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Form 3160-4
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: October 31, 2021

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.

1a. Type of Well ☐ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Competion ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Zones ☐ Hydraulic Fracturing
Other: _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator

8. Well Name and Well No.
WELL NO CHANGED TO 513H

3. Address

3a. Phone No. *(Include area code)*

9. API Well No.

4. Location of Well *(Report location clearly and in accordance with Federal requirements)**
At surface

At top prod. interval reported below

At total depth

10. Field and Pool or Exploratory

11. Sec., T., R., M., on Block and Survey or Area

12. County or Parish

13. State

14. Date Spudded

15. Date T.D. Reached

16. Date Completed
☐ D & A ☐ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)*

18. Total Depth: MD
TVD

19. Plug Back T.D.: MD
TVD

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

22. Was well cored? ☐ No ☐ Yes (Submit analysis)
Was DST run? ☐ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☐ Yes (Submit copy)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled

24. Tubing Record

Size	Dept Set (MD)	Packer Dept (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)

25. Producing Intervals

Formation	Top	Bottom
A)		
B)		
C)		
D)		

26. Perforation Record

Perforated Interval	Size	No. Holes	Perf. Status

27. Acid, Fracture, Treatment, Cement Squeeze, Post hydraulic fracturing chemical disclosures on FracFocus.org when required by state or federal regulation

Depth Interval	Amount, Type of Material and Date of Chemical Disclosure upload on FracFocus.org as applicable

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

*(See instructions and spaces for additional data on page 2)

Released to Imaging: 7/30/2024 3:28:19 PM

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas *(Solid, used for fuel, vented, etc.)*

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth

32. Additional remarks (include plugging procedure).

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☐ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☐ Directional Survey

☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name *(please print)* _____ Title _____

Signature _____ Date _____

Title 18 U.S C. Section 1001 and Title 43 U.S C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

INSTRUCTIONS

GENERAL: This form is designed for submitting a complete and correct well completion/recompletion report and log on all types of wells on Federal and Indian leases to a Federal agency, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal office.
If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, and all types electric), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal laws and regulations. All attachments should be listed on this form, see item 33.
ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal office for specific instructions.
ITEM 17: Indicate which reported elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.
ITEM 23: Show how reported top(s) of cement were determined, i.e. circulated (CIR), or calculated (CAL), or cement bond log (CBL), or temperature survey (TS).

NOTICES

The Privacy Act of 1974 and the regulation in 43 CFR 2.48 (d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. et seq.; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is to be used to evaluate the actual operations performed in the drilling, completing and testing of a well on a Federal or Indian lease.
ROUTINE USES: (1) Evaluate the equipment and procedures used during the drilling and completing/recompleting of a well. (2) The review of geologic zones and formation encountered during drilling. (3) Analyze future applications to drill in light of data obtained and methods used. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this report and disclosure of the information is mandatory once a well drilled on a Federal or Indian lease is completed/recompleted.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling and completing/recompleting wells on Federal and Indian oil and gas leases.
This information will be used to analyze operations and to compare equipment and procedures actually used with those proposed and approved.
Response to this request is mandatory only if the operator elects to initiate drilling and completing/recompleting operations on an oil and gas lease.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Information
Location information: 00S1

SHL: NWNE / 491 FNL / 2625 FEL / TWSP: 25S / RNG: 32E / SEC: 11 / LAT: 32.1509494 / LONG: -103.6454169
KOP: NENW / 86 FNL / 2168 FWL / TWSP: 25S / RNG: 32E / SEC: 11 / LAT: 32.1520592 / LONG: -103.6472275
PPP: NENW / 414 FNL / 2149 FWL / TWSP: 25S / RNG: 32E / SEC: 14 / LAT: 32.1511527 / LONG: -103.6472901
EXIT: SESW / 135 FSL / 2197 FWL / TWSP: 25S / RNG: 32E / SEC: 14 / LAT: 32.1236102 / LONG: -103.6472403
BHL: SESW / 110 FSL / 2197 FWL / TWSP: 25S / RNG: 32E / SEC: 14 / LAT: 32.1235415 / LONG: -103.6472397

Summary of Porous Zones Information:

Formation: CHERRY CANYON, Descriptions, Contents, etc: null, Bottom: 5725
Formation: BRUSHY CANYON, Descriptions, Contents, etc: null, Bottom: 7190
Formation: BONE SPRING LIME, Descriptions, Contents, etc: null, Bottom: 8787
Formation: FIRST BONE SPRING SAND, Descriptions, Contents, etc: null, Bottom: 9847
Formation: BONE SPRING 2ND, Descriptions, Contents, etc: null, Bottom: 10423

Attachments: 00S1

Log Attachments:
1) Ruthless_11_Fed_Com_513H_5_MD_20220223151841.pdf
2) Ruthless_11_Fed_Com_513H_Final_OH_Surveys_20220223151904.pdf
3) Ruthless_11_Fed_Com_513H_Final_PVA_20220223151927.pdf
4) C_102_RUTHLESS_11_FED_COM_513H_S_20220223151941.pdf

Ruthless 11 Fed Com #513H

Operator: Devon Energy Production Co., L.P.
Rig: Ensign 154
Surface Location: 2,000' FSL & 1,000' FWL
Section 11 - T-24-S R-34-E
County: Lea
State: New Mexico
Bottom Hole Location: 2,000' FSL & 1,000' FEL
Section 14 - T-24-S R-34-E
County: Lea
State: New Mexico
Elevation: 3,600'
MD Datum: RT-GL 32.0'
TVD Datum: RT-GL
Date: 10-Jul-2019

Formation Tops					
Formation	TVD	Subsea	Dip	Thickness	Lithology
Rustler	1,000	2,600		400	Anhydrite
Salado	1,400	2,200		1,000	Salt
Castile	2,400	1,200		1,000	Anhydrite
Lamar	3,400	200		200	Limestone
Bell Canyon	3,600	0		1,000	Sandstone
Cherry Canyon	4,600	-1,000		1,000	Sandstone
Brushy Canyon	5,600	-2,000		1,000	Sandstone
Bone Spring	6,600	-3,000		1,000	Limestone
1st Bone Spring Sand	7,600	-4,000		1,000	Sandstone
2nd Bone Spring Sand	8,600	-5,000		1,000	Sandstone
3rd Bone Spring Sand	9,600	-6,000		1,000	Sandstone
Wolfcamp	10,600	-7,000		1,000	Shale
Wolfcamp A	11,600	-8,000		1,000	Shale
Wolfcamp B	12,600	-9,000		1,000	Shale
Wolfcamp C	13,600	-10,000		1,000	Shale
Wolfcamp D	14,600	-11,000		1,000	Shale
Wolfcamp E	15,600	-12,000		1,000	Shale
Wolfcamp F	16,600	-13,000		1,000	Shale
Wolfcamp G	17,600	-14,000		1,000	Shale
Wolfcamp H	18,600	-15,000		1,000	Shale
Wolfcamp I	19,600	-16,000		1,000	Shale
Wolfcamp J	20,600	-17,000		1,000	Shale
Wolfcamp K	21,600	-18,000		1,000	Shale
Wolfcamp L	22,600	-19,000		1,000	Shale
Wolfcamp M	23,600	-20,000		1,000	Shale
Wolfcamp N	24,600	-21,000		1,000	Shale
Wolfcamp O	25,600	-22,000		1,000	Shale
Wolfcamp P	26,600	-23,000		1,000	Shale
Wolfcamp Q	27,600	-24,000		1,000	Shale
Wolfcamp R	28,600	-25,000		1,000	Shale
Wolfcamp S	29,600	-26,000		1,000	Shale
Wolfcamp T	30,600	-27,000		1,000	Shale
Wolfcamp U	31,600	-28,000		1,000	Shale
Wolfcamp V	32,600	-29,000		1,000	Shale
Wolfcamp W	33,600	-30,000		1,000	Shale
Wolfcamp X	34,600	-31,000		1,000	Shale
Wolfcamp Y	35,600	-32,000		1,000	Shale
Wolfcamp Z	36,600	-33,000		1,000	Shale
Wolfcamp AA	37,600	-34,000		1,000	Shale
Wolfcamp AB	38,600	-35,000		1,000	Shale
Wolfcamp AC	39,600	-36,000		1,000	Shale
Wolfcamp AD	40,600	-37,000		1,000	Shale
Wolfcamp AE	41,600	-38,000		1,000	Shale
Wolfcamp AF	42,600	-39,000		1,000	Shale
Wolfcamp AG	43,600	-40,000		1,000	Shale
Wolfcamp AH	44,600	-41,000		1,000	Shale
Wolfcamp AI	45,600	-42,000		1,000	Shale
Wolfcamp AJ	46,600	-43,000		1,000	Shale
Wolfcamp AK	47,600	-44,000		1,000	Shale
Wolfcamp AL	48,600	-45,000		1,000	Shale
Wolfcamp AM	49,600	-46,000		1,000	Shale
Wolfcamp AN	50,600	-47,000		1,000	Shale
Wolfcamp AO	51,600	-48,000		1,000	Shale
Wolfcamp AP	52,600	-49,000		1,000	Shale
Wolfcamp AQ	53,600	-50,000		1,000	Shale
Wolfcamp AR	54,600	-51,000		1,000	Shale
Wolfcamp AS	55,600	-52,000		1,000	Shale
Wolfcamp AT	56,600	-53,000		1,000	Shale
Wolfcamp AU	57,600	-54,000		1,000	Shale
Wolfcamp AV	58,600	-55,000		1,000	Shale
Wolfcamp AW	59,600	-56,000		1,000	Shale
Wolfcamp AX	60,600	-57,000		1,000	Shale
Wolfcamp AY	61,600	-58,000		1,000	Shale
Wolfcamp AZ	62,600	-59,000		1,000	Shale
Wolfcamp BA	63,600	-60,000		1,000	Shale
Wolfcamp BB	64,600	-61,000		1,000	Shale
Wolfcamp BC	65,600	-62,000		1,000	Shale
Wolfcamp BD	66,600	-63,000		1,000	Shale
Wolfcamp BE	67,600	-64,000		1,000	Shale
Wolfcamp BF	68,600	-65,000		1,000	Shale
Wolfcamp BG	69,600	-66,000		1,000	Shale
Wolfcamp BH	70,600	-67,000		1,000	Shale
Wolfcamp BI	71,600	-68,000		1,000	Shale
Wolfcamp BJ	72,600	-69,000		1,000	Shale
Wolfcamp BK	73,600	-70,000		1,000	Shale
Wolfcamp BL	74,600	-71,000		1,000	Shale
Wolfcamp BM	75,600	-72,000		1,000	Shale
Wolfcamp BN	76,600	-73,000		1,000	Shale
Wolfcamp BO	77,600	-74,000		1,000	Shale
Wolfcamp BP	78,600	-75,000		1,000	Shale
Wolfcamp BQ	79,600	-76,000		1,000	Shale
Wolfcamp BR	80,600	-77,000		1,000	Shale
Wolfcamp BS	81,600	-78,000		1,000	Shale
Wolfcamp BT	82,600	-79,000		1,000	Shale
Wolfcamp BU	83,600	-80,000		1,000	Shale
Wolfcamp BV	84,600	-81,000		1,000	Shale
Wolfcamp BW	85,600	-82,000		1,000	Shale
Wolfcamp BX	86,600	-83,000		1,000	Shale
Wolfcamp BY	87,600	-84,000		1,000	Shale
Wolfcamp BZ	88,600	-85,000		1,000	Shale
Wolfcamp CA	89,600	-86,000		1,000	Shale
Wolfcamp CB	90,600	-87,000		1,000	Shale
Wolfcamp CC	91,600	-88,000		1,000	Shale
Wolfcamp CD	92,600	-89,000		1,000	Shale
Wolfcamp CE	93,600	-90,000		1,000	Shale
Wolfcamp CF	94,600	-91,000		1,000	Shale
Wolfcamp CG	95,600	-92,000		1,000	Shale
Wolfcamp CH	96,600	-93,000		1,000	Shale
Wolfcamp CI	97,600	-94,000		1,000	Shale
Wolfcamp CJ	98,600	-95,000		1,000	Shale
Wolfcamp CK	99,600	-96,000		1,000	Shale
Wolfcamp CL	100,600	-97,000		1,000	Shale
Wolfcamp CM	101,600	-98,000		1,000	Shale
Wolfcamp CN	102,600	-99,000		1,000	Shale
Wolfcamp CO	103,600	-100,000		1,000	Shale
Wolfcamp CP	104,600	-101,000		1,000	Shale
Wolfcamp CQ	105,600	-102,000		1,000	Shale
Wolfcamp CR	106,600	-103,000		1,000	Shale
Wolfcamp CS	107,600	-104,000		1,000	Shale
Wolfcamp CT	108,600	-105,000		1,000	Shale
Wolfcamp CU	109,600	-106,000		1,000	Shale
Wolfcamp CV	110,600	-107,000		1,000	Shale
Wolfcamp CW	111,600	-108,000		1,000	Shale
Wolfcamp CX	112,600	-109,000		1,000	Shale
Wolfcamp CY	113,600	-110,000		1,000	Shale
Wolfcamp CZ	114,600	-111,000		1,000	Shale
Wolfcamp DA	115,600	-112,000		1,000	Shale
Wolfcamp DB	116,600	-113,000		1,000	Shale
Wolfcamp DC	117,600	-114,000		1,000	Shale
Wolfcamp DD	118,600	-115,000		1,000	Shale
Wolfcamp DE	119,600	-116,000		1,000	Shale
Wolfcamp DF	120,600	-117,000		1,000	Shale
Wolfcamp DG	121,600	-118,000		1,000	Shale
Wolfcamp DH	122,600	-119,000		1,000	Shale
Wolfcamp DI	123,600	-120,000		1,000	Shale
Wolfcamp DJ	124,600	-121,000		1,000	Shale
Wolfcamp DK	125,600	-122,000		1,000	Shale
Wolfcamp DL	126,600	-123,000		1,000	Shale
Wolfcamp DM	127,600	-124,000		1,000	Shale
Wolfcamp DN	128,600	-125,000		1,000	Shale
Wolfcamp DO	129,600	-126,000		1,000	Shale
Wolfcamp DP	130,600	-127,000		1,000	Shale
Wolfcamp DQ	131,600	-128,000		1,000	Shale
Wolfcamp DR	132,600	-129,000		1,000	Shale
Wolfcamp DS	133,600	-130,000		1,000	Shale
Wolfcamp DT	134,600	-131,000		1,000	Shale
Wolfcamp DU	135,600	-132,000		1,000	Shale
Wolfcamp DV	136,600	-133,000		1,000	Shale
Wolfcamp DW	137,600	-134,000		1,000	Shale
Wolfcamp DX	138,600	-135,000		1,000	Shale
Wolfcamp DY	139,600	-136,000		1,000	Shale
Wolfcamp DZ	140,600	-137,000		1,000	Shale
Wolfcamp EA	141,600	-138,000		1,000	Shale
Wolfcamp EB	142,600	-139,000		1,000	Shale
Wolfcamp EC	143,600	-140,000		1,000	Shale
Wolfcamp ED	144,600	-141,000		1,000	Shale
Wolfcamp EE	145,600	-142,000		1,000	Shale
Wolfcamp EF	146,600	-143,000		1,000	Shale
Wolfcamp EG	147,600	-144,000		1,000	Shale
Wolfcamp EH	148,600	-145,000		1,000	Shale
Wolfcamp EI	149,600	-146,000		1,000	Shale
Wolfcamp EJ	150,600	-147,000		1,000	Shale
Wolfcamp EK	151,600	-148,000		1,000	Shale
Wolfcamp EL	152,600	-149,000		1,000	Shale
Wolfcamp EM	153,600	-150,000		1,000	Shale
Wolfcamp EN	154,600	-151,000		1,000	Shale
Wolfcamp EO	155,600	-152,000		1,000	Shale
Wolfcamp EP	156,600	-153,000		1,000	Shale
Wolfcamp EQ	157,600	-154,000		1,000	Shale
Wolfcamp ER	158,600	-155,000		1,000	Shale
Wolfcamp ES	159,600	-156,000		1,000	Shale
Wolfcamp ET	160,600	-157,000		1,000	Shale
Wolfcamp EU	161,600	-158,000		1,000	Shale
Wolfcamp EV	162,600	-159,000		1,000	Shale
Wolfcamp EW	163,600	-160,000		1,000	Shale
Wolfcamp EX	164,600	-161,000		1,000	Shale
Wolfcamp EY	165,600	-162,000		1,000	Shale
Wolfcamp EZ	166,600	-163,000		1,000	Shale
Wolfcamp FA	167,600	-164,000		1,000	Shale
Wolfcamp FB	168,600	-165,000		1,000	Shale
Wolfcamp FC	169,600	-166,000		1,000	Shale
Wolfcamp FD	170,600	-167,000		1,000	Shale
Wolfcamp FE	171,600	-168,000		1,000	Shale
Wolfcamp FF	172,600	-169,000		1,000	Shale
Wolfcamp FG	173,600	-170,000		1,000	Shale
Wolfcamp FH	174,600	-171,000		1,000	Shale
Wolfcamp FI	175,600	-172,000		1,000	Shale
Wolfcamp FJ	176,600	-173,000		1,000	Shale
Wolfcamp FK	177,600	-174,000		1,000	Shale
Wolfcamp FL	178,600	-175,000		1,000	Shale
Wolfcamp FM	179,600	-176,000		1,000	Shale
Wolfcamp FN	180,600	-177,000		1,000	Shale
Wolfcamp FO	181,600	-178,000		1,000	Shale
Wolfcamp FP	182,600	-179,000		1,000	Shale
Wolfcamp FQ	183,600	-180,000		1,000	Shale
Wolfcamp FR	184,600	-181,000		1,000	Shale
Wolfcamp FS	185,600	-182,000		1,000	Shale
Wolfcamp FT	186,600	-183,000		1,000	Shale
Wolfcamp FU	187,600	-184,000		1,000	Shale
Wolfcamp FV	188,600	-185,000		1,000	Shale
Wolfcamp FW	189,600	-186,000		1,000	Shale
Wolfcamp FX	190,600	-187,000		1,000	Shale
Wolfcamp FY	191,600	-188,000		1,000	Shale
Wolfcamp FZ	192,600	-189,000		1,000	Shale
Wolfcamp GA	193,600	-190,000		1,000	Shale
Wolfcamp GB	194,600	-191,000		1,000	Shale
Wolfcamp GC	195,600	-192,000		1,000	Shale
Wolfcamp GD	196,600	-193,000		1,000	Shale
Wolfcamp GE	197,600	-194,000		1,000	Shale
Wolfcamp GF	198,600	-195,000		1,000	Shale
Wolfcamp GG	199,600	-196,000		1,000	Shale
Wolfcamp GH	200,600	-197,000		1,000	Shale
Wolfcamp GI	201,600	-198,000		1,000	Shale
Wolfcamp GJ	202,600	-199,000		1,000	Shale
Wolfcamp GK	203,600	-200,000		1,000	Shale
Wolfcamp GL	204,600	-201,000		1,000	Shale
Wolfcamp GM	205,600	-202,000		1,000	Shale
Wolfcamp GN	206,600	-203,000		1,000	Shale
Wolfcamp GO	207,600	-204,000		1,000	Shale
Wolfcamp GP	208,600	-205,000		1,000	Shale
Wolfcamp GQ	209,600	-206,000		1,000	Shale
Wolfcamp GR	210,600	-207,000		1,000	Shale
Wolfcamp GS	211,600	-208,000		1,000	Shale
Wolfcamp GT	212,600	-209,000		1,000	Shale
Wolfcamp GU	213,600	-210,000		1,000	Shale
Wolfcamp GV	214,600	-211,000		1,000	Shale
Wolfcamp GW	215,600	-212,000		1,000	Shale
Wolfcamp GX	216,600	-213,000		1,000	Shale
Wolfcamp GY	217,600	-214,000		1,000	Shale
Wolfcamp GZ	218,600	-215,000		1,000	Shale
Wolfcamp HA	219,600	-216,000		1,000	Shale
Wolfcamp HB	220,600	-217,000		1,000	Shale
Wolfcamp HC	221,600	-218,000		1,000	Shale
Wolfcamp HD	222,600	-219,000		1,000	Shale
Wolfcamp HE	223,600	-220,000		1,000	Shale
Wolfcamp HF	224,600	-221,000		1,000	Shale
Wolfcamp HG	225,600	-222,000		1,000	Shale
Wolfcamp HH	226,600	-223,000		1,000	Shale
Wolfcamp HI	227,600	-224,000		1,000	Shale
Wolfcamp HJ	228,600	-225,000		1,000	Shale
Wolfcamp HK	229,600	-226,000		1,000	Shale
Wolfcamp HL	230,600	-227,000		1,000	Shale
Wolfcamp HM	231,600	-228,000		1,000	Shale
Wolfcamp HN	232,600	-229,000		1,000	Shale
Wolfcamp HO	233,600	-230,000		1,000	Shale
Wolfcamp HP	234,600	-231,000		1,000	Shale
Wolfcamp HQ	235,600	-232,000		1,000	Shale
Wolfcamp HR	236,600	-233,000		1,000	Shale
Wolfcamp HS	237,600	-234,000		1,000	Shale
Wolfcamp HT	238,600	-235,000		1,000	Shale
Wolfcamp HU	239,600	-236,000		1,000	Shale
Wolfcamp HV	240,600	-237,000		1,000	Shale
Wolfcamp HW	241,600	-238,000		1,000	Shale
Wolfcamp HX	242,600	-239,000		1,000	Shale
Wolfcamp HY	243,600	-240,000		1,000	Shale
Wolfcamp HZ	244,600	-241,000		1,000	Shale
Wolfcamp IA	245,600	-242,000		1,000	Shale
Wolfcamp IB	246,600	-243,000		1,000	Shale
Wolfcamp IC	247,600	-244,000		1,000	Shale
Wolfcamp ID	248,600	-245,000		1,000	Shale
Wolfcamp IE	249,600	-246,000		1,000	Shale
Wolfcamp IF	250,600	-247,000		1,000	Shale
Wolfcamp IG	251,600	-248,000		1,000	Shale
Wolfcamp IH	252,600	-249,000		1,000	Shale
Wolfcamp II	253,600	-250,000		1,000	Shale
Wolfcamp IJ	254,600	-251,000		1,000	Shale
Wolfcamp IK	255,600	-252,000		1,000	Shale
Wolfcamp IL	256,600	-253,000		1,000	Shale
Wolfcamp IM	257,600	-254,000		1,000	Shale
Wolfcamp IN	258,600	-255,000		1,000	Shale
Wolfcamp IO	259,600	-256,000		1,000	Shale
Wolfcamp IP	260,600	-257,000		1,000	Shale
Wolfcamp IQ	261,600	-258,000		1,000	Shale
Wolfcamp IR	262,600	-259,000		1,000	Shale
Wolfcamp IS	263,600	-260,000		1,000	Shale
Wolfcamp IT	264,600	-261,000		1,000	Shale
Wolfcamp IU	265,600	-262,000		1,000	Shale
Wolfcamp IV	266,600	-263,000		1,000	Shale
Wolfcamp IW	267,600	-264,000		1,000	Shale
Wolfcamp IX	268,600	-265,000		1,000	Shale
Wolfcamp IY	269,600	-266,000		1,000	Shale
Wolfcamp IZ	270,600	-267,000		1,000	Shale
Wolfcamp JA	271,600	-268,000		1,000	Shale
Wolfcamp JB	272,600	-269,000		1,000	Shale
Wolfcamp JC	273,600	-270,000		1,000	Shale
Wolfcamp JD	274,600	-271,000		1,000	Shale
Wolfcamp JE	275,600	-272,000		1,000	Shale
Wolfcamp JF	276,600	-273,000		1,000	Shale
Wolfcamp JG	277,600	-274,000		1,000	Shale
Wolfcamp JH	278,600	-275,000		1,000	Shale
Wolfcamp JI	279,600	-276,000		1,000	Shale
Wolfcamp JJ	280,600	-277,000		1,000	Shale
Wolfcamp JK	281,600	-278,000		1,000	Shale
Wolfcamp JL	282,600	-279,000		1,000	Shale
Wolfcamp JM	283,600	-280,000		1,000	Shale
Wolfcamp JN	284,600	-281,000		1,000	Shale
Wolfcamp JO	285,600	-282,000		1,000	Shale
Wolfcamp JP	286,600	-283,000		1,000	Shale
Wolfcamp JQ	287,600	-284,000		1,000	Shale
Wolfcamp JR	288,600	-285,000		1,000	Shale
Wolfcamp JS	289,600	-286,000		1,000	Shale
Wolfcamp JT	290,600	-287,000		1,000	Shale
Wolfcamp JU	291,600	-288,000		1,000	Shale
Wolfcamp JV	292,600	-289,000		1,000	Shale
Wolfcamp JW	293,600	-290,000		1,000	Shale
Wolfcamp JX	294,600	-291,000		1,000	Shale
Wolfcamp JY	295,600	-292,000		1,000	Shale
Wolfcamp JZ	296,600	-293,000		1,000	Shale
Wolfcamp KA	297,600	-294,000		1,000	Shale
Wolfcamp KB	298,600	-295,000		1,000	Shale
Wolfcamp KC	299,600	-296,000		1,000	Shale
Wolfcamp KD	300,600	-297,000		1,000	Shale
Wolfcamp KE	301,600	-298,000		1,000	Shale
Wolfcamp KF	302,600	-299,000		1,000	Shale
Wolfcamp KG	303,600	-300,000		1,000	Shale
Wolfcamp KH	304,600	-301,000		1,000	Shale
Wolfcamp KI	305,600	-302,000		1,000	Shale
Wolfcamp KJ	306,600	-303,000		1,000	Shale
Wolfcamp KK	307,600	-304,000		1,000	Shale
Wolfcamp KL	308,600	-305,000		1,000	Shale
Wolfcamp KM	309,600	-306,000		1,000	Shale
Wolfcamp KN	310,600	-307,000		1,000	Shale
Wolfcamp KO	311,600	-308,000		1,000	Shale
Wolfcamp KP	312,600	-309,000		1,000	Shale
Wolfcamp KQ	313,600	-310,000		1,000	Shale
Wolfcamp KR	314,600	-311,000		1,000	Shale
Wolfcamp KS	315,600	-312,000		1,000	Shale
Wolfcamp KT	316,600	-313,000		1,000	Shale
Wolfcamp KU	317,600	-314,000		1,000	Shale
Wolfcamp KV	318,600	-315,000		1,000	Shale
Wolfcamp KW	319,600	-316,000		1,000	Shale
Wolfcamp KX	320,600	-317,000		1,000	Shale
Wolfcamp KY	321,600	-318,000		1,000	Shale
Wolfcamp KZ	322,600	-319,000		1,000	Shale
Wolfcamp LA	323,600	-320,000		1,000	Shale
Wolfcamp LB	324,600	-321,000		1,000	Shale
Wolfcamp LC	325,600	-322,000		1,000	Shale
Wolfcamp LD	326,600	-323,000		1,000	Shale
Wolfcamp LE	327,600	-324,000		1,000	Shale
Wolfcamp LF	328,600	-325,000		1,000	Shale
Wolfcamp LG	329,600	-326,000		1,000	Shale
Wolfcamp LH	330,600	-327,000		1,000	Shale
Wolfcamp LI	331,600	-328,000		1,000	Shale
Wolfcamp LJ	332,600	-329,000		1,000	Shale
Wolfcamp LK	333,600	-330,000		1,000	Shale
Wolfcamp LL	334,600	-331,000		1,000	Shale
Wolfcamp LM	335,600	-332,000		1,000	Shale
Wolfcamp LN	336,600	-333,000		1,000	Shale
Wolfcamp LO	337,600	-334,000		1,000	Shale
Wolfcamp LP	338,600	-335,000		1,000	Shale
Wolfcamp LQ	339,600	-336,000		1,000	Shale
Wolfcamp LR	340,600	-337,000		1,000	Shale
Wolfcamp LS	341,600	-338,000		1,000	Shale
Wolfcamp LT	342,600	-339,000		1,000	Shale
Wolfcamp LU	343,600	-340,000		1,000	Shale
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Wolfcamp MM	361,600	-358,000		1,000	Shale
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Wolfcamp MP	364,600	-361,000		1,000	Shale
Wolfcamp MQ	365,600	-362,000		1,000	Shale
Wolfcamp MR	366,600	-363,000		1,000	Shale
Wolfcamp MS	367,600	-364,000		1,000	Shale
Wolfcamp MT	368,600	-365,000		1,000	Shale
Wolfcamp MU	369,600	-366,000		1,000	Shale
Wolfcamp MV	370,600	-367,000		1,000	Shale
Wolfcamp MW	371,600	-368,000		1,000	Shale
Wolfcamp MX	372,600	-369,000		1,000	Shale
Wolfcamp MY	373,600	-370,000		1,000	Shale
Wolfcamp MZ	374,600	-371,000		1,000	Shale
Wolfcamp NA	375,600	-372,000		1,000	Shale
Wolfcamp NB	376,600	-373,000		1,000	Shale
Wolfcamp NC	377,600	-374,000		1,000	Shale
Wolfcamp ND	378,600	-375,000		1,000	Shale
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Wolfcamp NP	390,600	-387,000		1,000	Shale
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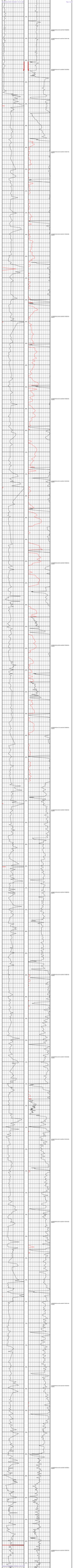
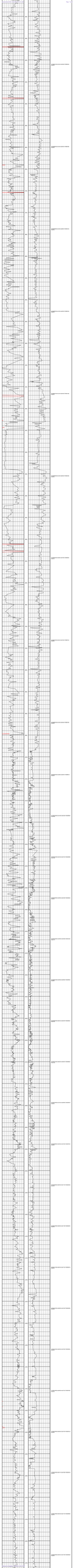
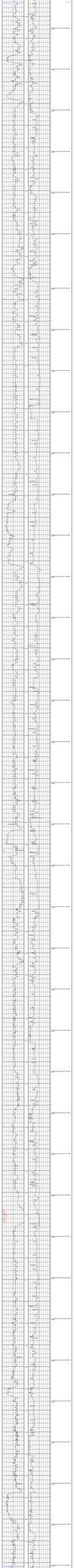
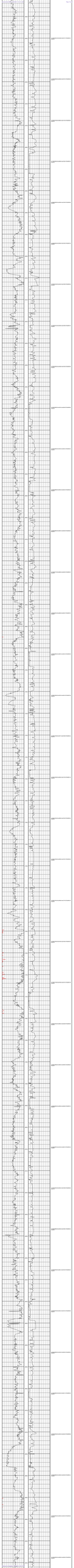
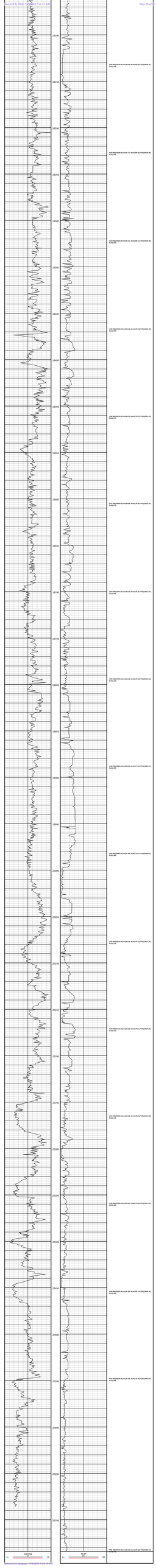
Wolfcamp NW	397,600	-394,000		1,000	Shale
Wolfcamp NX	398,600	-395,000		1,000	Shale
Wolfcamp NY	399,600	-396,000		1,000	Shale
Wolfcamp NZ	400,600	-397,000		1,000	Shale
Wolfcamp OA	401,600	-398,000		1,000	Shale
Wolfcamp OB	402,600	-399,000		1,000	Shale
Wolfcamp OC	403,600	-400,000		1,000	Shale
Wolfcamp OD	404,600	-401,000		1,000	Shale
Wolfcamp OE	405,600	-402,000		1,000	Shale
Wolfcamp OF	406,600	-403,000		1,000	Shale
Wolfcamp OG	407,600	-404,000		1,000	Shale
Wolfcamp OH	408,600	-405,000		1,000	Shale
Wolfcamp OI	409,600	-406,000		1,000	Shale
Wolfcamp OJ	410,600	-407,000		1,000	Shale
Wolfcamp OK	411,600	-408,000		1,000	Shale
Wolfcamp OL	412,600	-409,000		1,000	Shale
Wolfcamp OM	413,600	-410,000		1,000	Shale
Wolfcamp ON	414,600	-411,000		1,000	Shale
Wolfcamp OO	415,600	-412,000		1,000	Shale
Wolfcamp OP	416,600	-413,000		1,000	Shale
Wolfcamp OQ	417,600	-414,000		1,000	Shale
Wolfcamp OR	418,600	-415,000		1,000	Shale
Wolfcamp OS	419,600	-416,000		1,000	Shale
Wolfcamp OT	420,600	-417,000		1,000	Shale
Wolfcamp OU	421,600	-418,000		1,000	Shale
Wolfcamp OV	422,600	-419,000		1,000	Shale
Wolfcamp OW	423,600	-420,000		1,000	Shale
Wolfcamp OX	424,600	-421,000		1,000	Shale
Wolfcamp OY	425,600	-422,000		1,000	Shale
Wolfcamp OZ	426,600	-423,000		1,000	Shale
Wolfcamp PA	427,600	-424,000		1,000	Shale
Wolfcamp PB	428,600	-425,000		1,000	Shale
Wolfcamp PC	429,600	-426,000		1,000	Shale
Wolfcamp PD	430,600	-427,000		1,000	Shale
Wolfcamp PE	431,600	-428,000		1,000	Shale
Wolfcamp PF	432,600	-429,000		1,000	Shale
Wolfcamp PG	433,600	-430,000		1,000	Shale
Wolfcamp PH	434,600	-431,000		1,000	Shale
Wolfcamp PI	435,600	-432,000		1,000	Shale
Wolfcamp PJ	436,600	-433,000		1,000	Shale
Wolfcamp PK	437,600	-434,000		1,000	Shale
Wolfcamp PL	438,600	-435,000		1,000	Shale
Wolfcamp PM	439,600	-436,000		1,000	Shale
Wolfcamp PN	440,600	-437,000		1,000	Shale
Wolfcamp PO	441,600	-438,000		1,000	Shale
Wolfcamp PP	442,600	-439,000		1,000	Shale
Wolfcamp PQ	443,600	-440,000		1,000	Shale
Wolfcamp PR	444,600	-441,000		1,000	Shale
Wolfcamp PS	445,600	-442,000		1,000	Shale
Wolfcamp PT	446,600	-443,000		1,







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Midland

Lea County, NM (NAD 83 NME)
Ruthless 11 Fed Com
#513H
OH

Design: OH

Final PVA

09 June, 2021

Released to Imaging: 7/30/2024 3:28:19 PM

Received by OCD: 9/26/2023 7:41:31 AM

eog resources

Final PVA

Company:	Midland	**Local Co-ordinate Reference:**	Well #513H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Project: Lea County, NM (NAD 83 NME)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site: Ruthless 11 Fed Com

Site Position:		**Northing:**	419,142.00 usft	**Latitude:**	32° 9' 1.687 N
From:	Map	**Easting:**	752,042.00 usft	**Longitude:**	103° 39' 9.029 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.36 °

Well: #513H

Well Position	**+N/-S**	0.0 usft	**Northing:**	419,331.00 usft	**Latitude:**	32° 9' 3.421 N
	+E/-W	0.0 usft	**Easting:**	754,203.00 usft	**Longitude:**	103° 38' 43.879 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,506.0 usft

Wellbore: OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	6/5/2021	6.58	59.82	47,445.11340945

Design: OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	182.79

Survey Program: Date 6/8/2021

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
200.0	20,734.0	Driltech MWD (OH)	EOG MWD+IFR1	MWD + IFR1

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eog resources

Final PVA

Company:	Midland	**Local Co-ordinate Reference:**	Well #513H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
200.0	1.14	106.92	200.0	-0.6	1.9	0.57	0.57	0.00	-2.0	0.0
389.0	0.88	116.68	389.0	-1.8	5.0	0.16	-0.14	5.16	-5.3	0.7
578.0	1.85	107.98	577.9	-3.4	9.2	0.52	0.51	-4.60	-9.8	-0.4
766.0	0.79	278.22	765.9	-4.1	10.8	1.40	-0.56	90.55	11.3	2.5
954.0	2.46	303.80	953.8	-1.7	6.2	0.95	0.89	13.61	6.1	-2.0
997.0	2.81	294.83	996.8	-0.7	4.4	1.26	0.81	-20.86	4.3	-1.2
1,143.0	2.73	295.01	1,142.6	2.2	-2.0	0.06	-0.05	0.12	-2.4	-1.1
1,333.0	8.62	307.58	1,331.6	12.8	-17.4	3.15	3.10	6.62	-12.2	0.8
1,522.0	8.71	306.52	1,518.4	30.0	-40.1	0.10	0.05	-0.56	-20.5	1.6
1,712.0	9.15	306.26	1,706.1	47.5	-63.8	0.23	0.23	-0.14	-28.0	2.9
1,901.0	8.97	307.40	1,892.8	65.3	-87.6	0.13	-0.10	0.60	-35.8	4.8
2,090.0	8.71	310.48	2,079.5	83.6	-110.2	0.29	-0.14	1.63	-42.5	7.3
2,278.0	8.27	311.36	2,265.4	101.7	-131.2	0.24	-0.23	0.47	-48.3	7.7
2,467.0	8.97	302.92	2,452.3	118.7	-153.8	0.76	0.37	-4.47	-55.3	1.4
2,655.0	9.85	298.70	2,637.8	134.4	-180.2	0.59	0.47	-2.24	-64.5	0.5
2,844.0	9.50	300.11	2,824.1	150.0	-207.9	0.22	-0.19	0.75	-74.7	6.3
3,032.0	9.23	301.25	3,009.6	165.6	-234.2	0.17	-0.14	0.61	-83.5	11.5
3,221.0	8.97	301.69	3,196.2	181.2	-259.7	0.14	-0.14	0.23	-91.6	15.5
3,410.0	8.35	300.55	3,383.1	195.9	-284.0	0.34	-0.33	-0.60	-98.7	17.0
3,599.0	7.91	299.93	3,570.2	209.4	-307.1	0.24	-0.23	-0.33	-103.9	19.7
3,788.0	6.86	299.93	3,757.6	221.5	-328.2	0.56	-0.56	0.00	-106.6	23.5
3,977.0	6.33	299.58	3,945.3	232.3	-347.0	0.28	-0.28	-0.19	-106.7	26.8
4,166.0	5.63	301.86	4,133.3	242.3	-363.9	0.39	-0.37	1.21	-103.5	34.6
4,355.0	4.31	298.96	4,321.6	250.7	-378.0	0.71	-0.70	-1.53	-99.8	33.2
4,543.0	2.99	287.01	4,509.2	255.5	-388.9	0.81	-0.70	-6.36	-96.1	19.0
4,732.0	2.46	270.49	4,698.0	257.0	-397.7	0.50	-0.28	-8.74	-89.3	3.6

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Final PVA

Company:	Midland	**Local Co-ordinate Reference:**	Well #513H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
4,752.0	2.37	270.22	4,718.0	257.0	-398.5	0.45	-0.45	-1.35	-88.3	4.7
4,823.0	2.37	269.26	4,788.9	257.0	-401.5	0.06	0.00	-1.35	-85.0	8.6
5,012.0	5.10	349.24	4,977.6	265.2	-406.9	2.77	1.44	42.32	1.2	75.1
5,201.0	4.92	344.67	5,165.9	281.3	-410.6	0.23	-0.10	-2.42	-3.1	61.8
5,390.0	4.66	336.93	5,354.2	296.1	-415.8	0.37	-0.14	-4.10	-7.4	49.8
5,579.0	5.10	335.00	5,542.5	310.8	-422.4	0.25	0.23	-1.02	-5.1	40.0
5,768.0	5.01	330.51	5,730.8	325.6	-430.0	0.21	-0.05	-2.38	-4.1	31.1
5,956.0	4.92	322.68	5,918.1	339.2	-438.9	0.36	-0.05	-4.16	-3.1	24.4
6,145.0	5.98	328.92	6,106.2	354.1	-448.9	0.64	0.56	3.30	2.5	18.4
6,334.0	7.12	341.49	6,294.0	373.6	-457.7	0.97	0.60	6.65	3.9	8.0
6,523.0	6.60	338.06	6,481.7	394.8	-465.5	0.35	-0.28	-1.81	0.4	-2.8
6,712.0	6.16	333.23	6,669.5	413.9	-474.1	0.37	-0.23	-2.56	-0.1	-12.3
6,901.0	5.19	329.19	6,857.6	430.3	-483.0	0.55	-0.51	-2.14	2.9	-20.2
7,090.0	5.10	329.27	7,045.8	444.9	-491.7	0.05	-0.05	0.04	1.7	-25.7
7,279.0	0.97	309.15	7,234.5	453.1	-497.3	2.22	-2.19	-10.65	5.3	-26.4
7,468.0	0.97	254.57	7,423.5	453.7	-500.0	0.47	0.00	-28.88	22.0	-12.3
7,656.0	1.06	246.57	7,611.4	452.6	-503.2	0.09	0.05	-4.26	20.2	-9.3
7,845.0	1.58	210.36	7,800.4	449.6	-506.1	0.51	0.28	-19.16	17.8	3.4
8,033.0	1.93	194.89	7,988.3	444.3	-508.2	0.31	0.19	-8.23	10.6	7.3
8,223.0	2.11	191.02	8,178.2	437.8	-509.7	0.12	0.09	-2.04	3.4	7.8
8,411.0	2.55	190.50	8,366.0	430.3	-511.1	0.23	0.23	-0.28	-4.4	7.8
8,600.0	2.46	203.42	8,554.9	422.4	-513.5	0.30	-0.05	6.84	-10.7	9.5
8,789.0	1.85	206.76	8,743.7	416.0	-516.5	0.33	-0.32	1.77	-17.2	10.4
8,978.0	1.58	203.33	8,932.6	410.9	-518.9	0.15	-0.14	-1.81	-23.4	9.1
9,167.0	1.32	224.25	9,121.6	406.9	-521.4	0.31	-0.14	11.07	-23.2	17.8
9,356.0	1.06	281.20	9,310.5	405.7	-524.7	0.61	-0.14	30.13	-0.7	31.0
9,544.0	0.88	273.55	9,498.5	406.1	-527.8	0.12	-0.10	-4.07	-8.0	30.4

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Final PVA

Company:	Midland	**Local Co-ordinate Reference:**	Well #513H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
9,733.0	0.53	178.54	9,687.5	405.3	-529.3	0.56	-0.19	-50.27	-30.4	-12.0
9,922.0	1.06	192.25	9,876.5	402.8	-529.6	0.30	0.28	7.25	-34.9	-4.3
10,042.0	0.88	185.57	9,996.5	400.8	-529.9	0.18	-0.15	-5.57	-36.2	-8.4
10,055.0	2.29	182.51	10,009.5	400.4	-529.9	10.85	10.84	-23.50	-35.9	-10.4
KOP, MD:10055.0', TVD:10009.5',N/S:400.4', E/W:-529.9', INC:2.29										
10,136.0	11.08	181.00	10,089.8	391.0	-530.2	10.85	10.85	-1.87	-36.9	-11.5
10,160.1	13.92	178.88	10,113.4	385.8	-530.1	11.95	11.80	-8.81	-36.9	-12.9
FTP Crossing, MD:10160.1', TVD:10113.4',N/S:385.8', E/W:-530.1', INC:13.92										
10,231.0	22.34	175.73	10,180.7	363.8	-529.0	11.95	11.87	-4.44	-38.2	-13.8
10,325.0	29.90	181.09	10,265.0	322.5	-528.1	8.42	8.04	5.70	-40.5	-9.7
10,419.0	40.89	183.38	10,341.5	268.2	-530.3	11.77	11.69	2.44	-40.7	-10.9
10,513.0	46.96	186.63	10,409.2	203.3	-536.1	6.89	6.46	3.46	-38.6	-15.9
10,607.0	58.12	184.78	10,466.3	129.1	-543.4	11.97	11.87	-1.97	-33.3	-24.9
10,701.0	68.32	182.67	10,508.6	45.5	-548.8	11.03	10.85	-2.24	-28.9	-31.5
10,795.0	74.22	180.83	10,538.8	-43.4	-551.5	6.54	6.28	-1.96	-21.7	-34.9
10,890.0	82.66	179.33	10,557.8	-136.4	-551.6	9.02	8.88	-1.58	-10.5	-35.4
10,984.0	89.34	177.75	10,564.4	-230.1	-549.2	7.30	7.11	-1.68	-3.4	-33.3
11,078.0	90.04	177.49	10,564.9	-324.0	-545.3	0.79	0.74	-0.28	-2.3	-29.7
11,173.0	90.13	177.31	10,564.7	-418.9	-541.0	0.21	0.09	-0.19	-1.7	-25.6
11,267.0	89.60	176.43	10,565.0	-512.8	-535.9	1.09	-0.56	-0.94	-0.8	-20.8
11,361.0	88.46	176.52	10,566.5	-606.6	-530.1	1.22	-1.21	0.10	1.5	-15.3
11,456.0	89.96	175.12	10,567.9	-701.3	-523.2	2.16	1.58	-1.47	3.5	-8.7
11,550.0	90.92	176.79	10,567.1	-795.1	-516.6	2.05	1.02	1.78	3.4	-2.3
11,644.0	92.77	178.28	10,564.1	-888.9	-512.5	2.53	1.97	1.59	1.1	1.4
11,739.0	92.24	177.75	10,560.0	-983.8	-509.2	0.79	-0.56	-0.56	-2.4	4.4
11,833.0	92.51	177.93	10,556.1	-1,077.7	-505.7	0.35	0.29	0.19	-5.6	7.7
11,928.0	92.07	178.54	10,552.3	-1,172.5	-502.8	0.79	-0.46	0.64	-8.7	10.3

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Final PVA

Company:	Midland	**Local Co-ordinate Reference:**	Well #513H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
12,022.0	92.95	178.98	10,548.1	-1,266.4	-500.7	1.05	0.94	0.47	-12.2	12.0
12,116.0	87.23	179.42	10,548.0	-1,360.4	-499.4	6.10	-6.09	0.47	-11.6	13.1
12,211.0	86.70	179.60	10,553.0	-1,455.2	-498.6	0.59	-0.56	0.19	-5.9	13.6
12,305.0	88.11	180.30	10,557.3	-1,549.1	-498.5	1.67	1.50	0.74	-1.0	13.4
12,400.0	88.46	180.30	10,560.1	-1,644.1	-499.0	0.37	0.37	0.00	2.6	12.6
12,525.0	90.57	180.39	10,561.2	-1,769.1	-499.8	1.69	1.69	0.07	4.5	11.4
12,620.0	89.60	180.74	10,561.0	-1,864.1	-500.7	1.09	-1.02	0.37	5.1	10.2
12,714.0	89.25	181.36	10,562.0	-1,958.0	-502.4	0.76	-0.37	0.66	6.7	8.2
12,809.0	89.69	180.74	10,562.9	-2,053.0	-504.2	0.80	0.46	-0.65	8.2	6.2
12,903.0	90.48	180.04	10,562.7	-2,147.0	-504.8	1.12	0.84	-0.74	8.8	5.2
12,998.0	90.31	180.39	10,562.1	-2,242.0	-505.2	0.41	-0.18	0.37	8.8	4.6
13,092.0	90.92	179.33	10,561.1	-2,336.0	-504.9	1.30	0.65	-1.13	8.5	4.5
13,187.0	91.01	179.77	10,559.5	-2,431.0	-504.2	0.47	0.09	0.46	7.6	5.0
13,281.0	90.22	179.25	10,558.5	-2,525.0	-503.4	1.01	-0.84	-0.55	7.2	5.5
13,376.0	90.57	178.90	10,557.8	-2,620.0	-501.9	0.52	0.37	-0.37	7.3	6.7
13,471.0	90.48	178.19	10,556.9	-2,714.9	-499.4	0.75	-0.09	-0.75	7.1	8.9
13,566.0	91.89	177.66	10,555.0	-2,809.9	-496.0	1.59	1.48	-0.56	5.8	12.0
13,660.0	91.63	176.87	10,552.1	-2,903.7	-491.5	0.88	-0.28	-0.84	3.6	16.2
13,755.0	90.22	178.37	10,550.5	-2,998.6	-487.6	2.17	-1.48	1.58	2.8	19.9
13,850.0	90.57	180.74	10,549.9	-3,093.6	-486.8	2.52	0.37	2.49	2.8	20.3
13,945.0	89.87	179.77	10,549.5	-3,188.6	-487.3	1.26	-0.74	-1.02	3.1	19.6
14,040.0	90.31	180.13	10,549.4	-3,283.6	-487.2	0.60	0.46	0.38	3.7	19.4
14,134.0	89.60	177.93	10,549.4	-3,377.6	-485.6	2.46	-0.76	-2.34	4.4	20.7
14,229.0	88.90	179.60	10,550.7	-3,472.5	-483.5	1.91	-0.74	1.76	6.3	22.4
14,323.0	89.08	181.27	10,552.3	-3,566.5	-484.3	1.79	0.19	1.78	8.7	21.4
14,418.0	91.01	182.32	10,552.3	-3,661.5	-487.2	2.31	2.03	1.11	9.3	18.2
14,512.0	91.98	183.47	10,549.8	-3,755.3	-492.0	1.60	1.03	1.22	7.5	13.1

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Final PVA

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Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
14,607.0	92.15	183.03	10,546.4	-3,850.1	-497.4	0.50	0.18	-0.46	4.8	7.5
14,702.0	89.87	179.33	10,544.7	-3,945.0	-499.3	4.57	-2.40	-3.89	3.8	5.2
14,797.0	89.69	180.48	10,545.1	-4,040.0	-499.2	1.23	-0.19	1.21	4.8	5.1
14,891.0	89.69	179.86	10,545.6	-4,134.0	-499.4	0.66	0.00	-0.66	6.0	4.5
14,986.0	88.64	178.90	10,547.0	-4,229.0	-498.4	1.50	-1.11	-1.01	8.1	5.3
15,080.0	87.58	178.72	10,550.1	-4,322.9	-496.5	1.14	-1.13	-0.19	11.9	6.9
15,174.0	88.46	179.42	10,553.3	-4,416.9	-494.9	1.20	0.94	0.74	15.8	8.2
15,269.0	90.75	180.13	10,554.0	-4,511.9	-494.6	2.52	2.41	0.75	17.1	8.2
15,363.0	91.80	179.51	10,551.9	-4,605.8	-494.3	1.30	1.12	-0.66	15.7	8.2
15,457.0	92.07	179.33	10,548.7	-4,699.8	-493.3	0.35	0.29	-0.19	13.2	8.9
15,551.0	91.89	179.77	10,545.5	-4,793.7	-492.6	0.51	-0.19	0.47	10.7	9.4
15,645.0	90.66	178.72	10,543.4	-4,887.7	-491.3	1.72	-1.31	-1.12	9.3	10.3
15,740.0	88.81	177.84	10,543.8	-4,982.6	-488.5	2.16	-1.95	-0.93	10.4	12.9
15,834.0	88.90	178.81	10,545.7	-5,076.6	-485.7	1.04	0.10	1.03	12.9	15.3
15,928.0	90.66	178.28	10,546.1	-5,170.5	-483.4	1.96	1.87	-0.56	14.0	17.4
16,022.0	90.92	178.63	10,544.8	-5,264.5	-480.8	0.46	0.28	0.37	13.5	19.7
16,116.0	92.42	179.60	10,542.0	-5,358.4	-479.4	1.90	1.60	1.03	11.5	20.8
16,211.0	92.95	178.90	10,537.6	-5,453.3	-478.1	0.92	0.56	-0.74	7.9	21.8
16,305.0	92.68	178.46	10,533.0	-5,547.2	-476.0	0.55	-0.29	-0.47	4.1	23.6
16,399.0	92.33	180.48	10,528.8	-5,641.1	-475.1	2.18	-0.37	2.15	0.7	24.2
16,494.0	92.42	182.41	10,524.9	-5,736.0	-477.5	2.03	0.09	2.03	-2.4	21.5
16,588.0	89.43	182.32	10,523.4	-5,829.9	-481.4	3.18	-3.18	-0.10	-3.1	17.4
16,682.0	89.87	183.38	10,524.0	-5,923.7	-486.0	1.22	0.47	1.13	-1.8	12.4
16,777.0	88.55	182.94	10,525.3	-6,018.6	-491.3	1.46	-1.39	-0.46	0.4	6.9
16,871.0	88.29	183.47	10,527.9	-6,112.4	-496.5	0.63	-0.28	0.56	3.7	1.3
16,965.0	89.87	182.15	10,529.4	-6,206.3	-501.1	2.19	1.68	-1.40	6.1	-3.5
17,060.0	92.33	181.18	10,527.6	-6,301.2	-503.9	2.78	2.59	-1.02	5.0	-6.6

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Final PVA

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Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
17,153.0	92.77	179.60	10,523.4	-6,394.1	-504.5	1.76	0.47	-1.70	1.7	-7.5
17,248.0	89.25	177.93	10,521.7	-6,489.1	-502.5	4.10	-3.71	-1.76	0.8	-5.8
17,342.0	89.69	178.19	10,522.6	-6,583.0	-499.3	0.54	0.47	0.28	2.5	-2.9
17,436.0	89.08	178.37	10,523.6	-6,677.0	-496.5	0.68	-0.65	0.19	4.3	-0.3
17,531.0	89.08	177.49	10,525.1	-6,771.9	-493.0	0.93	0.00	-0.93	6.6	2.8
17,625.0	87.49	178.02	10,528.0	-6,865.8	-489.4	1.78	-1.69	0.56	10.2	6.2
17,719.0	87.85	178.72	10,531.8	-6,959.6	-486.7	0.84	0.38	0.74	14.8	8.6
17,814.0	88.81	181.88	10,534.5	-7,054.6	-487.2	3.48	1.01	3.33	18.4	7.8
17,908.0	88.64	180.92	10,536.6	-7,148.5	-489.5	1.04	-0.18	-1.02	21.3	5.2
18,003.0	90.84	180.83	10,537.1	-7,243.5	-490.9	2.32	2.32	-0.09	22.5	3.5
18,097.0	91.45	180.74	10,535.2	-7,337.5	-492.2	0.66	0.65	-0.10	21.4	1.9
18,191.0	90.22	179.69	10,533.8	-7,431.5	-492.6	1.72	-1.31	-1.12	20.9	1.2
18,285.0	90.40	178.81	10,533.3	-7,525.5	-491.3	0.96	0.19	-0.94	21.2	2.2
18,379.0	88.11	178.19	10,534.5	-7,619.4	-488.9	2.52	-2.44	-0.66	23.5	4.3
18,473.0	90.31	178.72	10,535.8	-7,713.4	-486.4	2.41	2.34	0.56	26.0	6.6
18,568.0	93.30	180.04	10,532.8	-7,808.3	-485.3	3.44	3.15	1.39	24.3	7.3
18,662.0	92.42	181.71	10,528.1	-7,902.2	-486.8	2.01	-0.94	1.78	20.8	5.6
18,756.0	90.22	181.62	10,526.0	-7,996.1	-489.5	2.34	-2.34	-0.10	19.9	2.6
18,850.0	90.84	181.80	10,525.1	-8,090.1	-492.3	0.69	0.66	0.19	20.2	-0.5
18,944.0	89.52	181.53	10,524.8	-8,184.0	-495.0	1.43	-1.40	-0.29	21.1	-3.5
19,039.0	89.08	180.65	10,526.0	-8,279.0	-496.8	1.04	-0.46	-0.93	23.5	-5.6
19,133.0	90.40	180.92	10,526.4	-8,373.0	-498.1	1.43	1.40	0.29	25.2	-7.2
19,228.0	91.71	180.04	10,524.7	-8,468.0	-498.9	1.66	1.38	-0.93	24.7	-8.3
19,323.0	91.01	180.21	10,522.4	-8,562.9	-499.1	0.76	-0.74	0.18	23.7	-8.8
19,418.0	90.13	178.63	10,521.5	-8,657.9	-498.2	1.90	-0.93	-1.66	24.0	-8.1
19,512.0	90.31	178.81	10,521.1	-8,751.9	-496.1	0.27	0.19	0.19	24.8	-6.3
19,606.0	89.69	178.46	10,521.1	-8,845.9	-493.8	0.76	-0.66	-0.37	26.1	-4.4

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Received by OCD: 9/26/2023 7:41:31 AM

eog resources

Final PVA

Company:	Midland	**Local Co-ordinate Reference:**	Well #513H
Project:	Lea County, NM (NAD 83 NME)	**TVD Reference:**	KB = 26' @ 3532.0usft
Site:	Ruthless 11 Fed Com	**MD Reference:**	KB = 26' @ 3532.0usft
Well:	#513H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	PEDM

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
19,701.0	89.43	178.19	10,521.8	-8,940.8	-491.0	0.39	-0.27	-0.28	28.0	-1.9
19,795.0	90.48	178.19	10,521.9	-9,034.8	-488.1	1.12	1.12	0.00	29.3	0.8
19,889.0	88.90	177.49	10,522.4	-9,128.7	-484.5	1.84	-1.68	-0.74	31.4	4.0
19,983.0	87.85	176.61	10,525.1	-9,222.5	-479.7	1.46	-1.12	-0.94	36.2	8.6
20,078.0	89.34	178.10	10,527.4	-9,317.4	-475.3	2.22	1.57	1.57	40.7	12.7
20,172.0	93.83	179.51	10,524.8	-9,411.3	-473.4	5.01	4.78	1.50	40.2	14.4
20,266.0	94.53	178.63	10,518.0	-9,505.0	-471.8	1.19	0.74	-0.94	35.4	15.6
20,360.0	93.91	179.86	10,511.0	-9,598.8	-470.6	1.46	-0.66	1.31	30.6	16.6
20,455.0	91.98	180.13	10,506.2	-9,693.7	-470.6	2.05	-2.03	0.28	27.8	16.3
20,549.0	91.80	179.25	10,503.1	-9,787.6	-470.1	0.96	-0.19	-0.94	26.9	16.5
Last MWD Survey (MD=20549.0')										
20,734.0	91.80	179.25	10,497.2	-9,972.5	-467.7	0.00	0.00	0.00	25.2	18.3
Projection to Bit (MD=20734.0')										

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,055.0	10,009.5	400.4	-529.9	KOP, MD:10055.0', TVD:10009.5',N/S:400.4', E/W:-529.9', INC:2.29
10,160.1	10,113.4	385.8	-530.1	FTP Crossing, MD:10160.1', TVD:10113.4',N/S:385.8', E/W:-530.1', INC
20,549.0	10,503.1	-9,787.6	-470.1	Last MWD Survey (MD=20549.0')
20,734.0	10,497.2	-9,972.5	-467.7	Projection to Bit (MD=20734.0')

Checked By: _____ Approved By: _____ Date: _____

I CERTIFY THIS SURVEY TO BE TRUE AND CORRECT TO THE BEST OF MY BELIEF AND KNOWLEDGE
KAY MADDOX 02/14/2022

Received by OCD: 9/26/2023 7:41:31 AM

Lea County, NM (NAD 83 NME)

Ruthless 11 Fed Com #513H

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level

G T M

Azimuths to Grid North
True North: -0.37°
Magnetic North: 6.21°

Magnetic Field
Strength: 47445.1nT
Dip Angle: 59.82°
Date: 6/5/2021
Model: IGRF2020

To convert a Magnetic Direction to a Grid Direction, Add 6.21°
To convert a Magnetic Direction to a True Direction, Add 6.58° East
To convert a True Direction to a Grid Direction, Subtract 0.37°

WELL DETAILS: #513H

3506.0
KB = 26' @ 3532.0usft

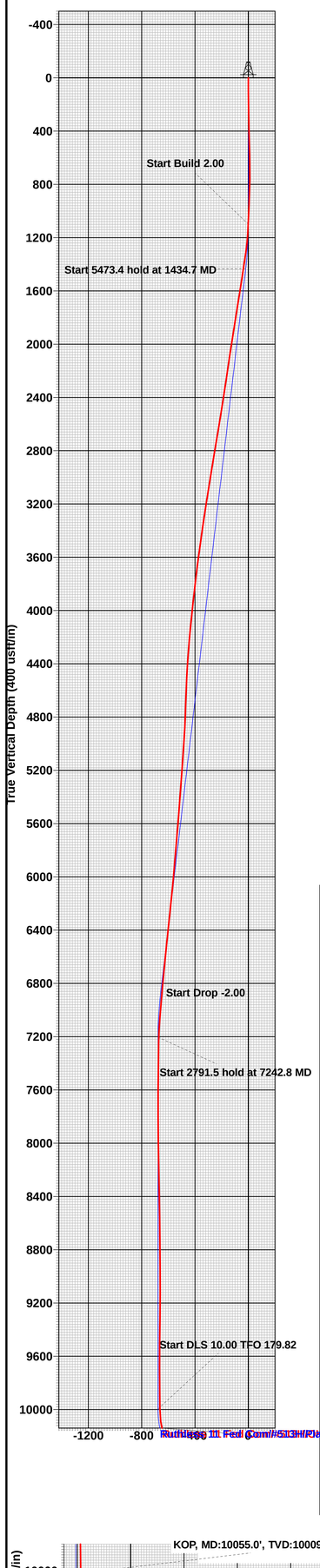
Northing	Easting	Latitude	Longitude
419331.00	754203.00	32° 9' 3.421 N	103° 38' 43.879 W

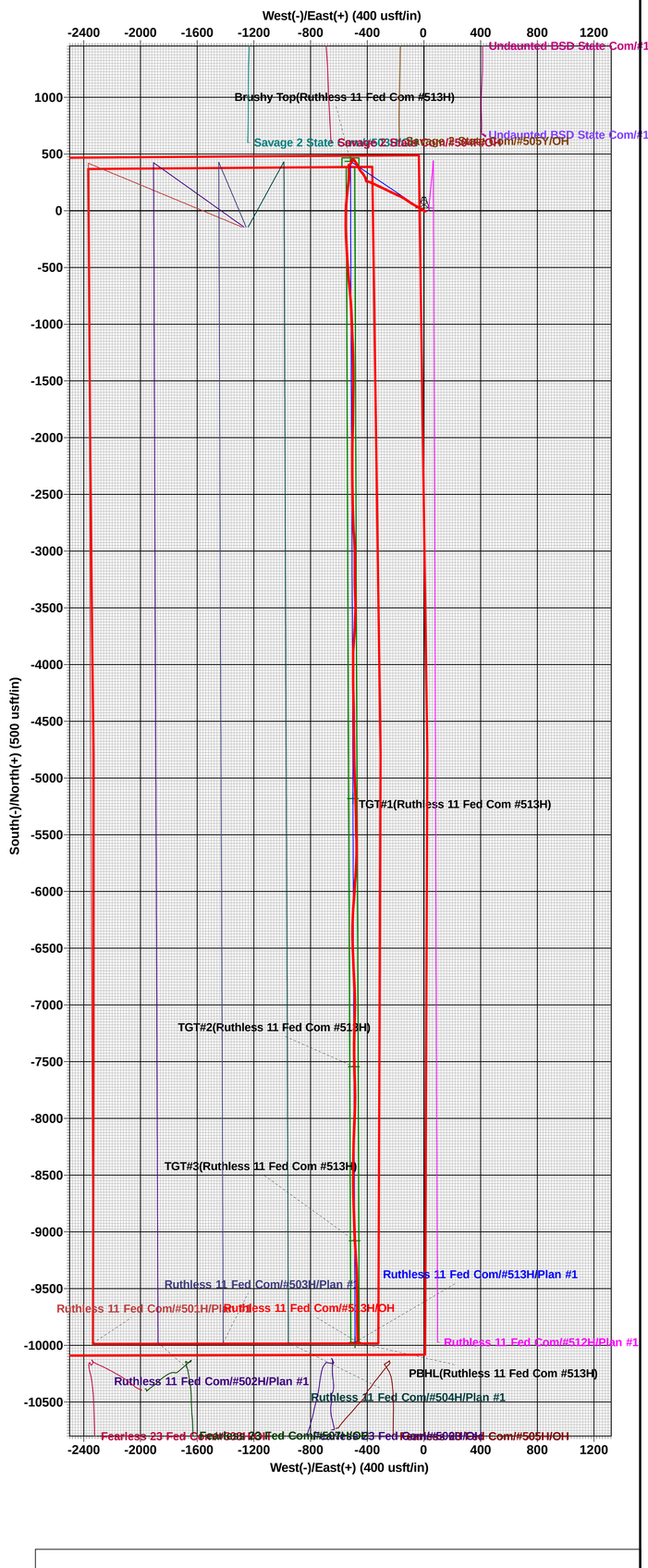
SECTION DETAILS

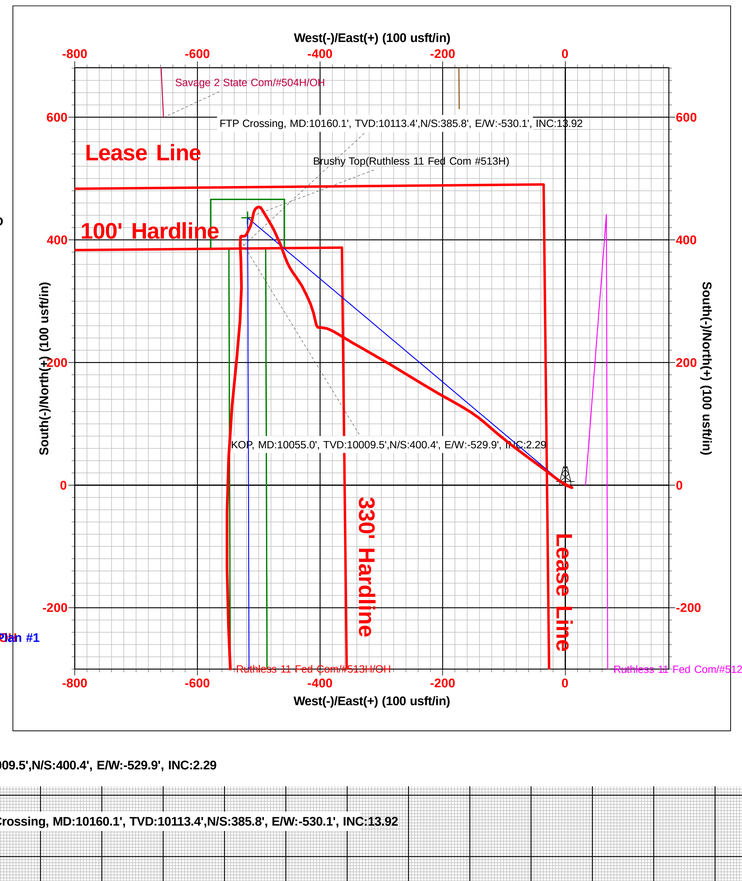
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0	
3	1434.7	6.69	310.09	1433.9	12.6	-14.9	2.00	310.09	-11.8	
4	6908.1	6.69	310.09	6870.1	423.4	-503.1	0.00	0.00	-398.4	
5	7242.8	0.00	0.00	7204.0	436.0	-518.0	2.00	180.00	-410.3	Brushy Top(Ruthless 11 Fed Com #513H)
6	10034.3	0.00	0.00	9995.5	436.0	-518.0	0.00	0.00	-410.3	
7	10938.5	90.41	179.82	10568.4	-141.1	-516.2	10.00	179.82	166.1	
8	15978.3	90.41	179.82	10532.0	-5180.8	-500.7	0.00	0.00	5199.0	TGT#1(Ruthless 11 Fed Com #513H)
9	15981.9	90.48	179.82	10532.0	-5184.3	-500.7	2.00	0.00	5202.6	
10	18341.5	90.48	179.82	10512.0	-7543.9	-493.5	0.00	0.00	7559.0	TGT#2(Ruthless 11 Fed Com #513H)
11	18354.7	90.75	179.82	10511.9	-7557.1	-493.4	2.00	0.00	7572.1	
12	19875.8	90.75	179.82	10492.0	-9078.0	-488.8	0.00	0.00	9091.0	TGT#3(Ruthless 11 Fed Com #513H)
13	19902.7	91.29	179.82	10491.5	-9104.9	-488.7	2.00	0.00	9117.9	
14	20772.0	91.29	179.82	10472.0	-9974.0	-486.0	0.00	0.00	9985.8	PBHL(Ruthless 11 Fed Com #513H)

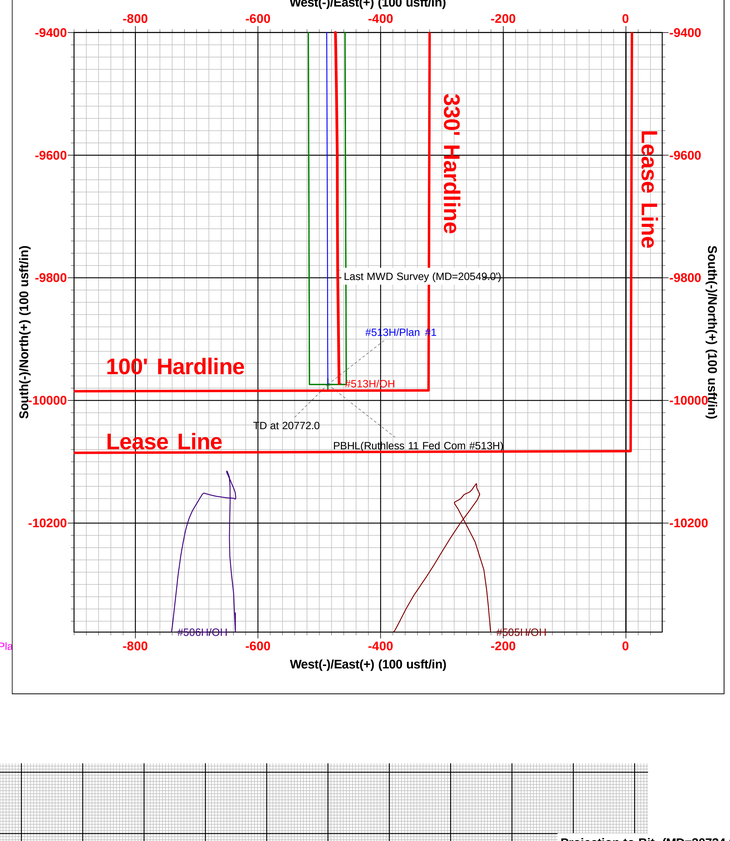
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

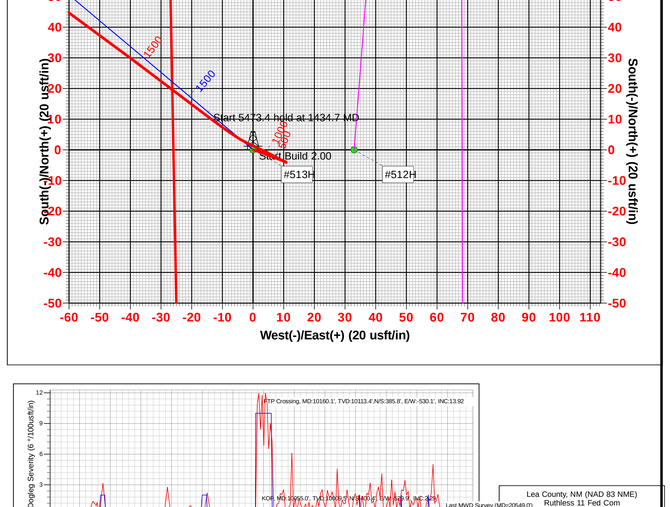
Name	TVD	+N/-S	+E/-W	Northing	Easting
Brushy Top(Ruthless 11 Fed Com #513H)	7204.0	436.0	-518.0	419767.00	753685.00
PBHL(Ruthless 11 Fed Com #513H)	10472.0	-9974.0	-486.0	409357.00	753717.00
TGT#3(Ruthless 11 Fed Com #513H)	10492.0	-9078.0	-488.8	410253.00	753714.25
TGT#2(Ruthless 11 Fed Com #513H)	10512.0	-7543.9	-493.5	411787.10	753709.53
TGT#1(Ruthless 11 Fed Com #513H)	10532.0	-5180.8	-500.7	414150.20	753702.27

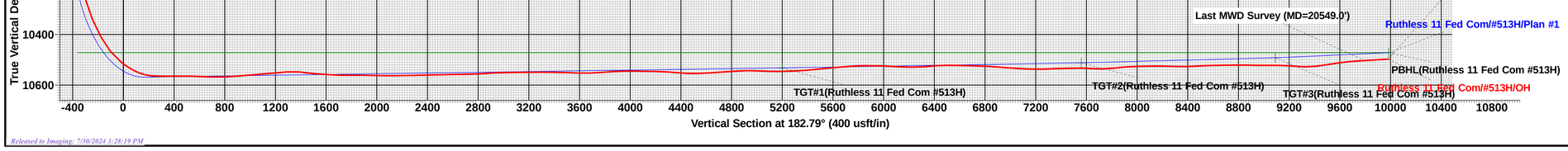


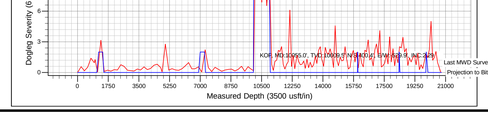












Lea County, NM (NAD 83 NME)
Ruthless 11 Fed Com
#513H
OH
Plan #1
14:17, June 09 2021

Released to Imaging: 7/30/2024 3:28:19 PM

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

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

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

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-025-47751	97903	WC025 G08 S253235G; LOWER BONE SPRING

[4]Property Code	[5]Property Name	[6]Well Number
329701	RUTHLESS 11 FED COM	513H

[7]OGRID No.	[8]Operator Name	[9]Elevation
7377	EOG RESOURCES, INC.	3506'

[10]Surface Location

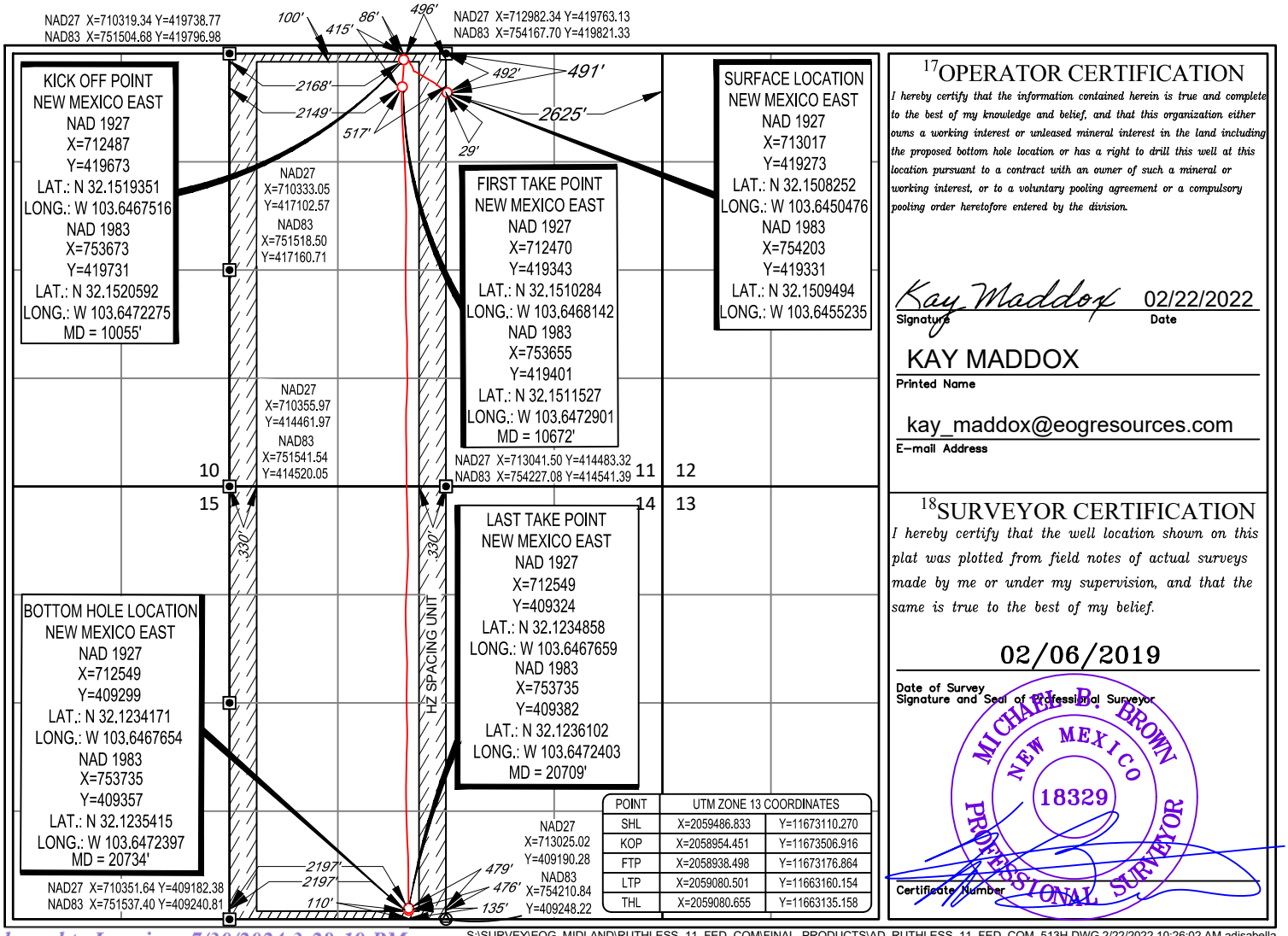
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	11	25-S	32-E	-	491'	NORTH	2625'	EAST	LEA

[11]Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	14	25-S	32-E	-	110'	SOUTH	2197'	WEST	LEA

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
640.00			

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



POINT	UTM ZONE 13 COORDINATES	
SHL	X=2059486.833	Y=11673110.270
KOP	X=2058954.451	Y=11673506.916
FTP	X=2058938.498	Y=11673176.864
LTP	X=2059080.501	Y=11663160.154
THL	X=2059080.655	Y=11663135.158

[17]OPERATOR CERTIFICATION

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

Kay Maddox — Signature — 02/22/2022 — Date

KAY MADDOX
Printed Name

kay_maddox@eogresources.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 to the best of my belief.

02/06/2019
Date of Survey
Signature and Seal of Professional Surveyor

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

S:\SURVEY\EOG_MIDLAND\RUTHLESS_11_FED_COM\FINAL_PRODUCTS\AD_RUTHLESS_11_FED_COM_513H.DWG 2/22/2022 10:26:02 AM adisabella

SCALE: 1" = 2000'

0' 1000' 2000'

SECTION 11, TOWNSHIP 25-S, RANGE 32-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

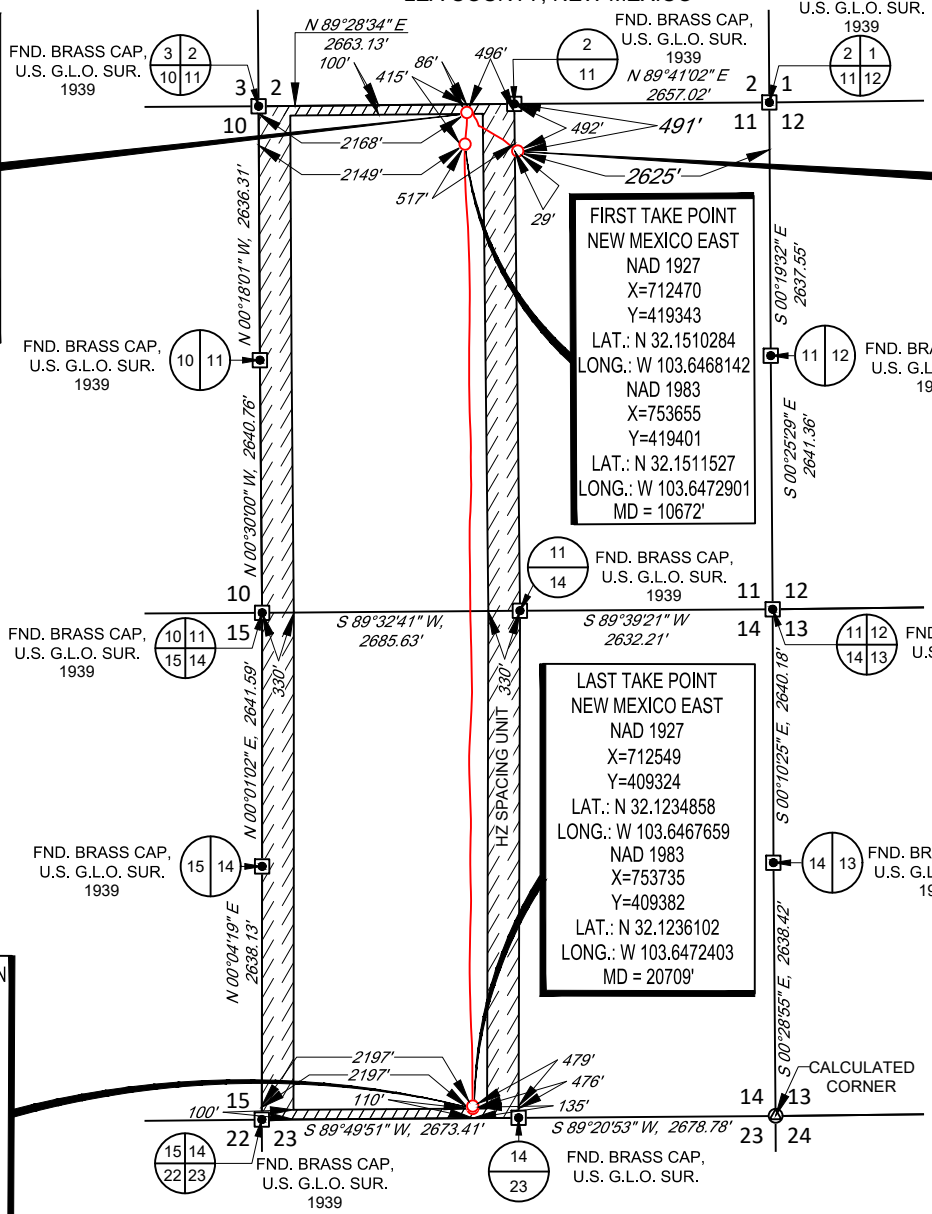
KICK OFF POINT
NEW MEXICO EAST
NAD 1927
X=712487
Y=419673
LAT.: N 32.1519351
LONG.: W 103.6467516
NAD 1983
X=753673
Y=419731
LAT.: N 32.1520592
LONG.: W 103.6472275
MD = 10055'

SURFACE LOCATION
NEW MEXICO EAST
NAD 1927
X=713017
Y=419273
LAT.: N 32.1508252
LONG.: W 103.6450476
NAD 1983
X=754203
Y=419331
LAT.: N 32.1509494
LONG.: W 103.6455235

FIRST TAKE POINT
NEW MEXICO EAST
NAD 1927
X=712470
Y=419343
LAT.: N 32.1510284
LONG.: W 103.6468142
NAD 1983
X=753655
Y=419401
LAT.: N 32.1511527
LONG.: W 103.6472901
MD = 10672'

LAST TAKE POINT
NEW MEXICO EAST
NAD 1927
X=712549
Y=409324
LAT.: N 32.1234858
LONG.: W 103.6467659
NAD 1983
X=753735
Y=409382
LAT.: N 32.1236102
LONG.: W 103.6472403
MD = 20709'

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1927
X=712549
Y=409299
LAT.: N 32.1234171
LONG.: W 103.6467654
NAD 1983
X=753735
Y=409357
LAT.: N 32.1235415
LONG.: W 103.6472397
MD = 20734'



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LTP	X=2059080.501	Y=11663160.154
THL	X=2059080.655	Y=11663135.158

LEASE NAME & WELL NO.: RUTHLESS 11 FED COM 513H

SECTION 11 TWP 25-S RGE 32-E SURVEY N.M.P.M.

COUNTY LEA STATE NM ELEVATION 3506'

DESCRIPTION 491' FNL & 2625' FEL

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
FEBRUARY 18, 2022

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

eog resources, inc.

RUTHLESS FED COM 513H AS-DRILLED	REVISION:
DATE: 02/18/2022	
FILE: AD_RUTHLESS_11_FED_COM_513H	
DRAWN BY: A.V.F.	
SHEET : 1 OF 1	

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

S:\SURVEY\EOG_MIDLAND\RUTHLESS_11_FED_COM\FINAL_PRODUCTS\AD_RUTHLESS_11_FED_COM_513H.DWG 2/22/2022 10:26:03 AM adisabella

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Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Action 268557

ACKNOWLEDGMENTS

Operator:	OGRID:
EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	7377
	Action Number: 268557
	Action Type: [C-105] Well (Re)Completion (C-105)

ACKNOWLEDGMENTS

☑	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☑	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

District I
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Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 268557

CONDITIONS

Operator: EOG RESOURCES INC 5509 Champions Drive Midland, TX 79706	OGRID: 7377
	Action Number: 268557
	Action Type: [C-105] Well (Re)Completion (C-105)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	ACCEPTED FOR RECORD.	7/30/2024