

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

**APPLICATION OF MEWBOURNE OIL
COMPANY FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO**

Case No. 20499

**SELF-AFFIRMED STATEMENT OF
MITCH ROBB**

1. I am over 18 years of age and am competent to provide this Self-Affirmed Statement. I have personal knowledge of the matters addressed herein.
2. I am a landman for Mewbourne Oil Company ("Mewbourne"). I have had direct involvement with Mewbourne's development of the 400-acre standard horizontal spacing unit ("HSU") that is the subject of Mewbourne's application in this case.
3. A Midland Map with the HSU highlighted is attached hereto as Exhibit A. The HSU is comprised of the N/2 S/2 of Section 3, the N/2 S/2 of Section 4, and the N/2 SE/4 of Section 5, Township 20 South, Range 30 East in Eddy County.
4. Mewbourne seeks to pool all uncommitted interests in the Bone Spring formation underlying the HSU. A listing of the uncommitted interests and their respective working interests is attached hereto as Exhibit B. 89.835971% of the working interests are committed to the proposed well.
5. The HSU will be dedicated to the Caballo Loco 3/5 B2IJ Fed Com #2H well, which will be horizontally drilled from a surface location in Unit M in Section 2 to a bottom hole location in Unit J in Section 5, Township 20 South, Range 30 East. The completed interval for the well will be orthodox.

Case No. 20499

**MEWBOURNE OIL
Exhibit #1**

6. There are no depth exceptions in the Bone Spring formation.

7. I sent well proposal letters to Devon Energy Production Company, LP and ConocoPhillips Company on September 18, 2018 and to G.P.C. Oil and Gas Corporation on March 5, 2019. They all received the letter. Subsequently, I had follow-up communications with them. A sample of my well proposal letter and a summary of my follow-up contacts with the three uncommitted interests are attached hereto as Exhibit C.

8. In my opinion, Mewbourne has made a good faith effort to obtain the voluntary joinder of uncommitted interests in the proposed well.

9. Notice of Mewbourne's application and the Division hearing was provided to the uncommitted interests by certified mail. A sample of the notice letter and the associated green cards are attached hereto as Exhibit D.

10. Mewbourne has the right to pool the overriding royalty owners in the HSU.

11. The AFE for the proposed well is attached hereto as Exhibit E. The estimated cost of the well is fair and reasonable, and is comparable to the cost of other wells of similar depth and length drilled in Eddy County.

12. Mewbourne requests overhead and administrative rates of \$8,000 per month while the well is being drilled and \$800 per month while the well is producing. These rates are fair, and are comparable to the rates charged by Mewbourne and by other operators in the vicinity. They are also the rates set forth in the Joint Operating Agreement for the HSU. Mewbourne further requests that the rates be adjusted periodically in accordance with the COPAS Accounting Procedure.

13. Mewbourne requests that it be designated the operator of the well.

14. Mewbourne also requests that a 200% risk charge be assessed against the uncommitted interests if they are non-consenting working interest owners.

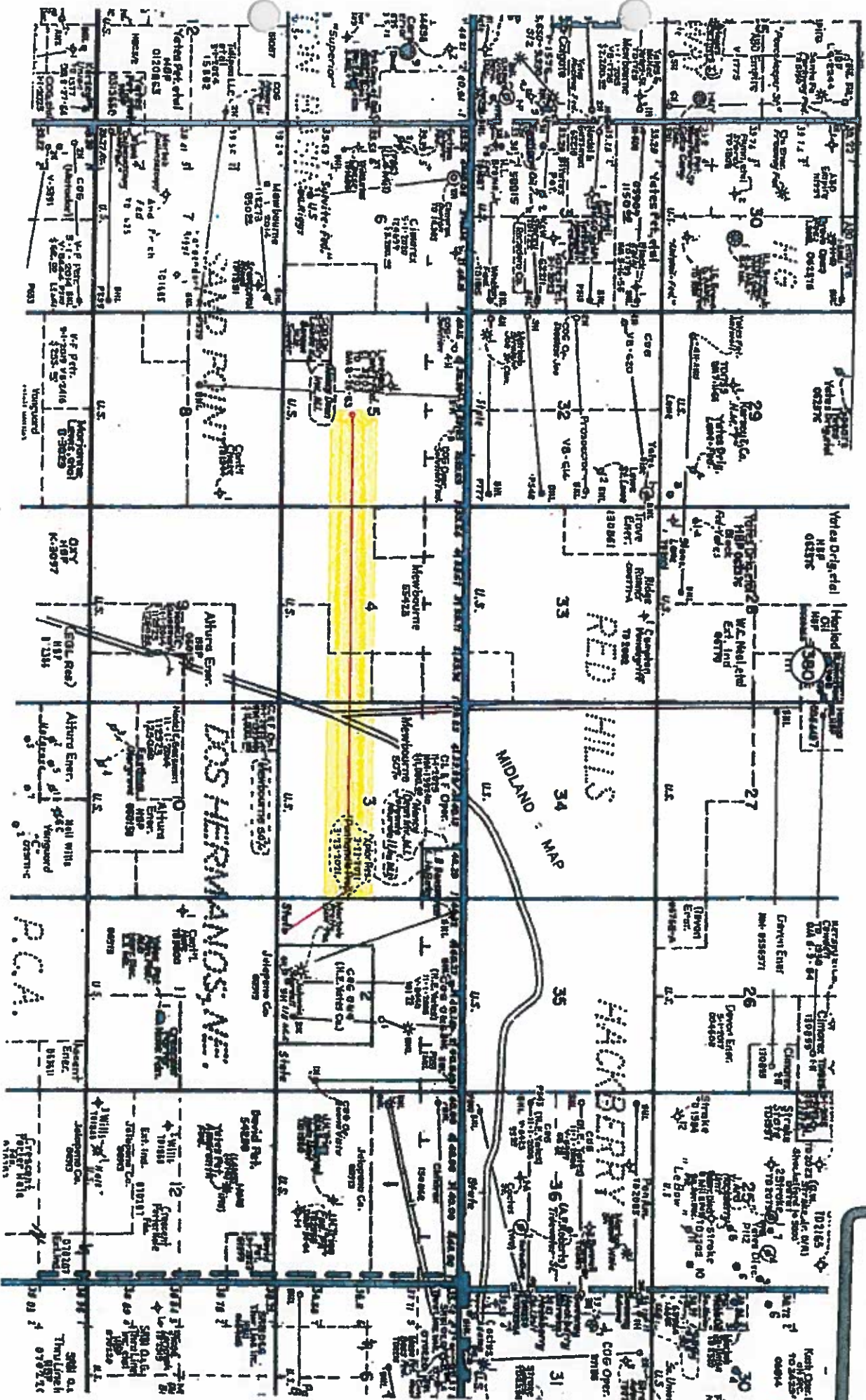
15. The exhibits attached hereto were either prepared by me or under my supervision, or were compiled from company business records.

16. In my opinion, the granting of Mewbourne's application would serve the interests of conservation and the prevention of waste.

17. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 16 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.


Mitch Robb

06/11/2019
Date



Tract Ownership
Caballo Loco 3/5 B2IJ Fed Com #2H
N/2S/2 of Section 3, N/2S/2 of Section 4 & N/2SE/4 of Section 5
T20S, R30E
Eddy County, New Mexico

Owners

Ownership:

Mewbourne Oil Company, Operator, and CL&F Operating LLC, et al, as Non-Operators	89.835971%
*Devon Energy Production Company, LP	5.000000%
*ConocoPhillips Company	5.000000%
*G.P.C. Oil and Gas Corporation	0.164029%
TOTAL	100.000000%

Total Interest being force pooled: 10.164029%

* Denotes an interest that is being force pooled.

**Exhibit
B**

MEWBOURNE OIL COMPANY

FASKEN CENTER
500 WEST TEXAS, SUITE 1020
MIDLAND, TX 79701

TELEPHONE (432) 682-3715

September 18, 2018

Via Certified Mail

Devon Energy Production Company, L.P.
333 West Sheridan Avenue
Oklahoma City, OK 73102
Attn: Katie Dean

Re: Caballo Loco 3/5 B2PO Fed Com #1H
110' FSL & 436' FWL (SL) (Section 2)
500' FSL & 2540' FEL (BHL) (Section 5)

Caballo Loco 3/5 B2IJ Fed Com #2H
119' FSL & 465' FWL (SL) (Section 2)
1927' FSL & 2540' FEL (BHL) (Section 5)

Caballo Loco 5/3 B2GH Fed Com #4H
430' FNL & 2135' FEL (SL) (Section 5)
1927' FNL & 100' FEL (BHL) (Section 3)

Caballo Loco 5/3 B2BA Fed Com #3H
400' FNL & 2135' FEL (SL) (Section 5)
500' FNL & 100' FEL (BHL) (Section 3)

All in Sections 3, 4, 5, T20S, R30E
Eddy County, New Mexico

Ladies and Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 1598.54 acre Working Interest Unit ("WIU") covering All of the captioned Sections 3 & 4 and the E/2 of Section 5 for oil and gas production.

Mewbourne as Operator hereby proposes to drill the captioned Caballo Loco 3/5 B2PO Fed Com #1H at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 8,440 feet subsurface to evaluate the Bone Spring Formation. The proposed well will have a measured depth (MD) of approximately 21,490 feet. The S/2S/2 of the captioned Sections 3 & 4 and the S/2SE/4 of Section 5 will be dedicated to the well as the proration unit.

In addition, Mewbourne as Operator hereby proposes to drill the captioned Caballo Loco 3/5 B2IJ Fed Com #2H at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 8,436 feet subsurface to evaluate the Bone Spring Formation. The proposed well will have a measured depth (MD) of approximately 21,715 feet. The N/2S/2 of the captioned Sections 3 & 4 and the N/2SE/4 of Section 5 will be dedicated to the well as the proration unit.

Exhibit

C

In addition, Mewbourne as Operator hereby proposes to drill the captioned Caballo Loco 5/3 B2GH Fed Com #4H at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 8,425 feet subsurface to evaluate the Bone Spring Formation. The proposed well will have a measured depth (MD) of approximately 21,700 feet. The S/2N/2 of the captioned Sections 3 & 4 and the S/2NE/4 of Section 5 will be dedicated to the well as the proration unit.

Finally, Mewbourne as Operator hereby proposes to drill the captioned Caballo Loco 5/3 B2BA Fed Com #3H at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 8,415 feet subsurface to evaluate the Bone Spring Formation. The proposed well will have a measured depth (MD) of approximately 21,465 feet. The N/2N/2 of the captioned Sections 3 & 4 and the N/2NE/4 of Section 5 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling are our AFEs dated September 13, 2018 for the captioned proposed wells. Please sign and return said AFEs at your earliest convenience if you elect to participate in the captioned wells and WIU and return to me within thirty (30) days.

A copy of our Joint Operating Agreement ("JOA") will follow under a separate cover letter for your further handling and review in the near future.

Should you have any questions regarding the above, please email me at mrobb@mewbourne.com or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY



Mitch Robb
Landman

Summary of Communications
Caballo Loco 3/5 B2IJ Fed Com #2H Well
N/2S/2 of Section 3, N/2S/2 of Section 4 & N/2SE/4 of Section 5
T20S, R30E
Eddy County, New Mexico

Devon Energy Production Company, LP:

09/18/2018: Mailed a Working Interest Unit and Well Proposal to the above listed party.

03/05/2019: Mailed Joint Operating Agreement to the above listed party.

05/09/2019: Email correspondence with Stephen Hoch regarding Working Interest Unit and Well Proposal.

ConocoPhillips Company:

09/18/2018: Mailed a Working Interest Unit and Well Proposal to the above listed party.

10/16/2018: Spoke with Stewart O'Neal regarding Working Interest Unit and Well Proposal.

10/29/2018: Received signed AFE from above listed party.

03/05/2019: Mailed Joint Operating Agreement to the above listed party.

4/26/2019: Called Stewart O'Neal and left voicemail.

05/30/2019: Spoke with Stewart O'Neal regarding Working Interest Unit and Well Proposal.

G.P.C. Oil and Gas Corporation:

03/05/2019: Mailed a Working Interest Unit, Well Proposal, and Joint Operating Agreement to the above listed party.

04/03/2019: Received signed AFE from above listed party.

04/04/2019: Attempted to contact owner by phone but could not find a viable phone number.



HINKLE SHANOR LLP
ATTORNEYS AT LAW
PO BOX 2068
SANTA FE, NEW MEXICO 87504
505-982-4554 (FAX) 505-982-8623

WRITER:
Gary W. Larson,
Partner
glarson@hinklelawfirm.com

May 23, 2019

VIA CERTIFIED MAIL

ConocoPhillips Company
Attn: Stewart O'Neal
P.O. Box 2197
Houston, TX 77252

Re: Mewbourne Oil Company NMOCD Application

Dear Mr. O'Neal:

Enclosed is a copy of an application for compulsory pooling that Mewbourne Oil Company ("Mewbourne") has filed with the New Mexico Oil Conservation Division ("the Division"). Mewbourne's application requests the pooling of all uncommitted mineral interests in the Bone Spring formation in a standard 400-acre horizontal spacing unit comprised of the N/2 S/2 of Section 3, the N/2 S/2 of Section 4, and the N/2 SE/4 of Section 5, Township 20 South, Range 30 East, N.M.P.M., Eddy County, New Mexico.

This matter is scheduled for hearing at 8:15 a.m. on Thursday, June 13, 2019 in Porter Hall at the Division's offices located at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. ConocoPhillips Company ("ConocoPhillips") is not required to attend this hearing, but as an owner of an interest that may be affected by Mewbourne's application, it may appear at the hearing and present testimony. If ConocoPhillips does not appear at that time and become a party of record, it will be precluded from contesting the matter at a later date.

A party appearing in a Division case is required by the Division's Rules to file a Pre-Hearing Statement, which in this matter must be filed no later than Thursday, June 6, 2019. The Pre-Hearing Statement must be filed with the Division's Santa Fe office at the address above, and should include: the name of the party and the party's attorney; a concise statement of the case; the name(s) of the witness(es) the party will call to testify at the hearing; the approximate amount of time the party will need to present the party's case; and an identification of any procedural matters that need to be resolved prior to the hearing. The Pre-Hearing Statement must also be provided to me.

Thank you for your attention to this matter.

Very truly yours,

Gary W. Larson

**Exhibit
D**

GWL:smi
Enclosure
PO BOX 10
ROSWELL, NEW MEXICO 88202
575-822-6510
(FAX) 575-823-9332

PO BOX 1720
ARTESIA, NEW MEXICO 88211
575-822-6510
(FAX) 575-746-8318

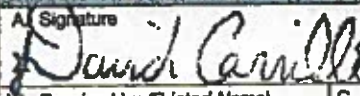
PO BOX 2068
SANTA FE, NEW MEXICO 87504
505-982-4554
(FAX) 505-982-8623

7801 JEFFERSON ST NE • SUITE 180
ALBUQUERQUE, NEW MEXICO 87109
505-858-8320
(FAX) 505-858-8321

SENDER COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>1. Complete items 1, 2, and 3.</p> <p>2. Print your name and address on the reverse so that we can return the card to you.</p> <p>3. Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1</p> <p>ConocoPhillips Company Attn: Stewart O'Neal P.O. Box 2197 Houston, TX 77252</p>		<p>A. Signature </p> <p><input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery 05/22/16</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p>	
<p>2. Article Number (Transfer from service label)</p> <p>7018 2290 0000 3423 8618</p>		<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery <input type="checkbox"/> Insured Mail</p> <p><input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

SENDER COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<p>1. Complete items 1, 2, and 3.</p> <p>2. Print your name and address on the reverse so that we can return the card to you.</p> <p>3. Attach this card to the back of the mailpiece, or on the front if space permits.</p> <p>1. Article Addressed to:</p> <p>Devon Energy Production Co. Attn: Katie Dean 333 West Sheridan Avenue Oklahoma City, OK 73102</p>		<p>A. Signature </p> <p><input type="checkbox"/> Agent <input checked="" type="checkbox"/> Addressee</p> <p>B. Received by (Printed Name)</p> <p>C. Date of Delivery</p> <p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input checked="" type="checkbox"/> No</p>	
<p>2. Article Number (Transfer from service label)</p> <p>7018 2290 0000 3423 8441</p>		<p>3. Service Type</p> <p><input type="checkbox"/> Adult Signature <input type="checkbox"/> Adult Signature Restricted Delivery <input checked="" type="checkbox"/> Certified Mail® <input type="checkbox"/> Certified Mail Restricted Delivery <input type="checkbox"/> Collect on Delivery <input type="checkbox"/> Collect on Delivery Restricted Delivery</p> <p><input type="checkbox"/> Priority Mail Express® <input type="checkbox"/> Registered Mail™ <input type="checkbox"/> Registered Mail Restricted Delivery <input type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Signature Confirmation™ <input type="checkbox"/> Signature Confirmation Restricted Delivery</p>	

PS Form 3811, July 2015 PSN 7530-02-000-9053

Domestic Return Receipt

MEWURNE OIL COMPANY
AUTHORIZATION FOR EXPENDITURE

Well Name: **Caballo Loco 3/5 B2LJ Fed Com #2H** Prospect: **2nd Bone Spring**
Location: **SL: 119' FSL & 465' FWL (2); BHL: 1927' FSL & 2540' FEL (5)** County: **Eddy** ST: **NM**
Sec. **3/5** Blk: Survey: TWP: **20S** RNG: **30E** Prop. TVD: **8436** TMD: **21715**

INTANGIBLE COSTS 0180			
Regulatory Permits & Surveys	CODE	TCP	CC
Location / Road / Site / Preparation	0180-0100	\$20,000	0180-0200
Location / Restoration	0180-0105	\$75,000	0180-0205
Daywork / Turnkey / Footage Drilling 38 days drlg / 5 days comp @ \$22,000/d	0180-0108	\$200,000	0180-0208
Fuel 1700 gal/day @ 2.70/gal	0180-0110	\$806,000	0180-0210
Mud, Chemical & Additives	0180-0114	\$203,500	0180-0214
Horizontal Drilling Services Coll Tbg Drilling	0180-0120	\$275,000	0180-0220
Cementing			0180-0222
Logging & Wireline Services	0180-0125	\$125,000	0180-0225
Casing / Tubing / Snubbing Service	0180-0130	\$2,000	0180-0230
Mud Logging	0180-0134	\$25,000	0180-0234
Stimulation 60 Slg 24.0 MM gal / 24.0 MM lb	0180-0137	\$20,000	
Stimulation Rentals & Other			0180-0241
Water & Other			0180-0242
Bits	0180-0145	\$50,000	0180-0245
Inspection & Repair Services	0180-0148	\$90,000	0180-0248
Misc. Air & Pumping Services	0180-0150	\$40,000	0180-0250
Testing & Flowback Services	0180-0154		0180-0254
Completion / Workover Rig	0180-0158	\$15,000	0180-0258
Rig Mobilization			0180-0260
Transportation	0180-0164	\$150,000	
Welding Services	0180-0165	\$20,000	0180-0265
Contract Services & Supervision	0180-0168	\$5,000	0180-0268
Directional Services Includes Vertical Control	0180-0170	\$58,500	0180-0270
Equipment Rental	0180-0175	\$336,000	
Well / Lease Legal	0180-0180	\$305,500	0180-0280
Well / Lease Insurance	0180-0184	\$5,000	0180-0284
Intangible Supplies	0180-0185	\$6,500	0180-0285
Damages	0180-0188	\$8,000	0180-0288
ROW & Easements	0180-0190	\$5,000	0180-0290
Pipeline Interconnect	0180-0192		0180-0292
Company Supervision			0180-0293
Overhead Fixed Rate	0180-0195	\$187,200	0180-0295
Well Abandonment	0180-0198	\$10,000	0180-0298
Contingencies 2% (TCP) 2% (CC)	0180-0199	\$50,900	0180-0299
TOTAL		\$3,106,100	\$5,511,200
TANGIBLE COSTS 0181			
Casing (18.1" - 30")	0181-0793		
Casing (10.1" - 18.0") 450' - 13 3/8" 54.5# J-55 ST&C @ \$35.90/m	0181-0794	\$17,300	
Casing (8.1" - 10.0") 3800' - 9 5/8" 40# L-80 LT&C @ \$27.81/m	0181-0795	\$112,100	
Casing (8.1" - 8.0") 8855' - 7" 26# P-110 LT&C @ \$27.76/m	0181-0796	\$262,600	
Casing (4.1" - 8.0") 13750' - 4 1/2" 13.5# P-110 BPN @ \$13.68/m			0181-0797
Tubing (2" - 4") 8055' - 2 7/8" 8.6# L-80 EUE 8rd @ \$5.82/m			0181-0798
Drilling Head	0181-0880	\$45,000	
Tubing Head & Upper Section			0181-0870
Horizontal Completion Tools Completion Liner Hanger			0181-0871
Sucker Rods			0181-0875
Subsurface Equipment			0181-0880
Artificial Lift Systems Gas Lift Valves			0181-0884
Pumping Unit			0181-0885
Surface Pumps & Prime Movers VRU/SWD Pump/Circ Pump			0181-0890
Tanks - Oil 3 - 750 bbl			0181-0891
Tanks - Water 3 - 750 bbl			0181-0895
Separation / Treating Equipment 30"x10"x1k# 3 ph/36"x15"x1k# Hor 3ph/Gum bbl			0181-0897
Heater Treaters, Line Heaters 8"x20"x75# HT			0181-0898
Metering Equipment			0181-0900
Line Pipe & Valves - Gathering			0181-0906
Fittings / Valves & Accessories			0181-0908
Cathodic Protection			0181-0909
Electrical Installation			0181-0910
Equipment Installation			0181-0920
Pipeline Construction			
TOTAL		\$437,000	\$817,000
SUBTOTAL		\$3,543,100	\$7,328,200
TOTAL WELL COST		\$10,871,300	

Extra Expense Insurance

- ☐ I elect to be covered by Operator's Extra Expense Insurance and pay my proportionate share of the premium.
Operator has secured Extra Expense Insurance covering costs of well control, clean up and redrilling as estimated in Line Item 0180-0185.
- ☐ I elect to purchase my own well control insurance policy.

If neither box is checked above, non-operating working interest owner elects to be covered by Operator's well control insurance.

Prepared by: T. Cude Date: 8/13/2018
Company Approval: _____ Date: _____

Joint Owner Interest: _____ Amount: _____
Joint Owner Name: _____ Signature: _____

Exhibit
E

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

**APPLICATION OF MEWBOURNE OIL
COMPANY FOR COMPULSORY POOLING,
EDDY COUNTY, NEW MEXICO**

Case No. 20499

**SELF-AFFIRMED STATEMENT OF
CHARLES CROSBY**

1. I am over 18 years of age and am competent to provide this Self-Affirmed Statement. I have personal knowledge of the matters addressed herein.
2. I am a geologist at Mewbourne Oil Company ("Mewbourne"). I am familiar with the geological matters that pertain to Mewbourne's application.
3. Attached hereto as Exhibit A is a structure map of the base of the Bone Spring Sand formation. The map shows that the structure dips gently to the East-Southeast. It also shows a line of cross section and the horizontal spacing unit ("HSU") for the proposed Caballo Loco 3/5 B2IJ Fed Com #2H well.
4. Attached hereto as Exhibit B is a gross sand isopach map of the Bone Spring formation, which is the target zone for the proposed well. It shows that the sand across the HSU has a uniform thickness of about 80 feet.
5. Attached hereto as Exhibit C is a west to east cross section. The well logs on the cross section provide a representative sample of the Bone Spring formation in the area. The target zone for the proposed well is continuous across the HSU.
6. Based on the information contained in Exhibits A, B and C, I am able to conclude that:
 - a) The HSU is justified from a geologic standpoint;

b) There is no faulting or other geologic impediment that could adversely affect the drilling of the proposed well; and

c) Each quarter-quarter section in the HSU will contribute more or less equally to production.

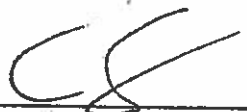
7. Attached hereto as Exhibit D is a table containing information from other wells drilled in the vicinity. The preference is for laydown wells (west to east or east to west), and the completed wells in the area (recent completions) apparently are commercial.

8. Attached hereto as Exhibit E is the Survey Calculation Report for the proposed well. The well's producing interval will be orthodox.

9. In my opinion, the granting of Mewbourne's application will serve the interests of conservation and the prevention of waste.

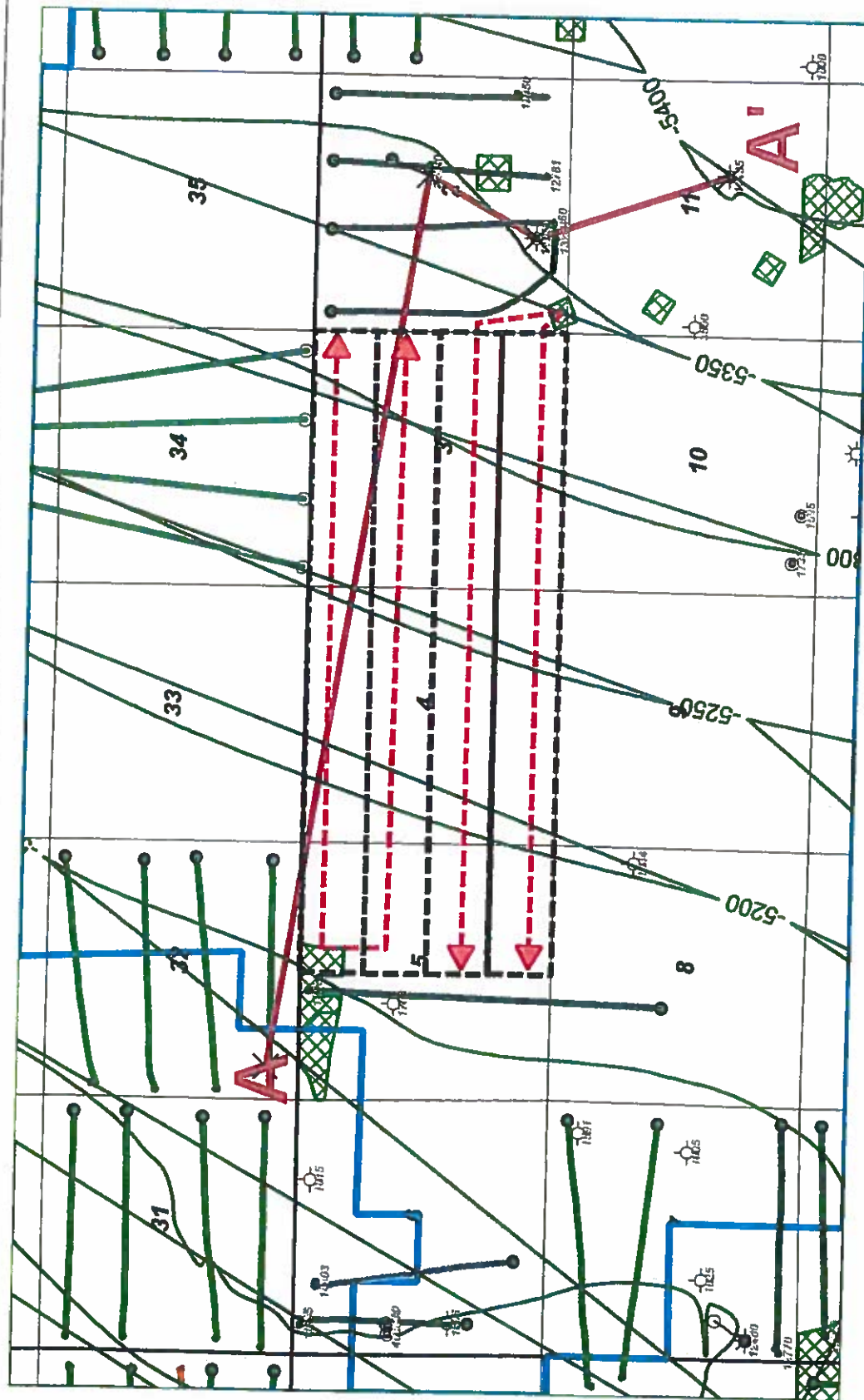
10. Exhibits A through E were either prepared by me or compiled from company records.

11. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 10 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.



Charles Crosby

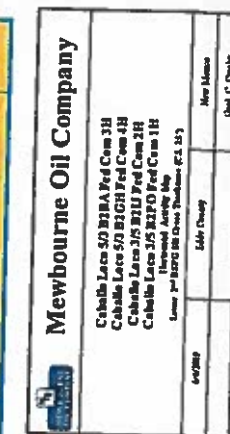
6/10/19
Date

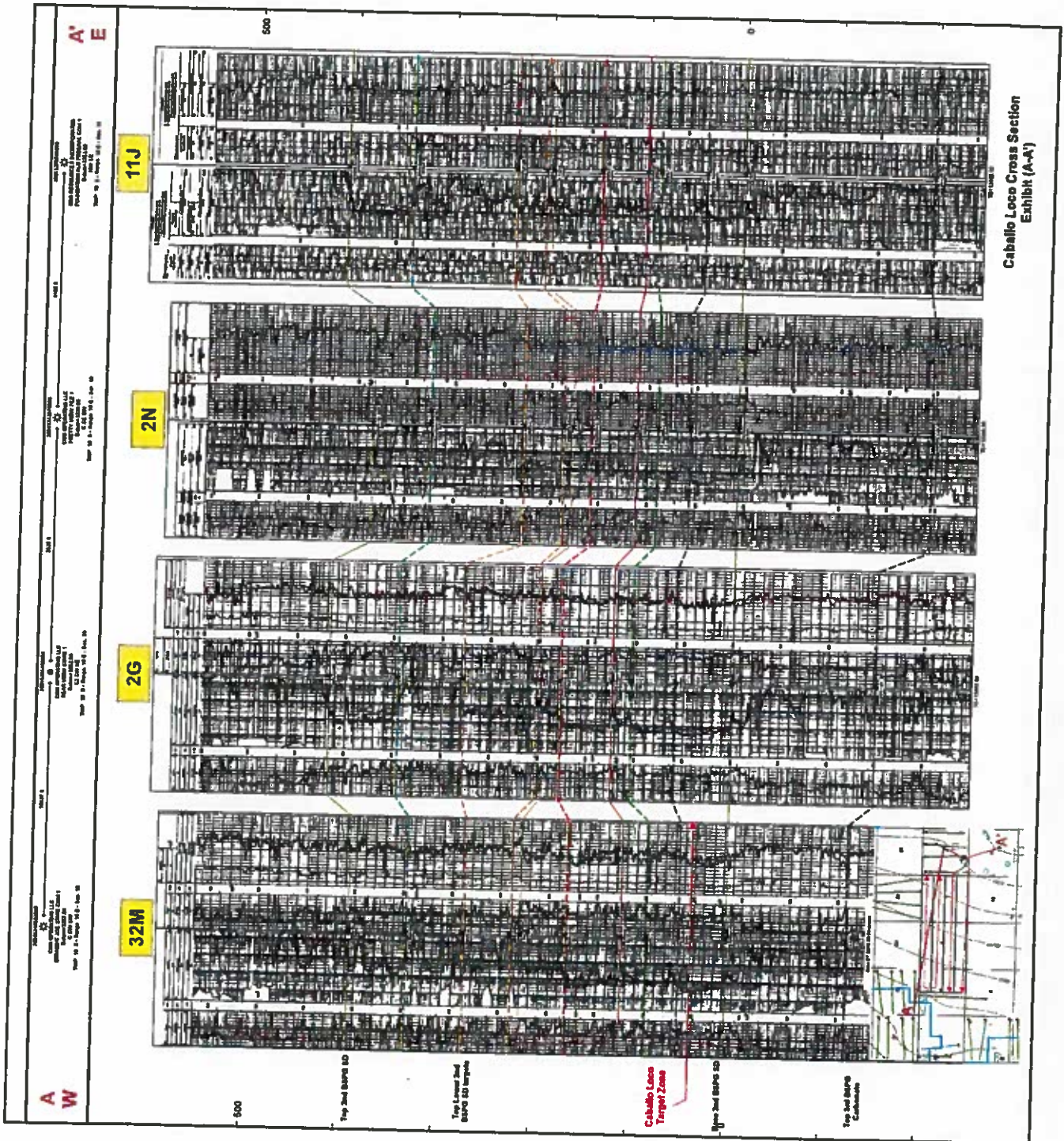


Mewbourne Oil Company

Caballo Lake SD B2BA Fed Com 3H	John Menden
Caballo Lake SD B2CH Fed Com 4H	David C. Chubb
Caballo Lake SD B2H Fed Com 3H	
Caballo Lake SD B2FO Fed Com 1H	
Horizontal Authority Map	
Done per BSPG SD Directive (CL 1187)	
04/2009	
Edgar County	

Exhibit
A





**Exhibit
C**

Caballo Loco Area 2nd BSPG SD Production Table									
Well Name	Operator	API	Location	Completion Date	Cum Oil (Mbo)	Cum Gas (Bcf)	Cum Water (Mbw)	NS/EW	Production Zone
Buena Vista 2 State Com 3H	COG	30015392450000	2N-20S-30E	10/29/2011	189.5	0.5	288	NS	2nd BSPG SD
Shoeless Joe 32 State Com 1H	COG	30015405860100	32D-19S-30E	11/30/2012	140.2	0.26	327.1	EW	2nd BSPG SD
Buena Vista 2 State 1H	COG	30015407890000	2P-20S-30E	4/3/2013	198.6	0.6	250.2	NS	2nd BSPG SD
Shoeless Joe 32 State Com 3H	COG	30015410280000	32L-19S-30E	4/10/2013	162	0.5	535.8	EW	2nd BSPG SD
Shoeless Joe 32 State Com 2H	COG	30015412380000	32E-19S-30E	6/21/2014	143.8	0.5	465.6	EW	2nd BSPG SD
Shoeless Joe 32 State Com 4H	COG	30015412420100	32M-19S-30E	11/3/2013	151.6	0.3	463.9	EW	2nd BSPG SD
Buena Vista 2 State Com 2H	COG	30015412900000	2O-20S-30E	6/25/2013	143.5	0.3	203.3	NS	2nd BSPG SD
Buena Vista 2 State 4H	COG	30015418290000	2N-20S-30E	7/1/2014	253.6	0.7	236.3	NS	2nd BSPG SD
Solution Federal Com 3H	COG	30015432270000	5C-20S-30E	10/4/2015	105	0.3	353.8	NS	2nd BSPG SD

Exhibit
D

Mewbourne Oil Company

SURVEY CALCULATION REPORT Minimum Curvature Calculations

Operator: Mewbourne Oil Company
Lease Name: Caballo Loco 3/5 B2U Fed Com 2H
KOP: 8067.54
SL: 119 FSL & 465 FWL Sec 2-20S-10E
PBHL: 1927 FSL & 2540 FEL Sec 5-20S-30E

Target KBTVD: 8,545 Feet
Target Angle: 90.69 Degrees
Section Plane: 277.81 Degrees
Declination Corrected to True North: 6.63 Degrees
Bit to Survey Offset: 44 Feet

Survey No	Measured Depth-ft	Drit (Deg)	Azimuth (Deg)	Course Length	TVD (Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	Closure Distance	Closure Direction	BUR	DLS	KBTVD	+Above -Below Target	DRIFT (RADIAN)	AZIMUTH (RADIAN)
T/1	8067.54	0.00	277.81	N/A	8067.5	0.0	0.0	0.0	0.0	0.0	N/A	N/A	8067.5	477.5	1E-12	4.85 8067.54
1	8142.11	8.07	277.81	75.57912	8142.8	6.0	0.8	-5.9	6.0	277.8	12.0	12.0	8142.9	402.1	0.15829254	4.85 0.158293
2	8218.89	16.14	277.81	75.57912	8216.2	23.7	3.2	-23.5	23.7	277.8	12.0	12.0	8216.5	328.5	0.31658309	4.85 0.158293
3	8294.27	27.21	277.81	75.57912	8285.8	52.8	7.2	-52.3	52.8	277.8	12.0	12.0	8286.5	258.5	0.47487763	4.85 0.158293
4	8368.85	38.28	277.81	75.57912	8350.1	92.6	12.6	-91.7	92.6	277.8	12.0	12.0	8351.2	193.8	0.63317017	4.85 0.158293
5	8445.43	45.35	277.81	75.57912	8407.2	141.9	19.3	-140.6	141.9	277.8	12.0	12.0	8408.9	136.1	0.79146271	4.85 0.158293
6	8521.01	54.42	277.81	75.57912	8455.8	199.6	27.1	-197.8	199.6	277.8	12.0	12.0	8458.3	86.7	0.94975526	4.85 0.158293
7	8598.59	63.48	277.81	75.57912	8494.8	264.3	35.9	-261.9	264.3	277.8	12.0	12.0	8498.0	47.0	1.1080478	4.85 0.158293
8	8672.17	72.56	277.81	75.57912	8523.0	334.3	45.4	-331.2	334.3	277.8	12.0	12.0	8527.1	17.9	1.26634034	4.85 0.158293
9	8747.75	81.63	277.81	75.57912	8539.9	407.9	53.4	-404.1	407.9	277.8	12.0	12.0	8544.9	0.1	1.42463289	4.85 0.158293
10	8823.33	90.68	277.81	75.57912	8545.0	483.3	65.6	-478.8	483.3	277.8	12.0	12.0	8550.8	-5.8	1.58292543	4.85 0.158293
11	8900.00	90.68	277.81	76.67361	8544.0	559.9	76.0	-558.7	559.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
12	9000.00	90.69	277.81	100	8542.8	659.9	89.6	-653.8	659.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
13	9100.00	90.69	277.81	100	8541.6	759.9	103.2	-752.9	759.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
14	9200.00	90.69	277.81	100	8540.4	859.9	116.8	-851.9	859.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
15	9300.00	90.69	277.81	100	8539.2	959.9	130.4	-951.0	959.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
16	9400.00	90.69	277.81	100	8538.0	1059.9	143.9	-1050.1	1059.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
17	9500.00	90.69	277.81	100	8536.8	1159.9	157.5	-1149.1	1159.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
18	9600.00	90.69	277.81	100	8535.5	1259.9	171.1	-1248.2	1259.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
19	9700.00	90.69	277.81	100	8534.3	1359.9	184.7	-1347.3	1359.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
20	9800.00	90.69	277.81	100	8533.1	1459.9	198.3	-1446.3	1459.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
21	9900.00	90.69	277.81	100	8531.9	1559.9	211.8	-1545.4	1559.9	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
22	10000.00	90.69	277.81	100	8530.7	1659.8	225.4	-1644.5	1659.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
23	10100.00	90.69	277.81	100	8529.5	1759.8	239.0	-1743.5	1759.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
24	10200.00	90.69	277.81	100	8528.3	1859.8	252.6	-1842.6	1859.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
25	10300.00	90.69	277.81	100	8527.1	1959.8	266.2	-1941.7	1959.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
26	10400.00	90.69	277.81	100	8525.8	2059.8	279.7	-2040.7	2059.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
27	10500.00	90.69	277.81	100	8524.6	2159.8	293.3	-2139.8	2159.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
28	10600.00	90.69	277.81	100	8523.4	2259.8	306.9	-2238.9	2259.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
29	10700.00	90.69	277.81	100	8522.2	2359.8	320.5	-2337.9	2359.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
30	10800.00	90.69	277.81	100	8521.0	2459.8	334.1	-2437.0	2459.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
31	10900.00	90.69	277.81	100	8519.8	2559.8	347.6	-2536.1	2559.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
32	11000.00	90.69	277.81	100	8518.6	2659.8	361.2	-2635.1	2659.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
33	11100.00	90.69	277.81	100	8517.4	2759.8	374.8	-2734.2	2759.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
34	11200.00	90.69	277.81	100	8516.1	2859.8	388.4	-2833.3	2859.8	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
35	11300.00	90.69	277.81	100	8514.9	2959.7	402.0	-2932.3	2959.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
36	11400.00	90.69	277.81	100	8513.7	3059.7	415.5	-3031.4	3059.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
37	11500.00	90.69	277.81	100	8512.5	3159.7	429.1	-3130.5	3159.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
38	11600.00	90.69	277.81	100	8511.3	3259.7	442.7	-3229.5	3259.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
39	11700.00	90.69	277.81	100	8510.1	3359.7	456.3	-3328.6	3359.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
40	11800.00	90.69	277.81	100	8508.9	3459.7	469.9	-3427.7	3459.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
41	11900.00	90.69	277.81	100	8507.6	3559.7	483.4	-3526.7	3559.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
42	12000.00	90.69	277.81	100	8506.4	3659.7	497.0	-3625.8	3659.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
43	12100.00	90.69	277.81	100	8505.2	3759.7	510.6	-3724.9	3759.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
44	12200.00	90.69	277.81	100	8504.0	3859.7	524.2	-3823.9	3859.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
45	12300.00	90.69	277.81	100	8502.8	3959.7	537.7	-3923.0	3959.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
46	12400.00	90.69	277.81	100	8501.6	4059.7	551.3	-4022.1	4059.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
47	12500.00	90.69	277.81	100	8500.4	4159.7	564.9	-4121.1	4159.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
48	12600.00	90.69	277.81	100	8499.2	4259.7	578.5	-4220.2	4259.7	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
49	12700.00	90.69	277.81	100	8497.9	4359.6	592.1	-4319.3	4359.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
50	12800.00	90.69	277.81	100	8496.7	4459.6	605.6	-4418.3	4459.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
51	12900.00	90.69	277.81	100	8495.5	4559.6	619.2	-4517.4	4559.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
52	13000.00	90.69	277.81	100	8494.3	4659.6	632.8	-4616.5	4659.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
53	13100.00	90.69	277.81	100	8493.1	4759.6	646.4	-4715.5	4759.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
54	13200.00	90.69	277.81	100	8491.9	4859.6	660.0	-4814.6	4859.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
55	13300.00	90.69	277.81	100	8490.7	4959.6	673.5	-4913.7	4959.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10
56	13400.00	90.69	277.81	100	8489.5	5059.6	687.1	-5012.7	5059.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85 1E-10

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57	13500.00	90.89	277.81	100	8488.2	5159.6	700.7	-5111.8	5159.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
58	13600.00	90.89	277.81	100	8487.0	5259.6	714.3	-5210.9	5259.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
59	13700.00	90.89	277.81	100	8485.8	5359.6	727.9	-5309.9	5359.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
60	13800.00	90.89	277.81	100	8484.6	5459.6	741.4	-5409.0	5459.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
61	13900.00	90.89	277.81	100	8483.4	5559.6	755.0	-5508.0	5559.6	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
62	14000.00	90.89	277.81	100	8482.2	5659.5	768.6	-5607.1	5659.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
63	14100.00	90.89	277.81	100	8481.0	5759.5	782.2	-5706.2	5759.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
64	14200.00	90.89	277.81	100	8479.8	5859.5	795.8	-5805.2	5859.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
65	14300.00	90.89	277.81	100	8478.5	5959.5	809.3	-5904.3	5959.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
66	14400.00	90.89	277.81	100	8477.3	6059.5	822.9	-6003.4	6059.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
67	14500.00	90.89	277.81	100	8476.1	6159.5	836.5	-6102.4	6159.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
68	14600.00	90.89	277.81	100	8474.9	6259.5	850.1	-6201.5	6259.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
69	14700.00	90.89	277.81	100	8473.7	6359.5	863.7	-6300.6	6359.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
70	14800.00	90.89	277.81	100	8472.5	6459.5	877.2	-6399.6	6459.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
71	14900.00	90.89	277.81	100	8471.3	6559.5	890.8	-6498.7	6559.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
72	15000.00	90.89	277.81	100	8470.0	6659.5	904.4	-6597.8	6659.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
73	15100.00	90.89	277.81	100	8468.8	6759.5	918.0	-6696.8	6759.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
74	15200.00	90.89	277.81	100	8467.6	6859.5	931.6	-6795.9	6859.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
75	15300.00	90.89	277.81	100	8466.4	6959.5	945.1	-6895.0	6959.5	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
76	15400.00	90.89	277.81	100	8465.2	7059.4	958.7	-6994.0	7059.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
77	15500.00	90.89	277.81	100	8464.0	7159.4	972.3	-7093.1	7159.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
78	15600.00	90.89	277.81	100	8462.8	7259.4	985.9	-7192.2	7259.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
79	15700.00	90.89	277.81	100	8461.6	7359.4	999.5	-7291.2	7359.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
80	15800.00	90.89	277.81	100	8460.3	7459.4	1013.0	-7390.3	7459.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
81	15900.00	90.89	277.81	100	8459.1	7559.4	1026.6	-7489.4	7559.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
82	16000.00	90.89	277.81	100	8457.9	7659.4	1040.2	-7588.4	7659.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
83	16100.00	90.89	277.81	100	8456.7	7759.4	1053.8	-7687.5	7759.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
84	16200.00	90.89	277.81	100	8455.5	7859.4	1067.4	-7786.6	7859.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
85	16300.00	90.89	277.81	100	8454.3	7959.4	1080.9	-7885.6	7959.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
86	16400.00	90.89	277.81	100	8453.1	8059.4	1094.5	-7984.7	8059.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
87	16500.00	90.89	277.81	100	8451.9	8159.4	1108.1	-8083.8	8159.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
88	16600.00	90.89	277.81	100	8450.6	8259.4	1121.7	-8182.8	8259.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
89	16700.00	90.89	277.81	100	8449.4	8359.4	1135.3	-8281.9	8359.4	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
90	16800.00	90.89	277.81	100	8448.2	8459.3	1148.8	-8381.0	8459.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
91	16900.00	90.89	277.81	100	8447.0	8559.3	1162.4	-8480.0	8559.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
92	17000.00	90.89	277.81	100	8445.8	8659.3	1176.0	-8579.1	8659.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
93	17100.00	90.89	277.81	100	8444.6	8759.3	1189.6	-8678.2	8759.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
94	17200.00	90.89	277.81	100	8443.4	8859.3	1203.1	-8777.2	8859.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
95	17300.00	90.89	277.81	100	8442.2	8959.3	1216.7	-8876.3	8959.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
96	17400.00	90.89	277.81	100	8440.9	9059.3	1230.3	-8975.4	9059.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
97	17500.00	90.89	277.81	100	8439.7	9159.3	1243.9	-9074.4	9159.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
98	17600.00	90.89	277.81	100	8438.5	9259.3	1257.5	-9173.5	9259.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
99	17700.00	90.89	277.81	100	8437.3	9359.3	1271.0	-9272.6	9359.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
100	17800.00	90.89	277.81	100	8436.1	9459.3	1284.6	-9371.6	9459.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
101	17900.00	90.89	277.81	100	8434.9	9559.3	1298.2	-9470.7	9559.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
102	18000.00	90.89	277.81	100	8433.7	9659.3	1311.8	-9569.8	9659.3	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
103	18100.00	90.89	277.81	100	8432.4	9759.2	1325.4	-9668.8	9759.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
104	18200.00	90.89	277.81	100	8431.2	9859.2	1338.9	-9767.9	9859.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
105	18300.00	90.89	277.81	100	8430.0	9959.2	1352.5	-9867.0	9959.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
106	18400.00	90.89	277.81	100	8428.8	10059.2	1366.1	-9966.0	10059.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
107	18500.00	90.89	277.81	100	8427.6	10159.2	1379.7	-10065.1	10159.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
108	18600.00	90.89	277.81	100	8426.4	10259.2	1393.3	-10164.2	10259.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
109	18700.00	90.89	277.81	100	8425.2	10359.2	1406.8	-10263.2	10359.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
110	18800.00	90.89	277.81	100	8424.0	10459.2	1420.4	-10362.3	10459.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
111	18900.00	90.89	277.81	100	8422.7	10559.2	1434.0	-10461.4	10559.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
112	19000.00	90.89	277.81	100	8421.5	10659.2	1447.6	-10560.4	10659.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
113	19100.00	90.89	277.81	100	8420.3	10759.2	1461.2	-10659.5	10759.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
114	19200.00	90.89	277.81	100	8419.1	10859.2	1474.7	-10758.6	10859.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
115	19300.00	90.89	277.81	100	8417.9	10959.2	1488.3	-10857.6	10959.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
116	19400.00	90.89	277.81	100	8416.7	11059.2	1501.9	-10956.7	11059.2	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
117	19500.00	90.89	277.81	100	8415.5	11159.1	1515.5	-11055.8	11159.1	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10
118	19600.00	90.89	277.81	100	8414.3	11259.1	1529.1	-11154.8	11259.1	277.8	0.0	0.0	8550.8	-5.8	1.58292543	4.85	1E-10