

**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. 20269

**SELF-AFFIRMED STATEMENT OF
PAUL HADEN**

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 240-acre standard horizontal spacing unit ("HSU") that is the subject of Mewbourne's application in this case.

3. The C-102 for Mewbourne's Sapphire 11/12 B3MN State Com #2H well is attached hereto as Exhibit A. As indicated on the C-102, the HSU is comprised of the S/2 S/2 of Section 11 and the S/2 SW/4 of Section 12, Township 19 South, Range 29 East in Eddy County.

4. Mewbourne seeks to pool the uncommitted interests of Marathon Oil Permian, LLC ("Marathon") in the Third Bone Spring Sand interval of the Bone Spring formation underlying the HSU. The HSU will be dedicated to the Sapphire 11/12 B3MN State Com #2H well, which will be horizontally drilled from a surface location in Unit M in Section 11 to a last take point in Unit N in Section 12. The completed interval for the well will be orthodox.

5. There are no depth exceptions in the Third Bone Spring Sand interval of Bone Spring formation.

Case No. 20269

**MEWBOURNE OIL
Exhibit #1**

6. Marathon is the sole party that Mewbourne seeks to pool. A copy of my well proposal letter and a summary of my contacts with Marathon regarding the proposed well are attached hereto as Exhibit B.

7. In my opinion, Mewbourne has made a good faith effort to obtain Marathon's voluntary joinder in the proposed well.

8. Notice of Mewbourne's application was provided to Marathon by certified mail. Copies of the notice letter and the associated green card are attached hereto as Exhibit C.

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

10. The AFE for the proposed well is attached hereto as Exhibit D. 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.

11. 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.

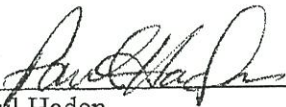
12. Mewbourne requests that it be designated the operator of the well.

13. Mewbourne also requests that a 200% risk charge be assessed against Marathon if it is a non-consenting working interest owner.

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

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

16. 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 15 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.



Paul Haden

MARCH 5, 2019
Date

**NM OIL CONSERVATION
ARTESIA DISTRICT**

DEC 18 2018

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

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

RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-01545560		2 Pool Code 60660		3 Pool Name TURKEY TRACK; BONE SPRING	
4 Property Code 323017		5 Property Name SAPPHIRE 11/12 B3MN STATE COM			6 Well Number 2H
7 OGRID NO. 14744		8 Operator Name MEWBOURNE OIL COMPANY			9 Elevation 3375'
10 Surface Location					
UL or lot no. M	Section 11	Township 19S	Range 29E	Lot Idn 1300	Feet from the SOUTH 285
				East/West line WEST	County EDDY
11 Bottom Hole Location If Different From Surface					
UL or lot no. N	Section 12	Township 19S	Range 29E	Lot Idn 450	Feet from the SOUTH 2540
				East/West line WEST	County EDDY
12 Dedicated Acres 240		13 Joint or Infill		14 Consolidation Code	
15 Order No.					

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

CORNER DATA NAD 83 GRID - NM EAST A: FOUND 1/2" REBAR N: 606848.2 - E: 627266.7 B: FOUND 1/2" REBAR N: 612102.4 - E: 627248.6 C: FOUND 12"X5"X9" LIMESTONE ROCK N: 612112.8 - E: 629887.6 D: FOUND 1/2" REBAR N: 612096.5 - E: 632531.2 E: FOUND 1/2" REBAR N: 612083.0 - E: 635199.6 F: FOUND BRASS CAP "1916" N: 612069.4 - E: 637838.3 G: FOUND BRASS CAP "1916" N: 609427.4 - E: 637829.9 H: FOUND BRASS CAP "1916" N: 606787.6 - E: 637820.9 I: FOUND 1" IRON PIPE N: 606817.4 - E: 632546.4 J: FOUND 1/2" REBAR N: 606833.5 - E: 629906.6		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or in a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Bradley Bishop</i> 12-4-18 Signature Date BRADLEY BISHOP Printed Name BBISHOP@MEWBOURNE.COM E-mail Address
18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. 11-20-2018 Date of Survey <i>Robert M. Howett</i> Signature and Seal of Professional Surveyor 19680 Certificate Number		

16

GEODETIC DATA
NAD 83 GRID - NM EAST

SURFACE LOCATION
N: 608146.6 - E: 627547.2
LAT: 32.6715276° N
LONG: 104.0531660° W

BOTTOM HOLE
N: 607252.9 - E: 635084.4
LAT: 32.6690140° N
LONG: 104.0286800° W

PROJECT AREA (11)

PRODUCING AREA (12)

285'

1300'

2540'

450'

B.H.

S 89°46'28" W 2639.66' (C) N 89°38'55" W 2644.25' (D) N 89°42'37" W 2669.07' (E) N 89°42'13" W 2639.41' (F)

N 00°11'51" W 3253.46' (B)

N 00°11'51" W 3253.46' (A)

N 89°40'51" W 2640.52' (J) N 89°38'58" W 2640.48' (I) N 89°40'34" W 5275.85' (H)

S 00°11'42" W 2640.45' (G) S 00°11'00" W 2642.69' (F)

RRC-Job No: LS18111276

RWP 12-18-18

Exhibit
A

MEWBOURNE OIL COMPANY

500 W. TEXAS, SUITE 1020
MIDLAND, TEXAS 79701

(432) 682-3715
FAX (432) 685-4170

November 28, 2018

Via Certified Mail

Marathon Oil Permian, LLC
5555 San Felipe
Houston, TX 77056-2701
Attn: Matthew D. Brown

Re: Sapphire 11/12 WTU
Section 11 and W/2 Section 12,
T19S, R29E
Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to drill the following horizontal wells:

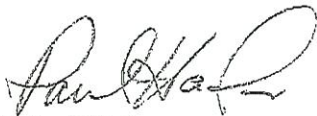
Mewbourne proposes to drill the Sapphire 11/12 B3MN State Com #2H Well at a surface location 1300' FSL & 285' FWL (Unit M) of Section 11 and drill same horizontally to a terminus point 450' FSL & 2540' FWL (Unit N) of the captioned Section 12 being the bottom hole location. The proposed well will be drilled vertically at the surface location to an approximate depth of 9,025 feet beneath the surface in the Bone Spring formation and drilled horizontally from a westerly direction to an easterly direction in the Third Bone Spring Sand Interval to the terminus point referenced above. The well will be drilled to a true measured depth of approximately 16,620 feet with the well being dedicated to the S/2S/2 of Section 11 and the S/2SW/4 of the captioned Section 12 as its oil proration unit containing 240 acres.

Mewbourne also proposes to drill the Sapphire 11/12 B3LK State Com #2H Well immediately following the previous referenced well at a surface location 1350' FSL & 285' FWL (Unit L) of Section 11 and drill same horizontally to a terminus point 1800' FSL & 2540' FWL (Unit K) of the captioned Section 12 being the bottom hole location. The proposed well will be drilled vertically at the surface location to an approximate depth of 9,025 feet beneath the surface in the Bone Spring formation and drilled horizontally from a westerly direction to an easterly direction in the Third Bone Spring Sand interval to the referenced terminus point. The well will be drilled to a true measured depth of approximately 16,620 feet with the well being dedicated to the N/2S/2 of Section 11 and N/2SW/4 of the captioned Section 12 as its oil proration unit containing 240 acres.

**Exhibit
B**

In the event Marathon elects to participate in the proposed WIU and wells, please have the enclosed AFE's signed and returned to me within thirty (30) days of receipt of same. The interest in the enclosed AFE's is Marathon's interest in the spacing unit for each well. Mewbourne will be filing a pooling application for each of these wells within the next thirty (30) days.

MEWBOURNE OIL COMPANY

A handwritten signature in dark ink, appearing to read "D. Paul Haden", written in a cursive style.

D. Paul Haden
Senior Landman

DPH/BI



December 3, 2018

Dear Simple Certified:

The following is in response to your request for proof of delivery on your item with the tracking number:
9414 8106 9994 5036 7087 33.

Item Details

Status: Delivered, Front Desk/Reception/Mail Room
Status Date / Time: December 3, 2018, 3:44 pm
Location: HOUSTON, TX 77056
Postal Product: First-Class Mail®
Extra Services: Certified Mail™
Return Receipt Electronic
Recipient Name: Attn Matt Brown

Shipment Details

Weight: 2.0oz

Recipient Signature

Signature of Recipient:

Harold Cury

Address of Recipient:

*555 San Felipe
Hou TX 77056*

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,

United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004

Attn: Matt Brown
Marathon Oil Company
5555 SAN FELIPE ST
HOUSTON, TX 77056
Reference #: Sapphire 11 12 WIU PH
Item ID: Sapphire 11 12 WIU

SUMMARY OF COMMUNICATIONS

CASE NO. 20268 and CASE NO. 20269

SAPPHIRE 11/12 B3MN ST. COM #2H

S/2S/2 Section 11 and S/2SW/4 Section 12;

SAPPHIRE 11/12 B3LK ST. COM #2H

N/2S/2 Section 11 and N/2SW/4 Section 12,

T19S, R29E, EDDY COUNTY, NEW MEXICO

MARATHON OIL PERMIAN, LLC

Matthew D. Brown (713) 296-3408; mbrown@marathonoil.com

Jeffery Broussard (713) 296-3159; jbroussard@marathonoil.com

11-28-2019: Sent well Proposal letter via certified mail with AFEs. Operating Agreement was previously sent.

12-3-2018: Certified mail receipt showed proof of delivery was this date.

1-9-2019: Follow up email sent this date to Matt and Jeff advising then we were filling a Pooling Application for the proposed wells.

2-25-2019: Follow up email to Matt reminding him the Pooling Hearing was scheduled to occur 3-7-2019. Offered to acquire a farmout or assignment of Marathon's interest in lieu of being pooled.

2-26-2019: Received email from Matt stating that Marathon would entertain an offer for Mewbourne to acquire the Marathon interest in the wellbores.



HINKLE SHANOR LLP

ATTORNEYS AT LAW

PO BOX 268

SANTA FE, NEW MEXICO 87504

505-982-4554 (FAX) 505-982-8623

WRITER

Gary W. Larson,
Partner

glarson@hinklelawfirm.com

January 29, 2019

VIA CERTIFIED MAIL

Marathon Oil Permian, LLC
Attn: Matthew D. Brown
5555 San Felipe
Houston, Texas 77056-2701

Re: Mewbourne Oil Company NMOCD Application

Dear Mr. Brown:

Enclosed is a copy of an application that Mewbourne Oil Company ("Mewbourne") has filed with the New Mexico Oil Conservation Division ("the Division"). Mewbourne's application requests an order pooling all uncommitted mineral interests in the Third Bone Spring Sand interval of the Bone Spring formation in a 240-acre standard horizontal spacing unit comprised of the S/2 S/2 of Section 11 and the S/2 SW/4 of Section 12, Township 19 South, Range 29 East in Eddy County, New Mexico.

This matter is scheduled for hearing at 8:15 a.m. on Thursday, March 7, 2019 in Porter Hall at the Division's offices located at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. Marathon Oil Permian, LLC ("Marathon") is not required to attend this hearing, but as an owner of an interest that may be affected by Mewbourne's application, Marathon may appear at the hearing and present testimony. If Marathon 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, February 28, 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
C**

GWL:sm
Enclosure

PO BOX 10
ROSWELL, NEW MEXICO 88202
575-622-6510
(FAX) 575-623-9332

PO BOX 1720
ARTESIA, NEW MEXICO 88210
575-622-6510
(FAX) 575-746-6316

PO BOX 268
SANTA FE, NEW MEXICO 87504
505-982-4554
(FAX) 505-982-8623

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Marathon Oil Permian, LLC
 Attn: Matthew D. Brown
 5555 San Felipe
 Houston, Texas 77056-2701



9590 9402 3866 8060 2375 48

2. Article Number (Transfer from carrier label)

7018 2290 0001 5022 9361

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *Marcos Camero*

- ☐ Agent
☐ Addressee

B. Received by (Printed Name)

Marcos Camero

C. Date of Delivery

2-5-19

D. Is delivery address different from item 1?

- ☐ Yes
☐ No

If YES, enter delivery address below:

3. Service Type

- ☐ Adult Signature
☐ Adult Signature Restricted Delivery
☒ Certified Mail®
☐ Certified Mail Restricted Delivery
☐ Collect on Delivery
☐ Collect on Delivery Restricted Delivery

- ☐ Priority Mail Express®
☐ Registered Mail™
☐ Registered Mail Restricted Delivery
☐ Return Receipt for Merchandise
☐ Signature Confirmation™
☐ Signature Confirmation Restricted Delivery

(over \$500)

Restricted Delivery

MEWBOURNE OIL COMPANY

AUTHORIZATION FOR EXPENDITURE

Well Name: Sapphire 11/12 B3LK State Com #2H		Prospect: Bone Spring	
Location: SL: 1350' FSL & 285' FWL (11); BHL: 1800' FSL & 2540' FWL (12)		County: Eddy	ST: NM
Sec. 11,12	Blk: 	Survey: 	TWP: 19S RNG: 29E Prop. TVD: 9025 TMD: 16620

INTANGIBLE COSTS 0180		CODE	TCP	CODE	CC
Regulatory Permits & Surveys		0180-0100	\$10,000	0180-0200	
Location / Road / Site / Preparation		0180-0105	\$75,000	0180-0205	\$25,000
Location / Restoration		0180-0106	\$200,000	0180-0206	\$30,000
Daywork / Turnkey / Footage Drilling 24 days drlg / 3 days comp @ \$22,000/d		0180-0110	\$561,000	0180-0210	\$70,200
Fuel 1700 gal/day @ 2.70/gal		0180-0114	\$124,000	0180-0214	\$250,000
Mud, Chemical & Additives		0180-0120	\$200,000	0180-0220	
Horizontal Drillout Services				0180-0222	\$200,000
Cementing		0180-0125	\$70,000	0180-0225	\$30,000
Logging & Wireline Services		0180-0130	\$2,000	0180-0230	\$315,000
Casing / Tubing / Snubbing Service		0180-0134	\$20,000	0180-0234	\$80,000
Mud Logging		0180-0137	\$20,000		
Stimulation 38 Stg 14.6 MM gal / 14.6 MM lb				0180-0241	\$1,820,000
Stimulation Rentals & Other				0180-0242	\$125,000
Water & Other		0180-0145	\$40,000	0180-0245	\$497,000
Bits		0180-0148	\$63,000	0180-0248	\$4,000
Inspection & Repair Services		0180-0150	\$40,000	0180-0250	\$5,000
Misc. Air & Pumping Services		0180-0154		0180-0254	\$10,000
Testing & Flowback Services		0180-0158	\$15,000	0180-0258	\$30,000
Completion / Workover Rig				0180-0260	\$10,500
Rig Mobilization		0180-0164	\$120,000		
Transportation		0180-0165	\$20,000	0180-0265	\$20,000
Welding Services		0180-0168	\$5,000	0180-0268	\$15,000
Contract Services & Supervision		0180-0170	\$33,000	0180-0270	\$32,000
Directional Services Includes Vertical Control		0180-0175	\$220,000		
Equipment Rental		0180-0180	\$160,200	0180-0280	\$30,000
Well / Lease Legal		0180-0184	\$5,000	0180-0284	
Well / Lease Insurance		0180-0185	\$5,200	0180-0285	
Intangible Supplies		0180-0188	\$8,000	0180-0288	\$10,000
Damages		0180-0190	\$5,000	0180-0290	
ROW & Easements		0180-0192		0180-0292	\$1,000
Pipeline Interconnect				0180-0293	
Company Supervision		0180-0195	\$105,600	0180-0295	\$81,600
Overhead Fixed Rate		0180-0196	\$10,000	0180-0296	\$20,000
Well Abandonment		0180-0198		0180-0298	
Contingencies 2% (TCP) 2% (CC)		0180-0199	\$42,700	0180-0299	\$74,200
TOTAL			\$2,179,700		\$3,785,500

TANGIBLE COSTS 0181		CODE	TCP	CODE	CC
Casing (19.1" - 30")		0181-0793			
Casing (10.1" - 19.0") 300' - 13 3/8" 54.5# J-55 ST&C @ \$42.99/ft		0181-0794	\$13,800		
Casing (8.1" - 10.0") 1130' - 9 5/8" 36# J-55 LT&C @ \$24.43/ft		0181-0795	\$29,500		
Casing (6.1" - 8.0") 9350' - 7" 29# P-110 LT&C @ \$28.96/ft		0181-0796	\$287,700		
Casing (4.1" - 6.0") 8120' - 4 1/2" 13.5# P-110 BPN @ \$14.94/ft				0181-0797	\$124,100
Tubing 8525' - 2 7/8" 6.5# L-80 EUE 8rd @ \$5.72/ft				0181-0798	\$51,900
Drilling Head		0181-0860	\$40,000		
Tubing Head & Upper Section				0181-0870	\$30,000
Horizontal Completion Tools Completion Liner Hanger				0181-0871	\$75,000
Sucker Rods				0181-0875	
Subsurface Equipment				0181-0880	
Artificial Lift Systems Gas Lift Valves & Pkr				0181-0884	\$25,000
Pumping Unit				0181-0885	
Surface Pumps & Prime Movers				0181-0886	
Tanks - Oil 2 - 750 bbl (1/2)				0181-0890	\$20,000
Tanks - Water 1 - 750 bbl (1/2)				0181-0891	\$12,000
Separation / Treating Equipment 30"x10"x1k# 3 ph/36"x15"x1k# Hor 3ph				0181-0895	\$40,000
Heater Treaters, Line Heaters 8'x20'x75# HT (1/2)				0181-0897	\$13,000
Metering Equipment				0181-0898	\$14,000
Line Pipe & Valves - Gathering 1.5 mile 4" poly				0181-0900	\$19,000
Fittings / Valves & Accessories				0181-0906	\$40,000
Cathodic Protection				0181-0908	\$4,000
Electrical Installation				0181-0909	\$75,000
Equipment Installation				0181-0910	\$35,000
Pipeline Construction 1.5 miles 4" poly				0181-0920	\$7,500
TOTAL			\$371,000		\$585,500
SUBTOTAL			\$2,550,700		\$4,371,000
TOTAL WELL COST			\$6,921,700		

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: <u>R. Terrell</u>	Date: <u>9/20/2018</u>
Company Approval: <u><i>m. whitel</i></u>	Date: <u>9/21/2018</u>
Joint Owner Interest: _____ Amount: _____	Signature: _____
Joint Owner Name: _____	

**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. 20269

**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 Bone Spring formation, on top of the Third Bone Spring Sand formation. The map shows that the structure dips gently east-southeast. It also shows a line of cross section and the horizontal spacing unit ("HSU") for the proposed Sapphire 11/12 B3MN State Com #2H well.

4. Attached hereto as Exhibit B is a gross sand isopach map of the Third Bone Spring Sand, which is the target zone for the proposed well. It shows that the sand across the HSU has a uniform thickness of approximately 400 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 Third Bone Spring Sand 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;

Case No. 20269

**MEWBOURNE OIL
Exhibit #2**

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.

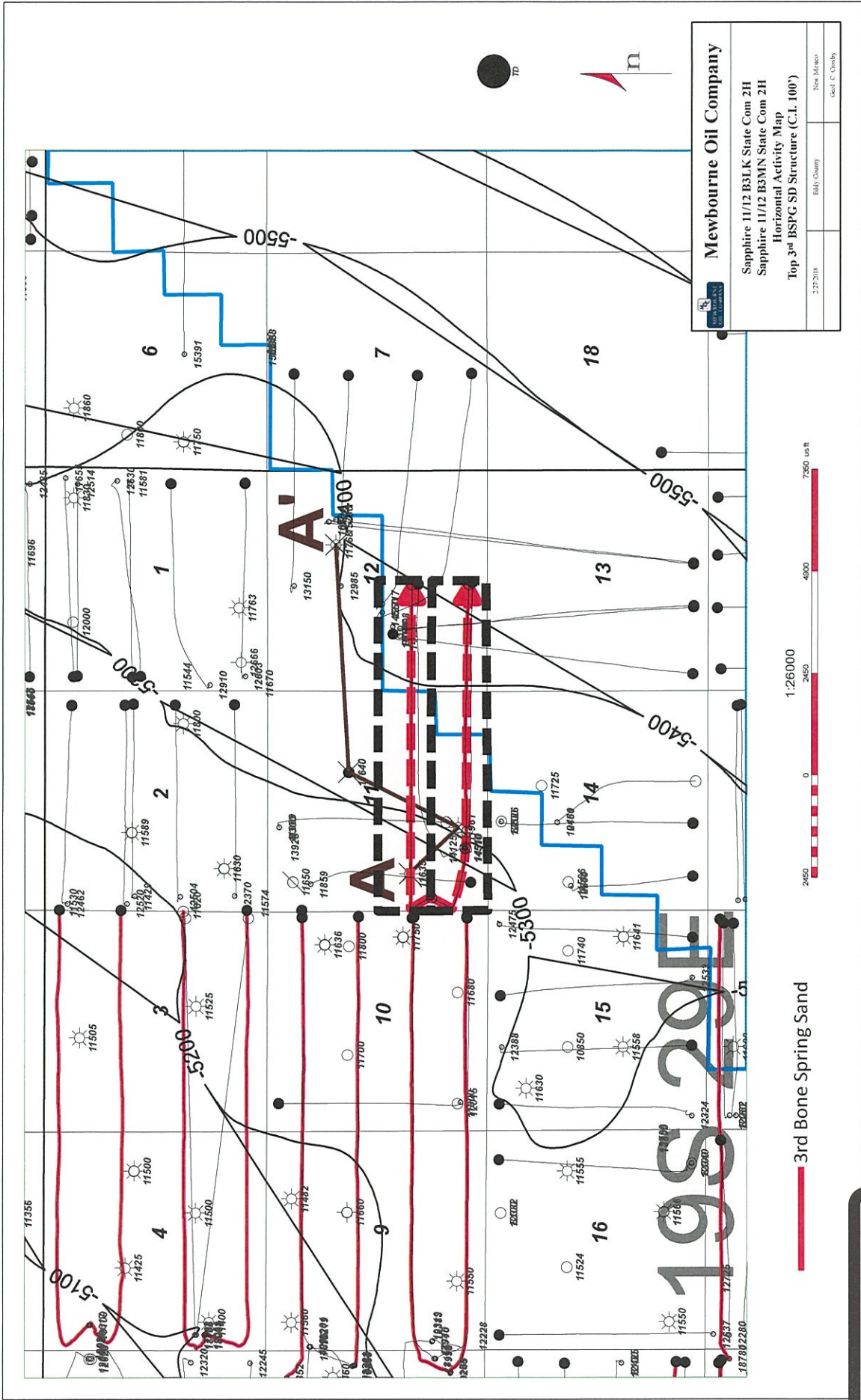
11. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 10 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten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



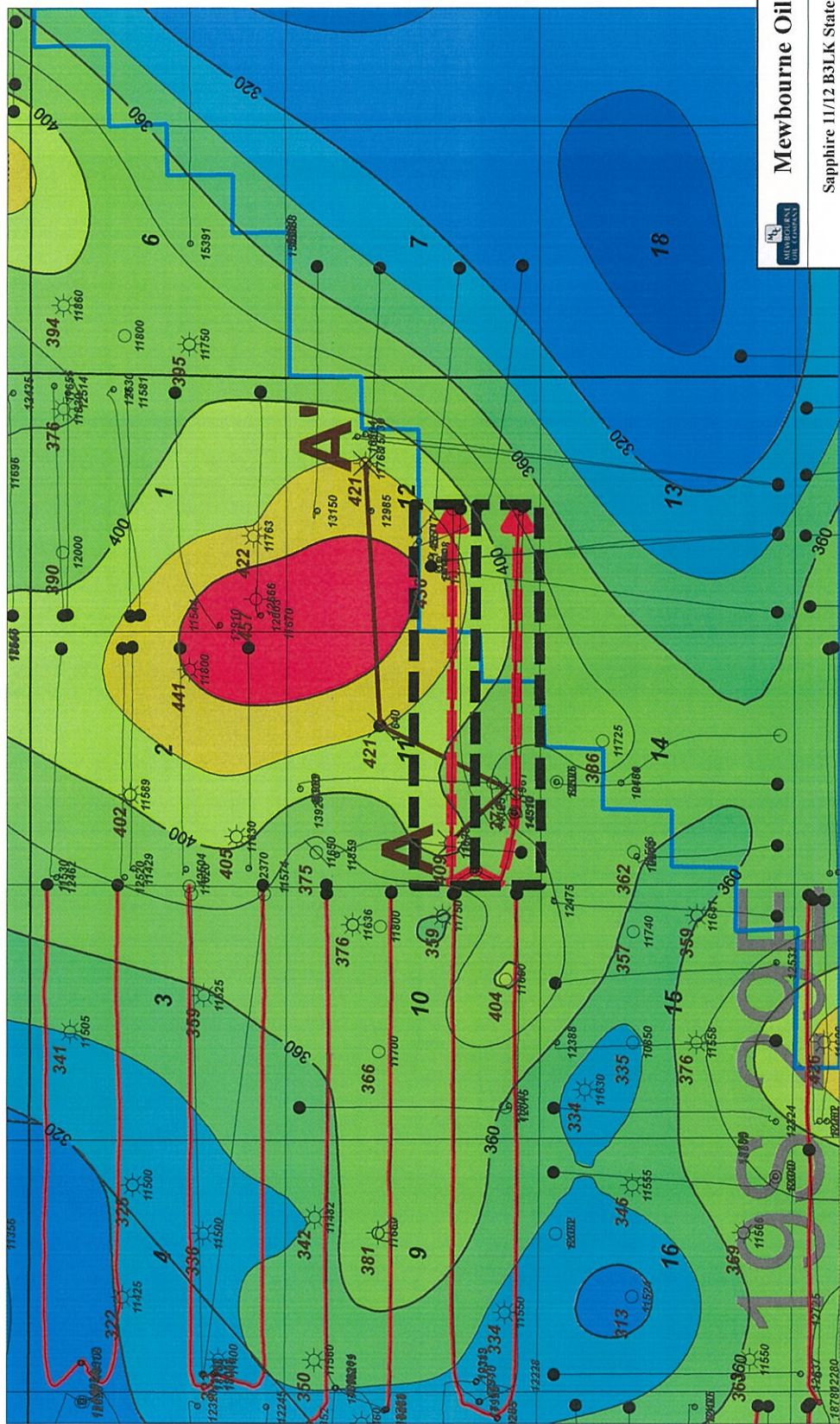
Charles Crosby



Date



**Exhibit
A**



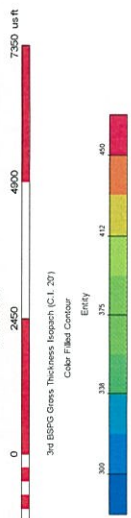
3rd BSPG SD Gross Thickness



Mewbourne Oil Company

Sapphire 11/12 B3LK State Com 2H
Sapphire 11/12 B3MN State Com 2H
Horizontal Activity Map
3rd BSPG Sand Gross Thickness (C.I. 20')

2/27/2018	Early County	New Mexico
		Geoff. C. Crosby



3rd Bone Spring Sand

Exhibit B

A' E

A W

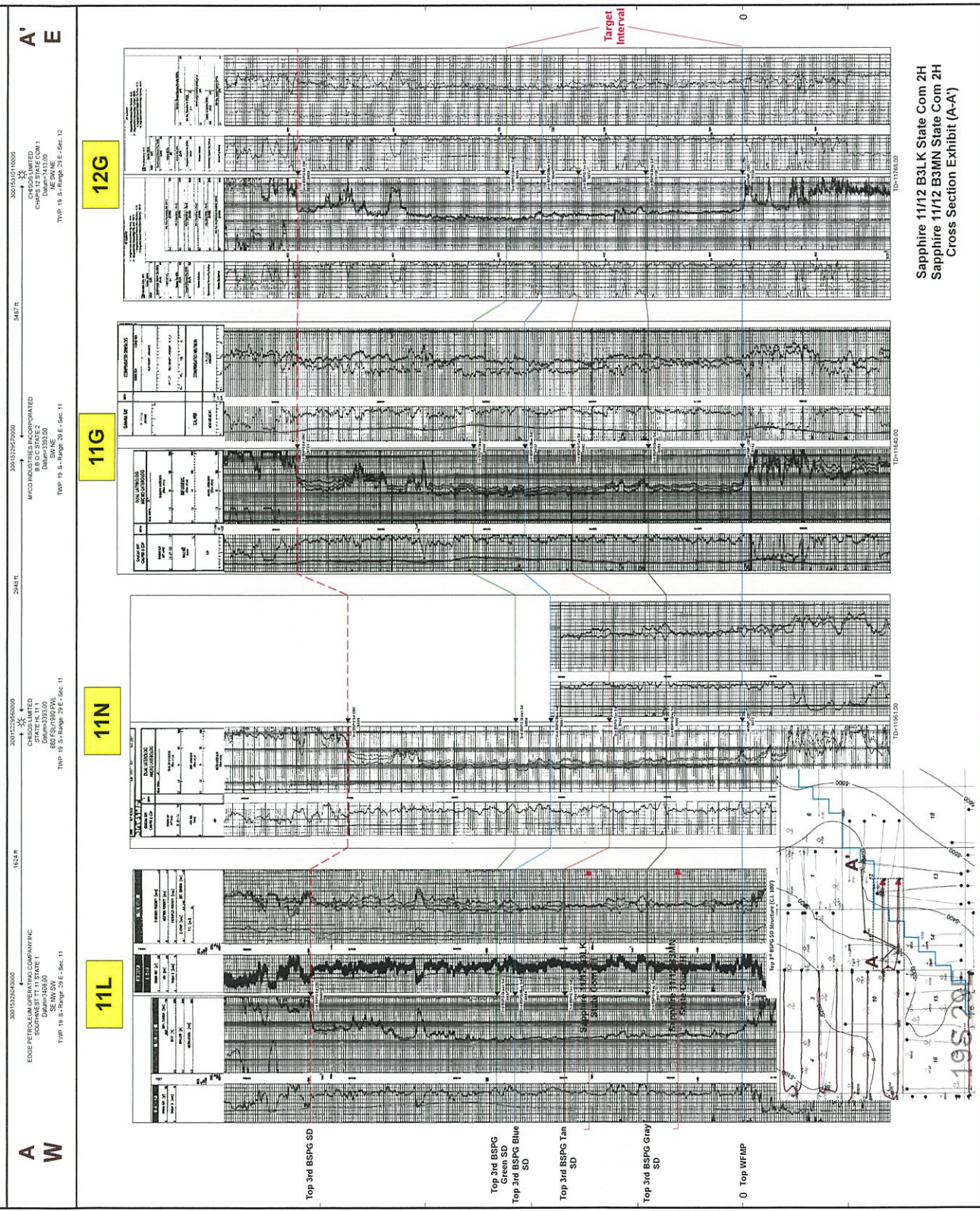


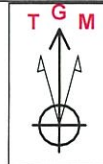
Exhibit
C

Sapphire Area Offset 3rd BSPG SD Production Table									
Well Name	Operator	API	Location	WFMP Comp Date	Cum Oil (Mbo)	Cum Gas (Bcf)	Cum Water (Mbw)	NS/EW	WFMP Zone
Turkey Track 9-10 State 32H	Oxy	3001544109	8H/19S/29E	12/2/2017	397.1	0.7	134.1	EW	Lower 3rd BSPG SD
Agate PWU 21-22 9H	Devon	3001544116	20A/19S/29E	1/16/2018	240.1	0.4	202.6	EW	Lower 3rd BSPG SD
Turkey Track 9-10 State 31H	Oxy	3001544193	8A/19S/29E	8/11/2018	152.8	0.2	155.6	EW	Lower 3rd BSPG SD
Turkey Track 9-10 State 33H	Oxy	3001544194	8P/19S/29E	7/8/2018	122.6	0.1	158.4	EW	Lower 3rd BSPG SD
Turkey Track 9-10 State 34H	Oxy	3001544195	8P/19S/29E	7/8/2018	216.2	0.2	137	EW	Lower 3rd BSPG SD
Turkey Track 4-3 State 31H	Oxy	3001544334	4D/19S/29E	10/23/2018	48.2	0.02	NA	EW	Lower 3rd BSPG SD
Turkey Track 4-3 State 32H	Oxy	3001544386	4D/19S/29E	10/22/2018	28.6	0.03	NA	EW	Lower 3rd BSPG SD
Turkey Track 4-3 State 34H	Oxy	3001544432	4L/19S/29E	8/21/2018	56.5	0.07	NA	EW	Lower 3rd BSPG SD
Turkey Track 4-3 State 33H	Oxy	3001544411	4L/19S/29E	10/10/2018	53.50	0.06	NA	EW	Lower 3rd BSPG SD

Exhibit
D

GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.89°

GEODETIC ZONE: New Mexico Eastern Zone 3375 + 27 @ 3402.0usft (Patterson 560) GROUND ELEVATION: 3375.0											Slot
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude						
0.0	0.0	608146.60	627547.20	32° 40' 17.499 N	104° 3' 11.398 W						
PLAN SECTIONS											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target	
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0		
3	1841.2	5.12	208.04	1840.7	-13.4	-7.2	1.50	208.04	-5.5		
4	8084.6	5.12	208.04	8059.3	-505.0	-269.0	0.00	0.00	-207.7		
5	8425.8	0.00	0.00	8400.0	-518.4	-276.2	1.50	180.00	-213.2	B.B. Sapphire 11 12 B3MN St Com 2H	
6	8554.6	0.00	0.00	8528.8	-518.4	-276.2	0.00	0.00	-213.2		
7	9289.9	88.24	108.00	9006.0	-661.4	164.0	12.00	108.00	240.7		
8	10461.5	88.25	90.42	9042.2	-848.1	1315.4	1.50	-90.23	1406.1		
9	16685.1	88.25	90.42	9232.0	-893.5	7536.0	0.00	0.00	7588.7	PBHL Sapphire 11 12 B3MN St Com #2H	



Azimuths to Grid North
True North: -0.15°
Magnetic North: 6.89°

Magnetic Field
Strength: 47992.8nT
Dip Angle: 60.38°
Date: 01/02/2019
Model: IGRF2015

SHL: 1300' FSL; 285' FWL
Section 11-19S-29E
PBHL: 450' FSL; 2538' FWL
Section 12-19S-29E

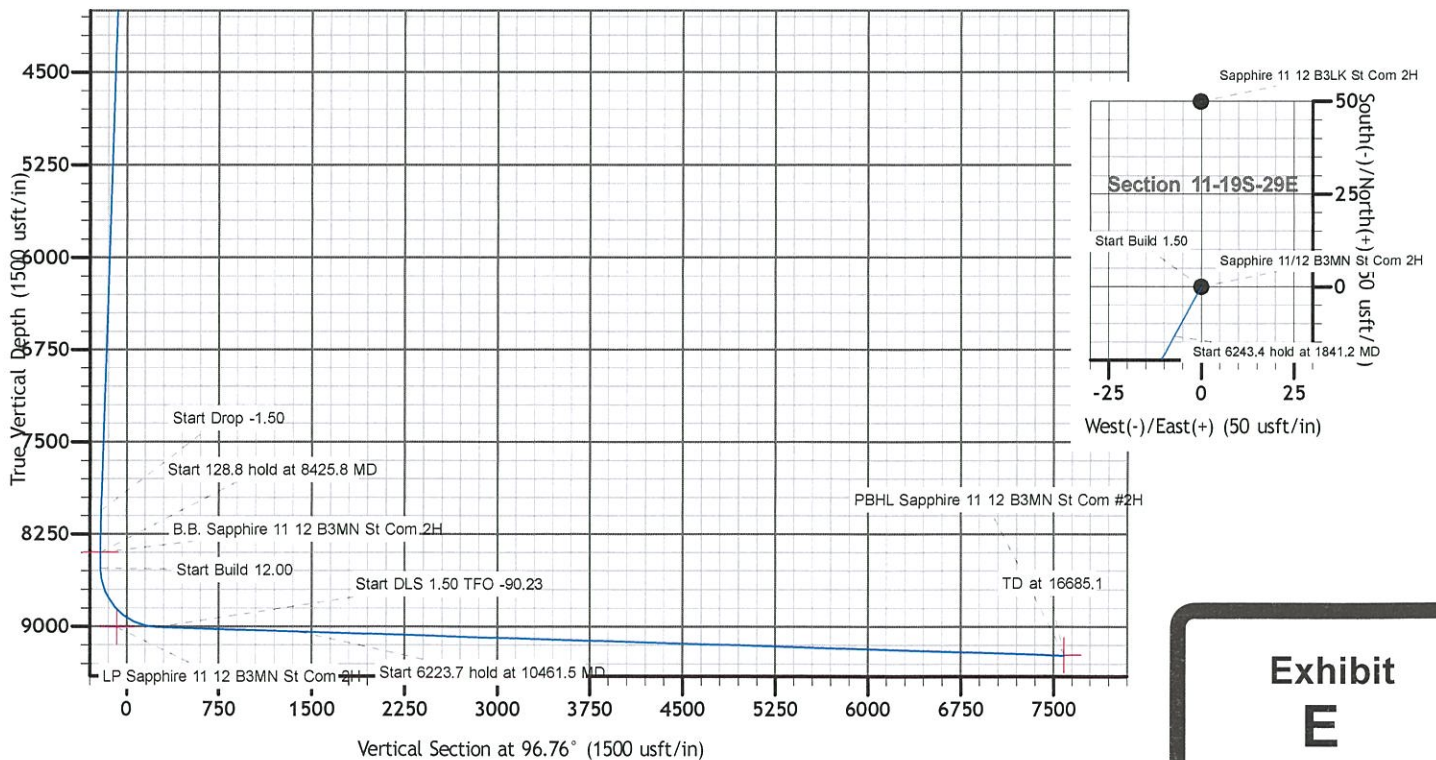
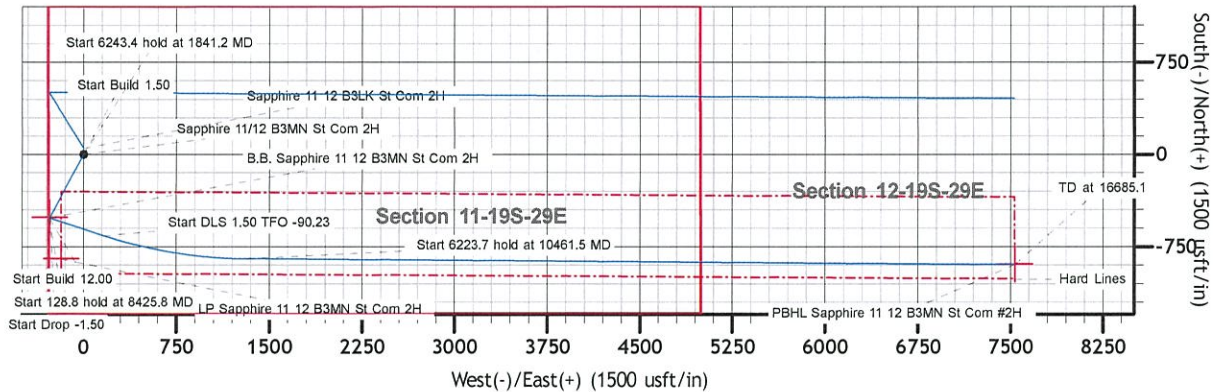


Exhibit
E



Mewbourne Oil Company

Eddy County, N.M. Nad (83)

Section 11/12-19S-29E Sapphire B3MN St Com 2H

Sapphire 11/12 B3MN St Com 2H

Original Hole

Plan: Plan#1

Standard Planning Report

02 January, 2019



Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, N.M. Nad (83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Section 11/12-19S-29E Sapphire B3MN St Com 2H			
Site Position:		Northing:	608,146.60 usft	Latitude: 32° 40' 17.499 N
From:	Map	Easting:	627,547.20 usft	Longitude: 104° 3' 11.398 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.15 °

Well	Sapphire 11/12 B3MN St Com 2H			
Well Position	+N/-S	0.0 usft	Northing:	608,146.60 usft
	+E/-W	0.0 usft	Easting:	627,547.20 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	27.0 usft	Ground Level: 3,375.0 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/02/19	7.05	60.38	47,992.82761388

Design	Plan#1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	96.76

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,841.2	5.12	208.04	1,840.7	-13.4	-7.2	1.50	1.50	0.00	208.04	
8,084.6	5.12	208.04	8,059.3	-505.0	-269.0	0.00	0.00	0.00	0.00	
8,425.8	0.00	0.00	8,400.0	-518.4	-276.2	1.50	-1.50	0.00	180.00	B.B. Sapphire 11 12
8,554.6	0.00	0.00	8,528.8	-518.4	-276.2	0.00	0.00	0.00	0.00	
9,289.9	88.24	108.00	9,006.0	-661.4	164.0	12.00	12.00	0.00	108.00	
10,461.5	88.25	90.42	9,042.2	-848.1	1,315.4	1.50	0.00	-1.50	-90.23	
16,685.1	88.25	90.42	9,232.0	-893.5	7,536.0	0.00	0.00	0.00	0.00	PBHL Sapphire 11

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	1.50	208.04	1,600.0	-1.2	-0.6	-0.5	1.50	1.50	0.00
1,700.0	3.00	208.04	1,699.9	-4.6	-2.5	-1.9	1.50	1.50	0.00
1,800.0	4.50	208.04	1,799.7	-10.4	-5.5	-4.3	1.50	1.50	0.00
1,841.2	5.12	208.04	1,840.7	-13.4	-7.2	-5.5	1.50	1.50	0.00
1,900.0	5.12	208.04	1,899.3	-18.1	-9.6	-7.4	0.00	0.00	0.00
2,000.0	5.12	208.04	1,998.9	-25.9	-13.8	-10.7	0.00	0.00	0.00
2,100.0	5.12	208.04	2,098.5	-33.8	-18.0	-13.9	0.00	0.00	0.00
2,200.0	5.12	208.04	2,198.1	-41.7	-22.2	-17.1	0.00	0.00	0.00
2,300.0	5.12	208.04	2,297.7	-49.6	-26.4	-20.4	0.00	0.00	0.00
2,400.0	5.12	208.04	2,397.3	-57.4	-30.6	-23.6	0.00	0.00	0.00
2,500.0	5.12	208.04	2,496.9	-65.3	-34.8	-26.9	0.00	0.00	0.00
2,600.0	5.12	208.04	2,596.5	-73.2	-39.0	-30.1	0.00	0.00	0.00
2,700.0	5.12	208.04	2,696.1	-81.1	-43.2	-33.3	0.00	0.00	0.00
2,800.0	5.12	208.04	2,795.7	-88.9	-47.4	-36.6	0.00	0.00	0.00
2,900.0	5.12	208.04	2,895.3	-96.8	-51.6	-39.8	0.00	0.00	0.00
3,000.0	5.12	208.04	2,994.9	-104.7	-55.8	-43.0	0.00	0.00	0.00
3,100.0	5.12	208.04	3,094.5	-112.5	-60.0	-46.3	0.00	0.00	0.00
3,200.0	5.12	208.04	3,194.1	-120.4	-64.1	-49.5	0.00	0.00	0.00
3,300.0	5.12	208.04	3,293.7	-128.3	-68.3	-52.8	0.00	0.00	0.00
3,400.0	5.12	208.04	3,393.3	-136.2	-72.5	-56.0	0.00	0.00	0.00
3,500.0	5.12	208.04	3,492.9	-144.0	-76.7	-59.2	0.00	0.00	0.00
3,600.0	5.12	208.04	3,592.5	-151.9	-80.9	-62.5	0.00	0.00	0.00
3,700.0	5.12	208.04	3,692.1	-159.8	-85.1	-65.7	0.00	0.00	0.00
3,800.0	5.12	208.04	3,791.7	-167.7	-89.3	-68.9	0.00	0.00	0.00
3,900.0	5.12	208.04	3,891.3	-175.5	-93.5	-72.2	0.00	0.00	0.00
4,000.0	5.12	208.04	3,990.9	-183.4	-97.7	-75.4	0.00	0.00	0.00
4,100.0	5.12	208.04	4,090.5	-191.3	-101.9	-78.7	0.00	0.00	0.00
4,200.0	5.12	208.04	4,190.1	-199.1	-106.1	-81.9	0.00	0.00	0.00
4,300.0	5.12	208.04	4,289.7	-207.0	-110.3	-85.1	0.00	0.00	0.00
4,400.0	5.12	208.04	4,389.3	-214.9	-114.5	-88.4	0.00	0.00	0.00
4,500.0	5.12	208.04	4,488.9	-222.8	-118.7	-91.6	0.00	0.00	0.00
4,600.0	5.12	208.04	4,588.5	-230.6	-122.9	-94.8	0.00	0.00	0.00
4,700.0	5.12	208.04	4,688.2	-238.5	-127.1	-98.1	0.00	0.00	0.00
4,800.0	5.12	208.04	4,787.8	-246.4	-131.2	-101.3	0.00	0.00	0.00
4,900.0	5.12	208.04	4,887.4	-254.3	-135.4	-104.6	0.00	0.00	0.00
5,000.0	5.12	208.04	4,987.0	-262.1	-139.6	-107.8	0.00	0.00	0.00
5,100.0	5.12	208.04	5,086.6	-270.0	-143.8	-111.0	0.00	0.00	0.00

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
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Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	5.12	208.04	5,186.2	-277.9	-148.0	-114.3	0.00	0.00	0.00
5,300.0	5.12	208.04	5,285.8	-285.7	-152.2	-117.5	0.00	0.00	0.00
5,400.0	5.12	208.04	5,385.4	-293.6	-156.4	-120.8	0.00	0.00	0.00
5,500.0	5.12	208.04	5,485.0	-301.5	-160.6	-124.0	0.00	0.00	0.00
5,600.0	5.12	208.04	5,584.6	-309.4	-164.8	-127.2	0.00	0.00	0.00
5,700.0	5.12	208.04	5,684.2	-317.2	-169.0	-130.5	0.00	0.00	0.00
5,800.0	5.12	208.04	5,783.8	-325.1	-173.2	-133.7	0.00	0.00	0.00
5,900.0	5.12	208.04	5,883.4	-333.0	-177.4	-136.9	0.00	0.00	0.00
6,000.0	5.12	208.04	5,983.0	-340.9	-181.6	-140.2	0.00	0.00	0.00
6,100.0	5.12	208.04	6,082.6	-348.7	-185.8	-143.4	0.00	0.00	0.00
6,200.0	5.12	208.04	6,182.2	-356.6	-190.0	-146.7	0.00	0.00	0.00
6,300.0	5.12	208.04	6,281.8	-364.5	-194.2	-149.9	0.00	0.00	0.00
6,400.0	5.12	208.04	6,381.4	-372.3	-198.3	-153.1	0.00	0.00	0.00
6,500.0	5.12	208.04	6,481.0	-380.2	-202.5	-156.4	0.00	0.00	0.00
6,600.0	5.12	208.04	6,580.6	-388.1	-206.7	-159.6	0.00	0.00	0.00
6,700.0	5.12	208.04	6,680.2	-396.0	-210.9	-162.8	0.00	0.00	0.00
6,800.0	5.12	208.04	6,779.8	-403.8	-215.1	-166.1	0.00	0.00	0.00
6,900.0	5.12	208.04	6,879.4	-411.7	-219.3	-169.3	0.00	0.00	0.00
7,000.0	5.12	208.04	6,979.0	-419.6	-223.5	-172.6	0.00	0.00	0.00
7,100.0	5.12	208.04	7,078.6	-427.5	-227.7	-175.8	0.00	0.00	0.00
7,200.0	5.12	208.04	7,178.2	-435.3	-231.9	-179.0	0.00	0.00	0.00
7,300.0	5.12	208.04	7,277.8	-443.2	-236.1	-182.3	0.00	0.00	0.00
7,400.0	5.12	208.04	7,377.4	-451.1	-240.3	-185.5	0.00	0.00	0.00
7,500.0	5.12	208.04	7,477.0	-458.9	-244.5	-188.7	0.00	0.00	0.00
7,600.0	5.12	208.04	7,576.6	-466.8	-248.7	-192.0	0.00	0.00	0.00
7,700.0	5.12	208.04	7,676.2	-474.7	-252.9	-195.2	0.00	0.00	0.00
7,800.0	5.12	208.04	7,775.8	-482.6	-257.1	-198.5	0.00	0.00	0.00
7,900.0	5.12	208.04	7,875.4	-490.4	-261.3	-201.7	0.00	0.00	0.00
8,000.0	5.12	208.04	7,975.0	-498.3	-265.4	-204.9	0.00	0.00	0.00
8,084.6	5.12	208.04	8,059.3	-505.0	-269.0	-207.7	0.00	0.00	0.00
8,100.0	4.89	208.04	8,074.6	-506.2	-269.6	-208.2	1.50	-1.50	0.00
8,200.0	3.39	208.04	8,174.3	-512.5	-273.0	-210.8	1.50	-1.50	0.00
8,300.0	1.89	208.04	8,274.2	-516.6	-275.2	-212.4	1.50	-1.50	0.00
8,400.0	0.39	208.04	8,374.2	-518.3	-276.1	-213.2	1.50	-1.50	0.00
8,425.8	0.00	0.00	8,400.0	-518.4	-276.2	-213.2	1.50	-1.50	0.00
B.B. Sapphire 11 12 B3MN St Com 2H									
8,500.0	0.00	0.00	8,474.2	-518.4	-276.2	-213.2	0.00	0.00	0.00
8,554.6	0.00	0.00	8,528.8	-518.4	-276.2	-213.2	0.00	0.00	0.00
8,575.0	2.45	108.00	8,549.2	-518.5	-275.7	-212.8	12.00	12.00	0.00
8,600.0	5.45	108.00	8,574.1	-519.1	-274.1	-211.1	12.00	12.00	0.00
8,625.0	8.45	108.00	8,598.9	-520.0	-271.2	-208.1	12.00	12.00	0.00
8,650.0	11.45	108.00	8,623.6	-521.3	-267.1	-203.9	12.00	12.00	0.00
8,675.0	14.45	108.00	8,647.9	-523.1	-261.8	-198.4	12.00	12.00	0.00
8,700.0	17.45	108.00	8,672.0	-525.2	-255.3	-191.6	12.00	12.00	0.00
8,725.0	20.45	108.00	8,695.6	-527.7	-247.5	-183.7	12.00	12.00	0.00
8,750.0	23.45	108.00	8,718.8	-530.6	-238.7	-174.5	12.00	12.00	0.00
8,775.0	26.45	108.00	8,741.5	-533.9	-228.6	-164.2	12.00	12.00	0.00
8,800.0	29.45	108.00	8,763.5	-537.5	-217.5	-152.7	12.00	12.00	0.00
8,825.0	32.45	108.00	8,785.0	-541.4	-205.3	-140.1	12.00	12.00	0.00
8,850.0	35.45	108.00	8,805.7	-545.8	-192.0	-126.4	12.00	12.00	0.00
8,875.0	38.45	108.00	8,825.7	-550.4	-177.7	-111.7	12.00	12.00	0.00
8,900.0	41.45	108.00	8,844.9	-555.4	-162.4	-95.9	12.00	12.00	0.00
8,925.0	44.45	108.00	8,863.2	-560.6	-146.2	-79.2	12.00	12.00	0.00

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,950.0	47.45	108.00	8,880.5	-566.2	-129.1	-61.6	12.00	12.00	0.00
8,975.0	50.45	108.00	8,897.0	-572.0	-111.2	-43.1	12.00	12.00	0.00
9,000.0	53.45	108.00	8,912.4	-578.1	-92.5	-23.8	12.00	12.00	0.00
9,025.0	56.45	108.00	8,926.7	-584.4	-73.0	-3.7	12.00	12.00	0.00
9,048.5	59.27	108.00	8,939.2	-590.6	-54.1	15.8	12.00	12.00	0.00
LP Sapphire 11 12 B3MN St Com 2H									
9,050.0	59.45	108.00	8,940.0	-591.0	-52.9	17.1	12.00	12.00	0.00
9,075.0	62.45	108.00	8,952.1	-597.7	-32.1	38.5	12.00	12.00	0.00
9,100.0	65.45	108.00	8,963.1	-604.7	-10.7	60.5	12.00	12.00	0.00
9,125.0	68.45	108.00	8,972.9	-611.8	11.1	83.1	12.00	12.00	0.00
9,150.0	71.45	108.00	8,981.5	-619.0	33.5	106.1	12.00	12.00	0.00
9,175.0	74.45	108.00	8,988.8	-626.4	56.2	129.6	12.00	12.00	0.00
9,200.0	77.45	108.00	8,994.9	-633.9	79.3	153.3	12.00	12.00	0.00
9,225.0	80.45	108.00	8,999.6	-641.5	102.6	177.4	12.00	12.00	0.00
9,250.0	83.45	108.00	9,003.1	-649.1	126.1	201.7	12.00	12.00	0.00
9,275.0	86.45	108.00	9,005.3	-656.8	149.8	226.1	12.00	12.00	0.00
9,289.9	88.24	108.00	9,006.0	-661.4	164.0	240.7	12.00	12.00	0.00
9,300.0	88.24	107.85	9,006.3	-664.5	173.6	250.6	1.50	-0.01	-1.50
9,400.0	88.23	106.35	9,009.4	-693.9	269.1	348.9	1.50	-0.01	-1.50
9,500.0	88.23	104.85	9,012.5	-720.8	365.4	447.7	1.50	0.00	-1.50
9,600.0	88.23	103.35	9,015.6	-745.1	462.3	546.8	1.50	0.00	-1.50
9,700.0	88.23	101.85	9,018.7	-766.9	559.9	646.3	1.50	0.00	-1.50
9,800.0	88.22	100.35	9,021.8	-786.2	657.9	745.9	1.50	0.00	-1.50
9,900.0	88.23	98.84	9,024.9	-802.8	756.5	845.8	1.50	0.00	-1.50
10,000.0	88.23	97.34	9,028.0	-816.9	855.4	945.7	1.50	0.00	-1.50
10,100.0	88.23	95.84	9,031.1	-828.4	954.7	1,045.6	1.50	0.00	-1.50
10,200.0	88.24	94.34	9,034.2	-837.2	1,054.3	1,145.5	1.50	0.00	-1.50
10,300.0	88.24	92.84	9,037.2	-843.5	1,154.0	1,245.3	1.50	0.01	-1.50
10,400.0	88.25	91.34	9,040.3	-847.2	1,253.9	1,344.9	1.50	0.01	-1.50
10,461.5	88.25	90.42	9,042.2	-848.1	1,315.4	1,406.1	1.50	0.01	-1.50
10,500.0	88.25	90.42	9,043.4	-848.4	1,353.9	1,444.3	0.00	0.00	0.00
10,600.0	88.25	90.42	9,046.4	-849.1	1,453.8	1,543.7	0.00	0.00	0.00
10,700.0	88.25	90.42	9,049.5	-849.8	1,553.8	1,643.0	0.00	0.00	0.00
10,800.0	88.25	90.42	9,052.5	-850.6	1,653.7	1,742.4	0.00	0.00	0.00
10,900.0	88.25	90.42	9,055.6	-851.3	1,753.7	1,841.7	0.00	0.00	0.00
11,000.0	88.25	90.42	9,058.6	-852.0	1,853.6	1,941.0	0.00	0.00	0.00
11,100.0	88.25	90.42	9,061.7	-852.8	1,953.6	2,040.4	0.00	0.00	0.00
11,200.0	88.25	90.42	9,064.7	-853.5	2,053.5	2,139.7	0.00	0.00	0.00
11,300.0	88.25	90.42	9,067.8	-854.2	2,153.5	2,239.1	0.00	0.00	0.00
11,400.0	88.25	90.42	9,070.8	-854.9	2,253.4	2,338.4	0.00	0.00	0.00
11,500.0	88.25	90.42	9,073.9	-855.7	2,353.4	2,437.8	0.00	0.00	0.00
11,600.0	88.25	90.42	9,076.9	-856.4	2,453.3	2,537.1	0.00	0.00	0.00
11,700.0	88.25	90.42	9,080.0	-857.1	2,553.3	2,636.4	0.00	0.00	0.00
11,800.0	88.25	90.42	9,083.0	-857.9	2,653.2	2,735.8	0.00	0.00	0.00
11,900.0	88.25	90.42	9,086.1	-858.6	2,753.2	2,835.1	0.00	0.00	0.00
12,000.0	88.25	90.42	9,089.1	-859.3	2,853.1	2,934.5	0.00	0.00	0.00
12,100.0	88.25	90.42	9,092.2	-860.1	2,953.1	3,033.8	0.00	0.00	0.00
12,200.0	88.25	90.42	9,095.2	-860.8	3,053.0	3,133.1	0.00	0.00	0.00
12,300.0	88.25	90.42	9,098.3	-861.5	3,153.0	3,232.5	0.00	0.00	0.00
12,400.0	88.25	90.42	9,101.3	-862.2	3,252.9	3,331.8	0.00	0.00	0.00
12,500.0	88.25	90.42	9,104.4	-863.0	3,352.9	3,431.2	0.00	0.00	0.00
12,600.0	88.25	90.42	9,107.4	-863.7	3,452.8	3,530.5	0.00	0.00	0.00

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,700.0	88.25	90.42	9,110.5	-864.4	3,552.8	3,629.9	0.00	0.00	0.00
12,800.0	88.25	90.42	9,113.5	-865.2	3,652.7	3,729.2	0.00	0.00	0.00
12,900.0	88.25	90.42	9,116.6	-865.9	3,752.7	3,828.5	0.00	0.00	0.00
13,000.0	88.25	90.42	9,119.6	-866.6	3,852.6	3,927.9	0.00	0.00	0.00
13,100.0	88.25	90.42	9,122.7	-867.4	3,952.6	4,027.2	0.00	0.00	0.00
13,200.0	88.25	90.42	9,125.7	-868.1	4,052.5	4,126.6	0.00	0.00	0.00
13,300.0	88.25	90.42	9,128.8	-868.8	4,152.5	4,225.9	0.00	0.00	0.00
13,400.0	88.25	90.42	9,131.8	-869.5	4,252.4	4,325.2	0.00	0.00	0.00
13,500.0	88.25	90.42	9,134.9	-870.3	4,352.4	4,424.6	0.00	0.00	0.00
13,600.0	88.25	90.42	9,137.9	-871.0	4,452.3	4,523.9	0.00	0.00	0.00
13,700.0	88.25	90.42	9,141.0	-871.7	4,552.3	4,623.3	0.00	0.00	0.00
13,800.0	88.25	90.42	9,144.0	-872.5	4,652.2	4,722.6	0.00	0.00	0.00
13,900.0	88.25	90.42	9,147.1	-873.2	4,752.2	4,821.9	0.00	0.00	0.00
14,000.0	88.25	90.42	9,150.1	-873.9	4,852.1	4,921.3	0.00	0.00	0.00
14,100.0	88.25	90.42	9,153.2	-874.7	4,952.1	5,020.6	0.00	0.00	0.00
14,200.0	88.25	90.42	9,156.2	-875.4	5,052.0	5,120.0	0.00	0.00	0.00
14,300.0	88.25	90.42	9,159.3	-876.1	5,152.0	5,219.3	0.00	0.00	0.00
14,400.0	88.25	90.42	9,162.3	-876.8	5,251.9	5,318.7	0.00	0.00	0.00
14,500.0	88.25	90.42	9,165.4	-877.6	5,351.9	5,418.0	0.00	0.00	0.00
14,600.0	88.25	90.42	9,168.4	-878.3	5,451.8	5,517.3	0.00	0.00	0.00
14,700.0	88.25	90.42	9,171.5	-879.0	5,551.8	5,616.7	0.00	0.00	0.00
14,800.0	88.25	90.42	9,174.5	-879.8	5,651.7	5,716.0	0.00	0.00	0.00
14,900.0	88.25	90.42	9,177.6	-880.5	5,751.7	5,815.4	0.00	0.00	0.00
15,000.0	88.25	90.42	9,180.6	-881.2	5,851.7	5,914.7	0.00	0.00	0.00
15,100.0	88.25	90.42	9,183.7	-882.0	5,951.6	6,014.0	0.00	0.00	0.00
15,200.0	88.25	90.42	9,186.7	-882.7	6,051.6	6,113.4	0.00	0.00	0.00
15,300.0	88.25	90.42	9,189.8	-883.4	6,151.5	6,212.7	0.00	0.00	0.00
15,400.0	88.25	90.42	9,192.8	-884.1	6,251.5	6,312.1	0.00	0.00	0.00
15,500.0	88.25	90.42	9,195.9	-884.9	6,351.4	6,411.4	0.00	0.00	0.00
15,600.0	88.25	90.42	9,198.9	-885.6	6,451.4	6,510.8	0.00	0.00	0.00
15,700.0	88.25	90.42	9,202.0	-886.3	6,551.3	6,610.1	0.00	0.00	0.00
15,800.0	88.25	90.42	9,205.0	-887.1	6,651.3	6,709.4	0.00	0.00	0.00
15,900.0	88.25	90.42	9,208.1	-887.8	6,751.2	6,808.8	0.00	0.00	0.00
16,000.0	88.25	90.42	9,211.1	-888.5	6,851.2	6,908.1	0.00	0.00	0.00
16,100.0	88.25	90.42	9,214.2	-889.3	6,951.1	7,007.5	0.00	0.00	0.00
16,200.0	88.25	90.42	9,217.2	-890.0	7,051.1	7,106.8	0.00	0.00	0.00
16,300.0	88.25	90.42	9,220.3	-890.7	7,151.0	7,206.1	0.00	0.00	0.00
16,400.0	88.25	90.42	9,223.3	-891.4	7,251.0	7,305.5	0.00	0.00	0.00
16,500.0	88.25	90.42	9,226.4	-892.2	7,350.9	7,404.8	0.00	0.00	0.00
16,600.0	88.25	90.42	9,229.4	-892.9	7,450.9	7,504.2	0.00	0.00	0.00
16,685.1	88.25	90.42	9,232.0	-893.5	7,536.0	7,588.7	0.00	0.00	0.00

PBHL Sapphire 11 12 B3MN St Com #2H

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
B.B. Sapphire 11 12 E - plan hits target center - Point	0.00	0.00	8,400.0	-518.4	-276.2	607,628.19	627,271.05	32° 40' 12.377 N	104° 3' 14.645 W
LP Sapphire 11 12 B3 - plan misses target center by 296.0usft at 9048.5usft MD (8939.2 TVD, -590.6 N, -54.1 E) - Point	0.00	0.00	9,006.0	-848.9	-182.0	607,297.66	627,365.16	32° 40' 9.104 N	104° 3' 13.554 W
PBHL Sapphire 11 12 - plan hits target center - Point	0.00	0.00	9,232.0	-893.5	7,536.0	607,253.08	635,083.16	32° 40' 8.452 N	104° 1' 43.263 W



Mewbourne Oil Company

Eddy County, N.M. Nad (83)

Section 11/12-19S-29E Sapphire B3MN St Com 2H

Sapphire 11/12 B3MN St Com 2H

Original Hole

Plan: Plan#1

Standard Planning Report - Geographic

02 January, 2019



Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, N.M. Nad (83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Section 11/12-19S-29E Sapphire B3MN St Com 2H

Site Position:	Northing:	608,146.60 usft	Latitude:	32° 40' 17.499 N
From: Map	Easting:	627,547.20 usft	Longitude:	104° 3' 11.398 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:
				0.15 °

Well	Sapphire 11/12 B3MN St Com 2H					
Well Position	+N/-S	0.0 usft	Northing:	608,146.60 usft	Latitude:	32° 40' 17.499 N
	+E/-W	0.0 usft	Easting:	627,547.20 usft	Longitude:	104° 3' 11.398 W
Position Uncertainty	0.0 usft		Wellhead Elevation:	27.0 usft	Ground Level:	3,375.0 usft

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/02/19	7.05	60.38	47,992.82761388

Design Plan#1

Audit Notes:

Version: **Phase:** PLAN **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	96.76

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,841.2	5.12	208.04	1,840.7	-13.4	-7.2	1.50	1.50	0.00	208.04	
8,084.6	5.12	208.04	8,059.3	-505.0	-269.0	0.00	0.00	0.00	0.00	
8,425.8	0.00	0.00	8,400.0	-518.4	-276.2	1.50	-1.50	0.00	180.00	B.B. Sapphire 11 12
8,554.6	0.00	0.00	8,528.8	-518.4	-276.2	0.00	0.00	0.00	0.00	
9,289.9	88.24	108.00	9,006.0	-661.4	164.0	12.00	12.00	0.00	108.00	
10,461.5	88.25	90.42	9,042.2	-848.1	1,315.4	1.50	0.00	-1.50	-90.23	
16,685.1	88.25	90.42	9,232.0	-893.5	7,536.0	0.00	0.00	0.00	0.00	PBHL Sapphire 11

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
100.0	0.00	0.00	100.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
200.0	0.00	0.00	200.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
300.0	0.00	0.00	300.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
400.0	0.00	0.00	400.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
500.0	0.00	0.00	500.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
600.0	0.00	0.00	600.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
700.0	0.00	0.00	700.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
800.0	0.00	0.00	800.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
900.0	0.00	0.00	900.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,100.0	0.00	0.00	1,100.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,200.0	0.00	0.00	1,200.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,300.0	0.00	0.00	1,300.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,400.0	0.00	0.00	1,400.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,500.0	0.00	0.00	1,500.0	0.0	0.0	608,146.60	627,547.20	32° 40' 17.499 N	104° 3' 11.398 W
1,600.0	1.50	208.04	1,600.0	-1.2	-0.6	608,145.45	627,546.59	32° 40' 17.488 N	104° 3' 11.405 W
1,700.0	3.00	208.04	1,699.9	-4.6	-2.5	608,141.98	627,544.74	32° 40' 17.454 N	104° 3' 11.427 W
1,800.0	4.50	208.04	1,799.7	-10.4	-5.5	608,136.21	627,541.67	32° 40' 17.397 N	104° 3' 11.463 W
1,841.2	5.12	208.04	1,840.7	-13.4	-7.2	608,133.16	627,540.05	32° 40' 17.367 N	104° 3' 11.482 W
1,900.0	5.12	208.04	1,899.3	-18.1	-9.6	608,128.53	627,537.58	32° 40' 17.321 N	104° 3' 11.511 W
2,000.0	5.12	208.04	1,998.9	-25.9	-13.8	608,120.66	627,533.38	32° 40' 17.243 N	104° 3' 11.560 W
2,100.0	5.12	208.04	2,098.5	-33.8	-18.0	608,112.79	627,529.19	32° 40' 17.165 N	104° 3' 11.610 W
2,200.0	5.12	208.04	2,198.1	-41.7	-22.2	608,104.92	627,525.00	32° 40' 17.087 N	104° 3' 11.659 W
2,300.0	5.12	208.04	2,297.7	-49.6	-26.4	608,097.04	627,520.80	32° 40' 17.010 N	104° 3' 11.708 W
2,400.0	5.12	208.04	2,397.3	-57.4	-30.6	608,089.17	627,516.61	32° 40' 16.932 N	104° 3' 11.758 W
2,500.0	5.12	208.04	2,496.9	-65.3	-34.8	608,081.30	627,512.42	32° 40' 16.854 N	104° 3' 11.807 W
2,600.0	5.12	208.04	2,596.5	-73.2	-39.0	608,073.42	627,508.22	32° 40' 16.776 N	104° 3' 11.856 W
2,700.0	5.12	208.04	2,696.1	-81.1	-43.2	608,065.55	627,504.03	32° 40' 16.698 N	104° 3' 11.906 W
2,800.0	5.12	208.04	2,795.7	-88.9	-47.4	608,057.68	627,499.83	32° 40' 16.621 N	104° 3' 11.955 W
2,900.0	5.12	208.04	2,895.3	-96.8	-51.6	608,049.81	627,495.64	32° 40' 16.543 N	104° 3' 12.004 W
3,000.0	5.12	208.04	2,994.9	-104.7	-55.8	608,041.93	627,491.45	32° 40' 16.465 N	104° 3' 12.054 W
3,100.0	5.12	208.04	3,094.5	-112.5	-60.0	608,034.06	627,487.25	32° 40' 16.387 N	104° 3' 12.103 W
3,200.0	5.12	208.04	3,194.1	-120.4	-64.1	608,026.19	627,483.06	32° 40' 16.309 N	104° 3' 12.152 W
3,300.0	5.12	208.04	3,293.7	-128.3	-68.3	608,018.31	627,478.86	32° 40' 16.232 N	104° 3' 12.201 W
3,400.0	5.12	208.04	3,393.3	-136.2	-72.5	608,010.44	627,474.67	32° 40' 16.154 N	104° 3' 12.251 W
3,500.0	5.12	208.04	3,492.9	-144.0	-76.7	608,002.57	627,470.48	32° 40' 16.076 N	104° 3' 12.300 W
3,600.0	5.12	208.04	3,592.5	-151.9	-80.9	607,994.70	627,466.28	32° 40' 15.998 N	104° 3' 12.349 W
3,700.0	5.12	208.04	3,692.1	-159.8	-85.1	607,986.82	627,462.09	32° 40' 15.920 N	104° 3' 12.399 W
3,800.0	5.12	208.04	3,791.7	-167.7	-89.3	607,978.95	627,457.90	32° 40' 15.843 N	104° 3' 12.448 W
3,900.0	5.12	208.04	3,891.3	-175.5	-93.5	607,971.08	627,453.70	32° 40' 15.765 N	104° 3' 12.497 W
4,000.0	5.12	208.04	3,990.9	-183.4	-97.7	607,963.20	627,449.51	32° 40' 15.687 N	104° 3' 12.547 W
4,100.0	5.12	208.04	4,090.5	-191.3	-101.9	607,955.33	627,445.31	32° 40' 15.609 N	104° 3' 12.596 W
4,200.0	5.12	208.04	4,190.1	-199.1	-106.1	607,947.46	627,441.12	32° 40' 15.531 N	104° 3' 12.645 W
4,300.0	5.12	208.04	4,289.7	-207.0	-110.3	607,939.59	627,436.93	32° 40' 15.454 N	104° 3' 12.695 W
4,400.0	5.12	208.04	4,389.3	-214.9	-114.5	607,931.71	627,432.73	32° 40' 15.376 N	104° 3' 12.744 W
4,500.0	5.12	208.04	4,488.9	-222.8	-118.7	607,923.84	627,428.54	32° 40' 15.298 N	104° 3' 12.793 W
4,600.0	5.12	208.04	4,588.5	-230.6	-122.9	607,915.97	627,424.34	32° 40' 15.220 N	104° 3' 12.842 W
4,700.0	5.12	208.04	4,688.2	-238.5	-127.1	607,908.09	627,420.15	32° 40' 15.143 N	104° 3' 12.892 W
4,800.0	5.12	208.04	4,787.8	-246.4	-131.2	607,900.22	627,415.96	32° 40' 15.065 N	104° 3' 12.941 W
4,900.0	5.12	208.04	4,887.4	-254.3	-135.4	607,892.35	627,411.76	32° 40' 14.987 N	104° 3' 12.990 W
5,000.0	5.12	208.04	4,987.0	-262.1	-139.6	607,884.48	627,407.57	32° 40' 14.909 N	104° 3' 13.040 W
5,100.0	5.12	208.04	5,086.6	-270.0	-143.8	607,876.60	627,403.38	32° 40' 14.831 N	104° 3' 13.089 W
5,200.0	5.12	208.04	5,186.2	-277.9	-148.0	607,868.73	627,399.18	32° 40' 14.754 N	104° 3' 13.138 W

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,300.0	5.12	208.04	5,285.8	-285.7	-152.2	607,860.86	627,394.99	32° 40' 14.676 N	104° 3' 13.188 W
5,400.0	5.12	208.04	5,385.4	-293.6	-156.4	607,852.99	627,390.79	32° 40' 14.598 N	104° 3' 13.237 W
5,500.0	5.12	208.04	5,485.0	-301.5	-160.6	607,845.11	627,386.60	32° 40' 14.520 N	104° 3' 13.286 W
5,600.0	5.12	208.04	5,584.6	-309.4	-164.8	607,837.24	627,382.41	32° 40' 14.442 N	104° 3' 13.336 W
5,700.0	5.12	208.04	5,684.2	-317.2	-169.0	607,829.37	627,378.21	32° 40' 14.365 N	104° 3' 13.385 W
5,800.0	5.12	208.04	5,783.8	-325.1	-173.2	607,821.49	627,374.02	32° 40' 14.287 N	104° 3' 13.434 W
5,900.0	5.12	208.04	5,883.4	-333.0	-177.4	607,813.62	627,369.83	32° 40' 14.209 N	104° 3' 13.483 W
6,000.0	5.12	208.04	5,983.0	-340.9	-181.6	607,805.75	627,365.63	32° 40' 14.131 N	104° 3' 13.533 W
6,100.0	5.12	208.04	6,082.6	-348.7	-185.8	607,797.88	627,361.44	32° 40' 14.053 N	104° 3' 13.582 W
6,200.0	5.12	208.04	6,182.2	-356.6	-190.0	607,790.00	627,357.24	32° 40' 13.976 N	104° 3' 13.631 W
6,300.0	5.12	208.04	6,281.8	-364.5	-194.2	607,782.13	627,353.05	32° 40' 13.898 N	104° 3' 13.681 W
6,400.0	5.12	208.04	6,381.4	-372.3	-198.3	607,774.26	627,348.86	32° 40' 13.820 N	104° 3' 13.730 W
6,500.0	5.12	208.04	6,481.0	-380.2	-202.5	607,766.38	627,344.66	32° 40' 13.742 N	104° 3' 13.779 W
6,600.0	5.12	208.04	6,580.6	-388.1	-206.7	607,758.51	627,340.47	32° 40' 13.664 N	104° 3' 13.829 W
6,700.0	5.12	208.04	6,680.2	-396.0	-210.9	607,750.64	627,336.27	32° 40' 13.587 N	104° 3' 13.878 W
6,800.0	5.12	208.04	6,779.8	-403.8	-215.1	607,742.77	627,332.08	32° 40' 13.509 N	104° 3' 13.927 W
6,900.0	5.12	208.04	6,879.4	-411.7	-219.3	607,734.89	627,327.89	32° 40' 13.431 N	104° 3' 13.977 W
7,000.0	5.12	208.04	6,979.0	-419.6	-223.5	607,727.02	627,323.69	32° 40' 13.353 N	104° 3' 14.026 W
7,100.0	5.12	208.04	7,078.6	-427.5	-227.7	607,719.15	627,319.50	32° 40' 13.275 N	104° 3' 14.075 W
7,200.0	5.12	208.04	7,178.2	-435.3	-231.9	607,711.27	627,315.31	32° 40' 13.198 N	104° 3' 14.124 W
7,300.0	5.12	208.04	7,277.8	-443.2	-236.1	607,703.40	627,311.11	32° 40' 13.120 N	104° 3' 14.174 W
7,400.0	5.12	208.04	7,377.4	-451.1	-240.3	607,695.53	627,306.92	32° 40' 13.042 N	104° 3' 14.223 W
7,500.0	5.12	208.04	7,477.0	-458.9	-244.5	607,687.66	627,302.72	32° 40' 12.964 N	104° 3' 14.272 W
7,600.0	5.12	208.04	7,576.6	-466.8	-248.7	607,679.78	627,298.53	32° 40' 12.887 N	104° 3' 14.322 W
7,700.0	5.12	208.04	7,676.2	-474.7	-252.9	607,671.91	627,294.34	32° 40' 12.809 N	104° 3' 14.371 W
7,800.0	5.12	208.04	7,775.8	-482.6	-257.1	607,664.04	627,290.14	32° 40' 12.731 N	104° 3' 14.420 W
7,900.0	5.12	208.04	7,875.4	-490.4	-261.3	607,656.17	627,285.95	32° 40' 12.653 N	104° 3' 14.470 W
8,000.0	5.12	208.04	7,975.0	-498.3	-265.4	607,648.29	627,281.75	32° 40' 12.575 N	104° 3' 14.519 W
8,084.6	5.12	208.04	8,059.3	-505.0	-269.0	607,641.63	627,278.21	32° 40' 12.509 N	104° 3' 14.561 W
8,100.0	4.89	208.04	8,074.6	-506.2	-269.6	607,640.45	627,277.58	32° 40' 12.498 N	104° 3' 14.568 W
8,200.0	3.39	208.04	8,174.3	-512.5	-273.0	607,634.08	627,274.18	32° 40' 12.435 N	104° 3' 14.608 W
8,300.0	1.89	208.04	8,274.2	-516.6	-275.2	607,630.02	627,272.02	32° 40' 12.395 N	104° 3' 14.633 W
8,400.0	0.39	208.04	8,374.2	-518.3	-276.1	607,628.27	627,271.09	32° 40' 12.377 N	104° 3' 14.644 W
8,425.8	0.00	0.00	8,400.0	-518.4	-276.2	607,628.19	627,271.05	32° 40' 12.377 N	104° 3' 14.645 W
B.B. Sapphire 11 12 B3MN St Com 2H									
8,500.0	0.00	0.00	8,474.2	-518.4	-276.2	607,628.19	627,271.05	32° 40' 12.377 N	104° 3' 14.645 W
8,554.6	0.00	0.00	8,528.8	-518.4	-276.2	607,628.19	627,271.05	32° 40' 12.377 N	104° 3' 14.645 W
8,575.0	2.45	108.00	8,549.2	-518.5	-275.7	607,628.06	627,271.46	32° 40' 12.375 N	104° 3' 14.640 W
8,600.0	5.45	108.00	8,574.1	-519.1	-274.1	607,627.52	627,273.10	32° 40' 12.370 N	104° 3' 14.621 W
8,625.0	8.45	108.00	8,598.9	-520.0	-271.2	607,626.59	627,275.98	32° 40' 12.361 N	104° 3' 14.587 W
8,650.0	11.45	108.00	8,623.6	-521.3	-267.1	607,625.26	627,280.08	32° 40' 12.347 N	104° 3' 14.539 W
8,675.0	14.45	108.00	8,647.9	-523.1	-261.8	607,623.52	627,285.41	32° 40' 12.330 N	104° 3' 14.477 W
8,700.0	17.45	108.00	8,672.0	-525.2	-255.3	607,621.40	627,291.94	32° 40' 12.309 N	104° 3' 14.401 W
8,725.0	20.45	108.00	8,695.6	-527.7	-247.5	607,618.89	627,299.66	32° 40' 12.284 N	104° 3' 14.310 W
8,750.0	23.45	108.00	8,718.8	-530.6	-238.7	607,616.01	627,308.55	32° 40' 12.255 N	104° 3' 14.206 W
8,775.0	26.45	108.00	8,741.5	-533.9	-228.6	607,612.75	627,318.58	32° 40' 12.223 N	104° 3' 14.089 W
8,800.0	29.45	108.00	8,763.5	-537.5	-217.5	607,609.13	627,329.72	32° 40' 12.187 N	104° 3' 13.959 W
8,825.0	32.45	108.00	8,785.0	-541.4	-205.3	607,605.16	627,341.94	32° 40' 12.147 N	104° 3' 13.816 W
8,850.0	35.45	108.00	8,805.7	-545.8	-192.0	607,600.84	627,355.22	32° 40' 12.104 N	104° 3' 13.661 W
8,875.0	38.45	108.00	8,825.7	-550.4	-177.7	607,596.20	627,369.51	32° 40' 12.058 N	104° 3' 13.494 W
8,900.0	41.45	108.00	8,844.9	-555.4	-162.4	607,591.24	627,384.78	32° 40' 12.008 N	104° 3' 13.315 W
8,925.0	44.45	108.00	8,863.2	-560.6	-146.2	607,585.98	627,400.97	32° 40' 11.956 N	104° 3' 13.126 W
8,950.0	47.45	108.00	8,880.5	-566.2	-129.1	607,580.42	627,418.06	32° 40' 11.900 N	104° 3' 12.926 W
8,975.0	50.45	108.00	8,897.0	-572.0	-111.2	607,574.60	627,435.99	32° 40' 11.842 N	104° 3' 12.717 W

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,000.0	53.45	108.00	8,912.4	-578.1	-92.5	607,568.52	627,454.71	32° 40' 11.781 N	104° 3' 12.498 W
9,025.0	56.45	108.00	8,926.7	-584.4	-73.0	607,562.19	627,474.17	32° 40' 11.718 N	104° 3' 12.270 W
9,048.5	59.27	108.00	8,939.2	-590.6	-54.1	607,556.05	627,493.08	32° 40' 11.657 N	104° 3' 12.049 W
LP Sapphire 11 12 B3MN St Com 2H									
9,050.0	59.45	108.00	8,940.0	-591.0	-52.9	607,555.65	627,494.32	32° 40' 11.653 N	104° 3' 12.035 W
9,075.0	62.45	108.00	8,952.1	-597.7	-32.1	607,548.89	627,515.10	32° 40' 11.586 N	104° 3' 11.792 W
9,100.0	65.45	108.00	8,963.1	-604.7	-10.7	607,541.95	627,536.46	32° 40' 11.516 N	104° 3' 11.542 W
9,125.0	68.45	108.00	8,972.9	-611.8	11.1	607,534.85	627,558.34	32° 40' 11.446 N	104° 3' 11.287 W
9,150.0	71.45	108.00	8,981.5	-619.0	33.5	607,527.59	627,580.67	32° 40' 11.373 N	104° 3' 11.026 W
9,175.0	74.45	108.00	8,988.8	-626.4	56.2	607,520.20	627,603.40	32° 40' 11.299 N	104° 3' 10.760 W
9,200.0	77.45	108.00	8,994.9	-633.9	79.3	607,512.71	627,626.46	32° 40' 11.225 N	104° 3' 10.490 W
9,225.0	80.45	108.00	8,999.6	-641.5	102.6	607,505.13	627,649.79	32° 40' 11.149 N	104° 3' 10.218 W
9,250.0	83.45	108.00	9,003.1	-649.1	126.1	607,497.48	627,673.33	32° 40' 11.073 N	104° 3' 9.942 W
9,275.0	86.45	108.00	9,005.3	-656.8	149.8	607,489.79	627,697.01	32° 40' 10.996 N	104° 3' 9.666 W
9,289.9	88.24	108.00	9,006.0	-661.4	164.0	607,485.18	627,711.20	32° 40' 10.950 N	104° 3' 9.500 W
9,300.0	88.24	107.85	9,006.3	-664.5	173.6	607,482.08	627,720.77	32° 40' 10.919 N	104° 3' 9.388 W
9,400.0	88.23	106.35	9,009.4	-693.9	269.1	607,452.69	627,816.31	32° 40' 10.626 N	104° 3' 8.271 W
9,500.0	88.23	104.85	9,012.5	-720.8	365.4	607,425.82	627,912.57	32° 40' 10.357 N	104° 3' 7.146 W
9,600.0	88.23	103.35	9,015.6	-745.1	462.3	607,401.47	628,009.51	32° 40' 10.114 N	104° 3' 6.012 W
9,700.0	88.23	101.85	9,018.7	-766.9	559.9	607,379.68	628,107.06	32° 40' 9.896 N	104° 3' 4.872 W
9,800.0	88.22	100.35	9,021.8	-786.2	657.9	607,360.44	628,205.14	32° 40' 9.703 N	104° 3' 3.725 W
9,900.0	88.23	98.84	9,024.9	-802.8	756.5	607,343.78	628,303.69	32° 40' 9.535 N	104° 3' 2.573 W
10,000.0	88.23	97.34	9,028.0	-816.9	855.4	607,329.71	628,402.64	32° 40' 9.393 N	104° 3' 1.415 W
10,100.0	88.23	95.84	9,031.1	-828.4	954.7	607,318.23	628,501.93	32° 40' 9.277 N	104° 3' 0.254 W
10,200.0	88.24	94.34	9,034.2	-837.2	1,054.3	607,309.36	628,601.49	32° 40' 9.187 N	104° 2' 59.090 W
10,300.0	88.24	92.84	9,037.2	-843.5	1,154.0	607,303.10	628,701.24	32° 40' 9.122 N	104° 2' 57.923 W
10,400.0	88.25	91.34	9,040.3	-847.2	1,253.9	607,299.45	628,801.12	32° 40' 9.084 N	104° 2' 56.755 W
10,461.5	88.25	90.42	9,042.2	-848.1	1,315.4	607,298.51	628,862.57	32° 40' 9.073 N	104° 2' 56.036 W
10,500.0	88.25	90.42	9,043.4	-848.4	1,353.9	607,298.23	628,901.07	32° 40' 9.069 N	104° 2' 55.585 W
10,600.0	88.25	90.42	9,046.4	-849.1	1,453.8	607,297.50	629,001.02	32° 40' 9.059 N	104° 2' 54.416 W
10,700.0	88.25	90.42	9,049.5	-849.8	1,553.8	607,296.77	629,100.97	32° 40' 9.049 N	104° 2' 53.247 W
10,800.0	88.25	90.42	9,052.5	-850.6	1,653.7	607,296.04	629,200.92	32° 40' 9.039 N	104° 2' 52.077 W
10,900.0	88.25	90.42	9,055.6	-851.3	1,753.7	607,295.31	629,300.87	32° 40' 9.029 N	104° 2' 50.908 W
11,000.0	88.25	90.42	9,058.6	-852.0	1,853.6	607,294.58	629,400.82	32° 40' 9.019 N	104° 2' 49.739 W
11,100.0	88.25	90.42	9,061.7	-852.8	1,953.6	607,293.85	629,500.77	32° 40' 9.009 N	104° 2' 48.570 W
11,200.0	88.25	90.42	9,064.7	-853.5	2,053.5	607,293.12	629,600.72	32° 40' 9.000 N	104° 2' 47.400 W
11,300.0	88.25	90.42	9,067.8	-854.2	2,153.5	607,292.39	629,700.67	32° 40' 8.990 N	104° 2' 46.231 W
11,400.0	88.25	90.42	9,070.8	-854.9	2,253.4	607,291.66	629,800.63	32° 40' 8.980 N	104° 2' 45.062 W
11,500.0	88.25	90.42	9,073.9	-855.7	2,353.4	607,290.93	629,900.58	32° 40' 8.970 N	104° 2' 43.892 W
11,600.0	88.25	90.42	9,076.9	-856.4	2,453.3	607,290.20	630,000.53	32° 40' 8.960 N	104° 2' 42.723 W
11,700.0	88.25	90.42	9,080.0	-857.1	2,553.3	607,289.47	630,100.48	32° 40' 8.950 N	104° 2' 41.554 W
11,800.0	88.25	90.42	9,083.0	-857.9	2,653.2	607,288.74	630,200.43	32° 40' 8.940 N	104° 2' 40.384 W
11,900.0	88.25	90.42	9,086.1	-858.6	2,753.2	607,288.01	630,300.38	32° 40' 8.930 N	104° 2' 39.215 W
12,000.0	88.25	90.42	9,089.1	-859.3	2,853.1	607,287.28	630,400.33	32° 40' 8.920 N	104° 2' 38.046 W
12,100.0	88.25	90.42	9,092.2	-860.1	2,953.1	607,286.55	630,500.28	32° 40' 8.910 N	104° 2' 36.877 W
12,200.0	88.25	90.42	9,095.2	-860.8	3,053.0	607,285.82	630,600.23	32° 40' 8.900 N	104° 2' 35.707 W
12,300.0	88.25	90.42	9,098.3	-861.5	3,153.0	607,285.09	630,700.18	32° 40' 8.891 N	104° 2' 34.538 W
12,400.0	88.25	90.42	9,101.3	-862.2	3,252.9	607,284.36	630,800.13	32° 40' 8.881 N	104° 2' 33.369 W
12,500.0	88.25	90.42	9,104.4	-863.0	3,352.9	607,283.63	630,900.08	32° 40' 8.871 N	104° 2' 32.199 W
12,600.0	88.25	90.42	9,107.4	-863.7	3,452.8	607,282.90	631,000.03	32° 40' 8.861 N	104° 2' 31.030 W
12,700.0	88.25	90.42	9,110.5	-864.4	3,552.8	607,282.17	631,099.99	32° 40' 8.851 N	104° 2' 29.861 W
12,800.0	88.25	90.42	9,113.5	-865.2	3,652.7	607,281.44	631,199.94	32° 40' 8.841 N	104° 2' 28.692 W
12,900.0	88.25	90.42	9,116.6	-865.9	3,752.7	607,280.71	631,299.89	32° 40' 8.831 N	104° 2' 27.522 W
13,000.0	88.25	90.42	9,119.6	-866.6	3,852.6	607,279.98	631,399.84	32° 40' 8.821 N	104° 2' 26.353 W

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,100.0	88.25	90.42	9,122.7	-867.4	3,952.6	607,279.25	631,499.79	32° 40' 8.811 N	104° 2' 25.184 W
13,200.0	88.25	90.42	9,125.7	-868.1	4,052.5	607,278.52	631,599.74	32° 40' 8.801 N	104° 2' 24.014 W
13,300.0	88.25	90.42	9,128.8	-868.8	4,152.5	607,277.79	631,699.69	32° 40' 8.791 N	104° 2' 22.845 W
13,400.0	88.25	90.42	9,131.8	-869.5	4,252.4	607,277.06	631,799.64	32° 40' 8.781 N	104° 2' 21.676 W
13,500.0	88.25	90.42	9,134.9	-870.3	4,352.4	607,276.33	631,899.59	32° 40' 8.771 N	104° 2' 20.506 W
13,600.0	88.25	90.42	9,137.9	-871.0	4,452.3	607,275.60	631,999.54	32° 40' 8.761 N	104° 2' 19.337 W
13,700.0	88.25	90.42	9,141.0	-871.7	4,552.3	607,274.87	632,099.49	32° 40' 8.751 N	104° 2' 18.168 W
13,800.0	88.25	90.42	9,144.0	-872.5	4,652.2	607,274.14	632,199.44	32° 40' 8.741 N	104° 2' 16.999 W
13,900.0	88.25	90.42	9,147.1	-873.2	4,752.2	607,273.41	632,299.40	32° 40' 8.731 N	104° 2' 15.829 W
14,000.0	88.25	90.42	9,150.1	-873.9	4,852.1	607,272.68	632,399.35	32° 40' 8.721 N	104° 2' 14.660 W
14,100.0	88.25	90.42	9,153.2	-874.7	4,952.1	607,271.95	632,499.30	32° 40' 8.711 N	104° 2' 13.491 W
14,200.0	88.25	90.42	9,156.2	-875.4	5,052.0	607,271.22	632,599.25	32° 40' 8.701 N	104° 2' 12.321 W
14,300.0	88.25	90.42	9,159.3	-876.1	5,152.0	607,270.49	632,699.20	32° 40' 8.691 N	104° 2' 11.152 W
14,400.0	88.25	90.42	9,162.3	-876.8	5,251.9	607,269.76	632,799.15	32° 40' 8.681 N	104° 2' 9.983 W
14,500.0	88.25	90.42	9,165.4	-877.6	5,351.9	607,269.03	632,899.10	32° 40' 8.671 N	104° 2' 8.813 W
14,600.0	88.25	90.42	9,168.4	-878.3	5,451.8	607,268.30	632,999.05	32° 40' 8.661 N	104° 2' 7.644 W
14,700.0	88.25	90.42	9,171.5	-879.0	5,551.8	607,267.57	633,099.00	32° 40' 8.651 N	104° 2' 6.475 W
14,800.0	88.25	90.42	9,174.5	-879.8	5,651.7	607,266.84	633,198.95	32° 40' 8.641 N	104° 2' 5.306 W
14,900.0	88.25	90.42	9,177.6	-880.5	5,751.7	607,266.11	633,298.90	32° 40' 8.631 N	104° 2' 4.136 W
15,000.0	88.25	90.42	9,180.6	-881.2	5,851.7	607,265.38	633,398.85	32° 40' 8.621 N	104° 2' 2.967 W
15,100.0	88.25	90.42	9,183.7	-882.0	5,951.6	607,264.65	633,498.81	32° 40' 8.611 N	104° 2' 1.798 W
15,200.0	88.25	90.42	9,186.7	-882.7	6,051.6	607,263.92	633,598.76	32° 40' 8.601 N	104° 2' 0.628 W
15,300.0	88.25	90.42	9,189.8	-883.4	6,151.5	607,263.19	633,698.71	32° 40' 8.591 N	104° 1' 59.459 W
15,400.0	88.25	90.42	9,192.8	-884.1	6,251.5	607,262.46	633,798.66	32° 40' 8.581 N	104° 1' 58.290 W
15,500.0	88.25	90.42	9,195.9	-884.9	6,351.4	607,261.73	633,898.61	32° 40' 8.571 N	104° 1' 57.121 W
15,600.0	88.25	90.42	9,198.9	-885.6	6,451.4	607,261.00	633,998.56	32° 40' 8.561 N	104° 1' 55.951 W
15,700.0	88.25	90.42	9,202.0	-886.3	6,551.3	607,260.27	634,098.51	32° 40' 8.551 N	104° 1' 54.782 W
15,800.0	88.25	90.42	9,205.0	-887.1	6,651.3	607,259.54	634,198.46	32° 40' 8.541 N	104° 1' 53.613 W
15,900.0	88.25	90.42	9,208.1	-887.8	6,751.2	607,258.81	634,298.41	32° 40' 8.531 N	104° 1' 52.443 W
16,000.0	88.25	90.42	9,211.1	-888.5	6,851.2	607,258.08	634,398.36	32° 40' 8.521 N	104° 1' 51.274 W
16,100.0	88.25	90.42	9,214.2	-889.3	6,951.1	607,257.35	634,498.31	32° 40' 8.511 N	104° 1' 50.105 W
16,200.0	88.25	90.42	9,217.2	-890.0	7,051.1	607,256.62	634,598.26	32° 40' 8.501 N	104° 1' 48.935 W
16,300.0	88.25	90.42	9,220.3	-890.7	7,151.0	607,255.89	634,698.22	32° 40' 8.491 N	104° 1' 47.766 W
16,400.0	88.25	90.42	9,223.3	-891.4	7,251.0	607,255.16	634,798.17	32° 40' 8.481 N	104° 1' 46.597 W
16,500.0	88.25	90.42	9,226.4	-892.2	7,350.9	607,254.43	634,898.12	32° 40' 8.471 N	104° 1' 45.428 W
16,600.0	88.25	90.42	9,229.4	-892.9	7,450.9	607,253.70	634,998.07	32° 40' 8.461 N	104° 1' 44.258 W
16,685.1	88.25	90.42	9,232.0	-893.5	7,536.0	607,253.08	635,083.16	32° 40' 8.452 N	104° 1' 43.263 W

PBHL Sapphire 11 12 B3MN St Com #2H

Database: Stryker_EDM
Company: Mewbourne Oil Company
Project: Eddy County, N.M. Nad (83)
Site: Section 11/12-19S-29E Sapphire B3MN St Com 2H
Well: Sapphire 11/12 B3MN St Com 2H
Wellbore: Original Hole
Design: Plan#1

Local Co-ordinate Reference: Well Sapphire 11/12 B3MN St Com 2H
TVD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
MD Reference: 3375 + 27 @ 3402.0usft (Patterson 560)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
B.B. Sapphire 11 12 E - plan hits target center - Point	0.00	0.00	8,400.0	-518.4	-276.2	607,628.19	627,271.05	32° 40' 12.377 N	104° 3' 14.645 W
LP Sapphire 11 12 B3 - plan misses target center by 296.0usft at 9048.5usft MD (8939.2 TVD, -590.6 N, -54.1 E) - Point	0.00	0.00	9,006.0	-848.9	-182.0	607,297.66	627,365.16	32° 40' 9.104 N	104° 3' 13.554 W
PBHL Sapphire 11 12 - plan hits target center - Point	0.00	0.00	9,232.0	-893.5	7,536.0	607,253.08	635,083.16	32° 40' 8.452 N	104° 1' 43.263 W