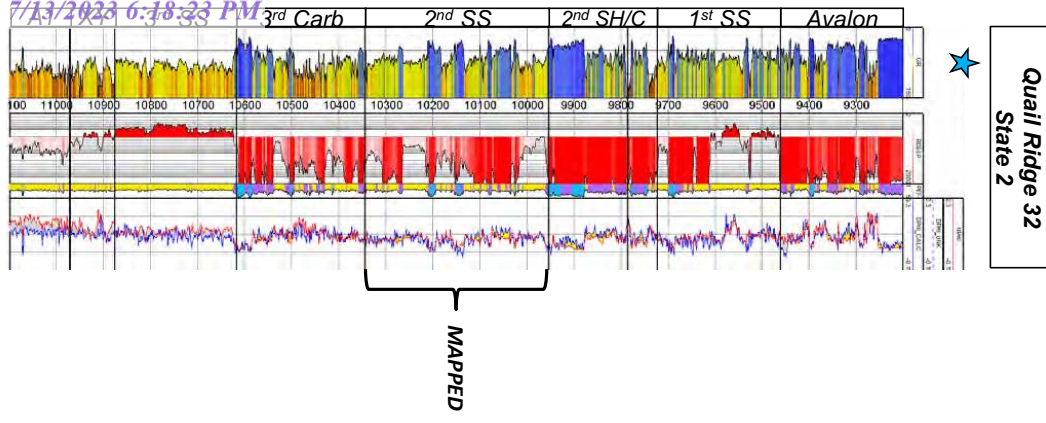


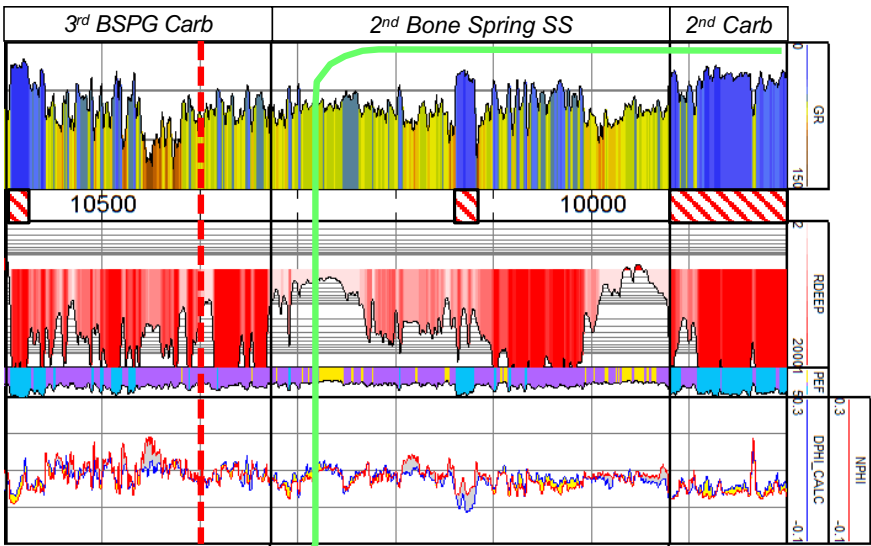
EXHIBIT
B-11



2nd Bone Spring Sand Isopach

EXHIBIT
B-12

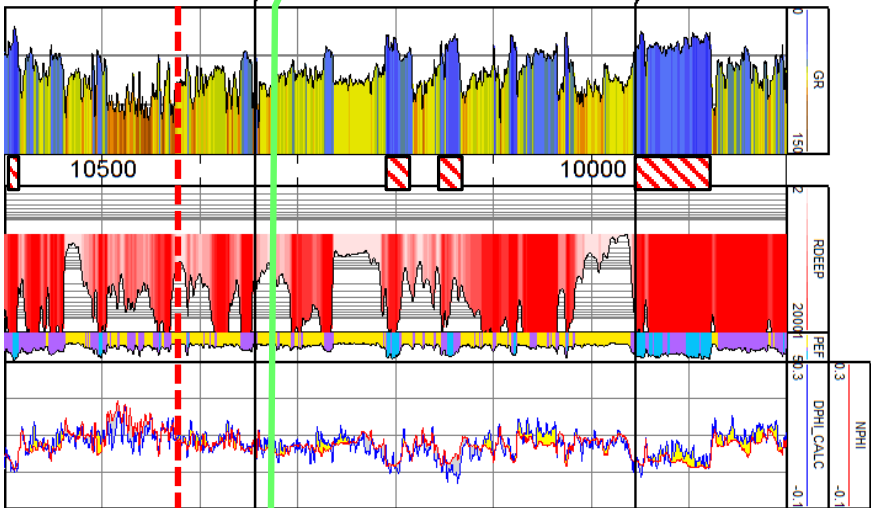
2nd Bone Spring Sand Cross Section



B

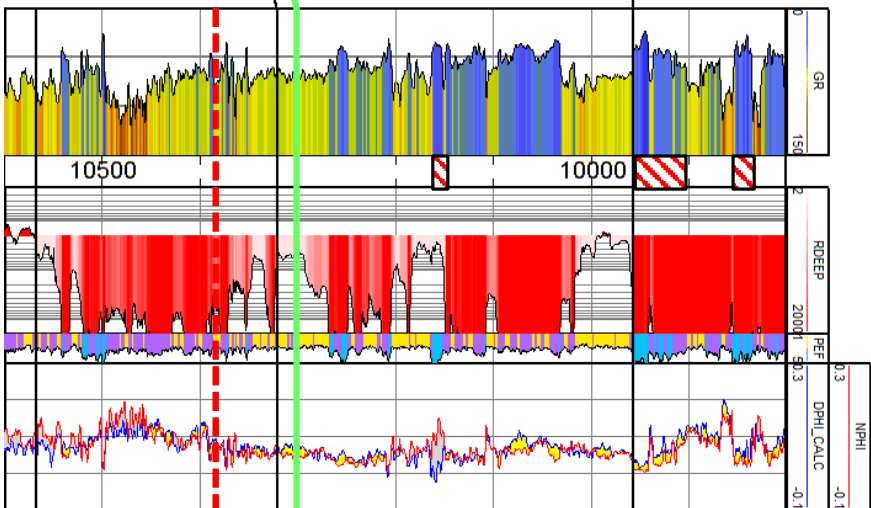
FEDERAL 6 COM

30025360030000



QUAIL RIDGE 32 STATE

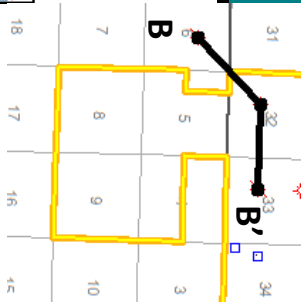
30025377030000



LEA CHAPARRAL FEDERAL COM

30025304130000

Frac Baffle

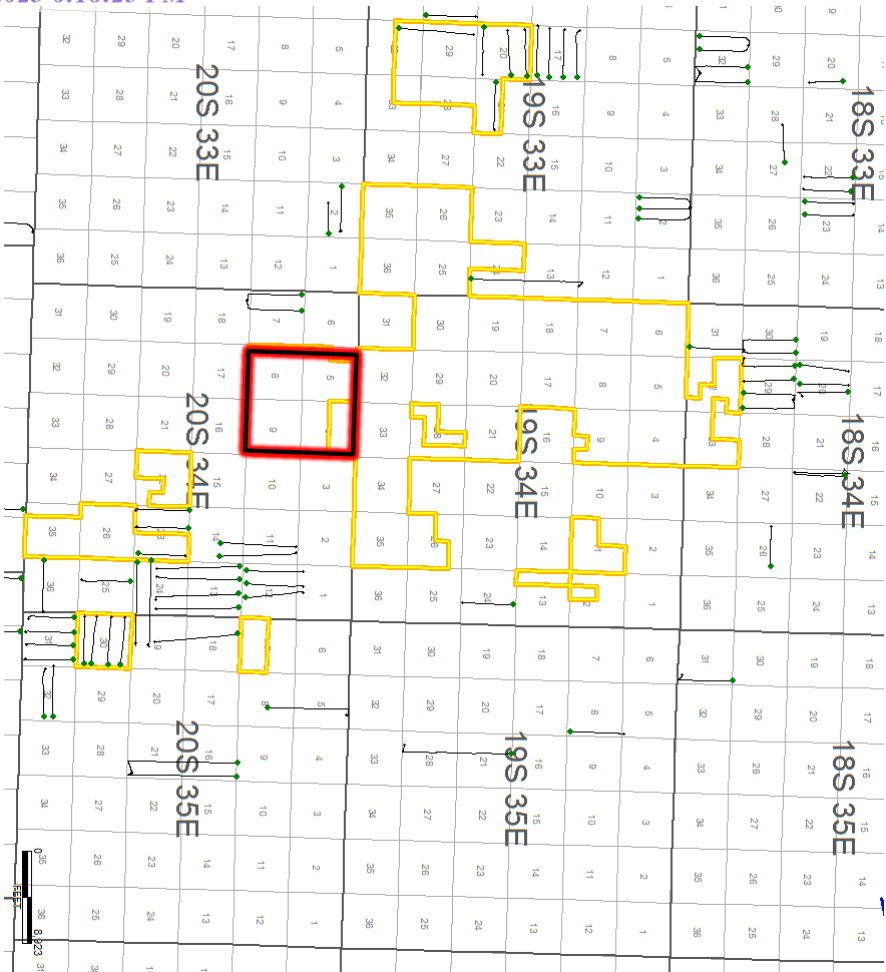


PR's additional 3rd Carb target lies ~135' below L. 2nd Sand target. No significant frac baffle separates the two reservoirs.

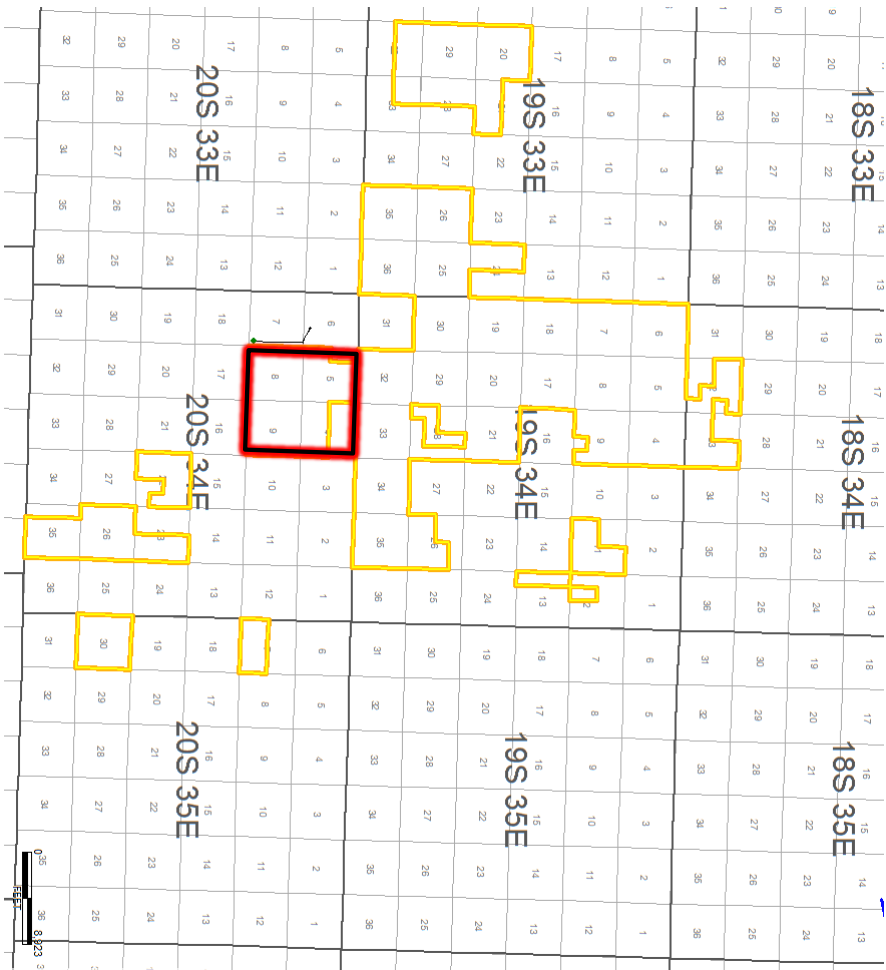
EXHIBIT B-13

2nd Bone Spring Sand is Established Target

Lower 2nd Bone Spring Sand Producers



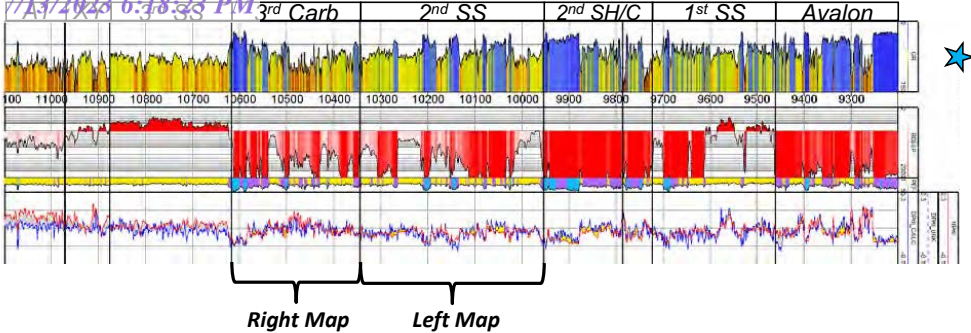
3rd Bone Spring Carb Producers



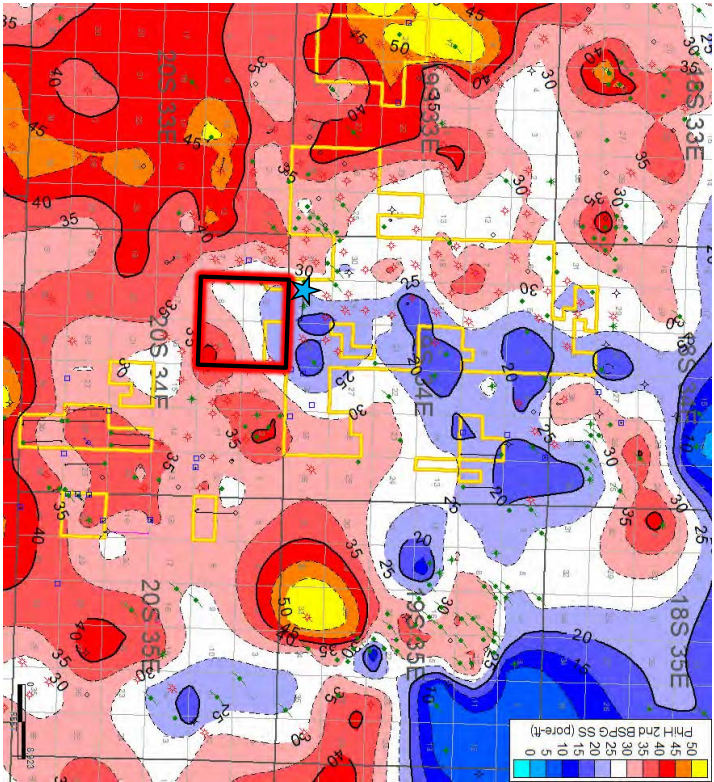
**EXHIBIT
B-14**

PhiHL 2nd Sand vs. 3rd Carb

Quail Ridge 32
State 2

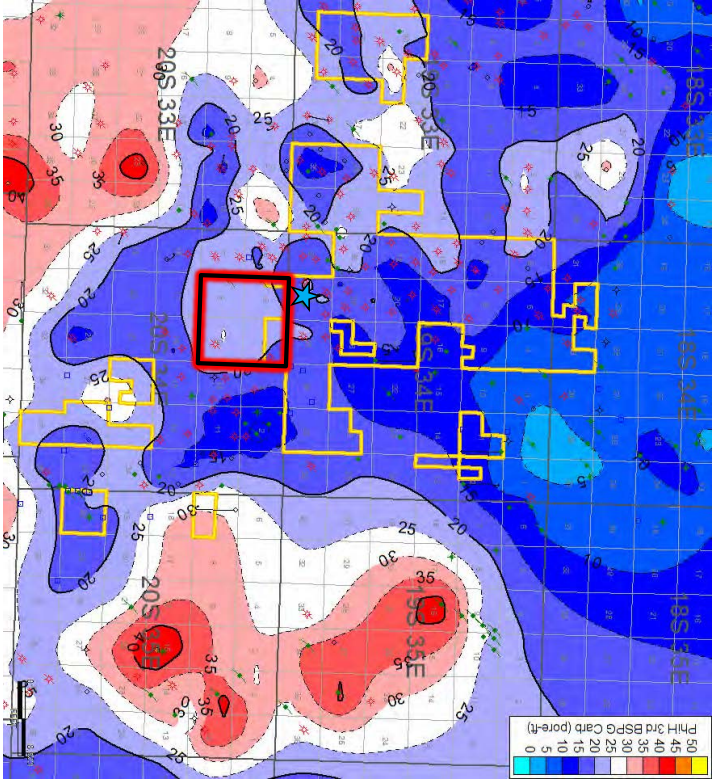


PhiH 2nd Bone Spring Sand
CTRA Target



Avg PhiH in 3rd SS = 30
60% of total reservoir

PhiH 3rd Bone Spring Carb
Permian Resources Additional Target

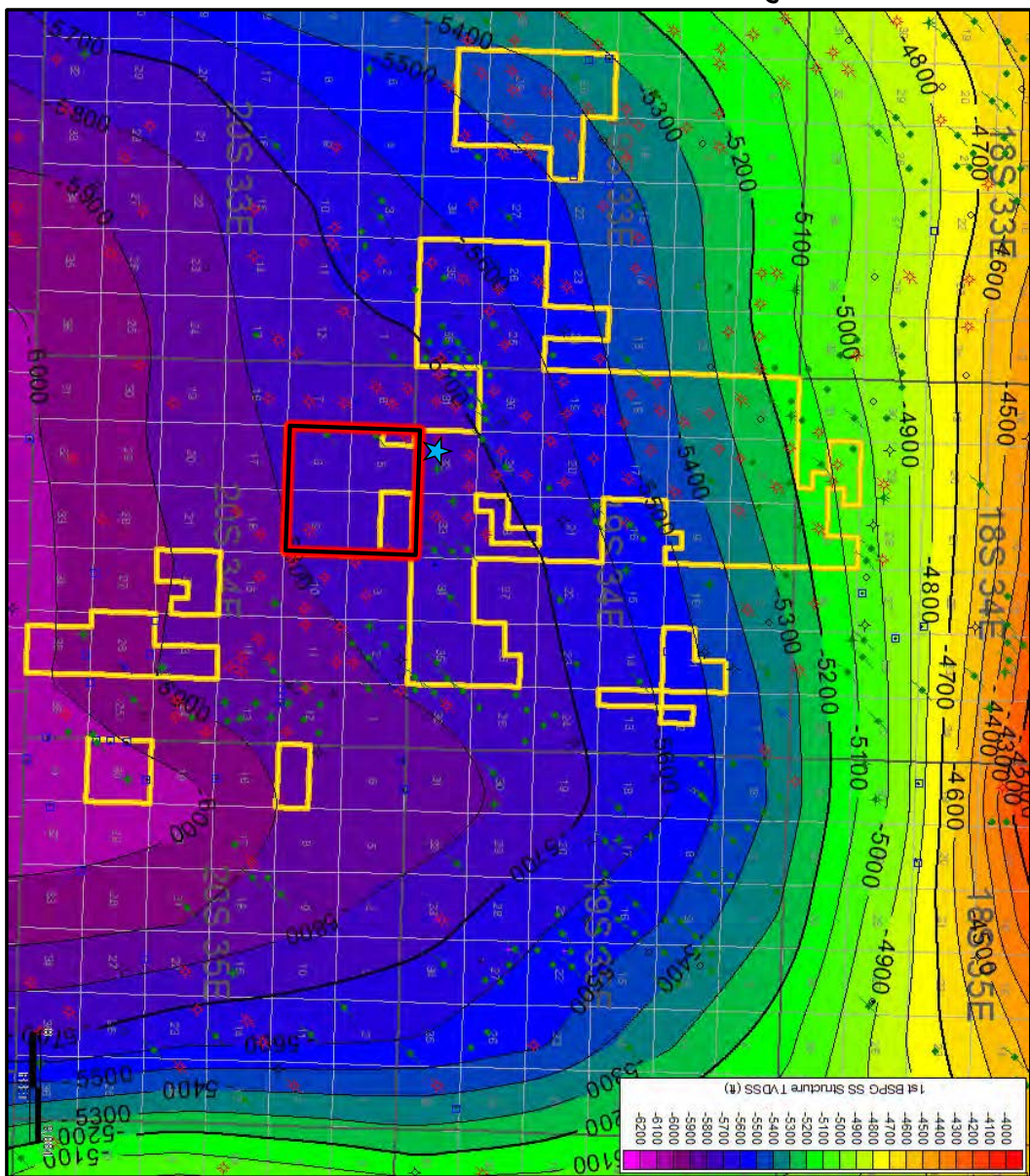
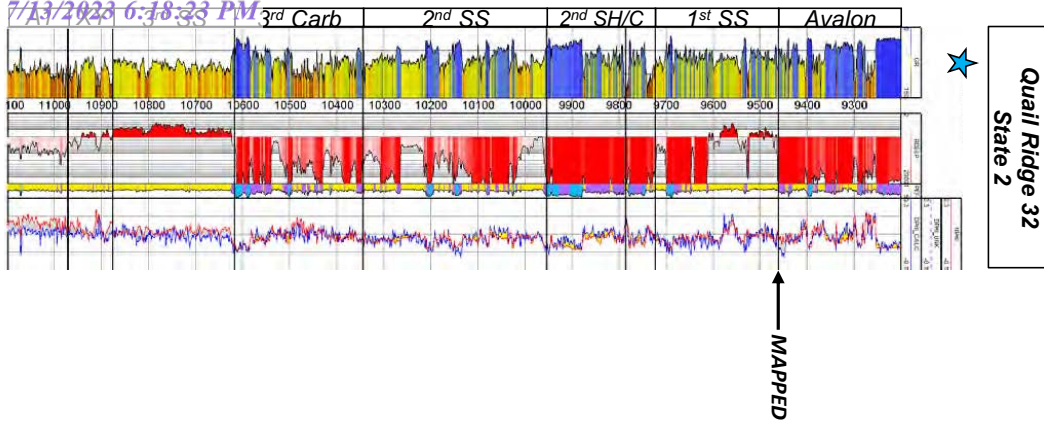


Avg PhiH in WFMP XY = 20
40% of total reservoir

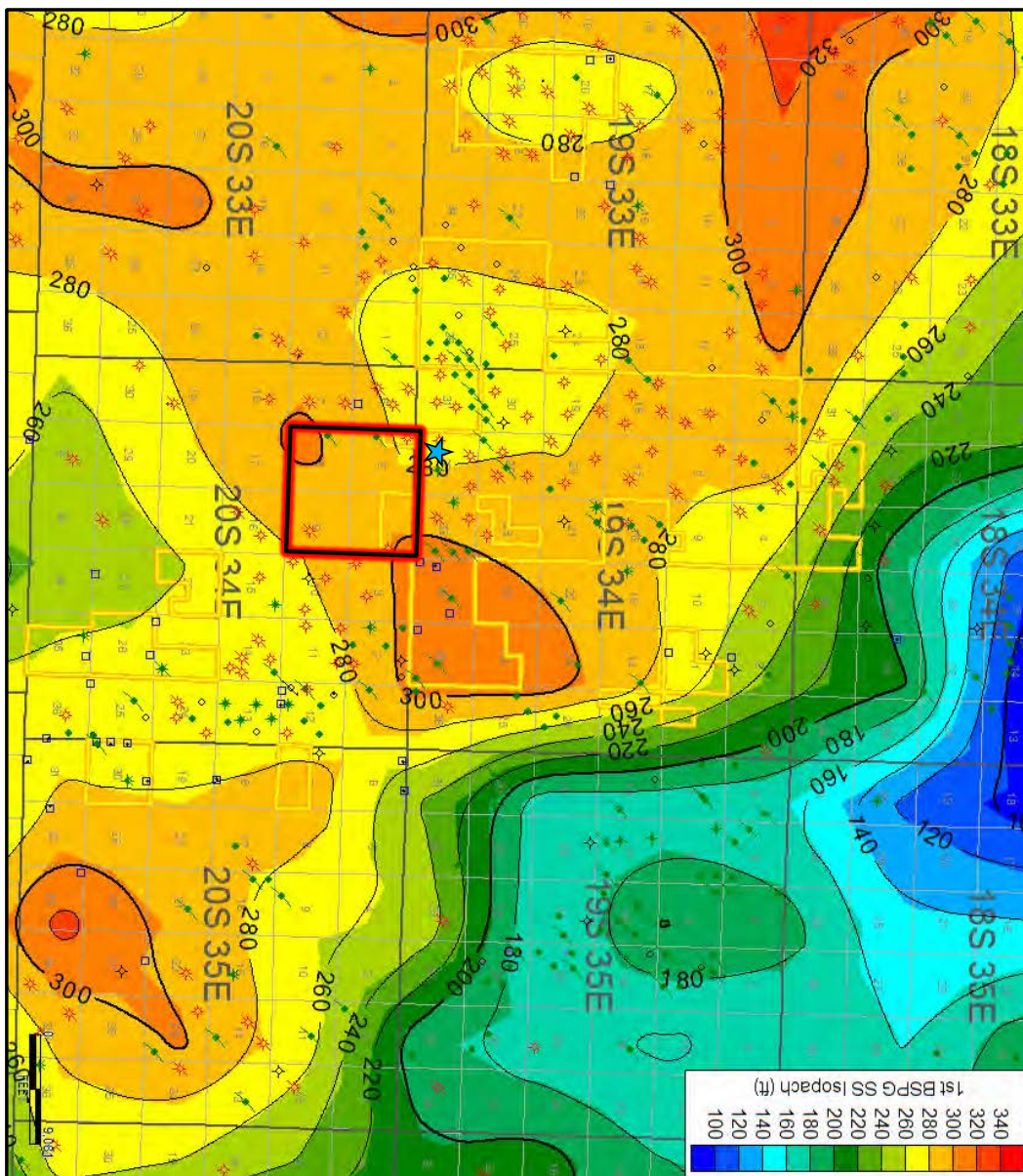
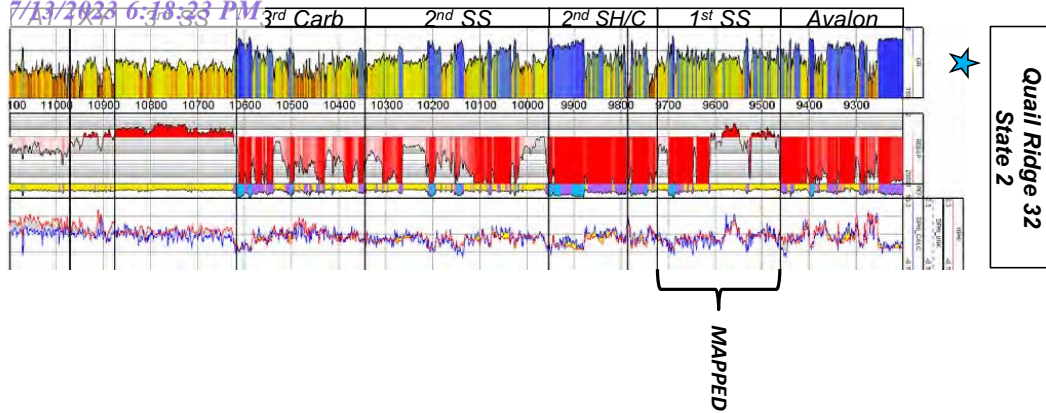
EXHIBIT
B-15

1st Bone Spring Sand

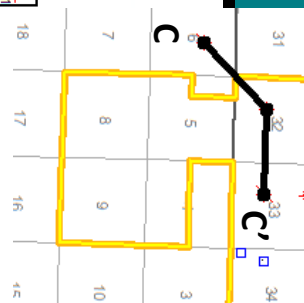
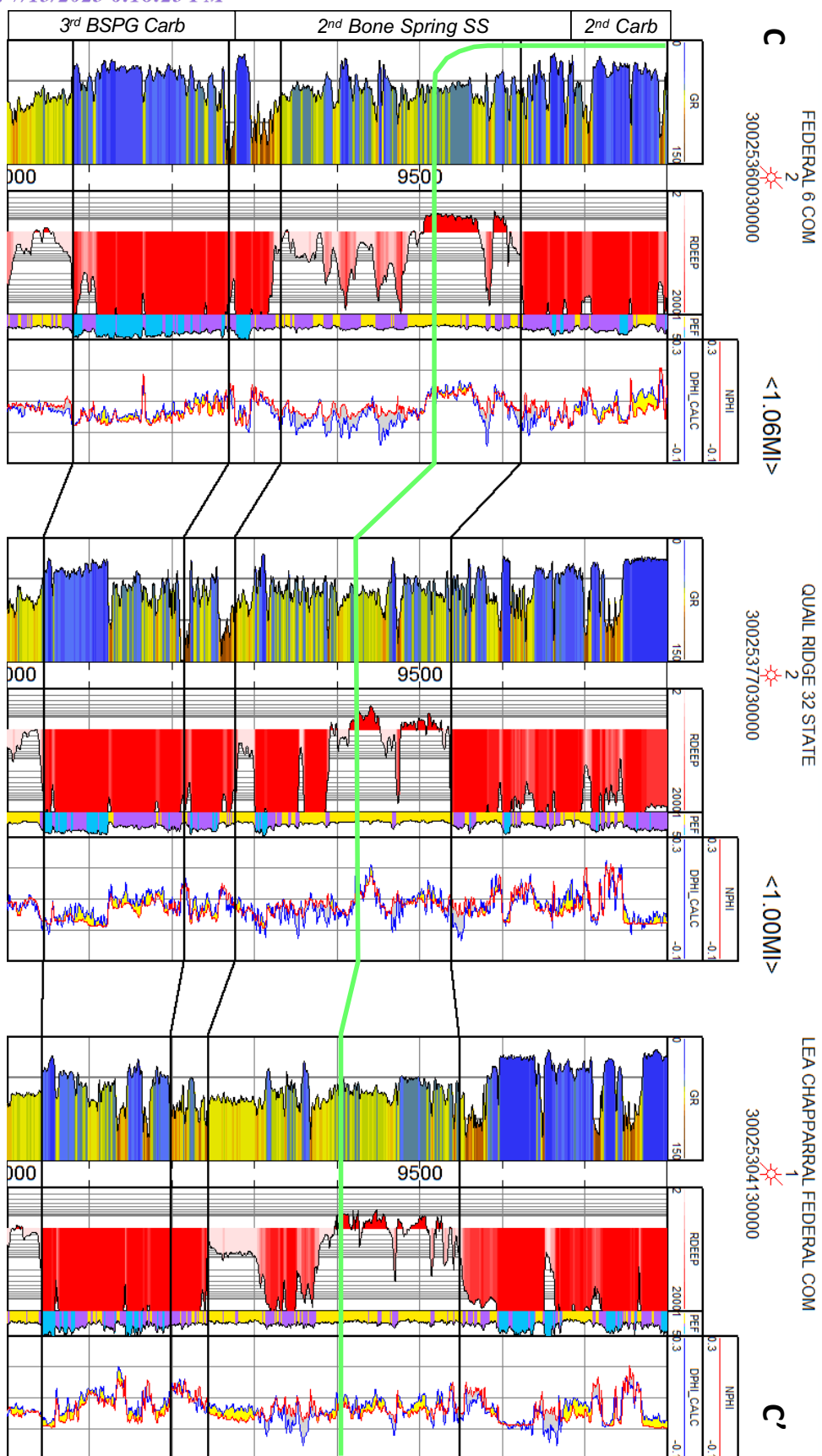




**EXHIBIT
B-16**



1st Bone Spring Sand Cross Section



**EXHIBIT
B-18**

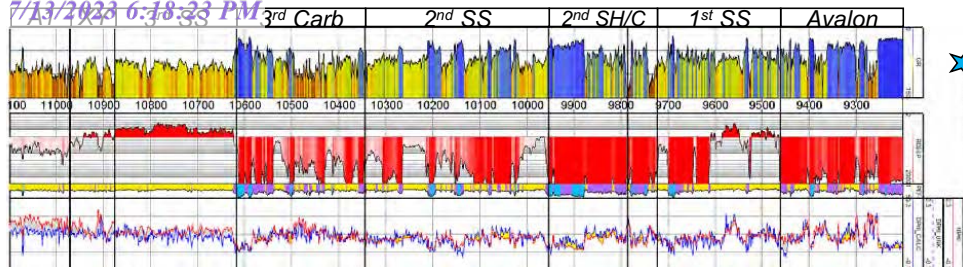


COTERRA

Wolfcamp XY

Wolfcamp XY Structure

Quail Ridge 32
State 2



MAPPED

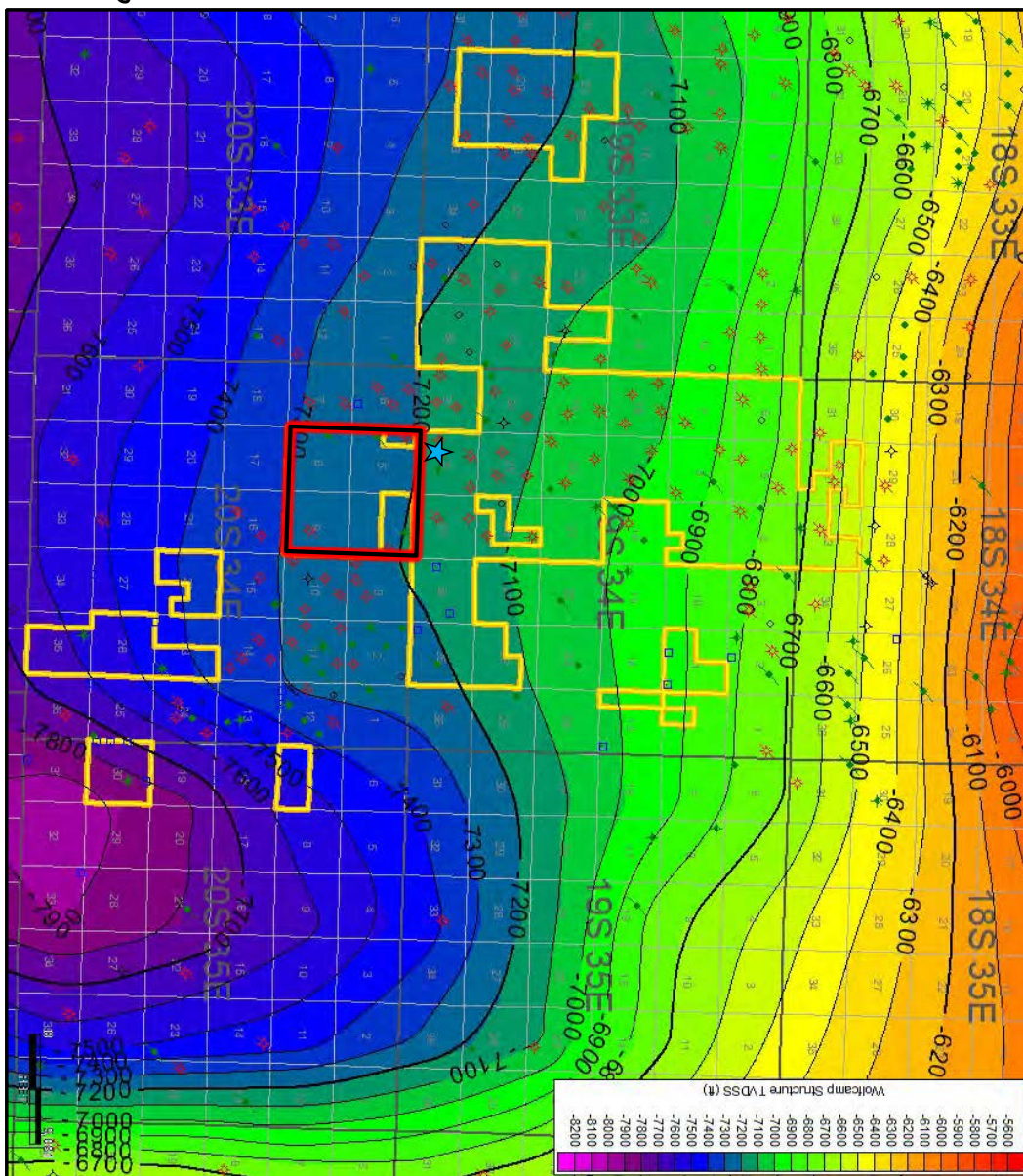
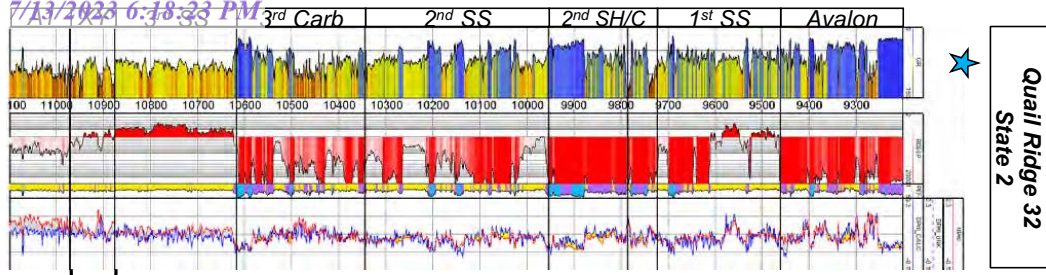


EXHIBIT
B-19



Wolfcamp XY Isopach

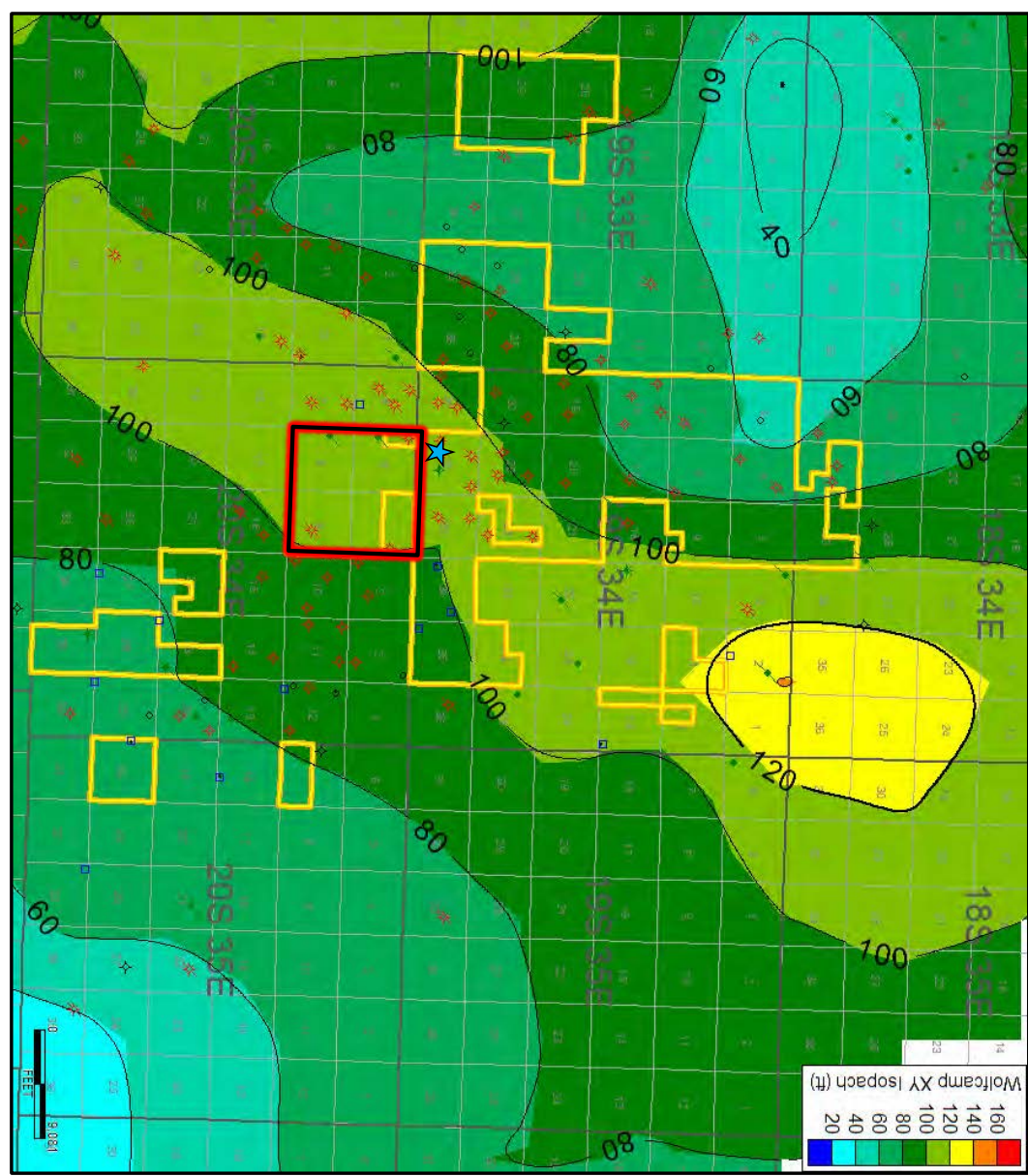
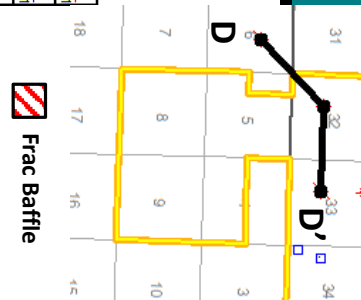
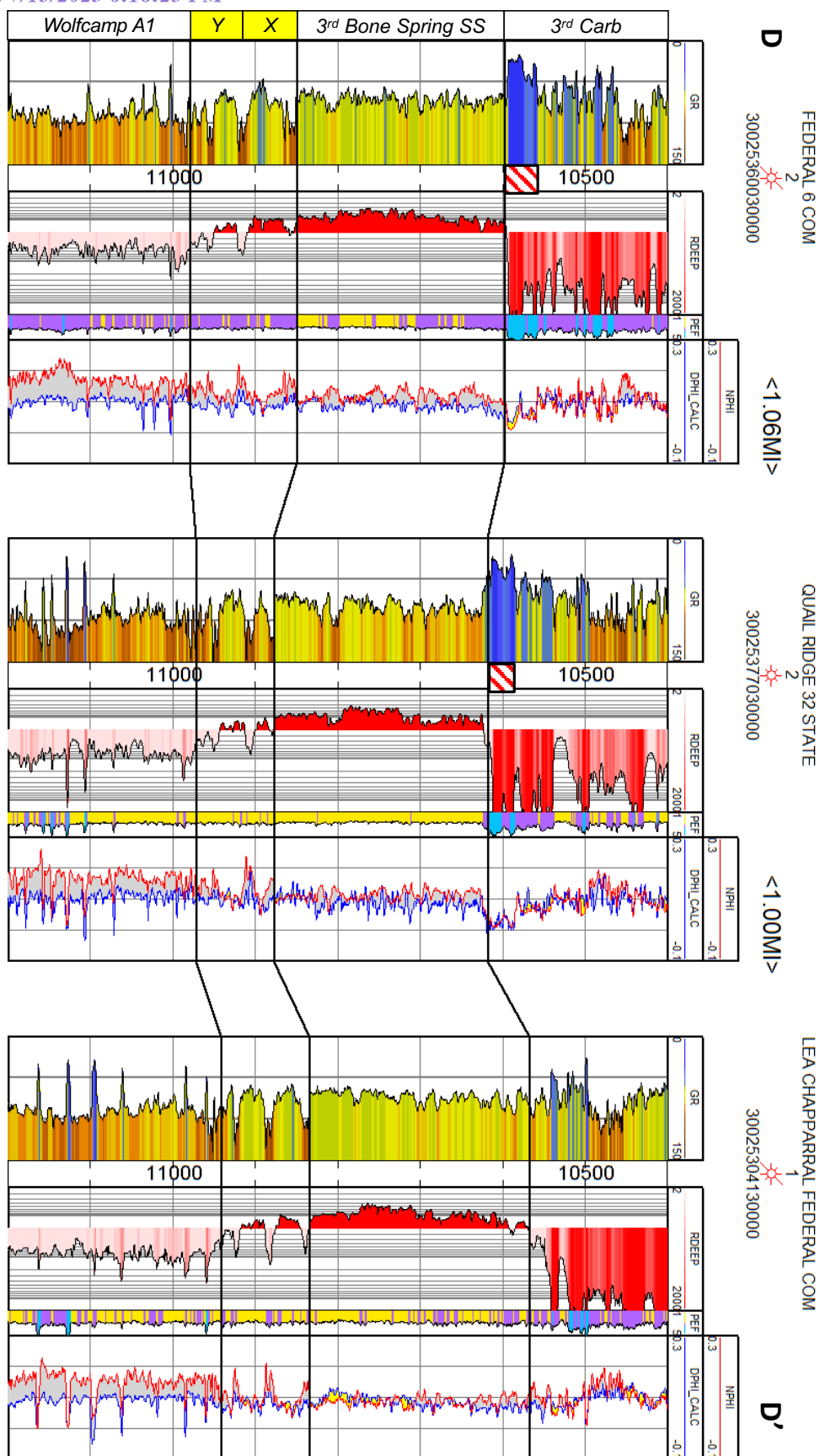


EXHIBIT
B-20

Wolfcamp XY Cross Section



**PR's additional
Wolfcamp target lies
~95' below the 3rd
Sand target. No
significant frac baffle
separates the two
reservoirs.**

EXHIBIT
B-21

TAB 4

Case Nos. 23594-23601

- Exhibit C: Self-Affirmed Statement of Eddie Behm, Petroleum Engineer
- Exhibit C-1: Mighty Pheasant Loosey Goosey Development Plan
- Exhibit C-2: Capital Plan Comparison Cimarex vs. Permian
- Exhibit C-3: Map of 3rd Bone Spring Sand Producers
- Exhibit C-4: 3rd Sand Well Count by Landing and Operators
- Exhibit C-5: Black and Tan 3rd Sand Composite Forecast 6 wells
(Before WC completion)
- Exhibit C-6: Black and Tan 3rd Sand Composite Forecast 6 Wells Post
Wolfcamp Frac
- Exhibit C-7: Black and Tan Wolfcamp Composite Forecast 5 wells
- Exhibit C-8: Lessons Learned from the Black and Tan Development
- Exhibit C-9: Diagram of Staggered Landing Wolfcamp 3rd SS Vs. 3rd SS Flat
- Exhibit C-10: Black and Tan Analog comparison to MP/LG
- Exhibit C-11: Landing Zone Matters; Five Years Ago, Cimarex's Perry Test
Confirmed 3rd SS Landing as Best Target
- Exhibit C-12: Dataset Identifying all Wells in Area of Interest

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

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR A HORIZONTAL SPACING UNIT AND
COMPULSORY POOLING, LEA COUNTY, NEW MEXICO**

**Case Nos. 23448 – 23451
(Mighty Pheasant; Bone Spring; Secs. 5 & 8)**

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

**Case Nos. 23594 – 23597
(Mighty Pheasant; Wolfcamp; Secs. 5 & 8)**

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR A HORIZONTAL SPACING UNIT AND
COMPULSORY POOLING, LEA COUNTY, NEW MEXICO**

**Case Nos. 23452 – 23455
(Loosey Goosey; Bone Spring; Secs. 4 & 9)**

**APPLICATIONS OF CIMAREX ENERGY CO.
FOR COMPULSORY POOLING,
LEA COUNTY, NEW MEXICO**

**Case Nos. 23598 – 23601
(Loosey Goosey; Wolfcamp; Secs. 4 & 9)**

SELF-AFFIRMED STATEMENT OF EDDIE BEHM

I, being duly sworn on oath, state the following:

1. I am over the age of 18 and have the capacity to provide this Statement; I am a Reservoir Engineer for Cimarex Energy Co. ("Cimarex") and have personal knowledge of the matters stated herein.
2. I attended the University of Tulsa and graduated with a bachelor's in petroleum engineering in 2011. I have worked for Occidental, California Resources prior to working for Cimarex Energy

Co. ("Cimarex") and have been employed as a Production and Reservoir engineer for Cimarex for the last 6 years, working in the Delaware Basin with a primary focus on Lea County, New Mexico. I am familiar with the subject applications filed in the above-referenced Cases and the engineering involved.

3. I have previously testified before the Oil Conservation Division ("Division") as an expert reservoir engineer, and my credentials have been accepted of record by the Division.

4. This testimony is submitted in connection with the filing by Cimarex in the above-referenced compulsory pooling application pursuant to 19.15.4.12.A(1) NMAC.

5. I am also thoroughly familiar with the competing applications filed by Read & Stevens, Inc. who designated Permian Resources Operating, LLC as the Operator (Read & Stevens and Permian Resources collectively referred to herein as "Permian" or "Permian Resources") in Case Nos. 23508 through 23523. This Statement provides a description and overview of Cimarex's development plan in comparison to Permian's development plans.

6. **Exhibit C-1, Slide 2: Mighty Pheasant Loosey Goosey Development Plan.**

Cimarex's development plan includes the Mighty Pheasant Wells in Sections 5 and 8, Township 20 South, Range 34 East; and the Loosey Goosey Wells in Sections 4 and 9, Township 20 South, Range 34 East, all in Lea County, and Cimarex plans to develop the entire 2880 acres of the proposed units with only 33.9 acres of disturbance to the surface, thus substantially minimizing environmental impact (resulting in only a minimal 1.17% disturbance). Once the four drill pads and bulk gathering lines are installed, Cimarex will be able to rotate back to these existing drill pads for all activities and operations, thus requiring no further disturbance to the lands; by minimizing dirt work in this way, Cimarex will reduce potential air pollution and preserve native vegetation and natural habitat. Furthermore, Cimarex will develop this area with best-in-class gas

capture technology and operations and has already initiated this approach by securing proposals for oil, water, and gas takeaway and submitting load requests to power surface equipment to develop the acreage. As a company we permit zero (0) routine flaring and build tankless facilities that offer superior capture rates of low-pressure gas ($\geq 90\%$ low pressure capture) for new developments which will be utilized in our proposed development plan.

7. Exhibit C-2, Slide 3: Capital Plan Comparison of Mighty Pheasant vs. Joker (1280-acre Capital comparison is shown for Sections 5 & 8) to Highlight:

- a) The \$92.7MM in Capital waste that results from the extra wells proposed by Permian Resources; public data show that Permian's extra wells will be non-additive to EUR and PV10**
- b) The \$31.6 MM in extra well cost driven by the wasteful execution of Permian Resources' plan.**
- c) Permian's unnecessary expenditure of \$11 MM on one additional 2nd Sand well in comparison to Cimarex's plan which avoids such waste.**
- d) At the time of its proposal, Permian Resources will spend \$270MM more than Cimarex to develop all 4 sections, thus in comparison, Permian would create financial waste that excessively burdens, undermines, and harms the correlative rights of working interest owners.**

8. Exhibit C-3, slide 6: 3rd Bone Spring Sand is the Established Single Bench Target at 4 Wells Per Section (WPS) Within the Area of Interest (AOI). The map of 3rd Bone Spring Sand Producers shows significant single bench development of the 3rd Sand at 4 wells per section spacing. The Map of Wolfcamp producers shows that the Wolfcamp is not primarily targeted with 3rd Sand development. Furthermore, where Wolfcamp is developed, it is

predominantly drilled and developed without the 3rd Sand because the reservoir is adequately captured with a single landing within the flow unit. There is only one development plan within the entire AOI similar to the plan Permian has proposed for the 3rd Sand. This plan, similar to Permian's plan, is located just 2 miles south of the subject lands, and it was based on similar well drainage assumptions that utilized outdated completion height assumptions. The Black and Tan Development Plan is the best analog and example that demonstrates the likely outcome of Permian Resources' proposal when both the 3rd Sand and Wolfcamp are developed as if they were separate and equal targets. A summary of the production results at **Exhibit C-10 (Slide 14)** herein speaks for itself, demonstrating what happened with the Black and Tan Development Plan, and therefore showing the substantial underproduction and waste that would likely result from Permian's approach, which is based on the same underlying assumptions. Cimarex's plan would avoid such an outcome.

9. **Exhibit C-4, Slide 7: Well Count by Landing and Operators Shows 3rd Sand is the Consensus Landing.** Ninety-seven percent of wells drilled in this area, that is, 236 out of 244 wells, are executed as single bench, non-staggered developments. This means it is not just Cimarex's idiosyncratic opinion that the best development plan for the Subject Lands requires a single landing target, but this is a consensus shared by all companies active within the area and directly supported by the data. Furthermore, 222 wells out of 244 total wells within the AOI land in the 3rd Sand supporting Cimarex's assessment of 3rd Sand as the optimum landing. Cimarex has executed 36 wells within the AOI, 15% of all wells, and has development experience specific to this area and its landing requirements.

10. **Exhibit C-5, Slide 9: Black and Tan 3rd Sand Composite Forecast 6 wells (Before WC completion)** This Forecast shows the aggregate well performance of 6 wells prior to

underlying Wolfcamp development. Significant reserves (that of 2.5MM barrels of oil) and rates (that being 3356 BOPD IP30) were accessed by these 1-mile wells supporting 3rd Sand as a proven landing for optimal production.

11. **Exhibit C-6, Slide 10: Black and Tan 3rd Sand Composite Forecast 6 Wells Post Wolfcamp Frac.** This Forecast shows the aggregate well performance of 3rd Bone Spring Sand wells after underlying Wolfcamp development. Unfavorable results included elevated water cut, rapid GOR Incline, and steep oil decline which are signatures of interference between the five Wolfcamp wells drilled below these six 3rd Sand wells. After the Wolfcamp wells were drilled and produced, overall reserves appear to have fallen to 1.63 MM barrels of oil with steep decline profile. This highlights the degradation a 2nd landing causes within the AOI.

12. **Exhibit C-7, Slide 11: Black and Tan Wolfcamp Composite Forecast 5 wells.** This plot shows the aggregate performance and forecast to the five Wolfcamp wells completed below the six 3rd Sand wells shown on exhibits C-4 and C-5. Data clearly shows that vertical interference occurs in staggered developments, causing these 5 wells to add only 885MBO oil reserves and 500 BOPD IP in the aggregate. Elevated water cut and rapid GOR incline are evidence of interference with 3rd sand wells above.

13. **Exhibit C-8, Slide 12: Lessons Learned from the Black and Tan Development.** Exhibit C-8 table 1.0 shows some simple forecast metrics highlighting the fact that only a negligible rate and a negligible amount of EUR were detectible from drilling the five extra, not to mention expensive, Wolfcamp wells. It is noteworthy and significant how little benefit the five wells added and how much they negatively impacted 3rd sand production. The aggregate rate change is so small it is essentially zero (0) which does not support or justify as effective capital stewardship the drilling of the 8 additional \$11MM dollar wells proposed by Permian Resources.

Table 1.1 shows the pore space distribution, 3rd Sand has 268% more PHIH than the upper Wolfcamp and is clearly the predominant contributing reservoir. The hypothesis that landing in 3rd Sand with 268% more porosity and height combined with better flow properties is the best way to access all the bbls becomes unarguable with production data from Black And Tan where the addition of Wolfcamp landings added no reserves and only negatively impacted the 3rd Sand raising aggregate section OpEx. The lesson learned from this data is that drilling into the Upper Wolfcamp itself is financially wasteful and jeopardizes optimal 3rd Sand production. A setback from 3rd sand is in the best interest of efficient low risk recovery of the area reserves.

14. **Exhibit C-9, Slide 13: Diagram of Staggered Landing Wolfcamp 3rd SS Vs. 3rd SS Flat.** This exhibit shows what Cimarex believes happened in the Black and Tan analog example which reflects the nature of Permian Resources' proposal and therefore Permian's likely outcome. The Majority of Stimulated Rock Volume accessed by 3rd Sand well's landed flat must be very similar to the Stimulated rock volume accessed by staggered Wolfcamp and 3rd landings. If this were not true, the sum of Wolfcamp and 3rd sand production out of the Black and Tan development would be significantly higher once the 2nd bench was added instead of about the same. Where appropriate geologically, Cimarex executes as many as 9 landings within the same section in Lea County. Due to the location of barriers and target reservoir height executing two landings within the contested acreage in the 3rd Sand Wolfcamp target or the lower 2nd Sand 3rd Shale target serves only to double development CapEx. Cimarex has proprietary data from South Lea County developments in thicker pay that support the accuracy of how we have assessed the vertical interference and is confident additional landings serve only to dilute sweet spot landing production. Not everyone has access to the same data but there is a wealth of public data available from the

Hydraulic Fracture Test Site 2 DOE and industry partnership that would lead to the same conclusion.

15. **Exhibit C-10, Slide 14: Black and Tan Analog comparison to MP/LG.** Mighty Pheasant and Loosey Goosey have a similar pore space distribution as the Black and Tan Development with slightly higher porosity. The extra porosity is more likely to correlate to better permeability and allow a single landing to capture proven 3rd sand reserves even more efficiently. Sensitivities run vs. reserves (table 1.3) and P50 expectations (table 1.4) show the PV 10 degradation and how much uplift would be needed to break even on the additional wells proposed by Permian. Given Black and Tan's added negligible bbls and rate, close to 0%, in similar rock two miles away, the public data simply does not support the 30% to 40% EUR and rate improvement needed to even break even on the extra incremental CapEx proposed by Permian resources well count. Furthermore, due to optimum well count Cimarex's plan is self-funding with payout in < 1 year. This is important for follow up benches that Cimarex will be able to rapidly develop out of lease cashflow, whereas Permian resources would require debt to fund an annual drilling program and would be significantly more exposed to commodity pricing jeopardizing timely development of subsequent benches.

16. **Exhibit C-11, Slide 15: Landing Zone Matters; Five Years Ago, Cimarex's Perry Test Confirmed 3rd SS Landing as Best Target.** Cimarex confirmed 3rd sand as best landing zone 5 years ago in 2018 with the Perry 4H 1 mile South of the contested acreage block. Over the life of the well, we see the old conventional 3rd Sand landing outperform other landings. Fracs evolved over time to modern slick water completions. Today most companies pump between 2000#/ft and 3000#/ft and 38 bbl/ft up to 60 bbl/ft with 6 to 14 clusters per stage depending on the target. It is highly unusual for a legacy frac, that is, one more conventional (i.e., <2016 with low

cluster count, long stages, and unfocused frac energy), to better access reservoir than a modern frac (>2016 vintage with high cluster count, short stages, very focused frac energy). The best explanation for 478#/ft 3rd Sand frac outperforming 5 to 6 times the frac energy pumped in the Wolfcamp test well is that the vast majority of oil reserves and best rock fabric flow properties are located within the 3rd Sand, and not in the Upper Wolfcamp. Thus, drilling into the Upper Wolfcamp is a waste of resources.

17. The dataset that identifies all the wells in the Area of Interest that I used in my analysis and that played a role in my conclusions is attached hereto as **Exhibit C-12**.

18. The Exhibits to this Self-Affirmed Statement were prepared by me or compiled from Cimarex's company business records under my supervision.

19. As explained by the foregoing, the granting of Cimarex's Applications are in the best interests of conservation, the prevention of waste, and the protection of correlative rights.

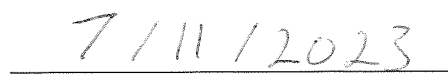
20. The foregoing is correct and complete to the best of my knowledge and belief.

[Signature page follows]

Signature page of Self-Affirmed Statement of Eddie Behm:

I understand that this Self-Affirmed Statement will be used as written testimony before the Division in Case Nos. 23448-23455 and 23594 – 23601 and affirm that my testimony herein is true and correct, to the best of my knowledge and belief and made under penalty of perjury under the laws of the State of New Mexico.


Eddie Behm


Date Signed

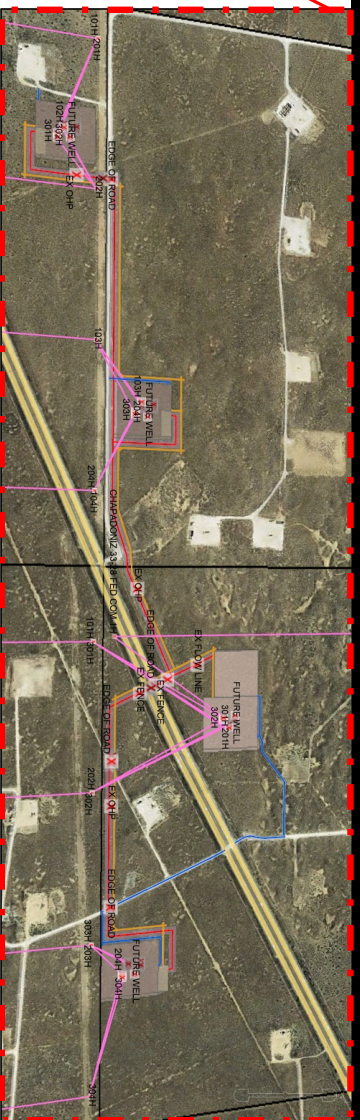
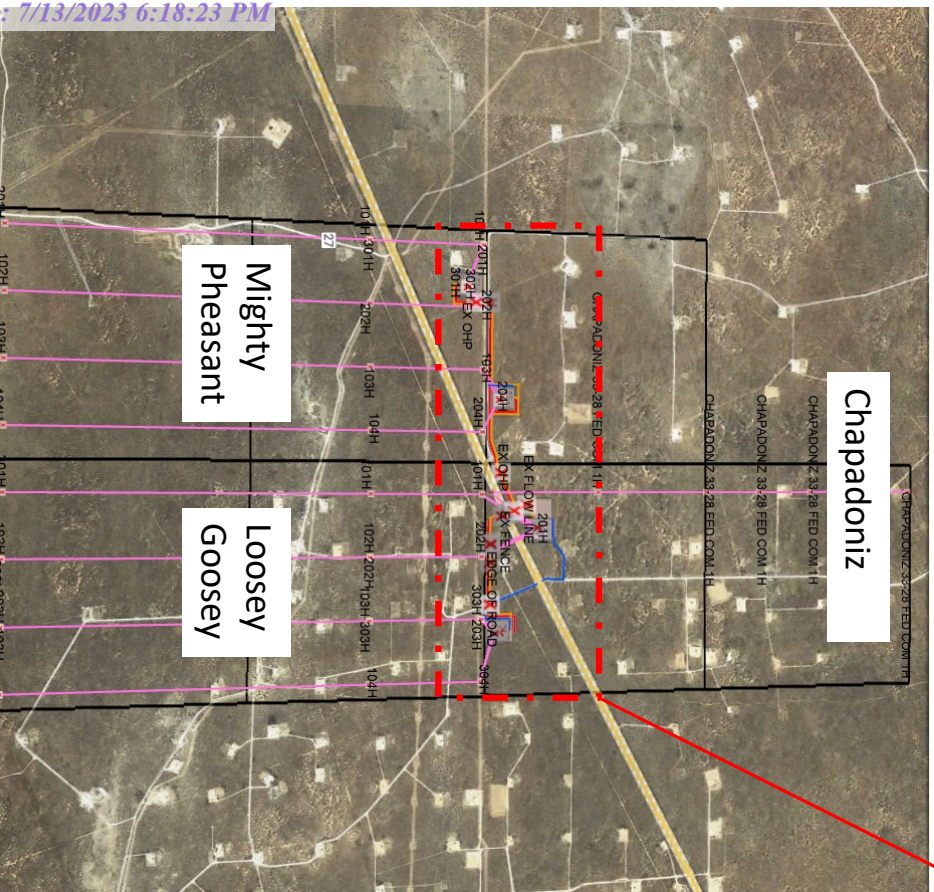
Development Strategy





Mighty Pheasant Loosey Goosey Development Plan

1 mile



- Single Battery develops – 27 to 34 planned wells
- Oil water gas power ROW connects 4 drilling pads with on pad separation to Battery
- Single battery eliminates 2 additional batteries worth of disturbance and high-risk emissions devices.
- Cimarex permits 0 routine flaring, and our design has >=90% low pressure vapor capture
- Roads (2.33) acres, pads (25.25 acres) and battery (6.31 acres) create ~33.9 acres of disturbance allowing for full development of ~2880 acres, 1.17% disturbance.
- Pipelines are onetime construction; follow-up wells will use existing gathering off pad which is installed the first time a well is drilled off a drill pad. All future wells create no new disturbance off drill pads minimizing environmental impact

EXHIBIT
C-1



Capital Plan Comparison Mighty Pheasant vs. Joker

Mighty Pheasant			
Res	Well	AFE Capex	June Current Cost
1st	101H	\$8,570,695	\$9,651,993
1st	102H	\$9,450,693	\$9,651,993
1st	103H	\$9,450,693	\$9,651,993
1st	104H	\$9,450,693	\$9,651,993
upper 2nd*	NA	\$8,570,695	\$9,651,993
upper 2nd*	NA	\$8,570,695	\$9,651,993
upper 2nd*	NA	\$8,570,695	\$9,651,993
2nd	201H	\$8,570,695	\$9,651,993
2nd	202H	\$8,570,695	\$9,651,993
2nd	203H	\$8,570,695	\$9,651,993
2nd	204H	\$8,570,695	\$9,651,993
3rd	301H	\$9,428,854	\$10,621,993
3rd	302H	\$9,428,854	\$10,621,993
3rd	303H	\$9,408,850	\$10,621,993
3rd	304H	\$9,408,850	\$10,621,993
Total Gross Capex		\$134,593,047	\$148,659,895

Permian Resources - Joker			
Res	Well	AFE Capex	June Current Cost
1st	111	\$10,724,193	
1st	112	\$10,724,193	
1st	113	\$10,724,193	
1st	114	\$10,724,193	
uppr 2nd	122	\$11,020,308	
uppr 2nd	124	\$11,020,308	
uppr 2nd	126	\$11,020,308	
uppr 2nd	128	\$11,020,308	
2nd	121	\$11,020,308	
2nd	123	\$11,020,308	
2nd	125	\$11,020,308	
2nd	127	\$11,020,308	
3rd bs	131H	\$11,535,757	
3rd bs	132H	\$11,535,757	
3rd bs	133H	\$11,535,757	
3rd bs	134H	\$11,535,757	
3rd bs	171H	\$11,308,013	
3rd bs	172H	\$11,308,013	
3rd bs	173H	\$11,308,013	
3rd bs	174H	\$11,308,013	
WC	201H	\$11,877,862	
WC	202H	\$11,877,862	
WC	203H	\$11,877,862	
WC	204H	\$11,877,862	
Total Gross Capex		\$269,945,764	?

*Note: we have planned for upper 2nd, acquiring data on 3rd sand wells to confirm adequate flow, saturation, and in place in this ~60-foot target and will execute if viable.

Permian plan is \$135MM more / 1280 acres with proposal Capex, ~100% more Capex, bad for WI owners:

\$ 92.7 MM, shown in red, Cimarex models as uneconomic non additive wells with reserves best captured by single landing.
 \$ 31.6 MM, where well counts are ~ = Permian costs are \$ 2.1 MM to \$2.4MM higher/well at time of proposal
 \$ 11 MM, one additional 2nd sand well vs. Cimarex Proven spacing.

Permian Resources contracts, practices, and development plan is >= \$121MM of waste driven by Frac cost and Well Count

EXHIBIT
C-2



Permit Status

State	County	Well Name & Number	Permit Status	Permit Submission Due Date	Permit Submitted Date	10-Day Letter Date	10-Day Letter Due
NM	Lea	Mighty Pheasant 5-8 Fed Com 101H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 102H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 103H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 104H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 201H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 202H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 203H	To be permitted				
NM	Lea	Mighty Pheasant 5-8 Fed Com 204H	AFMSS-Accepted	2/14/2022	2/14/2022	6/2/2023	7/17/2023
NM	Lea	Mighty Pheasant 5-8 Fed Com 301H	AFMSS-Accepted	3/1/2022	3/1/2022		
NM	Lea	Mighty Pheasant 5-8 Fed Com 302H	AFMSS-Accepted	3/2/2022	3/2/2022		
NM	Lea	Mighty Pheasant 5-8 Fed Com 303H	AFMSS-Accepted	2/14/2022	2/14/2022	6/2/2023	7/17/2023
NM	Lea	Mighty Pheasant 5-8 Fed Com 304H	AFMSS-Accepted	3/1/2022	3/1/2022	6/2/2023	7/17/2023
NM	Lea	Loosey Goosey 4-9 Fed Com 101H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 102H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 103H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 104H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 201H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 202H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 203H	To be permitted				
NM	Lea	Loosey Goosey 4-9 Fed Com 204H	AFMSS-Accepted	3/15/2022	3/15/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 301H	AFMSS-Accepted	3/9/2022	3/9/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 302H	AFMSS-Accepted	3/9/2022	3/9/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 303H	AFMSS-Accepted	3/15/2022	3/15/2022		
NM	Lea	Loosey Goosey 4-9 Fed Com 304H	AFMSS-Accepted	3/15/2022	3/15/2022		

Submitted permits for 3rd Sand development & 1st Sand/2nd Sand test
BLM is currently working on these

3rd Bone Spring Sand

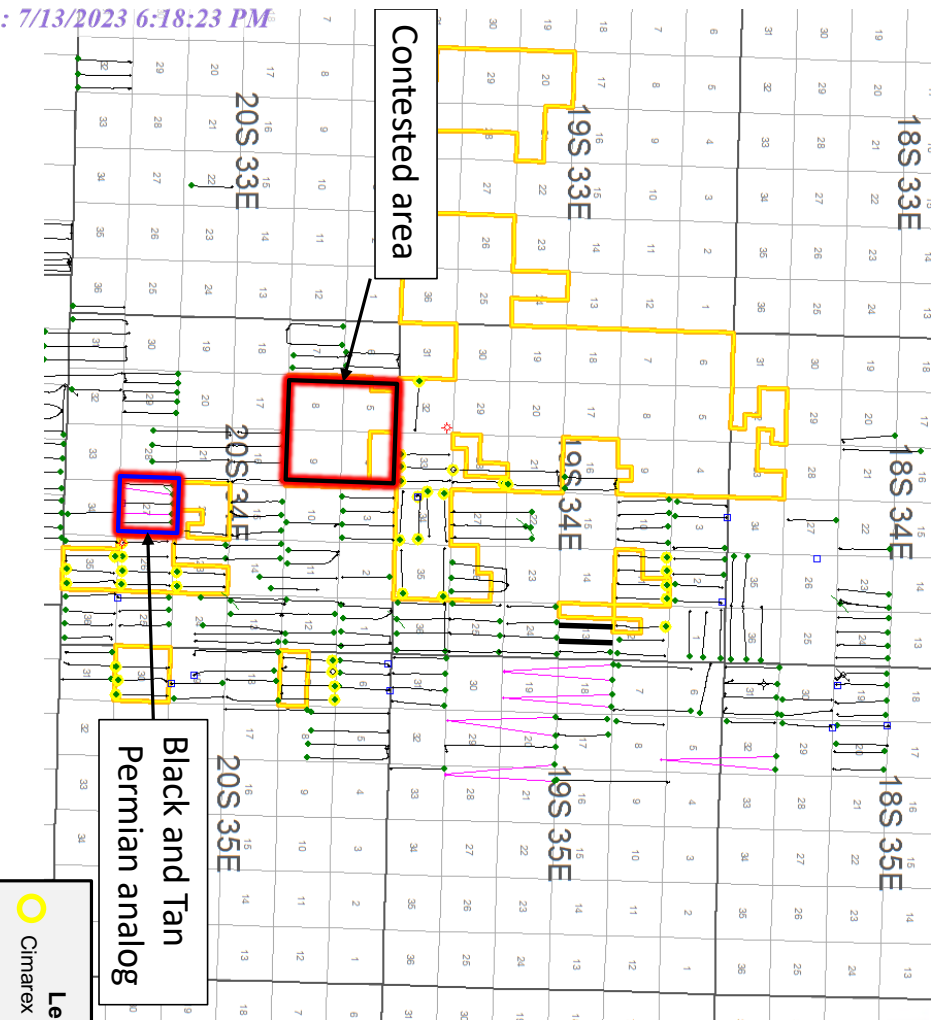




3rd Bone Spring Sand is the Established Single Bench Target at 4 WPS within AOI

42,650 acres developed with more than 1 well, all but one development, 98.5% of sections similar to Cimarex proposal

3rd Bone Spring Sand Producers



Wolfcamp Producers

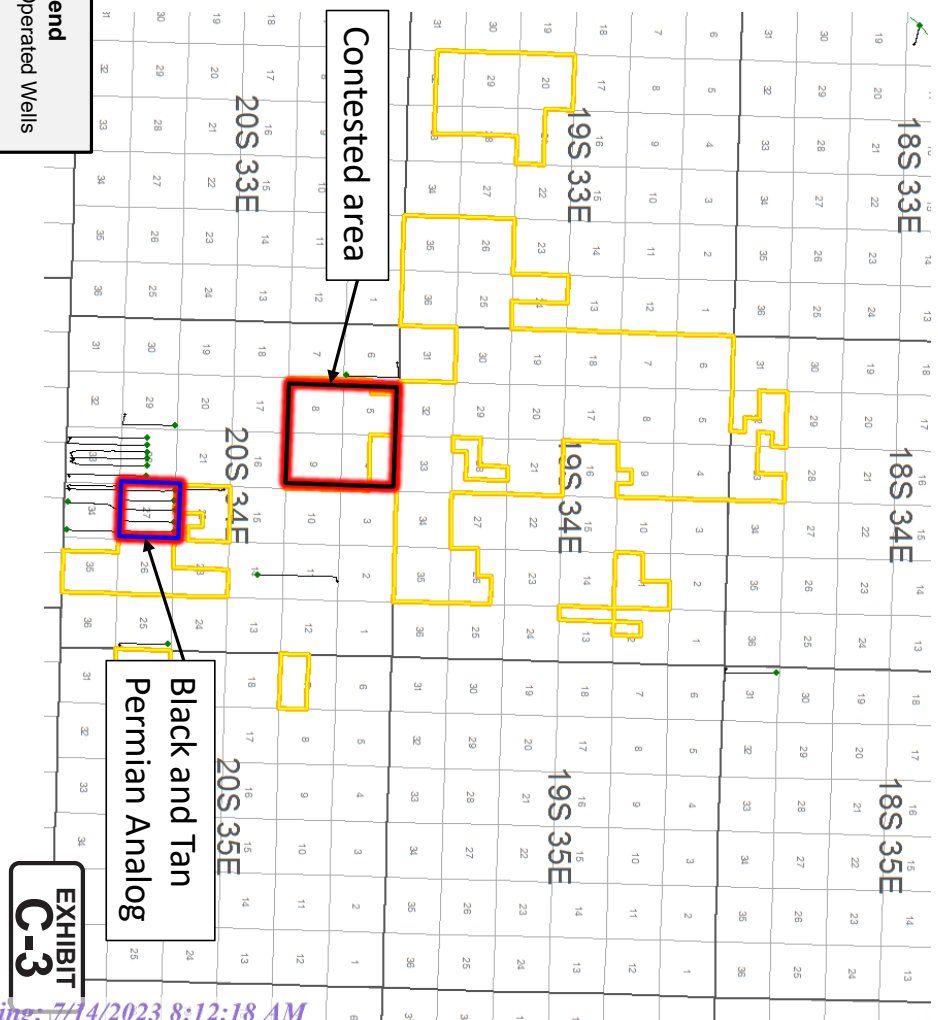


EXHIBIT
C-3



Well Count by Landing and Operators Shows 3rd Sand is the Consensus Landing

- 3rd Sand / single bench landing supported by 236 wells, 97%.
- 13 of 22 WCMP were drilled instead of 3rd SS
- 5 of 22 WCMP drilled as a separate bench
- 3 WCMP stack tests with 3rd Sand

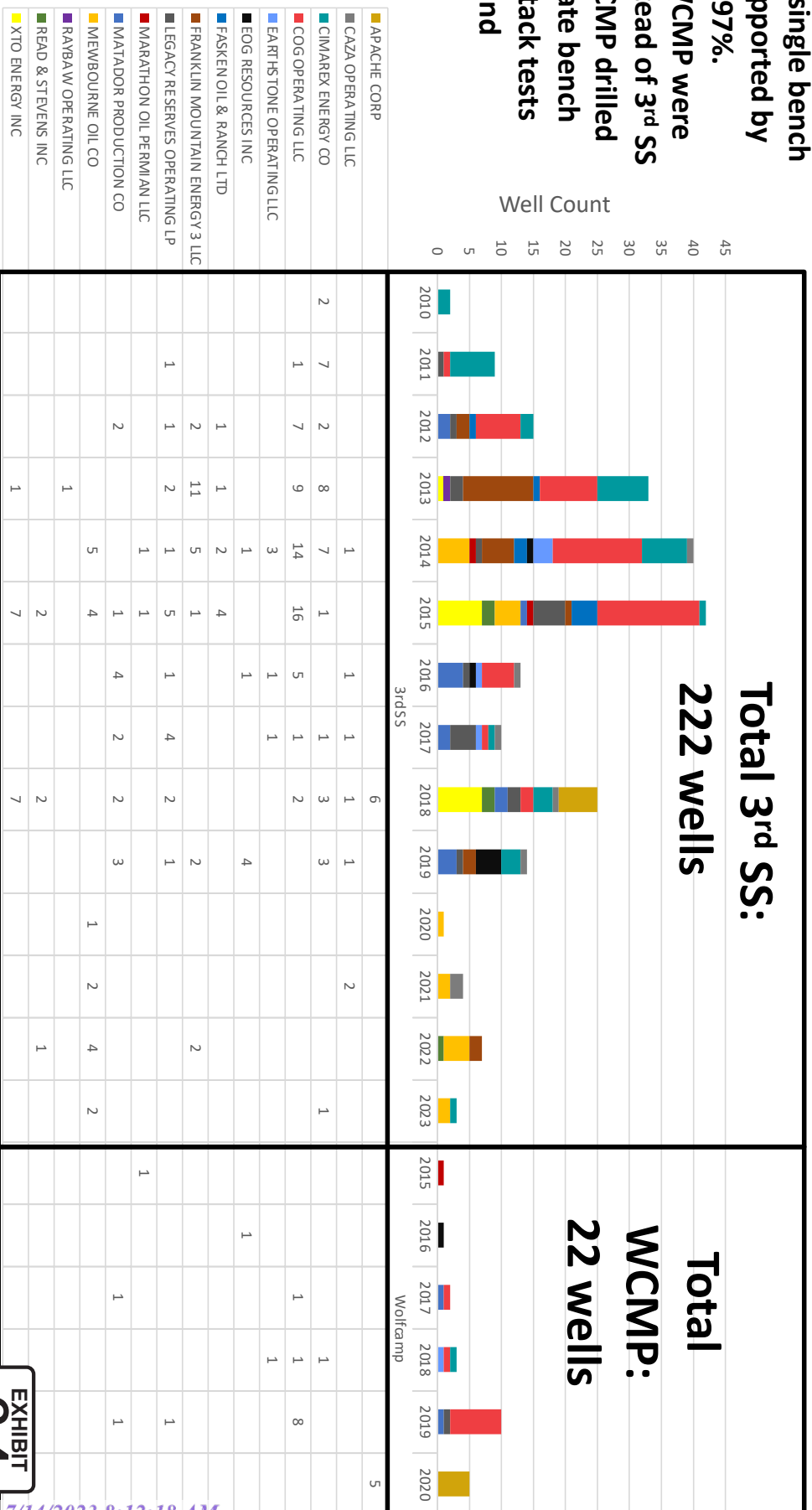
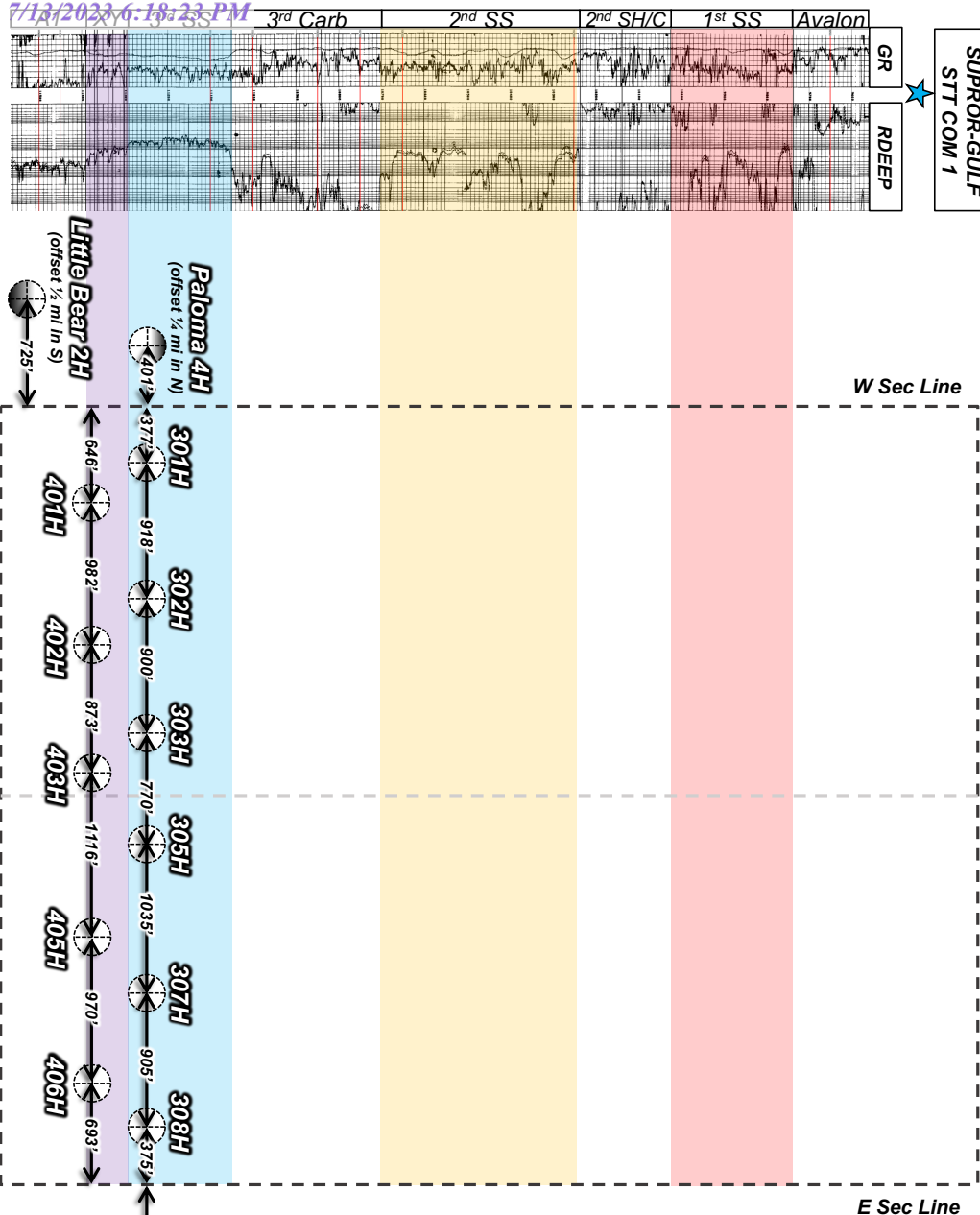


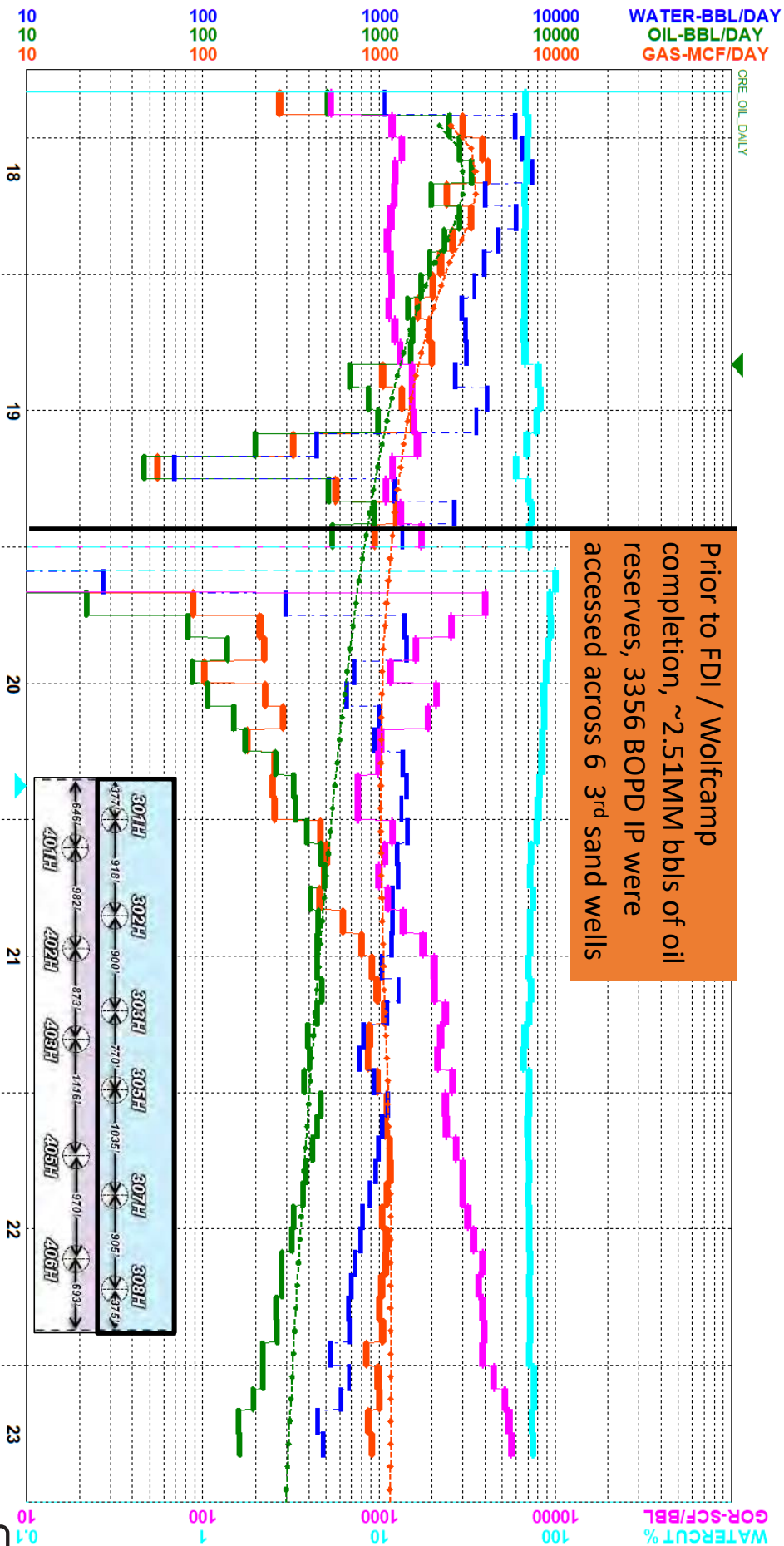
EXHIBIT
C-4



Hanson 26
Fed 1H



Black and Tan 3rd Sand Composite Forecast 6 Wells (Before WC completion)



Results	
Qual	EUR
Ref	5/1/2019
Vact	681,000
West	1274,272
Obeg	1323,258
Oab	0.000
"g"	0.000000
De	0.000000
Dmn	0.000
Yrs	49,167
Rem	1796744
Cum	750229
EUR	2506973

EXHIBIT
C-5



Black and Tan 3rd Sand Composite Forecast 6 Wells Post Wolfcamp Frac

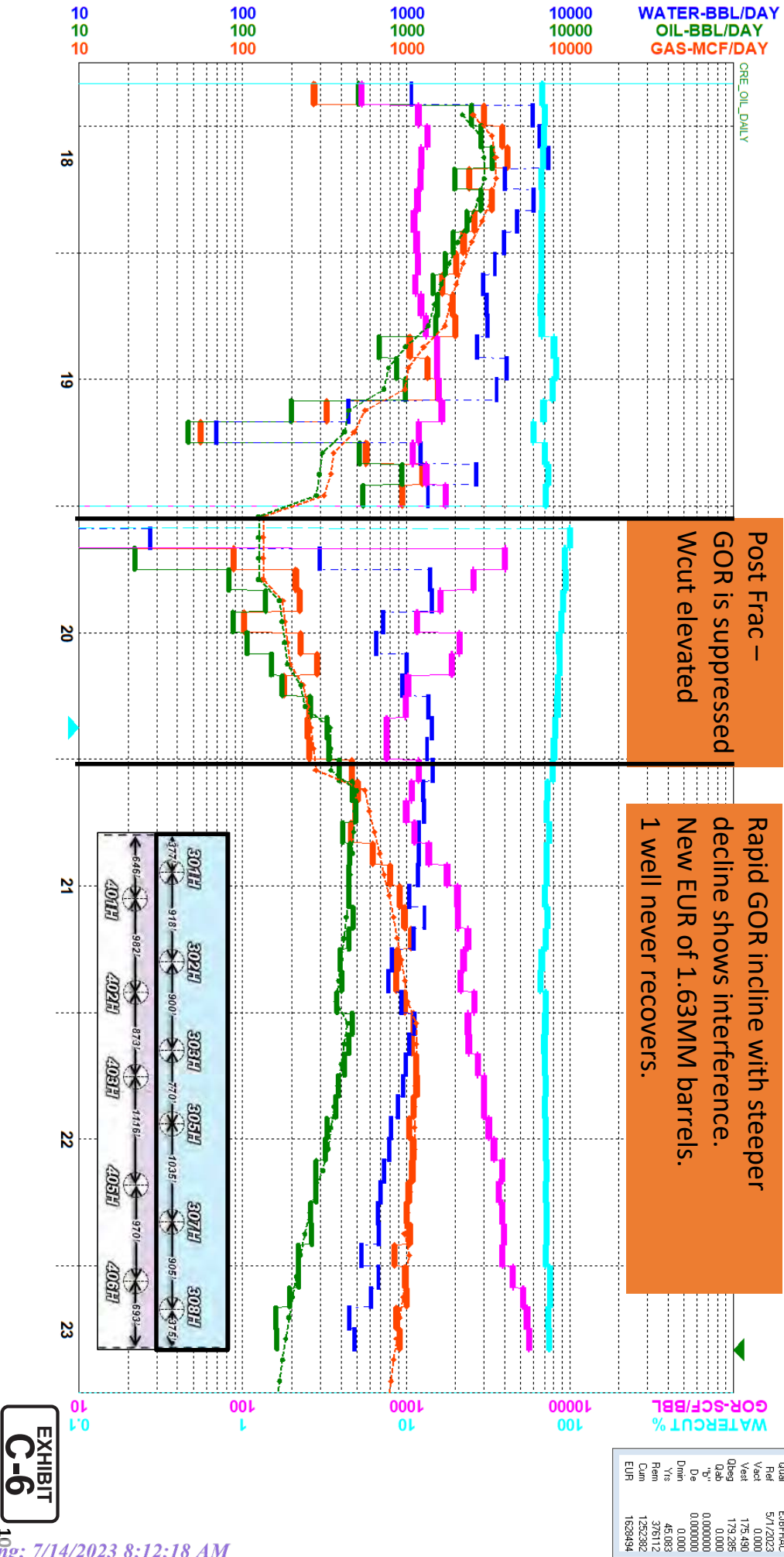


EXHIBIT
C-6



Black and Tan Wolfcamp Composite Forecast 5 Wells

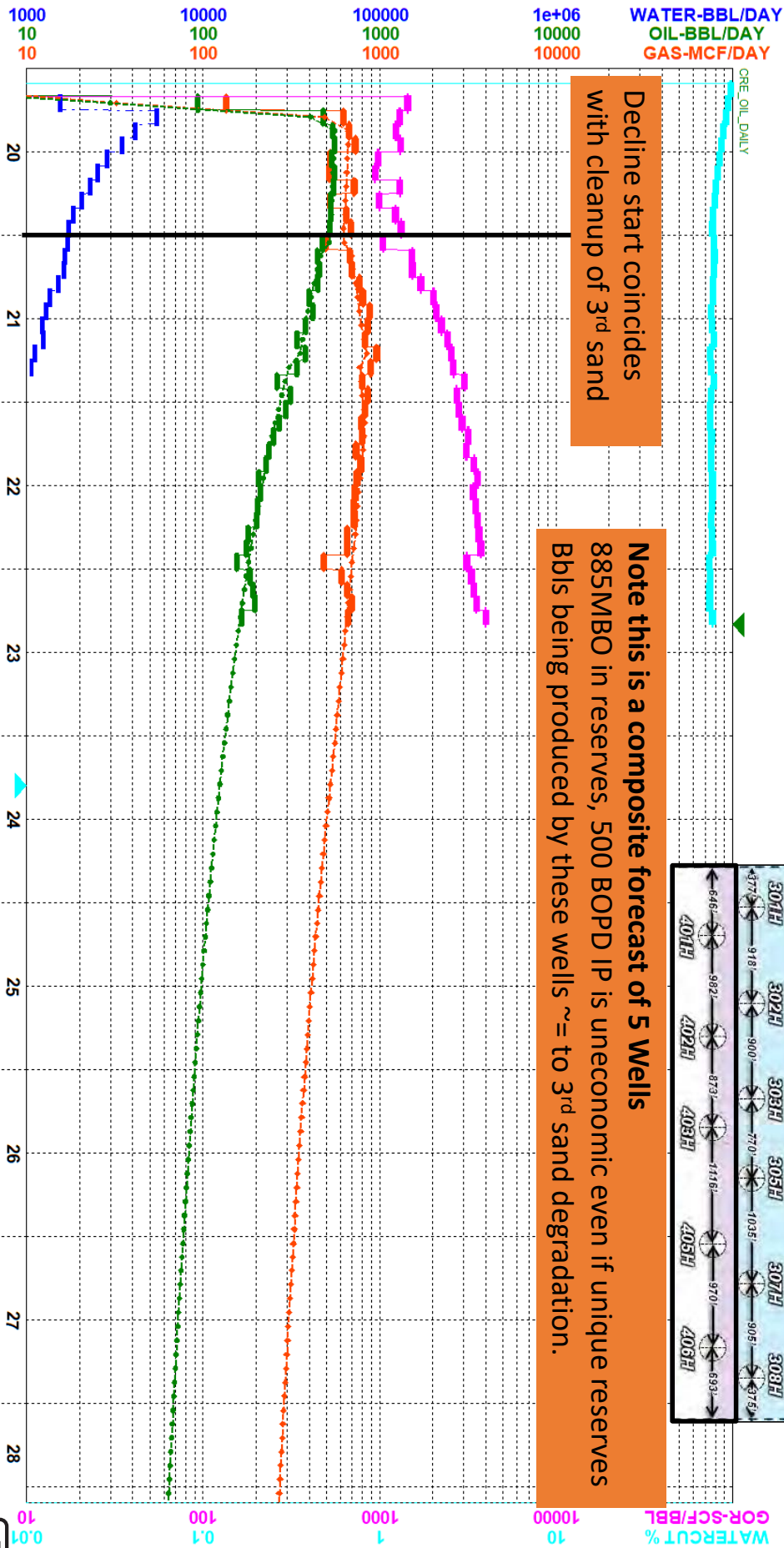


EXHIBIT
C-7



Lessons Learned from the Black and Tan Development

PROJECT = Black & Tan 27		
30025461240000	BLACK & TAN 27 FEDERAL COM #405H BLACK & TAN 27 FEDERAL COM I WOLFCAMP A I APACHE CORP I LEA I 4583 I 09/01/2019 I 02/26/2020 I 0EF33AE781	Completed 2nd
30025460720000	BLACK & TAN 27 FEDERAL COM #401H BLACK & TAN 27 FEDERAL COM I WOLFCAMP A I APACHE CORP I LEA I 4666 I 10/19/2019 I 01/22/2020 I AFD8F0925C	
30025460730000	BLACK & TAN 27 FEDERAL COM #402H BLACK & TAN 27 FEDERAL COM I WOLFCAMP SANDS XY SAND I APACHE CORP I LEA I 4561 I 08/17/2019 I 02/26/2020 I B4C53386	
30025461230000	BLACK & TAN 27 FEDERAL COM #403H BLACK & TAN 27 FEDERAL COM I WOLFCAMP SANDS XY SAND I APACHE CORP I LEA I 4629 I 09/08/2019 I 02/26/2020 I 607292AC	
30025460750000	BLACK & TAN 27 FEDERAL COM #406H BLACK & TAN 27 FEDERAL COM I WOLFCAMP SANDS XY SAND I APACHE CORP I LEA I 4694 I 09/29/2019 I 02/26/2020 I F44F2545	
30025440180000	BLACK & TAN 27 FEDERAL COM #302H BLACK & TAN 27 FEDERAL COM I 3RD BONE SPRING SAND I APACHE CORP I LEA I 4416 I 12/11/2017 I 06/01/2018 I 163AC020E2	Completed 1st
30025440170000	BLACK & TAN 27 FEDERAL COM #301H BLACK & TAN 27 FEDERAL COM I 3RD BONE SPRING SAND I APACHE CORP I LEA I 4526 I 11/15/2017 I 06/01/2018 I 40288A1B23	
30025439210100	BLACK & TAN 27 FEDERAL COM #303H BLACK & TAN 27 FEDERAL COM I 3RD BONE SPRING SAND I APACHE CORP I LEA I 4360 I 10/24/2017 I 05/18/2018 I 748D250B4E	
30025439400000	BLACK & TAN 27 FEDERAL COM #305H BLACK & TAN 27 FEDERAL COM I 3RD BONE SPRING SAND I APACHE CORP I LEA I 4524 I 03/17/2018 I 05/23/2018 I A635466807	
30025440400000	BLACK & TAN 27 FEDERAL COM #307H BLACK & TAN 27 FEDERAL COM I 3RD BONE SPRING SAND I APACHE CORP I LEA I 4303 I 01/07/2018 I 05/16/2018 I CF72E02929	
30025440450000	BLACK AND TAN 27 FEDERAL COM #308H BLACK AND TAN 27 FEDERAL COM I 3RD BONE SPRING SAND I APACHE CORP I LEA I 4340 I 01/30/2018 I 05/05/2018 I A7CD7	

WC vs. 3rd sand comparison shows stagger is capital waste

- 3rd sand IP is > 6 X Wolfcamp
- Wolfcamp oil rate ~ = to 3rd sand rate decrease
- Wolfcamp reserves ~ = to 3rd sand EUR decrease
- 5 Wolfcamp wells added ~ 0 additional bbls

Table 1.0 Comparison of 3rd sand to Wolfcamp		3rd Sand			Wolfcamp	(Wolfcamp - 3rd Sand Delta) = value added from 5 wells
IP30 BOPD	3rd Bone Spring	3rd Bone frac	3rd Bone Post	3rd Sand Delta	555	NA
Pre vs. Post frac oil rate BOPD	950	500		-450	+555	105
EUR MMBO	2.51	1.63		-0.88	+0.89	0.01

3rd sand is the landing for this single bench target

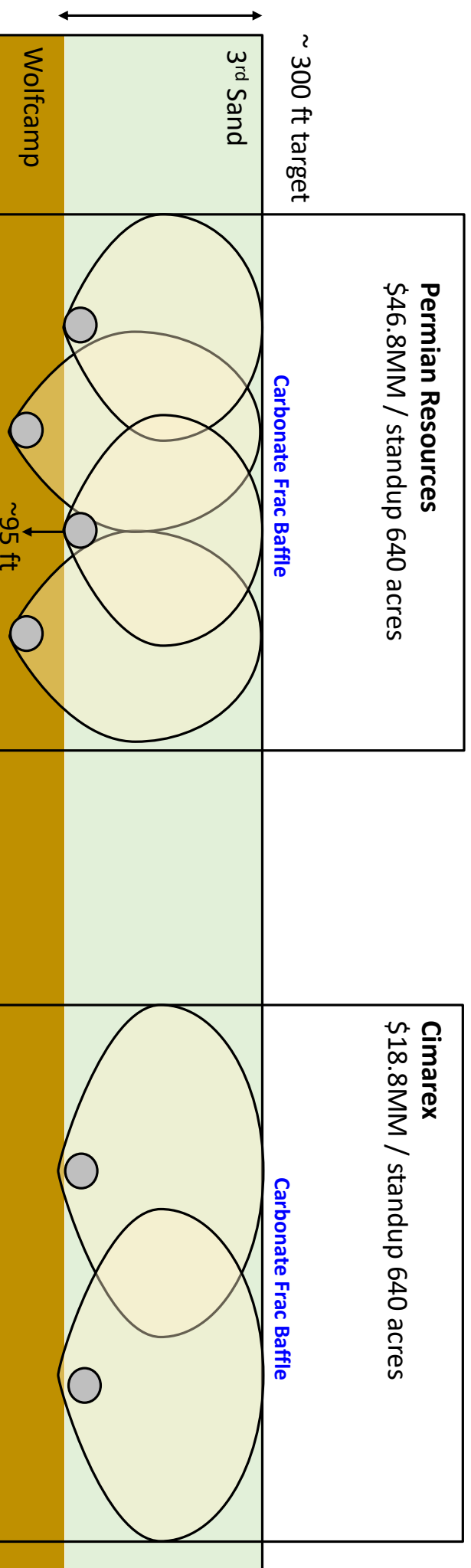
- 268% Phi H vs. Wolfcamp
- 3rd sand delta compounded by being cleaner with better flow property's than the Wolfcamp

Table 1.1 Analog Comparison		3rd Sand	Wolfcamp	3rd SS % of total	3rd / Wolfcamp Comparison %
PHIH	26.75	10	72.8	268	

EXHIBIT
C-8



Diagram of Staggered Landing Wolfcamp + 3rd SS vs. 3rd SS Flat



- Cimarex has experience developing as many as 8 landings within a DSU successfully in Lea county with 9th drilling now, 35 to 38 wells / section. The difference is the combination of geology (barriers, reservoir height, and flow units) don't support the proposed staggers at Mighty Pheasant Loosey Goosey as demonstrated by area developments like Black and Tan. 3rd and Wolfcamp landed this close together are equivalent to 8 WPS flat in the 3rd Sand, double the AOI proven density. A wealth of data from the DOE and industry funded Hydraulic Fracture Test Site 2 supports an upper Wolfcamp buffer zone in this specific location to protect proven 3rd Sand correlative rights and prevent capital waste.

EXHIBIT
C-9

Black and Tan Analog Comparison To MP/LG

Table 1.2

Analog Comparison	Black and Tan			Mighty Pheasant Loosey Goosey		
	3rd Sand	Wolfcamp	3rd SS % of total	3rd Sand	Wolfcamp	3rd SS % of total
PHIH	22	7	76	27	10	73

- Contested acreage is expected to outperform Black and Tan 2.5MMbo / 640-acre Technical EUR by ~20%
- Over performance driven by improved PHIH of 3rd sand. 27/22 = 122%.
- Sensitivities highlight impact of capital waste given 0% uplift on Black and Tan Wolfcamp 3rd SS analog
 - Table 1.3 - Wolfcamp must add ~40% reserves to break even vs Cimarex Development at P90 reserves case
 - Table 1.4 - Wolfcamp must add ~31% reserves to break even vs. Cimarex Development at SM business case
 - Neither Table 1.3 or 1.4 increase in performance is reasonable to expect given public data

Table 1.3 Reserves Economic Comparison 10MM Technical EUR DSU

Table 1.3 Reserves Economic Comparison 10MM Technical EUR DSU						
\$65 flat analysis at Cimarex WI & NRI			Permian		Cimarex	
Reserves	IP	Economic EUR MBO	PV10 \$MM	Payout months	PV10 \$MM	Payout months
100%	14,738	8,860	14.7	43	41.8	12
110% expected	16,212	9,820	21.4	33		
120% expected	17,685	10,780	28.2	26		
130% expected	19,159	11,740	34.9	23		
140% expected	20,633	12,700	41.5	21		

Table 1.4 Development Comparison 12MM Technical EUR DSU

Table 1.4 Development Comparison 12MM Technical EUR DSU						
\$65 flat analysis at Cimarex WI & NRI			Permian		Cimarex	
12 MM EUR	IP	Economic EUR MBO	PV10 \$MM	Payout months	PV10	Payout months
100%	18,897	11,026	34.8	23	61.9	10
110% expected	20,787	12,987	43.6	20		
120% expected	22,676	14,233	52.3	18		
130% expected	24,566	15,480	61	16		
140% expected	26,456	16,727	69.7	15		

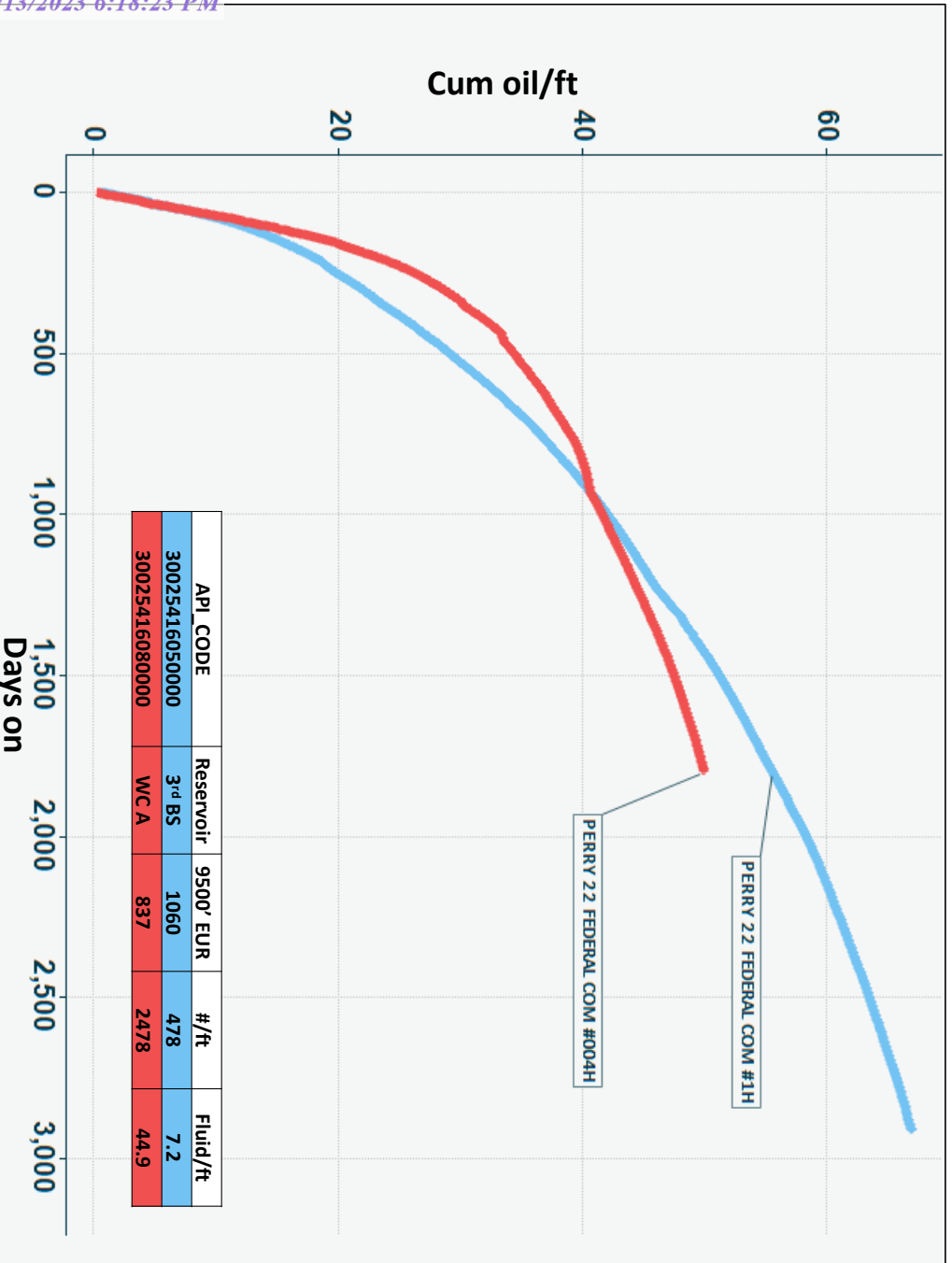
- In order to create equivalent PV10, Wolfcamp landings must add ~40% more reserves vs reserves estimate (table 1.3) and 31% more reserves vs. P50 expectation (table 1.4). This outcome is unrealistic vs. observed results.
- Cimarex lower terminal fixed OpEx + less well degradation results in 9.1MM EUR vs. Permian 8.9MM EUR at 100% reserves expectation.
- The Cimarex plan self-funds annual drilling after first batch of wells supporting rapid development
- Permian plan supports slower development speed

EXHIBIT
C-10

14



Landing Zone Matters; 5 Years Ago, Cimarex's Perry Test Confirmed 3rd SS Landing as Best Target



- Note: 5 to 6 x the frac energy is not as important as the right landing zone.**
- The Perry 1H 2014 vintage 3rd sand well outperforms modern 2018 Perry 4H Wolfcamp completion in the same section at better oil cut 1 mile south of contested development area.
 - The best flow properties and majority of bbls are best accessed from the 3rd sand where they are located

EXHIBIT
C-11

Exhibit C12 3rd SS WC API List

Exhibit C12 API list			
UWI (APINum)	Well Label	Operator	Formation
30025024240100	LEA UNIT 4H	LEGACY RESERVES OPERATING LP	3rd SS
30025328180000	MALLON `34` FEDERAL 16	CIMAREX ENERGY CO	3rd SS
30025393820100	MALLON 35 FEDERAL 4H	CIMAREX ENERGY CO	3rd SS
30025395550000	TUSK FEDERAL 2H	COG OPERATING LLC	3rd SS
30025397630100	MALLON 34 FEDERAL 18H	CIMAREX ENERGY CO	3rd SS
30025398940100	MALLON 34 FEDERAL 19	CIMAREX ENERGY CO	3rd SS
30025400350000	AIRCOBRA 12 STATE 002H	COG OPERATING LLC	3rd SS
30025400400000	QUAIL RIDGE 32 STATE 3H	CIMAREX ENERGY CO	3rd SS
30025400860000	MALLON 35 FEDERAL 7H	CIMAREX ENERGY CO	3rd SS
30025401150000	LYNCH 23 FEDERAL 1H	CIMAREX ENERGY CO	3rd SS
30025401230000	LYNCH 23 FEDERAL 2H	CIMAREX ENERGY CO	3rd SS
30025401350000	MALLON 34 FEDERAL 20	CIMAREX ENERGY CO	3rd SS
30025402530100	CHAPARRAL 33 FEDERAL 3H	CIMAREX ENERGY CO	3rd SS
30025403270000	HANSON 26 FEDERAL 1H	CIMAREX ENERGY CO	3rd SS
30025403280000	CHAPARRAL 33 FEDERAL COM 4	CIMAREX ENERGY CO	3rd SS
30025403300000	EAGLE `2` STATE 006H	MATADOR PRODUCTION CO	3rd SS
30025403610000	QUAIL `16` STATE COM 003H	FASKEN OIL & RANCH LTD	3rd SS
30025403880100	KING COBRA 2 STATE 1H	COG OPERATING LLC	3rd SS
30025403970000	AIRSTRIIP 6 STATE COM 2H	COG OPERATING LLC	3rd SS
30025404040000	WILD COBRA 1 STATE 2H	COG OPERATING LLC	3rd SS
30025404050100	PLAYA 2 STATE 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025404250000	WEST PEARL 36 STATE 002H	COG OPERATING LLC	3rd SS
30025404300000	TIGER `11` FEDERAL 1H	COG OPERATING LLC	3rd SS
30025405310000	QUAIL `16` STATE 004H	FASKEN OIL & RANCH LTD	3rd SS
30025405490000	PLAYA 2 STATE 002H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406040100	IGLOO 19 STATE 2H	CAZA OPERATING LLC	3rd SS
30025406110000	IRONHOUSE 20 STATE 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406340000	BUTTER CUP 35 STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406370000	HANSON 26 FEDERAL 3H	CIMAREX ENERGY CO	3rd SS
30025406400000	BUTTER CUP 36 STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406410000	BUTTER CUP 36 STATE COM 002H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406420000	BUTTER CUP 35 STATE COM 002H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406760100	IRONHOUSE 19 STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025406970000	LAGUNA 23 FEDERAL COM 002H	EARTHSTONE OPERATING LLC	3rd SS
30025406980100	LEA UNIT 30H	LEGACY RESERVES OPERATING LP	3rd SS
30025406990100	LEA UNIT 31H	LEGACY RESERVES OPERATING LP	3rd SS
30025407250100	OUTLAW `22` FEDERAL COM 1H	COG OPERATING LLC	3rd SS
30025407270000	MONGOOSE FEE 001H	MATADOR PRODUCTION CO	3rd SS
30025407420000	LAGUNA 23 FEDERAL COM 1H	EARTHSTONE OPERATING LLC	3rd SS
30025407480000	IRONHOUSE 20 STATE COM 002H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025407500000	LYNCH 35-2H	CIMAREX ENERGY CO	3rd SS
30025407780100	PRICKLY PEAR 6 FEDERAL 4H	COG OPERATING LLC	3rd SS
30025408040000	HANSON 26 FEDERAL 4H	CIMAREX ENERGY CO	3rd SS
30025408140100	CONDOR STATE 001H	COG OPERATING LLC	3rd SS
30025408190000	HANSON 26 FEDERAL 2H	CIMAREX ENERGY CO	3rd SS
30025408250000	LYNCH 35 FEE 1H	CIMAREX ENERGY CO	3rd SS
30025408360000	MERIT 32 DM STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025408410000	QUAIL 11 STATE COM 1H	CIMAREX ENERGY CO	3rd SS
30025408420000	QUAIL 11 STATE COM 2H	CIMAREX ENERGY CO	3rd SS
30025408750000	AIRCOBRA 12 STATE 1H	COG OPERATING LLC	3rd SS

EXHIBIT
C-12

Exhibit C12 3rd SS WC API List

30025408840000	MERIT 6 EH STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025409420000	QUAIL '16' STATE 007H	FASKEN OIL & RANCH LTD	3rd SS
30025409700000	STRATOJET 31 STATE COM 2H	COG OPERATING LLC	3rd SS
30025409770100	TRES PRIMOS 3 STATE 1H	COG OPERATING LLC	3rd SS
30025409840000	MARATHON ROAD 14 NC FEDERAL 1H	MEWBOURNE OIL CO	3rd SS
30025410250000	CONDOR STATE 2H	COG OPERATING LLC	3rd SS
30025410500000	IRONHOUSE 19 STATE COM 003H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025410600000	KING COBRA 2 STATE 2H	COG OPERATING LLC	3rd SS
30025410940000	IRONHOUSE 19 STATE COM 002H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025411060100	GOOSE STATE 001H	COG OPERATING LLC	3rd SS
30025411100000	WILD COBRA 1 STATE 1H	COG OPERATING LLC	3rd SS
30025411310000	PERLA NEGRA FEDERAL COM 1H	XTO ENERGY INC	3rd SS
30025411410000	QUAIL 11 STATE COM 3H	CIMAREX ENERGY CO	3rd SS
30025411480100	CAPROCK 27 STATE FEDERAL COM 1H	RAYBAW OPERATING LLC	3rd SS
30025411520000	AIRSTRIPE FEE COM 1H	COG OPERATING LLC	3rd SS
30025411630000	IRONHOUSE 24 STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025412010000	GOOSE STATE COM 2H	COG OPERATING LLC	3rd SS
30025412100100	QUAIL 11 STATE COM 4H	CIMAREX ENERGY CO	3rd SS
30025412150000	MARATHON ROAD 14 MD FEDERAL 1H	MEWBOURNE OIL CO	3rd SS
30025412450200	IRONHOUSE '19' STATE COM 004H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025413050100	HAMON A FEDERAL COM 3H	LEGACY RESERVES OPERATING LP	3rd SS
30025413580100	TUSK FEDERAL 4H	COG OPERATING LLC	3rd SS
30025413660000	QUAIL '16' STATE 8H	FASKEN OIL & RANCH LTD	3rd SS
30025413670100	LEA SOUTH 25 FEDERAL COM 5H	EARTHSTONE OPERATING LLC	3rd SS
30025415190100	NIGHTHAWK STATE COM 1H	MARATHON OIL PERMIAN LLC	3rd SS
30025415320000	SCHARB 10 PA STATE 1H	MEWBOURNE OIL CO	3rd SS
30025415440000	ALBATROSS STATE COM 2H	COG OPERATING LLC	3rd SS
30025415620000	TANGO BTP STATE COM 004H	EOG RESOURCES INC	3rd SS
30025415720100	PRICKLY PEAR 6 FEDERAL 2H	COG OPERATING LLC	3rd SS
30025415730000	TUSK FEDERAL 3H	COG OPERATING LLC	3rd SS
30025415740000	TUSK FEDERAL 5H	COG OPERATING LLC	3rd SS
30025415750000	MARATHON ROAD 15 PA FEDERAL 1H	MEWBOURNE OIL CO	3rd SS
30025415950000	IRONHOUSE 24 STATE COM 002H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025416050000	PERRY 22 FEDERAL COM 1H	CIMAREX ENERGY CO	3rd SS
30025416120100	ORIOLE STATE 1H	COG OPERATING LLC	3rd SS
30025416170000	HAMON A FEDERAL COM 4H	LEGACY RESERVES OPERATING LP	3rd SS
30025416290000	PRICKLY PEAR 6 FEDERAL 3H	COG OPERATING LLC	3rd SS
30025416300100	HAMON FEDERAL COM A 2H	LEGACY RESERVES OPERATING LP	3rd SS
30025416440000	LYNCH 35 FED COM 3H	CIMAREX ENERGY CO	3rd SS
30025416950000	IRONHOUSE 24 STATE COM 003H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025416960000	IRONHOUSE 24 STATE COM 004H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025417140000	TOMCAT FEE 1H	COG OPERATING LLC	3rd SS
30025417520000	CUATRO HIJOS FEE 4H	COG OPERATING LLC	3rd SS
30025417750000	SCHARB 10 B3OB STATE 1H	MEWBOURNE OIL CO	3rd SS
30025418080000	MALLON 27 FEDERAL COM 003H	MATADOR PRODUCTION CO	3rd SS
30025418090000	ALBATROSS STATE COM 1H	COG OPERATING LLC	3rd SS
30025418330000	TIGER 11 FEDERAL 2H	COG OPERATING LLC	3rd SS
30025418340000	CORDONIZ 28 FEDERAL COM 4H	CIMAREX ENERGY CO	3rd SS
30025418350000	KINGFISHER STATE COM 1H	COG OPERATING LLC	3rd SS
30025418360000	KINGFISHER STATE COM 2H	COG OPERATING LLC	3rd SS
30025418580000	TEAL 12 STATE 2H	CIMAREX ENERGY CO	3rd SS
30025418610000	PERLA VERDE 31 STATE 2H	XTO ENERGY INC	3rd SS

Exhibit C12 3rd SS WC API List

30025418620000	PERLA VERDE 31 STATE 003H	XTO ENERGY INC	3rd SS
30025418630000	PERLA VERDE 31 STATE 4H	XTO ENERGY INC	3rd SS
30025418790000	CHAPARRAL 33 FEDERAL COM 5H	CIMAREX ENERGY CO	3rd SS
30025418980000	LEA SOUTH 25 FEDERAL COM 6H	EARTHSTONE OPERATING LLC	3rd SS
30025419450000	MARATHON ROAD 15 B3OB FEDERAL 1H	MEWBOURNE OIL CO	3rd SS
30025419470000	PALOMA 21 FEDERAL COM 4H	FASKEN OIL & RANCH LTD	3rd SS
30025419860000	SCHARB 10 B3NC STATE 1H	MEWBOURNE OIL CO	3rd SS
30025419870100	SUPER COBRA STATE COM 1H	COG OPERATING LLC	3rd SS
30025419930000	PALOMA 21 FEDERAL COM 1H	FASKEN OIL & RANCH LTD	3rd SS
30025419940000	PALOMA 21 FEDERAL COM 2H	FASKEN OIL & RANCH LTD	3rd SS
30025419950000	PALOMA 21 FEDERAL COM 3H	FASKEN OIL & RANCH LTD	3rd SS
30025420340000	STRATOSPHERE 36 STATE COM 3H	COG OPERATING LLC	3rd SS
30025420350000	STRATOSPHERE 36 STATE COM 4H	COG OPERATING LLC	3rd SS
30025420360000	STRATOSPHERE 36 STATE COM 5H	COG OPERATING LLC	3rd SS
30025420370000	STRATOSPHERE 36 STATE COM 6H	COG OPERATING LLC	3rd SS
30025420630000	PERLA VERDE 31 STATE 001H	XTO ENERGY INC	3rd SS
30025420800000	NORTH LEA `3` FEDERAL COM 001H	READ & STEVENS INC	3rd SS
30025421290000	TRES PRIMOS 3 STATE 2H	COG OPERATING LLC	3rd SS
30025421410000	PEARL WEST 36 STATE COM 6H	COG OPERATING LLC	3rd SS
30025421450000	WEST PEARL 36 STATE COM 003H	COG OPERATING LLC	3rd SS
30025421460000	PEARL WEST 36 STATE COM 4H	COG OPERATING LLC	3rd SS
30025421470000	WEST PEARL 36 STATE COM 005H	COG OPERATING LLC	3rd SS
30025421730000	RAPTOR WEST 3 STATE 004H	MARATHON OIL PERMIAN LLC	3rd SS
30025422010000	MARATHON ROAD 15 NC FEDERAL 1H	MEWBOURNE OIL CO	3rd SS
30025422120000	MALLON 27 FEDERAL COM 001H	MATADOR PRODUCTION CO	3rd SS
30025422270000	NORTH LEA 3 FEDERAL COM 002H	READ & STEVENS INC	3rd SS
30025422280000	NORTH LEA `3` FEDERAL COM 003H	READ & STEVENS INC	3rd SS
30025422680000	LEA 7 FEDERAL COM 1H	CIMAREX ENERGY CO	3rd SS
30025422760000	CUATRO HIJOS FEE 3H	COG OPERATING LLC	3rd SS
30025422920000	BLACK PEARL 1 FEDERAL COM 1H	COG OPERATING LLC	3rd SS
30025422930000	BLACK PEARL 1 FEDERAL 002H	COG OPERATING LLC	3rd SS
30025422940000	BLACK PEARL 1 FEDERAL 3H	COG OPERATING LLC	3rd SS
30025422950000	BLACK PEARL 1 FEDERAL 4H	COG OPERATING LLC	3rd SS
30025423150000	MALLON 27 FEDERAL COM 2H	MATADOR PRODUCTION CO	3rd SS
30025423380100	BLUE JAY FEDERAL 001H	COG OPERATING LLC	3rd SS
30025423420000	LEA UNIT 32H	LEGACY RESERVES OPERATING LP	3rd SS
30025423430000	LEA UNIT 33H	LEGACY RESERVES OPERATING LP	3rd SS
30025423440000	LEA UNIT 34H	LEGACY RESERVES OPERATING LP	3rd SS
30025423520000	CIMARRON 16-19-34 RN STATE 134H	MATADOR PRODUCTION CO	3rd SS
30025423570100	IGLOO `19` STATE 3H	CAZA OPERATING LLC	3rd SS
30025423670000	BUTTER CUP 36 STATE COM 003H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025423770000	IGGLES STATE COM 001H	COG OPERATING LLC	3rd SS
30025424300000	STRATOJET 31 STATE COM 8H	COG OPERATING LLC	3rd SS
30025424720000	KINGFISHER STATE COM 5H	COG OPERATING LLC	3rd SS
30025424990000	PICKARD 20 18 34 RN STATE 124H	MATADOR PRODUCTION CO	3rd SS
30025425210000	SCHARB 10 B3MD STATE 1H	MEWBOURNE OIL CO	3rd SS
30025425460000	LEA 7 FEDERAL COM 2H (P&A 12/27/	CIMAREX ENERGY CO	3rd SS
30025425770000	PERLA NEGRA FEDERAL COM 4H	XTO ENERGY INC	3rd SS
30025426840000	NORTH LEA `3` FEDERAL COM 004H	READ & STEVENS INC	3rd SS
30025427090000	PERLA NEGRA FEDERAL COM 2H	XTO ENERGY INC	3rd SS
30025427100000	PERLA NEGRA FEDERAL COM 3H	XTO ENERGY INC	3rd SS
30025428850000	LEA UNIT 44H	LEGACY RESERVES OPERATING LP	3rd SS

Exhibit C12 3rd SS WC API List

30025429490000	LEA UNIT 54H	LEGACY RESERVES OPERATING LP	3rd SS
30025429500000	MAS FEDERAL 3H	COG OPERATING LLC	3rd SS
30025429580000	LEA UNIT 051H	LEGACY RESERVES OPERATING LP	3rd SS
30025429720000	DESERT ROSE 17-8 FEDERAL COM 001	CAZA OPERATING LLC	3rd SS
30025429790000	CIMARRON 16 19S 34E RN STATE COM	MATADOR PRODUCTION CO	3rd SS
30025429880100	EAGLECLAW FEDERAL 001H	CAZA OPERATING LLC	3rd SS
30025430290000	LEA SOUTH 25 FEDERAL COM 3BS 007	EARTHSTONE OPERATING LLC	3rd SS
30025430350000	LEA UNIT 059H	LEGACY RESERVES OPERATING LP	3rd SS
30025430540000	DELLA 29 FEDERAL COM 602H	EOG RESOURCES INC	3rd SS
30025430770000	LEA UNIT 038H	LEGACY RESERVES OPERATING LP	3rd SS
30025432470100	LEA UNIT 062H	LEGACY RESERVES OPERATING LP	3rd SS
30025432500000	HAMON A FED COM 009H	LEGACY RESERVES OPERATING LP	3rd SS
30025434150000	SEVERUS 31 FEDERAL COM 001H	XTO ENERGY INC	3rd SS
30025434160000	SEVERUS 31 FEDERAL COM 002H	XTO ENERGY INC	3rd SS
30025434170000	SEVERUS 31 FEDERAL COM 003H	XTO ENERGY INC	3rd SS
30025434180000	SEVERUS 31 FEDERAL COM 004H	XTO ENERGY INC	3rd SS
30025434680100	CHIEF 30 STATE 7H	CIMAREX ENERGY CO	3rd SS
30025435330000	BLUE JAY FEDERAL COM 002H	COG OPERATING LLC	3rd SS
30025436800000	NORTH LEA 10 FEDERAL 002H	READ & STEVENS INC	3rd SS
30025437410000	ESPEJO FEDERAL COM 001H	XTO ENERGY INC	3rd SS
30025437420000	ESPEJO FEDERAL COM 002H	XTO ENERGY INC	3rd SS
30025437770000	ESPEJO FEDERAL COM 003H	XTO ENERGY INC	3rd SS
30025437920000	STRATOJET 31 STATE COM 007H	COG OPERATING LLC	3rd SS
30025438160100	AIRSTRIIP 31 18 35 RN STATE COM #132H	MATADOR PRODUCTION CO	3rd SS
30025439210100	BLACK & TAN 27 FEDERAL COM 303H	APACHE CORP	3rd SS
30025439400000	BLACK & TAN 27 FEDERAL COM 305H	APACHE CORP	3rd SS
30025440170000	BLACK & TAN 27 FEDERAL COM 301H	APACHE CORP	3rd SS
30025440180000	BLACK & TAN 27 FEDERAL COM 302H	APACHE CORP	3rd SS
30025440440000	BLACK & TAN 27 FEDERAL COM 307H	APACHE CORP	3rd SS
30025440450000	BLACK AND TAN 27 FEDERAL COM 308	APACHE CORP	3rd SS
30025440920000	MAS FEDERAL COM 001H	COG OPERATING LLC	3rd SS
30025442130000	CHIEF 30 STATE 8H	CIMAREX ENERGY CO	3rd SS
30025443230000	AIRSTRIIP 31-18-35 RN STATE COM 1	MATADOR PRODUCTION CO	3rd SS
30025443410000	VERNA RAE FEDERAL COM 133H	MATADOR PRODUCTION CO	3rd SS
30025443420000	VERNA RAE FEDERAL COM 134H	MATADOR PRODUCTION CO	3rd SS
30025444740000	DELLA 29 FEDERAL COM 603H	EOG RESOURCES INC	3rd SS
30025444750000	DELLA 29 FEDERAL 604H	EOG RESOURCES INC	3rd SS
30025444760000	DELLA 29 FEDERAL 605H	EOG RESOURCES INC	3rd SS
30025444770000	DELLA 29 FEDERAL 606H	EOG RESOURCES INC	3rd SS
30025444950000	EAGLECLAW FEDERAL COM 002H	CAZA OPERATING LLC	3rd SS
30025445090000	AIRSTRIIP 31-18-35 RN STATE COM 1	MATADOR PRODUCTION CO	3rd SS
30025449080000	CHIEF 30 STATE 9H	CIMAREX ENERGY CO	3rd SS
30025450540000	MESCALERO RIDGE 21 FEDERAL 1H	CIMAREX ENERGY CO	3rd SS
30025451540000	LEA UNIT 066H	LEGACY RESERVES OPERATING LP	3rd SS
30025451990000	LEA 7 FEDERAL COM 29H	CIMAREX ENERGY CO	3rd SS
30025452000000	LEA 7 FEDERAL COM 30H	CIMAREX ENERGY CO	3rd SS
30025452100000	LEA UNIT 065H	LEGACY RESERVES OPERATING LP	3rd SS
30025454380000	AIRSTRIIP 31-18S-35E RN STATE COM	MATADOR PRODUCTION CO	3rd SS
30025458960000	ANCHOR 19 35 33 STATE 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025461400000	CABLE 19 35 9 STATE COM 001H	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025467680000	HEREFORD 29-20 W10B FED COM 001H	MEWBOURNE OIL CO	3rd SS
30025468030000	SANTA VACA 19-18 B3MD STATE COM	MEWBOURNE OIL CO	3rd SS

Exhibit C12 3rd SS WC API List

30025474570000	TALON 5-8 FEDERAL 001H	CAZA OPERATING LLC	3rd SS
30025474830000	HEREFORD 29-20 W1MD STATE COM 00	MEWBOURNE OIL CO	3rd SS
30025474840000	HEREFORD 29-20 W1NC STATE COM 00	MEWBOURNE OIL CO	3rd SS
30025474860000	TALON 5-8 FEDERAL 005H	CAZA OPERATING LLC	3rd SS
30025491550000	SANTA VACA 19 18 B3NC STATE COM	MEWBOURNE OIL CO	3rd SS
30025499040000	CHAROLAIS 28 21 W1MD STATE COM 0	MEWBOURNE OIL CO	3rd SS
30025499350000	HEREFORD 29 20 W1PA STATE COM 00	MEWBOURNE OIL CO	3rd SS
30025501680000	FOXTAIL E2 05 32 W1 STATE COM 00	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025501690000	FOXTAIL E2 05 32 W1 STATE COM 00	FRANKLIN MOUNTAIN ENERGY 3 LLC	3rd SS
30025502420000	SANTA VACA 19-18 B3OB FEE 001H	MEWBOURNE OIL CO	3rd SS
30025503260000	SANTA VACA 19-18 B3PA FEE 001H	MEWBOURNE OIL CO	3rd SS
30025507240000	MESCALERO RIDGE 21-28 FED COM 2H	CIMAREX ENERGY CO	3rd SS
30025416080000	PERRY 22 FEDERAL COM 4H	CIMAREX ENERGY CO	Wolfcamp
30025419500000	NIGHTHAWK STATE COM 003H	MARATHON OIL PERMIAN LLC	Wolfcamp
30025430530000	DELLA 29 FEDERAL COM 701H	EOG RESOURCES INC	Wolfcamp
30025431100000	LEA SOUTH 25 FEDERAL COM WCA 012	EARTHSTONE OPERATING LLC	Wolfcamp
30025433950000	AIRSTRIIP 31 18 35 RN STATE COM 2	MATADOR PRODUCTION CO	Wolfcamp
30025434820000	MAS FEDERAL 4H	COG OPERATING LLC	Wolfcamp
30025442140100	MAS FEDERAL COM 002H	COG OPERATING LLC	Wolfcamp
30025444940000	VERNA RAE FEDERAL COM 204H	MATADOR PRODUCTION CO	Wolfcamp
30025450980100	LITTLE BEAR FEDERAL COM 001H	COG OPERATING LLC	Wolfcamp
30025450990000	LITTLE BEAR FEDERAL COM 003H	COG OPERATING LLC	Wolfcamp
30025451000000	LITTLE BEAR FEDERAL COM 004H	COG OPERATING LLC	Wolfcamp
30025451020000	LITTLE BEAR FEDERAL COM 006H	COG OPERATING LLC	Wolfcamp
30025451030000	LITTLE BEAR FEDERAL COM 007H	COG OPERATING LLC	Wolfcamp
30025451040000	LITTLE BEAR FEDERAL COM 008H	COG OPERATING LLC	Wolfcamp
30025451050000	LITTLE BEAR FEDERAL COM 009H	COG OPERATING LLC	Wolfcamp
30025451490000	LITTLE BEAR FEDERAL COM 002H	COG OPERATING LLC	Wolfcamp
30025452110100	LEA UNIT 100H	LEGACY RESERVES OPERATING LP	Wolfcamp
30025460720000	BLACK & TAN 27 FEDERAL COM 401H	APACHE CORP	Wolfcamp
30025460730000	BLACK & TAN 27 FEDERAL COM 402H	APACHE CORP	Wolfcamp
30025460750000	BLACK & TAN 27 FEDERAL COM 406H	APACHE CORP	Wolfcamp
30025461230000	BLACK & TAN 27 FEDERAL COM 403H	APACHE CORP	Wolfcamp
30025461240000	BLACK & TAN 27 FEDERAL COM 405H	APACHE CORP	Wolfcamp