

Well Name: ENDER WIGGINS 14 WXY FED COM	Well Location: T25S / R34E / SEC 14 / SENE / 32.1308864 / -103.43587	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM113419	Unit or CA Name:	Unit or CA Number:
US Well Number: 300254702600X1	Well Status: Approved Application for Permit to Drill	Operator: MARATHON OIL PERMIAN LLC

Notice of Intent

Sundry ID: 2657250

Type of Submission: Notice of Intent **Type of Action:** APD Change

Date Sundry Submitted: 02/15/2022 **Time Sundry Submitted:** 03:13

Date proposed operation will begin: 03/01/2022

Procedure Description: Marathon Oil Permian LLC. respectfully requests to make changes to the Approved Drilling Plan for the above listed well. The only changes being requested are to the Drill Plan, Casing & Cement program. No new surface disturbance is being requested. Please see attachment for a summary of the requested changes and a revised Drilling and Operations Plan.

NOI Attachments

Procedure Description

SN_Atch_Ender_Wiggins_14_WA_Fed_Com_20H_Csg_Cmt_Chng_02.15.2022_20220215151110.pdf

Conditions of Approval

Specialist Review

Ender_Wiggings_14_WXY_Fed_Com_20H_COA_20220421091959.pdf

Well Name: ENDER WIGGINS 14 WXY FED COM	Well Location: T25S / R34E / SEC 14 / SENE / 32.1308864 / -103.43587	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM113419	Unit or CA Name:	Unit or CA Number:
US Well Number: 300254702600X1	Well Status: Approved Application for Permit to Drill	Operator: MARATHON OIL PERMIAN LLC

Operator

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: MELISSA SZUDERA	Signed on: FEB 15, 2022 03:11 PM
Name: MARATHON OIL PERMIAN LLC	
Title: REGULATORY COMPLIANCE REPRESENTATIVE	
Street Address: 990 TOWN & COUNTRY BLVD	
City: Houston	State: TX
Phone: (713) 296-3179	
Email address: mszudera@marathonoil.com	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: ZOTA M STEVENS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752345998	BLM POC Email Address: ZSTEVENS@BLM.GOV
Disposition: Approved	Disposition Date: 04/21/2022
Signature: Zota Stevens	

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.5. Lease Serial No. NMNM113419
6. If Indian, Allottee or Tribe Name**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator MARATHON OIL PERMIAN LLC

3a. Address 990 TOWN & COUNTRY BLVD, HOUSTON, TX 3b. Phone No. (include area code)
(000) 000-00004. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC 14/T25S/R34E/NMP

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No. ENDER WIGGINS FC 25 34 14 WX

9. API Well No. 3002547026

10. Field and Pool or Exploratory Area
PITCHFORK RANCH/WOLFCAMP; SOUTH11. Country or Parish, State
LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

Marathon Oil Permian respectfully requests to make the below listed changes to the above listed APD.

- Name: from Ender Wiggins F C 25 34 14 WXY 20H to Ender Wiggins 14 WXY Fed Com 20H

- FTP: from 2490 FNL 330 FEL to 2539 FNL 330 FEL

- LTP: from 150 FNL 330 FEL to 100 FNL 330 FEL

- TVD: from 12557 feet to 12635 feet

- MD: from 19981 feet to 20135 feet

See attachments for revised C-102 Well Plat, Revised Drill Plan and Drilling Directional Plan.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

MELISSA SZUDERA / Ph: (713) 296-3179

Title REGULATORY COMPLIANCE REPRESENTATIVE

Signature

Date

05/27/2021

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved

Title Petroleum Engineer

Date 10/12/2021

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office CARLSBAD

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law 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, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

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. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c) and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: 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 in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

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 St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Location of Well

0. SHL: SENE / 2490 FNL / 1136 FEL / TWSP: 25S / RANGE: 34E / SECTION: 14 / LAT: 32.1308864 / LONG: -103.43587 (TVD: 0 feet, MD: 0 feet)

PPP: SENE / 2490 FNL / 330 FEL / TWSP: 25S / RANGE: 34E / SECTION: 14 / LAT: 32.1308811 / LONG: -103.4327891 (TVD: 12557 feet, MD: 13405 feet)

PPP: SESE / 0 FSL / 330 FEL / TWSP: 25S / RANGE: 34E / SECTION: 11 / LAT: 32.1377147 / LONG: -103.4332616 (TVD: 12557 feet, MD: 14894 feet)

PPP: SENE / 2640 FNL / 330 FEL / TWSP: 25S / RANGE: 34E / SECTION: 11 / LAT: 32.144974 / LONG: -103.4332603 (TVD: 12557 feet, MD: 17535 feet)

BHL: NENE / 150 FNL / 330 FEL / TWSP: 25S / RANGE: 34E / SECTION: 11 / LAT: 32.1518204 / LONG: -103.4332581 (TVD: 12557 feet, MD: 19981 feet)

CONFIDENTIAL

Well Name: ENDER WIGGINS 14 WXY FED COM	Well Location: T25S / R34E / SEC 14 / SENE / 32.1308864 / -103.43587	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM113419	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547026	Well Status: Approved Application for Permit to Drill	Operator: MARATHON OIL PERMIAN LLC

Notice of Intent

Sundry ID: 2389336

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 06/09/2021	Time Sundry Submitted: 12:27
Date proposed operation will begin: 09/30/2021	

Procedure Description: Marathon Oil Permian respectfully requests to make the below listed changes to the above listed APD. - Name: from Ender Wiggins F C 25 34 14 WXY 20H to Ender Wiggins 14 WXY Fed Com 20H - FTP: from 2490 FNL 330 FEL to 2539 FNL 330 FEL - LTP: from 150 FNL 330 FEL to 100 FNL 330 FEL - TVD: from 12557 feet to 12635 feet - MD: from 19981 feet to 20135 feet See attachments for revised C-102 Well Plat, Revised Drill Plan and Drilling Directional Plan.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- REV_BLM_Drill_Plan_Sundry_Ender_Wiggins_14_WXY_FED_COM_20H_sub_06.09.21_20210609122702.pdf
- Sub_Rev_C102_ENDER_WIGGINS_14_WXY_FED_COM_20H_cert_05.21.2021_mro_sgn_20210527115310.pdf
- Sub_Rev_Pad_Plat_DOGIE_DRAW_ENDER_WIGGINS_East_Pad_cert_05.21.2021_20210527115309.pdf

Well Name: ENDER WIGGINS 14 WXY FED COM	Well Location: T25S / R34E / SEC 14 / SENE / 32.1308864 / -103.43587	County or Parish/State: LEA / NM
Well Number: 20H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM113419	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547026	Well Status: Approved Application for Permit to Drill	Operator: MARATHON OIL PERMIAN LLC

Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: MELISSA SZUDERA	Signed on: MAY 27, 2021 11:53 AM
Name: MARATHON OIL PERMIAN LLC	
Title: REGULATORY COMPLIANCE REPRESENTATIVE	
Street Address: 990 TOWN & COUNTRY BLVD	
City: Houston	State: TX
Phone: (713) 296-3179	
Email address: mszudera@marathonoil.com	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 10/12/2021
Signature: Chris Walls	

District I

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-47026	² Pool Code 96994	³ Pool Name PITCHFORK RANCH; WOLFCAMP (SOUTH)
⁴ Property Code	⁵ Property Name ENDER WIGGINS 14 WXY FED COM	⁶ Well Number 20H
⁷ OGRID No. 372098	⁸ Operator Name MARATHON OIL PERMIAN LLC	⁹ Elevation 3358'

¹⁰ Surface Location

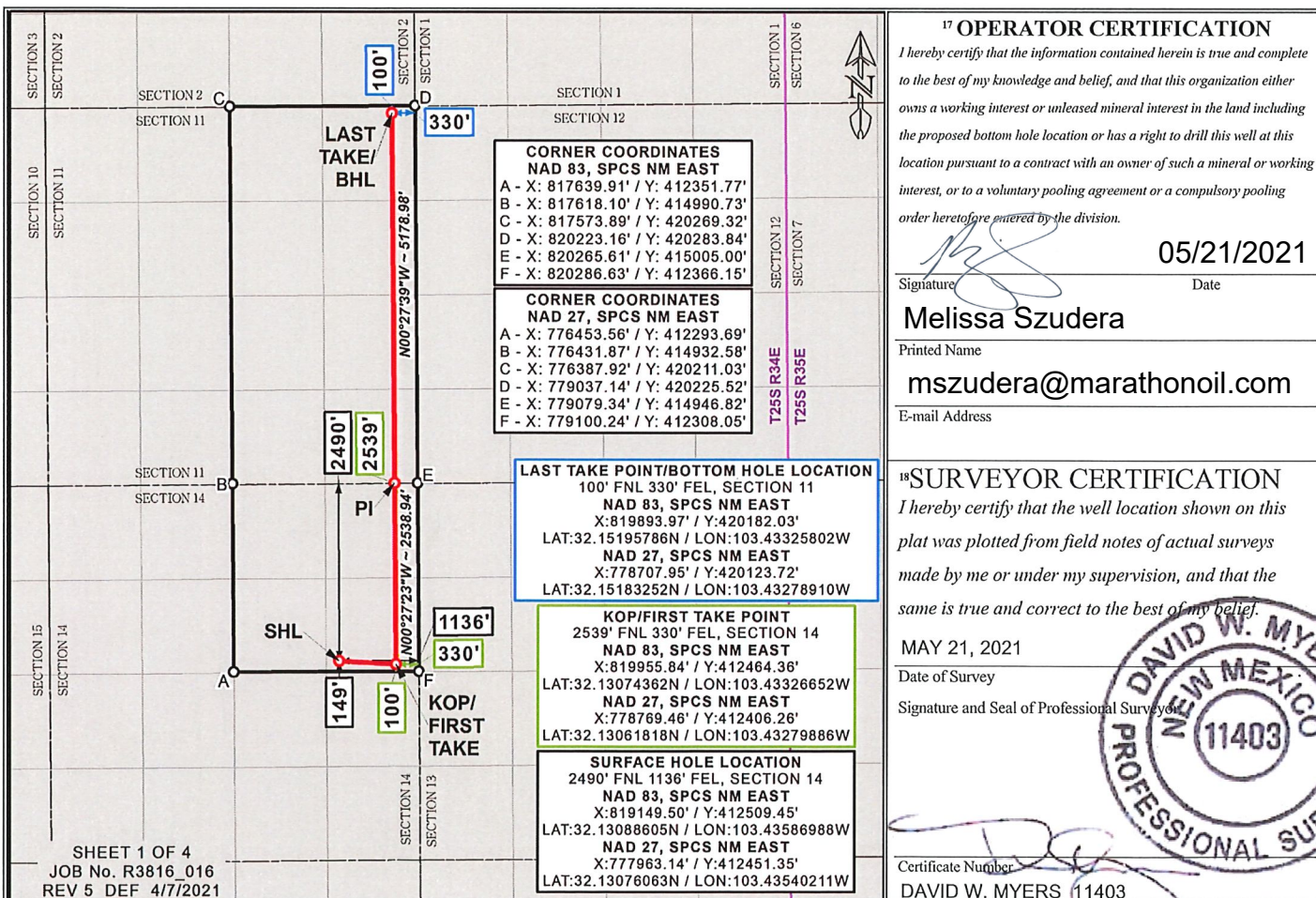
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	14	25S	34E		2490	NORTH	1136	EAST	LEA

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
A	11	25S	34E		100	NORTH	330	EAST	LEA

¹² Dedicated Acres 480.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

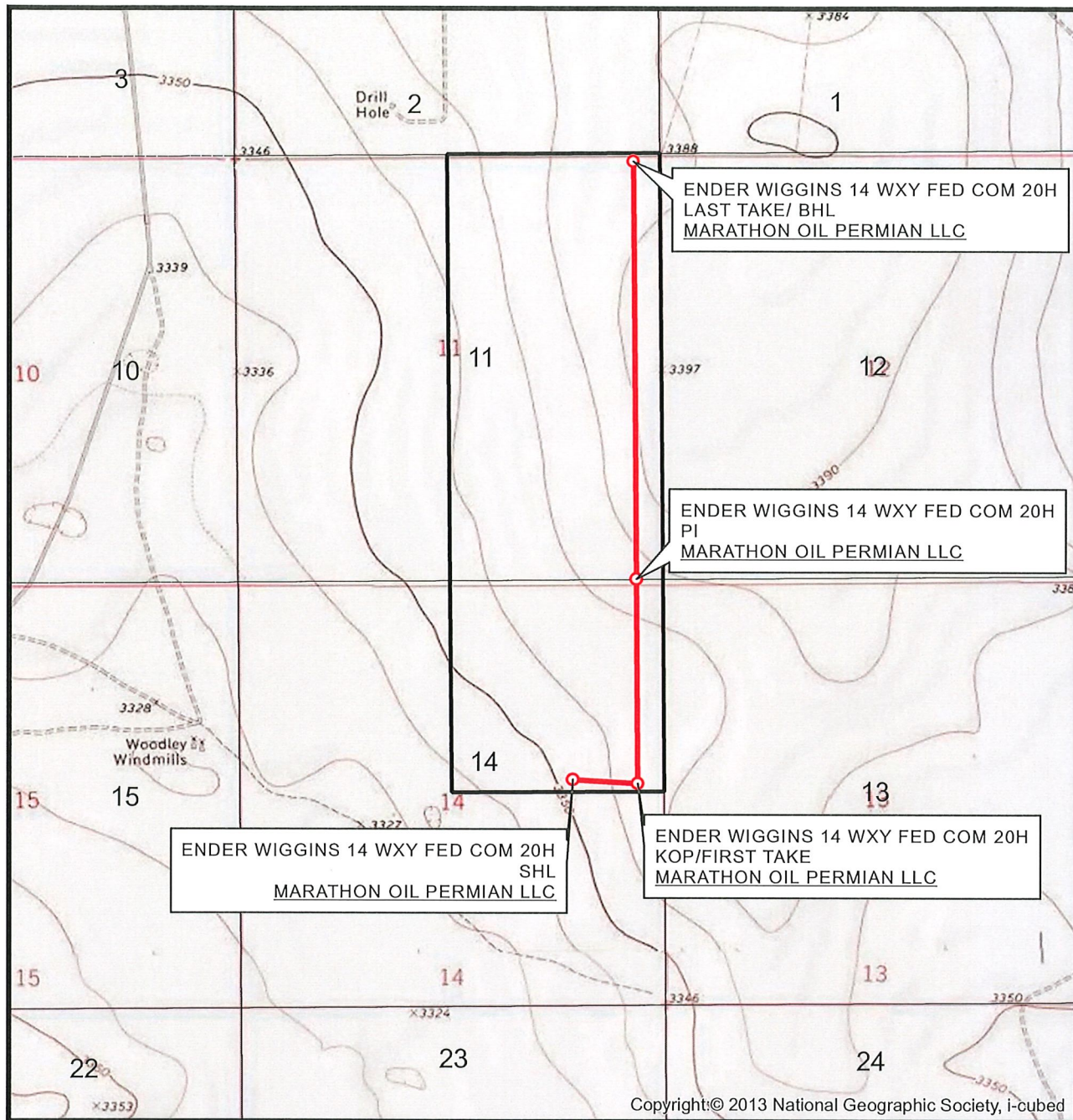
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



Distances/areas relative to NAD 83 Combined Scale Factor: 0.99985058 Convergence Angle: 00°28'24.77529"

☐ Horizontal Spacing Unit

LOCATION VERIFICATION MAP



SEC. 14 TWP. 25-S RGE. 34-E
 SURVEY: N.M.P.M.
 COUNTY: LEA
 OPERATOR: MARATHON OIL PERMIAN LLC
 DESCRIPTION: 2490' FNL & 1136' FEL
 ELEVATION: 3358'
 LEASE: ENDER WIGGINS 14 FED COM
 U.S.G.S. TOPOGRAPHIC MAP: WOODLEY FLAT, NM.

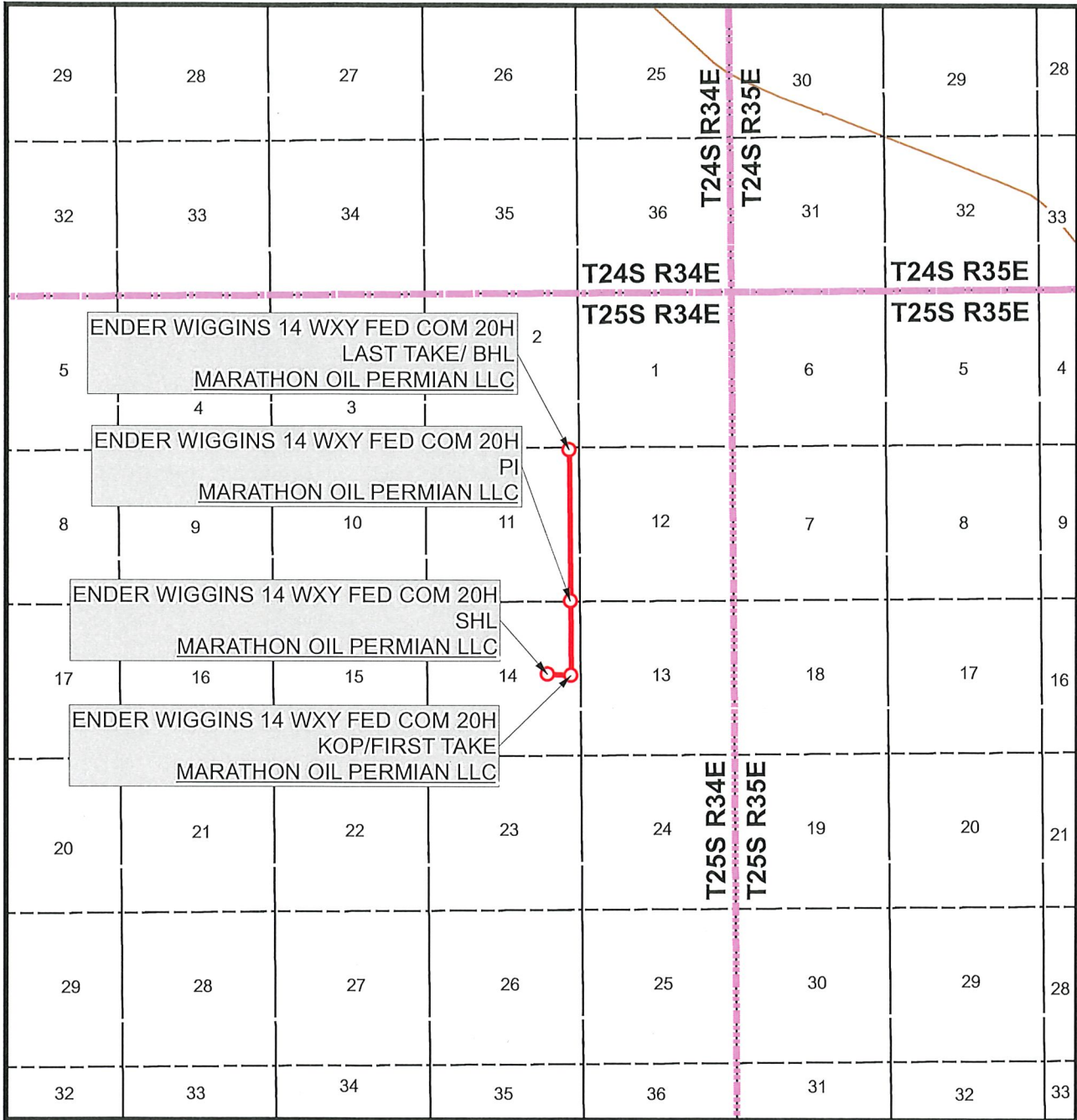
1" = 2,000'
 CONTOUR INTERVAL = 10'



SHEET 2 OF 4

PREPARED BY:
 R-SQUARED GLOBAL, LLC
 510 TRENTON ST., UNIT B, WEST MONROE, LA 71291
 318-323-6900 OFFICE
 JOB No. R3816_016

VICINITY MAP



SEC. 14 TWP. 25-S RGE. 34-E

SURVEY: N.M.P.M.

COUNTY: LEA

OPERATOR: MARATHON OIL PERMIAN LLC

DESCRIPTION: 2490' FNL & 1136' FEL

ELEVATION: 3358'

LEASE: ENDER WIGGINS 14 FED COM

U.S.G.S. TOPOGRAPHIC MAP: WOODLEY FLAT, NM.

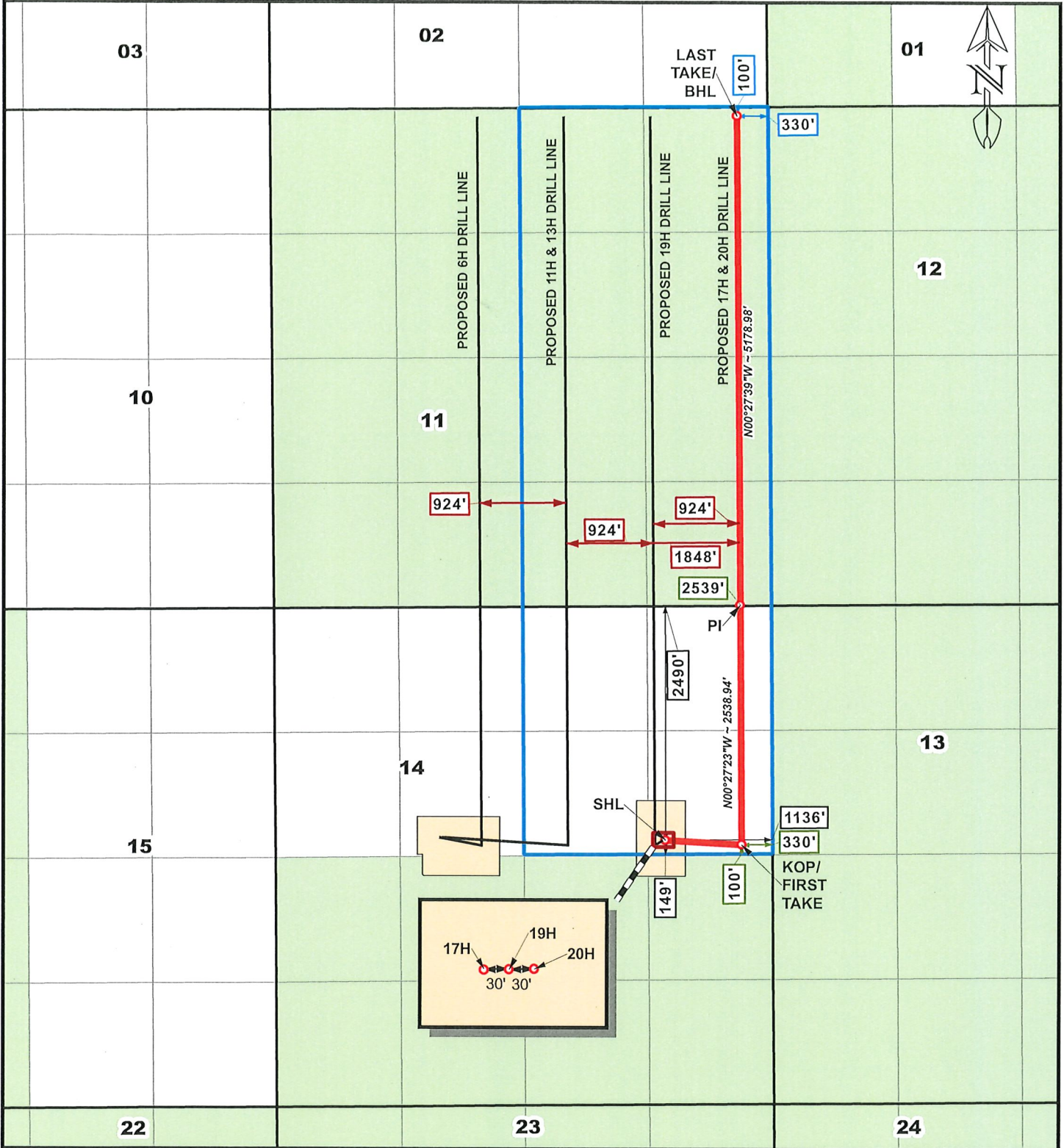
1" = 1 MILE



SHEET 3 OF 4

PREPARED BY:
R-SQUARED GLOBAL, LLC
510 TRENTON ST., UNIT B, WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R3816_016

JOB No. R3816_016 SECTIONS 11, 14, T-25-S, R-34-E, N.M.P.M., LEA COUNTY, NEW MEXICO



1,000 0 1,000

1 inch = 167 feet

LEGEND

- SUBJECT WELL / DRILL LINE
- SURVEY/SECTION LINE
- LEASE LINE
- OTHER WELLS / DRILL LINES
- TOWNSHIP / RANGE LINE
- DRILL LINE HOLES



WELL NAME

ENDER WIGGINS 14
WXY FED COM 20H

5	4/06/2021	UPDATE DRILL LINE	DEF	MWS
REV.	DATE	DESCRIPTION		CHKD
SHEET 4 OF 4		510 TRENTON ST., UNIT B, WEST MONROE, LA 71291 (318) 323-6900		
DRAWN BY: DEF				
DATE DRAWN: 4/7/2021				
CHECKED BY: MWS				

Page 12 of 51
Received by OGD: 7/18/2022 9:48:43 AM
Released to Imaging: 8/1/2022 10:47:16 AM

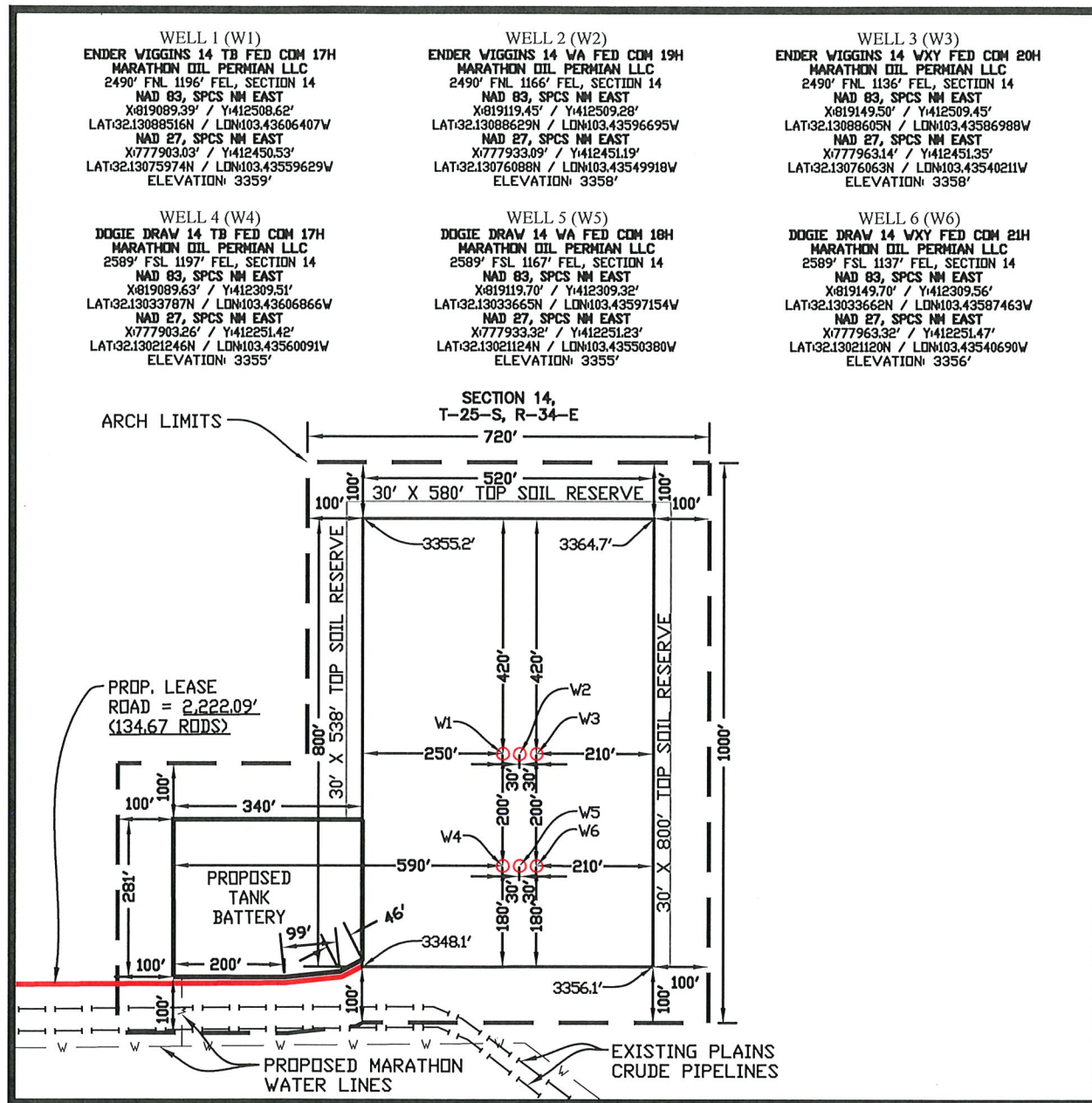
LEGEND

- PROPOSED WELL PAD
- ARCH SURVEY LIMITS
- PROPOSED LEASE ROAD
- EXISTING LEASE ROAD
- SECTION LINE
- EXISTING PIPELINE
- PROPOSED WATERLINE

WELL LOCATION PLAT

DOGIE DRAW 14 FED COM /
ENDER WIGGINS 14 FED COM
SEC. 14 TWP. 25-S RGE. 34-E
SURVEY: N.M.P.M.
COUNTY: LEA

OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: WOODLEY FLAT, N.M.



MAY 20, 2021

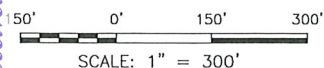
DAVID W. MYERS 11403



SHEET 1 OF 1

PREPARED BY:
R-SQUARED GLOBAL, LLC
610 TRENTON ST., UNIT B,
WEST MONROE, LA 71291
318-323-8000 OFFICE
JOB No. R3765

NOTE:
THIS IS NOT A BOUNDARY SURVEY,
APPARENT PROPERTY CORNERS AND
PROPERTY LINES ARE SHOWN FOR
INFORMATION ONLY. BOUNDARY DATA
SHOWN IS FROM STATE OF NEW MEXICO
OIL CONSERVATION DIVISION FORM C-102
INCLUDED IN THIS SUBMITTAL.



MARATHON OIL PERMIAN, LLC.
DRILLING AND OPERATIONS PLAN



WELL NAME & NUMBER:
LOCATION:

Ender Wiggins 14 WXY Fed Com 20H
SECTION **14** TOWNSHIP **25S** RANGE **34E**
Lea COUNTY, **New Mexico**

WELL LOCATION TABLE

Traverse Segment	Latitude NAD83	Longitude NAD83	Elevation (ft SS)	MD (RKB)	TVD (RKB)	NS Foot	NS Indicator	EW Foot	EW Indicator	Township	Range	Section	Aliquot/Lot	Lease Type	Lease Number
SHL	32.1308861	-103.4358699	3358	0	0	2490	FNL	1136	FEL	25S	34E	14	SENE		PRIVATE
KOP/FTP	32.1307436	-103.4332665	-8665	12056	12023	2539	FNL	330	FEL	25S	34E	14	SENE		PRIVATE
PPP-2	32.1377224	-103.4332633	-9142	14868	12500		FSL	330	FEL	25S	34E	11	SESE	F	NMNM113419
PPP-3	32.1449776	-103.4332606	-9142	17507	12500	2639	FSL	330	FEL	25S	34E	11	SENE	F	NMNM108476
LTP/BHL	32.1519579	-103.4332580	-9142	20046	12500	100	FNL	330	FEL	25S	34E	11	NENE	F	NMNM108476

GEOLOGIC FORMATIONS

Formation	TVD (ft)	MD (ft)	Elevation (ft SS)	Lithologies	Mineral Resources	Producing Formation?
Rustler	857	857	2501	Anhydrite/Dolomite	Brine	N
Castille	3562	3567	-204	Base Salt	Brine	N
Lamar/Base of Salt	5370	5381	-2012	Limey Sands	Brine	N
Bell Canyon	5402	5413	-2044	Sand/Carbonate/Dolomite	Oil	Y
Cherry Canyon	6710	6726	-3352	Sand/Shale/Carbonate	Oil	Y
Brushy Canyon	8013	8033	-4655	Sand/Shale/Carbonate	Oil	Y
Bone Spring	9296	9321	-5938	Sand/Shale/Carbonate	Oil	Y
1st Bone Spring Sand	10346	10375	-6988	Sand	Oil	Y
2nd Bone Spring Sand	10925	10956	-7567	Sand	Oil	Y
3rd Bone Spring Sand	11966	11999	-8608	Sand	Oil	Y
Wolfcamp	12422	12529	-9064	Sand/Shale/Carbonate	Oil	Y
Wolfcamp X Sand	12461	12612	-9103	Sand	Oil	Y
Wolfcamp Y Sand	12533	NA	-9175	Sand	Oil	Y
Wolfcamp A	12565	NA	-9207	Sand/Shale/Carbonate	Oil	Y
Wolfcamp B	12918	NA	-9560	Sand/Shale/Carbonate	Oil	Y
Wolfcamp C	13020	NA	-9662	Sand/Shale/Carbonate	Oil	Y
Wolfcamp D	13352	NA	-9994	Sand/Shale/Carbonate	Oil	Y

BLOWOUT PREVENTION

Pressure Rating (PSI): 10000
Rating Depth: All depths

Equipment:	Hole Size	BOP Size	Min. Required WP	Type	Tested to:
	9 7/8"	13 5/8"	10000	Annular	50% of working pressure
				BOP Stack	10000
	6 3/4"	13 5/8"	10000	Annular	50% of working pressure
				BOP Stack	10000

Requesting Variance? Y
Variance Request: A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Testing Procedure: BOP/BOPE will be tested to 250 psi low and the high pressure indicated above. Testing will be conducted by an independent service company per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the Equipment Description above. If the system is upgraded all the components installed will be functional and tested. Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock, full opening safety valve / inside BOP and choke lines and choke manifold. See attached schematics. Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

CASING PROGRAM

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight	Grade	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF	Tapered String?
Surface	14 3/4	10 3/4	0	1100	0	1100	3358	2258	40 1/2	J55	STC	6.57	1.95	BUOY	2.98	BUOY	2.98	N
Intermediate	9 7/8	7 5/8	0	12056 1/5	0	12022 1/2	3358	-8664 1/2	29 2/3	P110	BTC	2.30	1.24	BUOY	2.35	BUOY	2.35	N
Production	6 3/4	5 1/2	0	20046 2/5	0	12500	3358	-9142	20	P110	BTC	1.33	1.24	BUOY	1.86	BUOY	1.86	N

Casing Condition: New
Casing Standard: API

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

CASING PROGRAM *continued*

Is casing new? If used, attach certification as required in Onshore Order #1.	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is proposed well within the designated four string boundary?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is the second string set 100' to 600' below the base of salt?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and third string cement tied back 500' into previous casing?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

CEMENT PROGRAM

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity (sks)	Yield (ft3/sks)	Density (ppg)	Slurry Volume (ft3)	Excess (%)	Cement Type	Additives
Surface	Lead	--	0	880	707	1.73	13.5	1224	150	Class C	LCM
Surface	Tail	--	880	1100	184	1.33	14.8	245	100	Class C	Accelerator
Intermediate	Lead	--	0	11056.2	1907	2.49	11	4749	100	Class C	Extender, Accelerator
Intermediate	Tail	--	11056.2	12056.2	218	1.28	13.8	279	30	Class H	Retarder
Production	Lead	--	9556.2	10056.2	22	1.29	14.5	28	30	Class H	Viscosifier, Retarder, Extender
Production	Tail	--	10056.2	20046.4	1019	1.09	14.5	1111	30	Class H	Retarder, Extender, Fluid Loss, Dispersant

Stage tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Pilot Hole? (Yes/No)

No

if yes, provide information below

Pilot Hole Depth:

N/A

KOP:

N/A

Plugging Procedure for Pilot Hole:

N/A

Plug Top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft3/sks)	Water gal/sk	Slurry Description and Cement Type

CIRCULATING MEDIUM

Mud System Type:

Closed

Will an air or gas system be used?

No

Describe what will be on location to control well or mitigate other conditions:

The necessary mud products for additional weight and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized:

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

Circulating Medium Table:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max Weight (ppg)
	1100	Freshwater	8.4	8.8
1100	12056.2	Brine	9.2	10.2
12056.2	20046.4	OBM	10.5	12.5

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

The necessary mud products for additional weight and fluid loss control will be on location at all times.

TESTING, LOGGING, CORING

List of production tests including testing procedures, equipment and safety measures:

GR from TD to surface (horizontal well - vertical portion of hole)

List of open and cased hole logs run in the well:

GR while drilling from Intermediate casing shoe to TD.

Coring operation description for the well:

No coring is planned at this time.

Mud Logger: None

DST's: None

Open Hole Logs: GR while drilling from Surface shoe to TD

PRESSURE

Anticipated Bottom Hole Pressure: (psi) 8,125

Anticipated Bottom Hole Temperature: (F) 195

Anticipated Abnormal Pressure? (Y/N) N

Anticipated Abnormal Temperature? (Y/N) N

Potential Hazards:

H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.

See attached H2S Contingency Plan.

OTHER

Auxiliary Well Control and Monitoring Equipment:

A Kelly cock will be in the drill string at all times. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM.

Anticipated Starting Date and Duration of Operations:

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.

MARATHON OIL
DRILL PLAN CHANGE REGISTER
Ender Wiggins 14 WXY Fed Com 20H

Original Document Date:

Thursday, May 10, 2018

Prepared By:

Kyle Schriener

<u>Drilling</u>		<u>Regulatory</u>	
Revised By:	Kyler Rose	Submitted By:	Melissa Szudera
Date:	Friday, June 4, 2021	Agency Approved?	submitted Wednesday, June 9, 2021
Change Summary			
Section	Description		
All	Name: from Ender Wiggins F C 25 34 14 WXY 20H to Ender Wiggins 14 WXY Fed Com 20H		
	FTP: from 2490 FNL 330 FEL to 2539 FNL 330 FEL		
	LTP: from 150 FNL 330 FEL to 100 FNL 330 FEL		
	TVD: from 12557 feet to 12635 feet		
	MD: from 19981 feet to 20135 feet		

<u>Drilling</u>		<u>Regulatory</u>	
Revised By:		Submitted By:	
Date:		Agency Approved?	
Change Summary			
Section	Description		

<u>Drilling</u>		<u>Regulatory</u>	
Revised By:		Submitted By:	
Date:		Agency Approved?	
Change Summary			
Section	Description		

<u>Drilling</u>		<u>Regulatory</u>	
Revised By:		Submitted By:	
Date:		Agency Approved?	
Change Summary			
Section	Description		



Marathon Oil Permian LLC

Lea County, New Mexico (NAD 27)

Sec 14, T25S, R34E

Ender Wiggins 14 WXY FED COM 20H

Wellbore #1

Plan: Prelim #1

KLX Well Planning Report

04 June, 2021





KLX
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ender Wiggins 14 WXY FED COM 20H
Company:	Marathon Oil Permian LLC	TVD Reference:	25'KB @ 3383.0usft (25'KB)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	25'KB @ 3383.0usft (25'KB)
Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

Project	Lea County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Sec 14, T25S, R34E				
Site Position:		Northing:	412,251.42 usft	Latitude:	32° 7' 48.954 N
From:	Lat/Long	Easting:	775,595.75 usft	Longitude:	103° 26' 34.995 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.47 °

Well	Ender Wiggins 14 WXY FED COM 20H					
Well Position	+N/-S	199.9 usft	Northing:	412,451.35 usft	Latitude:	32° 7' 50.738 N
	+E/-W	2,367.4 usft	Easting:	777,963.14 usft	Longitude:	103° 26' 7.448 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,358.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021	6/2/2021	6.37	59.72	47,543.30000000

Design	Prelim #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	359.54	

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,240.9	4.82	93.20	2,240.6	-0.6	10.1	2.00	2.00	0.00	93.20	
11,615.3	4.82	93.20	11,581.9	-44.5	796.2	0.00	0.00	0.00	0.00	
11,856.2	0.00	0.00	11,822.5	-45.1	806.3	2.00	-2.00	0.00	180.00	VP - EW 14 WXY FC
12,056.2	0.00	0.00	12,022.5	-45.1	806.3	0.00	0.00	0.00	0.00	
12,806.2	90.00	359.54	12,500.0	432.4	802.5	12.00	12.00	-0.06	359.54	
20,046.4	90.00	359.54	12,500.0	7,672.4	744.8	0.00	0.00	0.00	0.00	LTP/BHL - EW 14 WX



KLX
Well Planning Report



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Project:	Lea County, New Mexico (NAD 27)	MD Reference:	25'KB @ 3383.0usft (25'KB)
Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

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
Rustler									
857.0	0.00	0.00	857.0	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
Salado									
1,363.0	0.00	0.00	1,363.0	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	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 2°/100'									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	2.00	93.20	2,100.0	-0.1	1.7	-0.1	2.00	2.00	0.00
2,200.0	4.00	93.20	2,199.8	-0.4	7.0	-0.4	2.00	2.00	0.00
EOB @ 4.82°Inc/93.20°Az									
2,240.9	4.82	93.20	2,240.6	-0.6	10.1	-0.6	2.00	2.00	0.00
2,300.0	4.82	93.20	2,299.5	-0.8	15.1	-1.0	0.00	0.00	0.00
2,400.0	4.82	93.20	2,399.2	-1.3	23.4	-1.5	0.00	0.00	0.00
2,500.0	4.82	93.20	2,498.8	-1.8	31.8	-2.0	0.00	0.00	0.00
2,600.0	4.82	93.20	2,598.4	-2.2	40.2	-2.6	0.00	0.00	0.00
2,700.0	4.82	93.20	2,698.1	-2.7	48.6	-3.1	0.00	0.00	0.00
2,800.0	4.82	93.20	2,797.7	-3.2	57.0	-3.6	0.00	0.00	0.00
2,900.0	4.82	93.20	2,897.4	-3.7	65.4	-4.2	0.00	0.00	0.00
3,000.0	4.82	93.20	2,997.0	-4.1	73.8	-4.7	0.00	0.00	0.00
3,100.0	4.82	93.20	3,096.7	-4.6	82.1	-5.3	0.00	0.00	0.00
3,200.0	4.82	93.20	3,196.3	-5.1	90.5	-5.8	0.00	0.00	0.00
3,300.0	4.82	93.20	3,296.0	-5.5	98.9	-6.3	0.00	0.00	0.00
3,400.0	4.82	93.20	3,395.6	-6.0	107.3	-6.9	0.00	0.00	0.00
3,500.0	4.82	93.20	3,495.3	-6.5	115.7	-7.4	0.00	0.00	0.00
Castile									
3,567.0	4.82	93.20	3,562.0	-6.8	121.3	-7.8	0.00	0.00	0.00
3,600.0	4.82	93.20	3,594.9	-6.9	124.1	-7.9	0.00	0.00	0.00
3,700.0	4.82	93.20	3,694.6	-7.4	132.5	-8.5	0.00	0.00	0.00
3,800.0	4.82	93.20	3,794.2	-7.9	140.8	-9.0	0.00	0.00	0.00
3,900.0	4.82	93.20	3,893.9	-8.3	149.2	-9.5	0.00	0.00	0.00
4,000.0	4.82	93.20	3,993.5	-8.8	157.6	-10.1	0.00	0.00	0.00
4,100.0	4.82	93.20	4,093.1	-9.3	166.0	-10.6	0.00	0.00	0.00
4,200.0	4.82	93.20	4,192.8	-9.8	174.4	-11.2	0.00	0.00	0.00
4,300.0	4.82	93.20	4,292.4	-10.2	182.8	-11.7	0.00	0.00	0.00
4,400.0	4.82	93.20	4,392.1	-10.7	191.2	-12.2	0.00	0.00	0.00



KLX
Well Planning Report



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Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

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)
4,500.0	4.82	93.20	4,491.7	-11.2	199.5	-12.8	0.00	0.00	0.00
4,600.0	4.82	93.20	4,591.4	-11.6	207.9	-13.3	0.00	0.00	0.00
4,700.0	4.82	93.20	4,691.0	-12.1	216.3	-13.8	0.00	0.00	0.00
4,800.0	4.82	93.20	4,790.7	-12.6	224.7	-14.4	0.00	0.00	0.00
4,900.0	4.82	93.20	4,890.3	-13.0	233.1	-14.9	0.00	0.00	0.00
5,000.0	4.82	93.20	4,990.0	-13.5	241.5	-15.4	0.00	0.00	0.00
5,100.0	4.82	93.20	5,089.6	-14.0	249.9	-16.0	0.00	0.00	0.00
5,200.0	4.82	93.20	5,189.3	-14.4	258.2	-16.5	0.00	0.00	0.00
5,300.0	4.82	93.20	5,288.9	-14.9	266.6	-17.1	0.00	0.00	0.00
Lamar/Base of Salt									
5,381.4	4.82	93.20	5,370.0	-15.3	273.5	-17.5	0.00	0.00	0.00
5,400.0	4.82	93.20	5,388.6	-15.4	275.0	-17.6	0.00	0.00	0.00
Bell Canyon									
5,413.5	4.82	93.20	5,402.0	-15.4	276.2	-17.7	0.00	0.00	0.00
5,500.0	4.82	93.20	5,488.2	-15.8	283.4	-18.1	0.00	0.00	0.00
5,600.0	4.82	93.20	5,587.8	-16.3	291.8	-18.7	0.00	0.00	0.00
5,700.0	4.82	93.20	5,687.5	-16.8	300.2	-19.2	0.00	0.00	0.00
5,800.0	4.82	93.20	5,787.1	-17.3	308.6	-19.7	0.00	0.00	0.00
5,900.0	4.82	93.20	5,886.8	-17.7	316.9	-20.3	0.00	0.00	0.00
6,000.0	4.82	93.20	5,986.4	-18.2	325.3	-20.8	0.00	0.00	0.00
6,100.0	4.82	93.20	6,086.1	-18.7	333.7	-21.3	0.00	0.00	0.00
6,200.0	4.82	93.20	6,185.7	-19.1	342.1	-21.9	0.00	0.00	0.00
6,300.0	4.82	93.20	6,285.4	-19.6	350.5	-22.4	0.00	0.00	0.00
6,400.0	4.82	93.20	6,385.0	-20.1	358.9	-23.0	0.00	0.00	0.00
6,500.0	4.82	93.20	6,484.7	-20.5	367.3	-23.5	0.00	0.00	0.00
6,600.0	4.82	93.20	6,584.3	-21.0	375.6	-24.0	0.00	0.00	0.00
6,700.0	4.82	93.20	6,684.0	-21.5	384.0	-24.6	0.00	0.00	0.00
Cherry Canyon									
6,726.1	4.82	93.20	6,710.0	-21.6	386.2	-24.7	0.00	0.00	0.00
6,800.0	4.82	93.20	6,783.6	-21.9	392.4	-25.1	0.00	0.00	0.00
6,900.0	4.82	93.20	6,883.3	-22.4	400.8	-25.6	0.00	0.00	0.00
7,000.0	4.82	93.20	6,982.9	-22.9	409.2	-26.2	0.00	0.00	0.00
7,100.0	4.82	93.20	7,082.5	-23.4	417.6	-26.7	0.00	0.00	0.00
7,200.0	4.82	93.20	7,182.2	-23.8	426.0	-27.2	0.00	0.00	0.00
7,300.0	4.82	93.20	7,281.8	-24.3	434.3	-27.8	0.00	0.00	0.00
7,400.0	4.82	93.20	7,381.5	-24.8	442.7	-28.3	0.00	0.00	0.00
7,500.0	4.82	93.20	7,481.1	-25.2	451.1	-28.8	0.00	0.00	0.00
7,600.0	4.82	93.20	7,580.8	-25.7	459.5	-29.4	0.00	0.00	0.00
7,700.0	4.82	93.20	7,680.4	-26.2	467.9	-29.9	0.00	0.00	0.00
7,800.0	4.82	93.20	7,780.1	-26.6	476.3	-30.5	0.00	0.00	0.00
7,900.0	4.82	93.20	7,879.7	-27.1	484.7	-31.0	0.00	0.00	0.00
8,000.0	4.82	93.20	7,979.4	-27.6	493.0	-31.5	0.00	0.00	0.00
Brushy Canyon									
8,033.8	4.82	93.20	8,013.0	-27.7	495.9	-31.7	0.00	0.00	0.00
8,100.0	4.82	93.20	8,079.0	-28.0	501.4	-32.1	0.00	0.00	0.00
8,200.0	4.82	93.20	8,178.7	-28.5	509.8	-32.6	0.00	0.00	0.00
8,300.0	4.82	93.20	8,278.3	-29.0	518.2	-33.1	0.00	0.00	0.00
8,400.0	4.82	93.20	8,378.0	-29.4	526.6	-33.7	0.00	0.00	0.00
8,500.0	4.82	93.20	8,477.6	-29.9	535.0	-34.2	0.00	0.00	0.00
8,600.0	4.82	93.20	8,577.2	-30.4	543.4	-34.7	0.00	0.00	0.00
8,700.0	4.82	93.20	8,676.9	-30.9	551.7	-35.3	0.00	0.00	0.00
8,800.0	4.82	93.20	8,776.5	-31.3	560.1	-35.8	0.00	0.00	0.00
8,900.0	4.82	93.20	8,876.2	-31.8	568.5	-36.4	0.00	0.00	0.00



KLX
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ender Wiggins 14 WXY FED COM 20H
Company:	Marathon Oil Permian LLC	TVD Reference:	25'KB @ 3383.0usft (25'KB)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	25'KB @ 3383.0usft (25'KB)
Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

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)
9,000.0	4.82	93.20	8,975.8	-32.3	576.9	-36.9	0.00	0.00	0.00
9,100.0	4.82	93.20	9,075.5	-32.7	585.3	-37.4	0.00	0.00	0.00
9,200.0	4.82	93.20	9,175.1	-33.2	593.7	-38.0	0.00	0.00	0.00
9,300.0	4.82	93.20	9,274.8	-33.7	602.1	-38.5	0.00	0.00	0.00
Bone Spring									
9,321.3	4.82	93.20	9,296.0	-33.8	603.8	-38.6	0.00	0.00	0.00
9,400.0	4.82	93.20	9,374.4	-34.1	610.4	-39.0	0.00	0.00	0.00
9,500.0	4.82	93.20	9,474.1	-34.6	618.8	-39.6	0.00	0.00	0.00
9,600.0	4.82	93.20	9,573.7	-35.1	627.2	-40.1	0.00	0.00	0.00
9,700.0	4.82	93.20	9,673.4	-35.5	635.6	-40.6	0.00	0.00	0.00
9,800.0	4.82	93.20	9,773.0	-36.0	644.0	-41.2	0.00	0.00	0.00
9,900.0	4.82	93.20	9,872.7	-36.5	652.4	-41.7	0.00	0.00	0.00
10,000.0	4.82	93.20	9,972.3	-37.0	660.8	-42.3	0.00	0.00	0.00
10,100.0	4.82	93.20	10,071.9	-37.4	669.1	-42.8	0.00	0.00	0.00
10,200.0	4.82	93.20	10,171.6	-37.9	677.5	-43.3	0.00	0.00	0.00
10,300.0	4.82	93.20	10,271.2	-38.4	685.9	-43.9	0.00	0.00	0.00
1st Bone Spring Sand									
10,375.0	4.82	93.20	10,346.0	-38.7	692.2	-44.3	0.00	0.00	0.00
10,400.0	4.82	93.20	10,370.9	-38.8	694.3	-44.4	0.00	0.00	0.00
10,500.0	4.82	93.20	10,470.5	-39.3	702.7	-44.9	0.00	0.00	0.00
10,600.0	4.82	93.20	10,570.2	-39.8	711.1	-45.5	0.00	0.00	0.00
10,700.0	4.82	93.20	10,669.8	-40.2	719.5	-46.0	0.00	0.00	0.00
10,800.0	4.82	93.20	10,769.5	-40.7	727.8	-46.5	0.00	0.00	0.00
10,900.0	4.82	93.20	10,869.1	-41.2	736.2	-47.1	0.00	0.00	0.00
2nd Bone Spring Sand									
10,956.1	4.82	93.20	10,925.0	-41.4	740.9	-47.4	0.00	0.00	0.00
11,000.0	4.82	93.20	10,968.8	-41.6	744.6	-47.6	0.00	0.00	0.00
11,100.0	4.82	93.20	11,068.4	-42.1	753.0	-48.2	0.00	0.00	0.00
11,200.0	4.82	93.20	11,168.1	-42.6	761.4	-48.7	0.00	0.00	0.00
11,300.0	4.82	93.20	11,267.7	-43.0	769.8	-49.2	0.00	0.00	0.00
11,400.0	4.82	93.20	11,367.4	-43.5	778.2	-49.8	0.00	0.00	0.00
11,500.0	4.82	93.20	11,467.0	-44.0	786.5	-50.3	0.00	0.00	0.00
11,600.0	4.82	93.20	11,566.6	-44.5	794.9	-50.8	0.00	0.00	0.00
Drop 2°/100'									
11,615.3	4.82	93.20	11,581.9	-44.5	796.2	-50.9	0.00	0.00	0.00
11,700.0	3.12	93.20	11,666.4	-44.9	802.1	-51.3	2.00	-2.00	0.00
11,800.0	1.12	93.20	11,766.3	-45.1	805.8	-51.5	2.00	-2.00	0.00
EOD @ Vertical									
11,856.2	0.00	0.00	11,822.5	-45.1	806.3	-51.6	2.00	-2.00	0.00
11,900.0	0.00	0.00	11,866.3	-45.1	806.3	-51.6	0.00	0.00	0.00
3rd Bone Spring Sand									
11,999.7	0.00	0.00	11,966.0	-45.1	806.3	-51.6	0.00	0.00	0.00
12,000.0	0.00	0.00	11,966.3	-45.1	806.3	-51.6	0.00	0.00	0.00
Build 12°/100'									
12,056.2	0.00	0.00	12,022.5	-45.1	806.3	-51.6	0.00	0.00	0.00
12,075.0	2.26	359.54	12,041.3	-44.7	806.3	-51.2	12.00	12.00	0.00
12,100.0	5.26	359.54	12,066.2	-43.1	806.3	-49.6	12.00	12.00	0.00
12,125.0	8.26	359.54	12,091.1	-40.1	806.3	-46.6	12.00	12.00	0.00
12,150.0	11.26	359.54	12,115.7	-35.9	806.2	-42.4	12.00	12.00	0.00
12,175.0	14.26	359.54	12,140.1	-30.4	806.2	-36.9	12.00	12.00	0.00
12,200.0	17.26	359.54	12,164.1	-23.6	806.2	-30.1	12.00	12.00	0.00
12,225.0	20.26	359.54	12,187.8	-15.6	806.1	-22.0	12.00	12.00	0.00
12,250.0	23.26	359.54	12,211.0	-6.3	806.0	-12.8	12.00	12.00	0.00



KLX
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ender Wiggins 14 WXY FED COM 20H
Company:	Marathon Oil Permian LLC	TVD Reference:	25'KB @ 3383.0usft (25'KB)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	25'KB @ 3383.0usft (25'KB)
Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

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)
12,275.0	26.26	359.54	12,233.7	4.2	805.9	-2.3	12.00	12.00	0.00
12,300.0	29.26	359.54	12,255.9	15.8	805.8	9.3	12.00	12.00	0.00
12,325.0	32.26	359.54	12,277.3	28.6	805.7	22.1	12.00	12.00	0.00
12,350.0	35.26	359.54	12,298.1	42.5	805.6	36.0	12.00	12.00	0.00
12,375.0	38.26	359.54	12,318.1	57.4	805.5	51.0	12.00	12.00	0.00
12,400.0	41.26	359.54	12,337.4	73.4	805.4	67.0	12.00	12.00	0.00
12,425.0	44.26	359.54	12,355.7	90.4	805.2	83.9	12.00	12.00	0.00
12,450.0	47.26	359.54	12,373.2	108.3	805.1	101.8	12.00	12.00	0.00
12,475.0	50.26	359.54	12,389.6	127.1	805.0	120.6	12.00	12.00	0.00
12,500.0	53.26	359.54	12,405.1	146.7	804.8	140.3	12.00	12.00	0.00
12,525.0	56.26	359.54	12,419.5	167.1	804.6	160.7	12.00	12.00	0.00
Wolfcamp									
12,529.5	56.79	359.54	12,422.0	170.9	804.6	164.4	12.00	12.00	0.00
12,550.0	59.26	359.54	12,432.9	188.3	804.5	181.8	12.00	12.00	0.00
12,575.0	62.26	359.54	12,445.1	210.1	804.3	203.6	12.00	12.00	0.00
12,600.0	65.26	359.54	12,456.1	232.5	804.1	226.1	12.00	12.00	0.00
Wolfcamp X Sand									
12,612.0	66.69	359.54	12,461.0	243.4	804.0	237.0	12.00	12.00	0.00
12,625.0	68.26	359.54	12,466.0	255.5	803.9	249.0	12.00	12.00	0.00
12,650.0	71.26	359.54	12,474.6	278.9	803.7	272.5	12.00	12.00	0.00
12,675.0	74.26	359.54	12,482.1	302.8	803.5	296.4	12.00	12.00	0.00
12,700.0	77.26	359.54	12,488.2	327.0	803.4	320.6	12.00	12.00	0.00
12,725.0	80.26	359.54	12,493.1	351.6	803.2	345.1	12.00	12.00	0.00
12,750.0	83.26	359.54	12,496.7	376.3	803.0	369.8	12.00	12.00	0.00
12,775.0	86.26	359.54	12,498.9	401.2	802.8	394.7	12.00	12.00	0.00
12,800.0	89.26	359.54	12,499.9	426.2	802.6	419.7	12.00	12.00	0.00
EOB @ 90.00°Inc/359.54°Az									
12,806.2	90.00	359.54	12,500.0	432.4	802.5	425.9	12.00	12.00	0.00
12,900.0	90.00	359.54	12,500.0	526.2	801.8	519.7	0.00	0.00	0.00
13,000.0	90.00	359.54	12,500.0	626.2	801.0	619.7	0.00	0.00	0.00
13,100.0	90.00	359.54	12,500.0	726.2	800.2	719.7	0.00	0.00	0.00
13,200.0	90.00	359.54	12,500.0	826.2	799.4	819.7	0.00	0.00	0.00
13,300.0	90.00	359.54	12,500.0	926.2	798.6	919.7	0.00	0.00	0.00
13,400.0	90.00	359.54	12,500.0	1,026.1	797.8	1,019.7	0.00	0.00	0.00
13,500.0	90.00	359.54	12,500.0	1,126.1	797.0	1,119.7	0.00	0.00	0.00
13,600.0	90.00	359.54	12,500.0	1,226.1	796.2	1,219.7	0.00	0.00	0.00
13,700.0	90.00	359.54	12,500.0	1,326.1	795.4	1,319.7	0.00	0.00	0.00
13,800.0	90.00	359.54	12,500.0	1,426.1	794.6	1,419.7	0.00	0.00	0.00
13,900.0	90.00	359.54	12,500.0	1,526.1	793.8	1,519.7	0.00	0.00	0.00
14,000.0	90.00	359.54	12,500.0	1,626.1	793.0	1,619.7	0.00	0.00	0.00
14,100.0	90.00	359.54	12,500.0	1,726.1	792.2	1,719.7	0.00	0.00	0.00
14,200.0	90.00	359.54	12,500.0	1,826.1	791.4	1,819.7	0.00	0.00	0.00
14,300.0	90.00	359.54	12,500.0	1,926.1	790.6	1,919.7	0.00	0.00	0.00
14,400.0	90.00	359.54	12,500.0	2,026.1	789.8	2,019.7	0.00	0.00	0.00
14,500.0	90.00	359.54	12,500.0	2,126.1	789.0	2,119.7	0.00	0.00	0.00
14,600.0	90.00	359.54	12,500.0	2,226.1	788.2	2,219.7	0.00	0.00	0.00
14,700.0	90.00	359.54	12,500.0	2,326.1	787.4	2,319.7	0.00	0.00	0.00
14,800.0	90.00	359.54	12,500.0	2,426.1	786.6	2,419.7	0.00	0.00	0.00
14,900.0	90.00	359.54	12,500.0	2,526.1	785.8	2,519.7	0.00	0.00	0.00
15,000.0	90.00	359.54	12,500.0	2,626.1	785.0	2,619.7	0.00	0.00	0.00
15,100.0	90.00	359.54	12,500.0	2,726.1	784.2	2,719.7	0.00	0.00	0.00
15,200.0	90.00	359.54	12,500.0	2,826.1	783.4	2,819.7	0.00	0.00	0.00
15,300.0	90.00	359.54	12,500.0	2,926.1	782.6	2,919.7	0.00	0.00	0.00



KLX
Well Planning Report



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Company:	Marathon Oil Permian LLC	TVD Reference:	25'KB @ 3383.0usft (25'KB)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	25'KB @ 3383.0usft (25'KB)
Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

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)
15,400.0	90.00	359.54	12,500.0	3,026.1	781.8	3,019.7	0.00	0.00	0.00
15,500.0	90.00	359.54	12,500.0	3,126.1	781.0	3,119.7	0.00	0.00	0.00
15,600.0	90.00	359.54	12,500.0	3,226.1	780.2	3,219.7	0.00	0.00	0.00
15,700.0	90.00	359.54	12,500.0	3,326.1	779.5	3,319.7	0.00	0.00	0.00
15,800.0	90.00	359.54	12,500.0	3,426.1	778.7	3,419.7	0.00	0.00	0.00
15,900.0	90.00	359.54	12,500.0	3,526.1	777.9	3,519.7	0.00	0.00	0.00
16,000.0	90.00	359.54	12,500.0	3,626.1	777.1	3,619.7	0.00	0.00	0.00
16,100.0	90.00	359.54	12,500.0	3,726.1	776.3	3,719.7	0.00	0.00	0.00
16,200.0	90.00	359.54	12,500.0	3,826.1	775.5	3,819.7	0.00	0.00	0.00
16,300.0	90.00	359.54	12,500.0	3,926.1	774.7	3,919.7	0.00	0.00	0.00
16,400.0	90.00	359.54	12,500.0	4,026.1	773.9	4,019.7	0.00	0.00	0.00
16,500.0	90.00	359.54	12,500.0	4,126.0	773.1	4,119.7	0.00	0.00	0.00
16,600.0	90.00	359.54	12,500.0	4,226.0	772.3	4,219.7	0.00	0.00	0.00
16,700.0	90.00	359.54	12,500.0	4,326.0	771.5	4,319.7	0.00	0.00	0.00
16,800.0	90.00	359.54	12,500.0	4,426.0	770.7	4,419.7	0.00	0.00	0.00
16,900.0	90.00	359.54	12,500.0	4,526.0	769.9	4,519.7	0.00	0.00	0.00
17,000.0	90.00	359.54	12,500.0	4,626.0	769.1	4,619.7	0.00	0.00	0.00
17,100.0	90.00	359.54	12,500.0	4,726.0	768.3	4,719.7	0.00	0.00	0.00
17,200.0	90.00	359.54	12,500.0	4,826.0	767.5	4,819.7	0.00	0.00	0.00
17,300.0	90.00	359.54	12,500.0	4,926.0	766.7	4,919.7	0.00	0.00	0.00
17,400.0	90.00	359.54	12,500.0	5,026.0	765.9	5,019.7	0.00	0.00	0.00
17,500.0	90.00	359.54	12,500.0	5,126.0	765.1	5,119.7	0.00	0.00	0.00
17,600.0	90.00	359.54	12,500.0	5,226.0	764.3	5,219.7	0.00	0.00	0.00
17,700.0	90.00	359.54	12,500.0	5,326.0	763.5	5,319.7	0.00	0.00	0.00
17,800.0	90.00	359.54	12,500.0	5,426.0	762.7	5,419.7	0.00	0.00	0.00
17,900.0	90.00	359.54	12,500.0	5,526.0	761.9	5,519.7	0.00	0.00	0.00
18,000.0	90.00	359.54	12,500.0	5,626.0	761.1	5,619.7	0.00	0.00	0.00
18,100.0	90.00	359.54	12,500.0	5,726.0	760.3	5,719.7	0.00	0.00	0.00
18,200.0	90.00	359.54	12,500.0	5,826.0	759.5	5,819.7	0.00	0.00	0.00
18,300.0	90.00	359.54	12,500.0	5,926.0	758.7	5,919.7	0.00	0.00	0.00
18,400.0	90.00	359.54	12,500.0	6,026.0	757.9	6,019.7	0.00	0.00	0.00
18,500.0	90.00	359.54	12,500.0	6,126.0	757.1	6,119.7	0.00	0.00	0.00
18,600.0	90.00	359.54	12,500.0	6,226.0	756.3	6,219.7	0.00	0.00	0.00
18,700.0	90.00	359.54	12,500.0	6,326.0	755.5	6,319.7	0.00	0.00	0.00
18,800.0	90.00	359.54	12,500.0	6,426.0	754.7	6,419.7	0.00	0.00	0.00
18,900.0	90.00	359.54	12,500.0	6,526.0	753.9	6,519.7	0.00	0.00	0.00
19,000.0	90.00	359.54	12,500.0	6,626.0	753.1	6,619.7	0.00	0.00	0.00
19,100.0	90.00	359.54	12,500.0	6,726.0	752.4	6,719.7	0.00	0.00	0.00
19,200.0	90.00	359.54	12,500.0	6,826.0	751.6	6,819.7	0.00	0.00	0.00
19,300.0	90.00	359.54	12,500.0	6,926.0	750.8	6,919.7	0.00	0.00	0.00
19,400.0	90.00	359.54	12,500.0	7,026.0	750.0	7,019.7	0.00	0.00	0.00
19,500.0	90.00	359.54	12,500.0	7,126.0	749.2	7,119.7	0.00	0.00	0.00
19,600.0	90.00	359.54	12,500.0	7,226.0	748.4	7,219.7	0.00	0.00	0.00
19,700.0	90.00	359.54	12,500.0	7,325.9	747.6	7,319.7	0.00	0.00	0.00
19,800.0	90.00	359.54	12,500.0	7,425.9	746.8	7,419.7	0.00	0.00	0.00
19,900.0	90.00	359.54	12,500.0	7,525.9	746.0	7,519.7	0.00	0.00	0.00
20,000.0	90.00	359.54	12,500.0	7,625.9	745.2	7,619.7	0.00	0.00	0.00
TD @ 20046.4'MD/12500.0'TVD									
20,046.4	90.00	359.54	12,500.0	7,672.4	744.8	7,666.1	0.00	0.00	0.00



KLX
Well Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Ender Wiggins 14 WXY FED COM 20H
Company:	Marathon Oil Permian LLC	TVD Reference:	25'KB @ 3383.0usft (25'KB)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	25'KB @ 3383.0usft (25'KB)
Site:	Sec 14, T25S, R34E	North Reference:	Grid
Well:	Ender Wiggins 14 WXY FED COM 20H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Prelim #1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
VP - EW 14 WXY FC 20	0.00	0.00	11,822.5	-45.1	806.3	412,406.26	778,769.46	32° 7' 50.225 N	103° 25' 58.076 W
- plan hits target center									
- Point									
KOP/FTP - EW 20H (12H)	0.00	0.00	12,022.5	-45.1	806.3	412,406.26	778,769.46	32° 7' 50.225 N	103° 25' 58.076 W
- plan hits target center									
- Point									
PPP-2 - EW 20H(14867.6)	0.00	0.00	12,500.0	2,493.7	786.2	414,945.05	778,749.35	32° 8' 15.349 N	103° 25' 58.063 W
- plan misses target center by 0.1usft at 14867.6usft MD (12500.0 TVD, 2493.7 N, 786.1 E)									
- Point									
LTP/BHL - EW 14 WXY I	0.00	0.00	12,500.0	7,672.4	744.8	420,123.72	778,707.94	32° 9' 6.597 N	103° 25' 58.041 W
- plan hits target center									
- Point									
PPP-3 - EW 20H(17507.0)	0.00	0.00	12,500.0	5,133.0	765.1	417,584.38	778,728.25	32° 8' 41.468 N	103° 25' 58.052 W
- plan misses target center by 0.1usft at 17507.0usft MD (12500.0 TVD, 5133.0 N, 765.0 E)									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
857.0	857.0	Rustler				
1,363.0	1,363.0	Salado				
3,567.0	3,562.0	Castile				
5,381.4	5,370.0	Lamar/Base of Salt				
5,413.5	5,402.0	Bell Canyon				
6,726.1	6,710.0	Cherry Canyon				
8,033.8	8,013.0	Brushy Canyon				
9,321.3	9,296.0	Bone Spring				
10,375.0	10,346.0	1st Bone Spring Sand				
10,956.1	10,925.0	2nd Bone Spring Sand				
11,999.7	11,966.0	3rd Bone Spring Sand		0.00	359.54	
12,529.5	12,422.0	Wolfcamp		0.00	359.54	
12,612.0	12,461.0	Wolfcamp X Sand		0.00	359.54	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,000.0	2,000.0	0.0	0.0	Build 2°/100'	
2,240.9	2,240.6	-0.6	10.1	EOB @ 4.82°Inc/93.20°Az	
11,615.3	11,581.9	-44.5	796.2	Drop 2°/100'	
11,856.2	11,822.5	-45.1	806.3	EOD @ Vertical	
12,056.2	12,022.5	-45.1	806.3	Build 12°/100'	
12,806.2	12,500.0	432.4	802.5	EOB @ 90.00°Inc/359.54°Az	
20,046.4	12,500.0	7,672.4	744.8	TD @ 20046.4'MD/12500.0'TVD	

Company Name: Marathon Oil Permian LLC
Ender Wiggins 14 WXY FED COM 20H
Lea County, New Mexico (NAD 27)
Rig: 25'KB
Created By: Michael Hilliard
Date: 6/4/2021

PROJECT DETAILS: Lea County, New Mexico (NAD 27)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

Ender Wiggins 14 WXY FED COM 20H
Lea County, New Mexico (NAD 27)
Q210*** & WT-210***
Prelim #1

WELL DETAILS: Ender Wiggins 14 WXY FED COM 20H					
3358.0					
+N/-S	+E/-W	North	East	Latitude	Longitude
0.0	0.0	412451.35	777963.14	32° 7' 50.738 N	103° 26' 7.448 W

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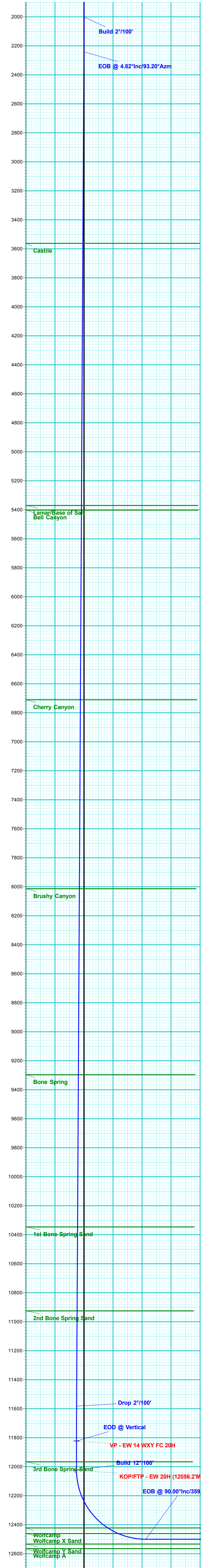
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Azimuths to Grid North

Correction: 5.89°

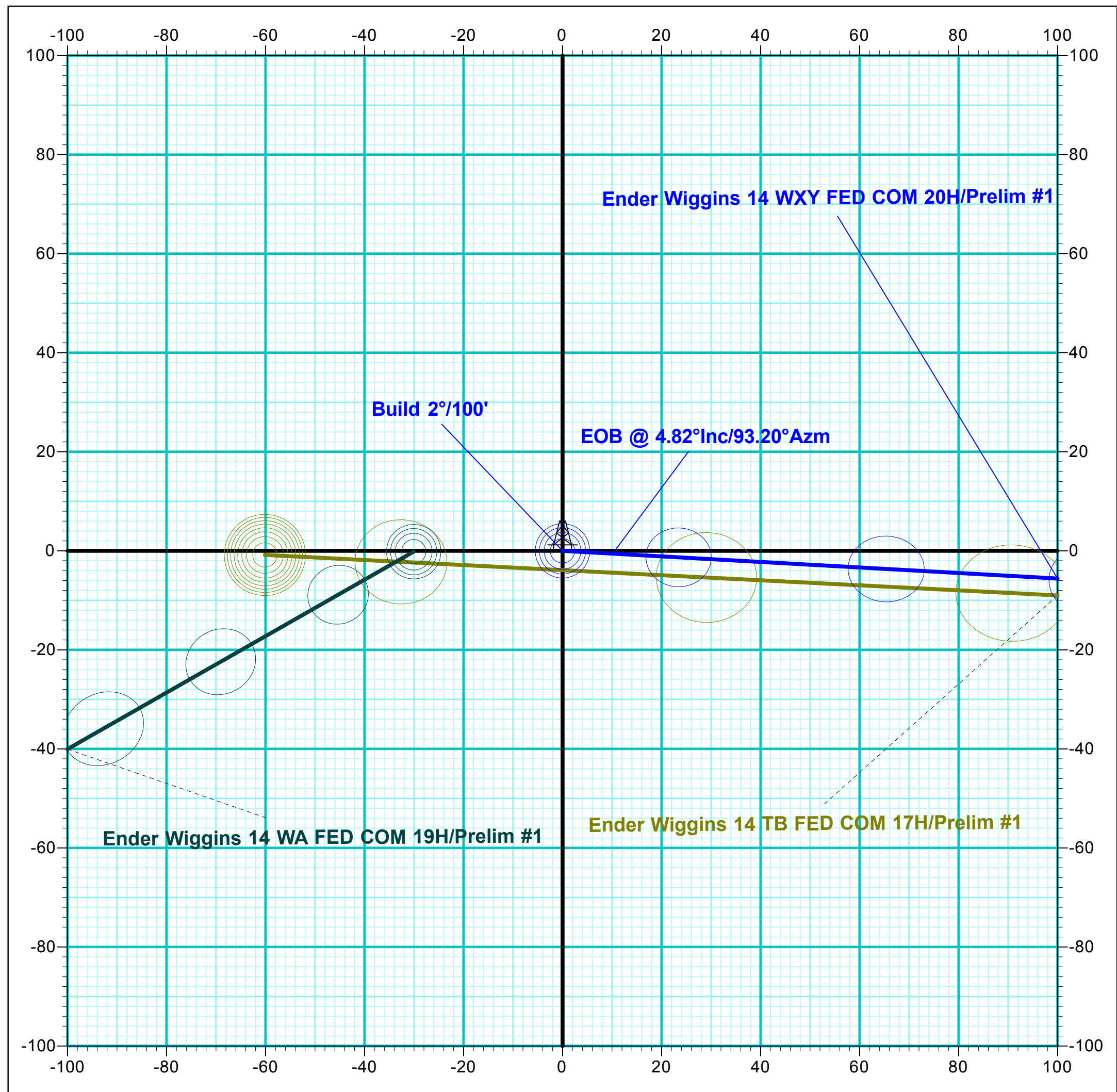
Magnetic Field
Strength: 47543.3nT
Dip Angle: 59.72°
Date: 6/2/2021
Model: HDGM2021



CASING DETAILS

No casing data is available

FORMATION TOP DETAILS				
TVDPath	MDPath	Formation	DipAngle	DipDir
857.0	857.0	Rustler		
1363.0	1363.0	Salado		
3562.0	3562.0	Castle		
5370.0	5370.0	Lamar/Base of Salt		
5402.0	5413.5	Bull Canyon		
6710.0	6726.1	Cherry Canyon		
8013.0	8033.8	Brushy Canyon		
9296.0	9321.3	Bone Spring		
10346.0	10366.0	Bone Spring Sand	0.00	359.54
10925.0	10945.0	Bone Spring Sand	0.00	359.54
11966.0	11986.0	Bone Spring Sand	0.00	359.54
12422.0	12529.5	Wolfcamp	0.00	359.54
12461.0	12612.0	Wolfcamp X Sand	0.00	359.54



Target Line: 12,500' TVD @ 0°VS 90° 10' U/D

PPP-2 - EW 20H(14867.6°MD)

PPP-3 - EW 20H(17507°MD)

Vertical Section at 359.54° (200 usft/in)

Vertical Section at 359.54° (200 usft/in)

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PPP-2 - EW 20H(14867.6°MD)

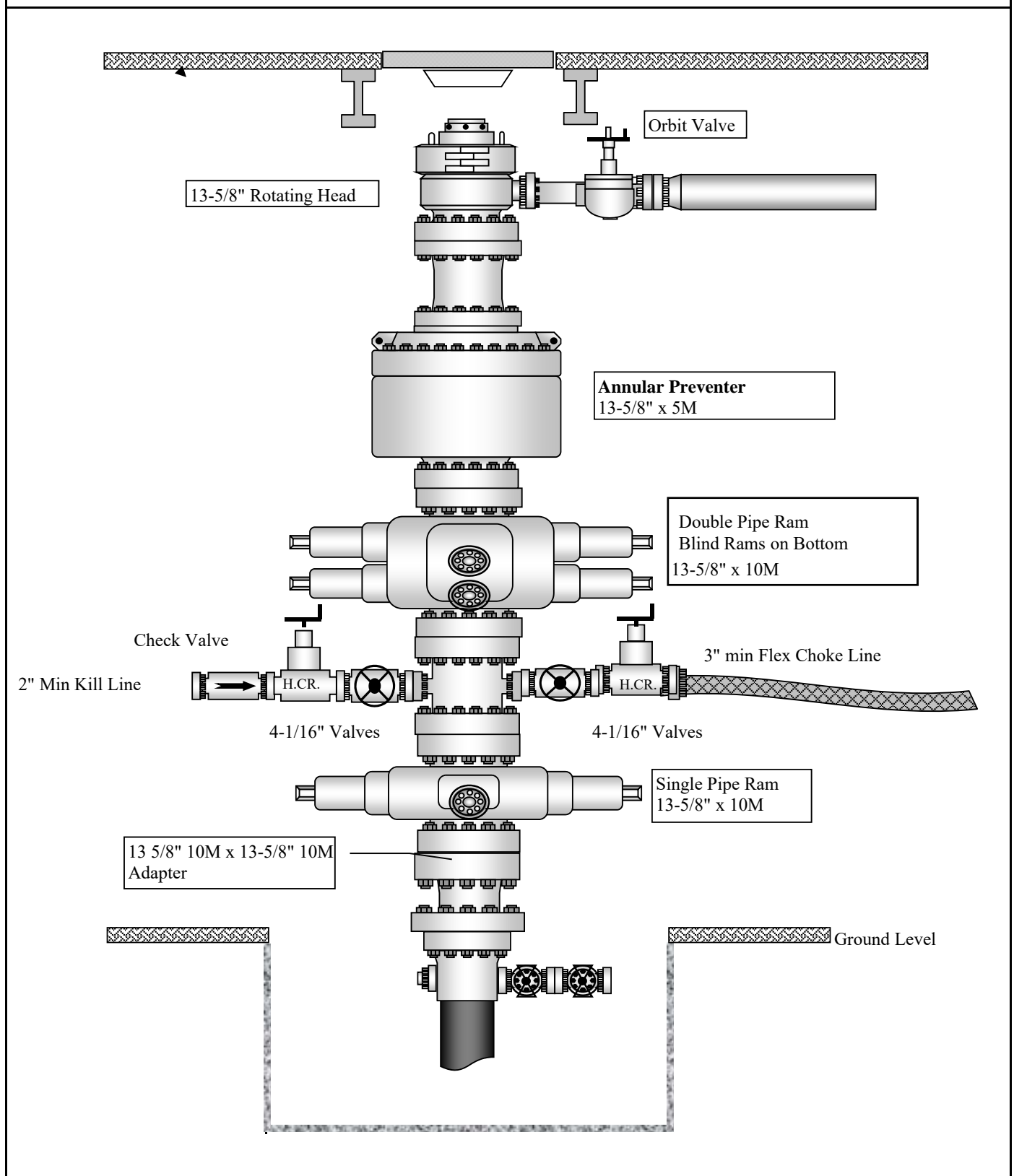
PPP-3 - EW 20H(17507

Batch Drilling Plan

- Marathon Oil Permian LLC. respectfully requests the option to “batch” drill sections of a well with intentions of returning to the well for later completion.
- When it is determined that the use of a “batch” drilling process to increase overall efficiency and reduce rig time on location, the following steps will be utilized to ensure compliant well control before releasing drilling rig during the batch process.
- Succeeding a successful cement job, fluid levels will be monitored in both the annulus and casing string to be verified static.
- A mandrel hanger packoff will be ran and installed in the multi-bowl wellhead isolating and creating a barrier on the annulus. This packoff will be tested to 5,000 PSI validating the seals.
- At this point the well is secure and the drilling adapter will be removed from the wellhead.
- A 13-5/8” 5M temporary abandonment cap will be installed on the wellhead by stud and nut flange. The seals of the TA cap will then be pressure tested to 5,000 PSI.
- The drilling rig will skid to the next well on the pad to continue the batch drilling process.
- When returning to the well with the TA cap, the TA cap will be removed and the BOP will be nipped up on the wellhead.
- A BOP test will then be conducted according to Onshore Order #2 and drilling operations will resume on the subject well.

Request for Surface Rig

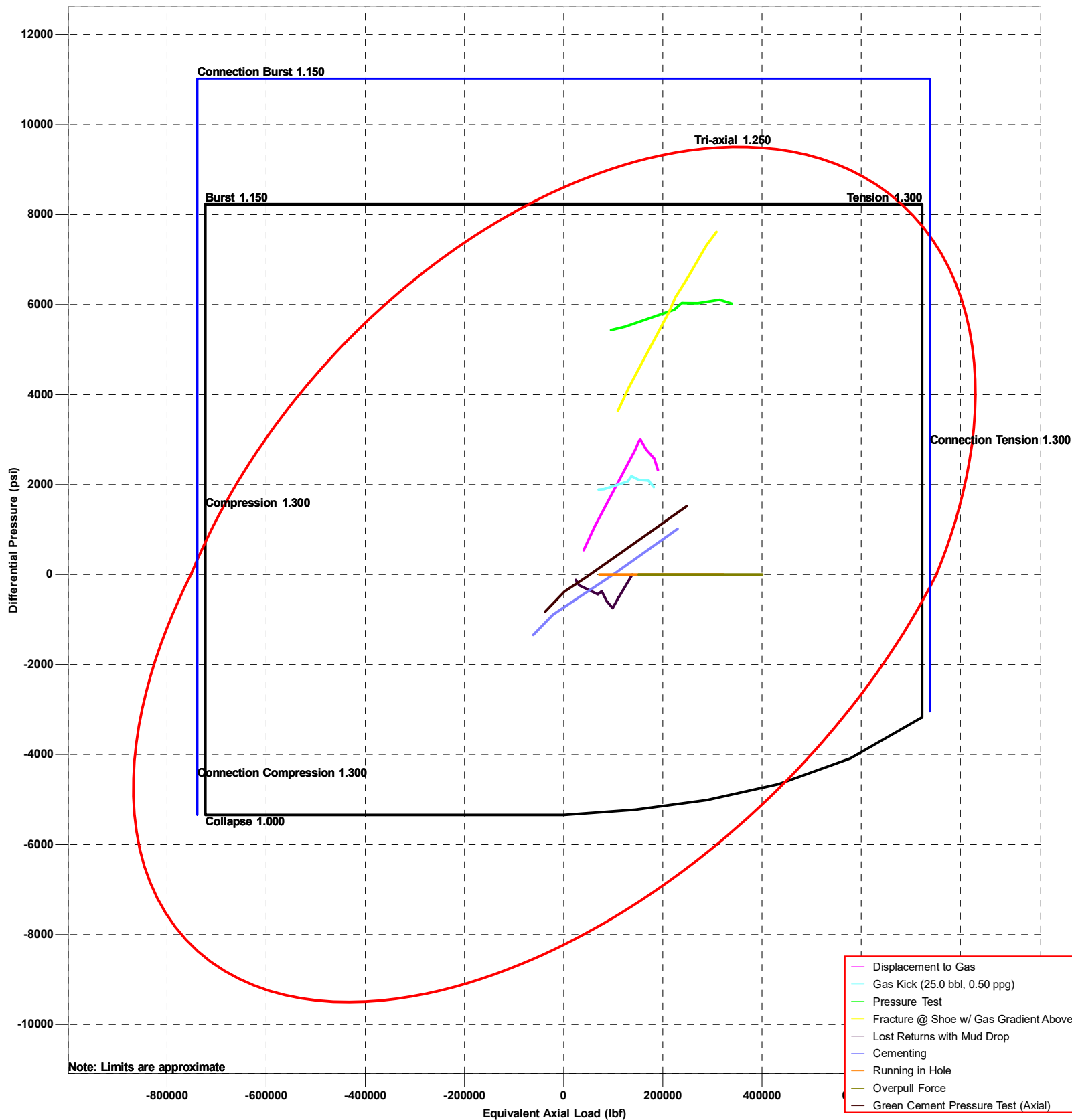
- Marathon Oil Permian LLC. Requests the option to contract a surface rig to drill, set surface casing and cement on the subject well. If the timing between rigs is such that Marathon Oil Permian LLC. would not be able to preset the surface section, the primary drilling rig will drill the well in its entirety per the APD.

Operator : Marathon Oil

File: Basis of Design (10.75-7.625-5.5) *

Date: October 13, 2020 Page: 1

Design Limits (7 5/8" Intermediate Casing - Section 1)



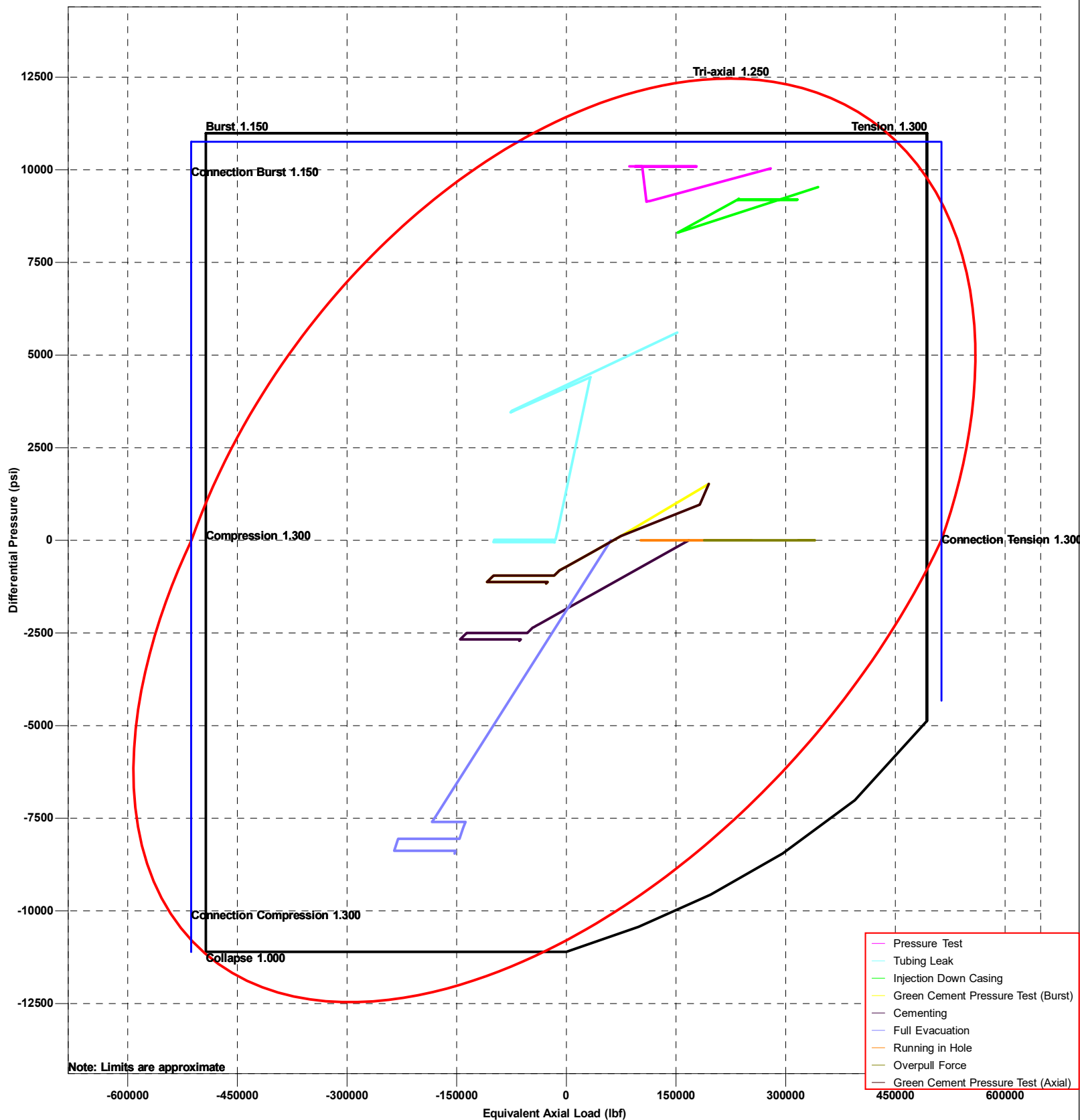
RED HILLS SB - 3 CSG STRING

StressCheck 5000.15.1.2 Build 21

File: Basis of Design (10.75-7.625-5.5) *

Date: October 13, 2020 Page: 1

Design Limits (5 1/2" Production Casing - Section 1)



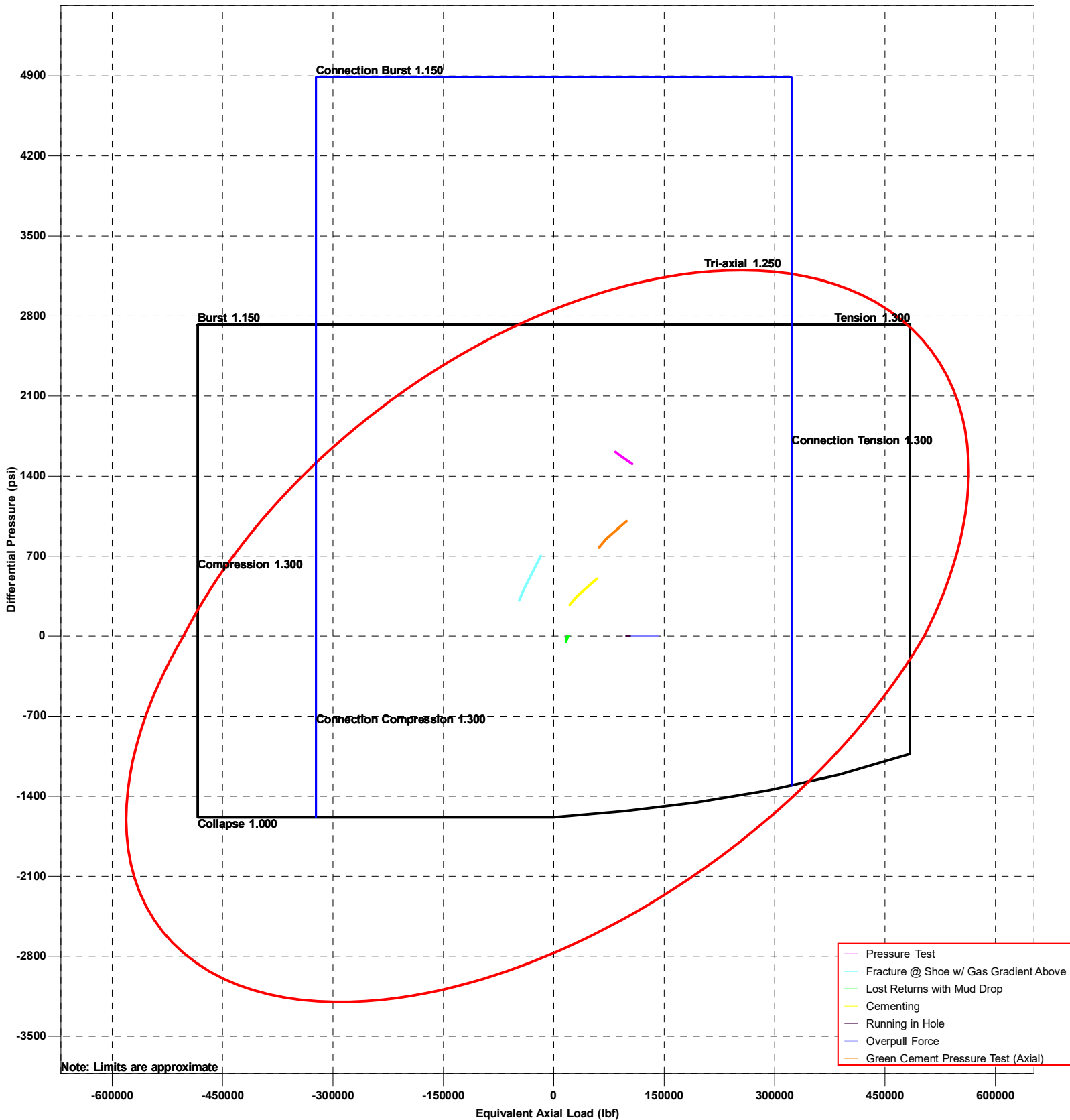
RED HILLS SB - 3 CSG STRING

StressCheck 5000.15.1.2 Build 21

File: Basis of Design (10.75-7.625-5.5) *

Date: October 13, 2020 Page: 1

Design Limits (10 3/4" Surface Casing - Section 1)



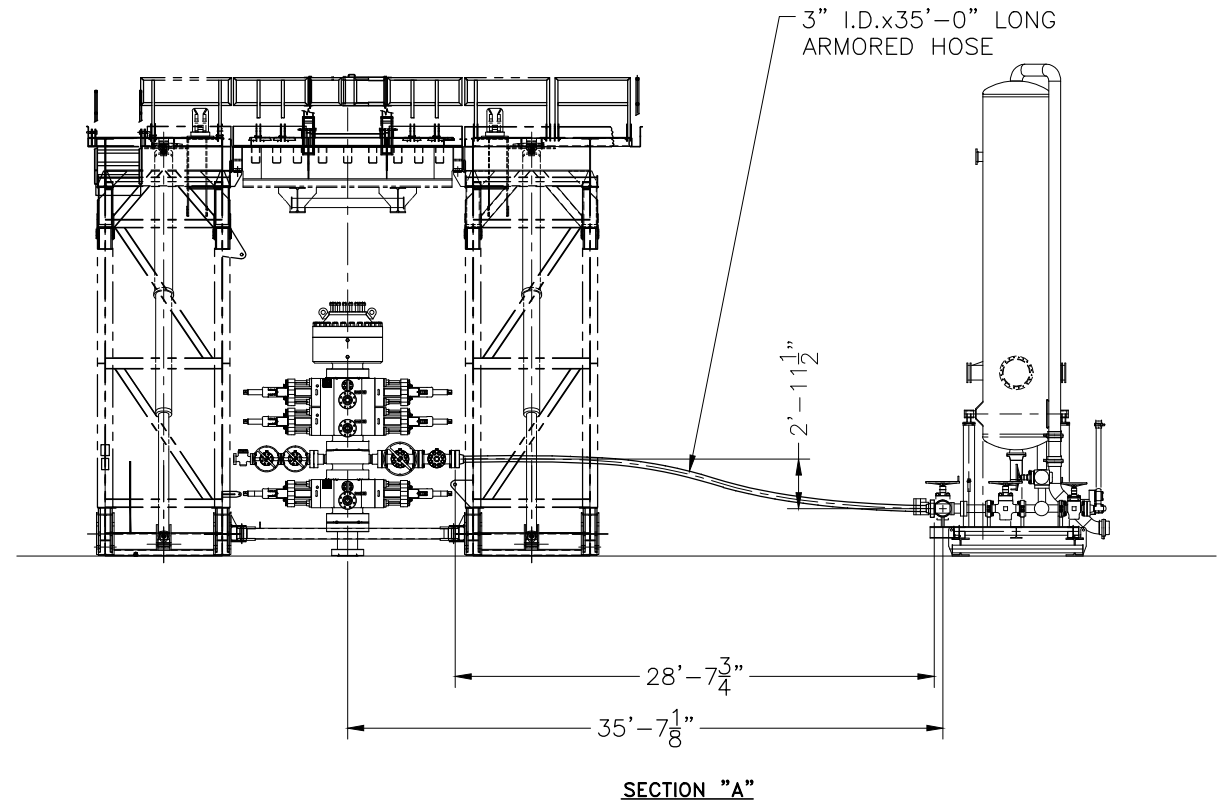
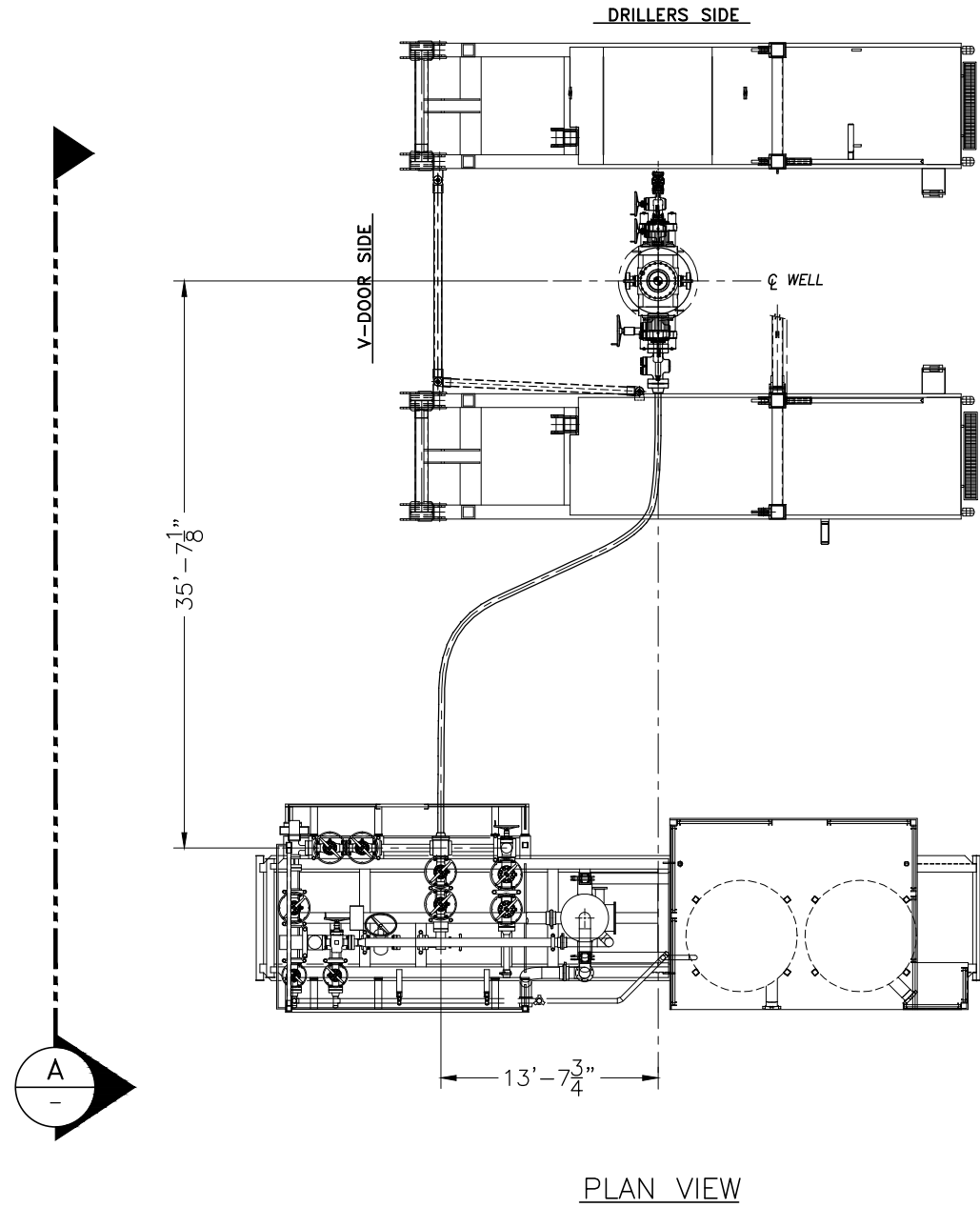
RED HILLS SB - 3 CSG STRING

StressCheck 5000.15.1.2 Build 21



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IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE
REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER,
WITHOUT THE PRIOR, WRITTEN CONSENT OF A DULY AUTHOR-
IZED OFFICER OF HELMERICH & PAYNE INT'L DRILLING CO.

			ENGINEERING APPROVAL	DATE	TITLE: CHOKE MANIFOLD RIG 216-234			
△								
△					CUSTOMER: H&P			
△					PROJECT: FLEXRIG3			
△					DRAWN: MTS	DATE: 2-28-02	DWG. NO.:	REV:
A	10/15/02	ADJUST DIM TO FIELD CONFIRMED DIM	RAY		SCALE: 3/4"=1'	SHEET: 1 OF 1	216-P1-05	A
REV	DATE	DESCRIPTION	BY					




ISSUED FOR FABRICATION
December-19-2007
DRAFTSMAN _____
ENGINEER _____

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER, WITHOUT THE PRIOR, WRITTEN CONSENT OF A DULY AUTHORIZED OFFICER OF HELMERICH & PAYNE INT'L DRILLING CO.


ENGINEERING APPROVAL		DATE
△		
△		
△		
△		
△	12/18/07	REMOVED SHEET TOTAL CALLOUT
REV	DATE	DESCRIPTION

		HELMERICH & PAYNE INTERNATIONAL DRILLING CO.	
TITLE: CHOKE LINE SYSTEM FLEXRIG3			
CUSTOMER:			
PROJECT:			
DRAWN: JBG	DATE: 4-10-07	DWG. NO.:	REV:
SCALE: 3/16"=1'	SHEET: 2 OF 3	210-P1-07	A



Certificate of Conformity

ContiTech

Certificate Number 953233-4	COM Order Reference 953233	Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No: 740053080		
Project:		
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Accepted by COM Inspection Signed: Roger Suarez Date: 5/11/17 	Accepted by Client Inspection

We certify that the items detailed below meet the requirements of the customer's Purchase Order referenced above, and are in conformance with the specifications given below.

Item	Part No.	Description	Qty	Serial Number	Specifications
30		RECERTIFICATION - 3" ID 10K Choke and Kill Hose x 35 ft OAL	1	63393	ContiTech Standard



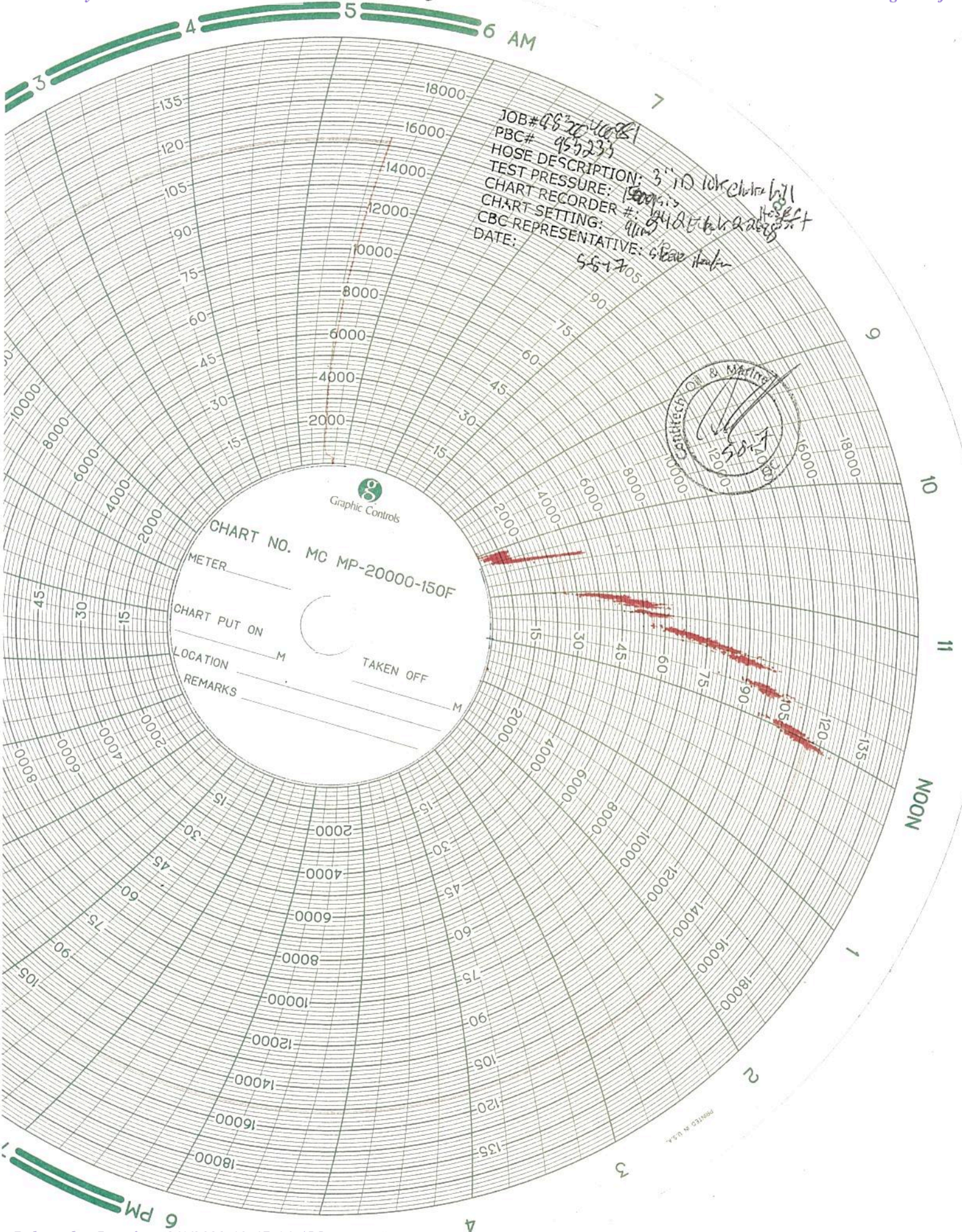
Hydrostatic Test Certificate

ContiTech

Certificate Number 953233-4	COM Order Reference 953233	Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No: 740053080		
Project:		
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Accepted by COM Inspection Signed: Roger Suarez Date: 5/11/17	Accepted by Client Inspection

We certify that the goods detailed hereon have been inspected as described below by our Quality Management System, and to the best of our knowledge are found to conform the requirements of the above referenced purchase order as issued to ContiTech Oil & Marine Corporation.

Item	Part No.	Description	Qty	Serial Number	Work. Press.	Test Press.	Test Time (minutes)
30		RECERTIFICATION - 3" ID 10K Choke and Kill Hose x 35 ft OAL	1	63393	10,000 psi	15,000 psi	60





QUALITY CONTROL	No.: QC-DB- 380 / 2012
	Page : 1 / 61
Hose No.: 63389, 63390, 63391 63392, 63393	Revision : 0
	Date: 28. August 2012.
	Prepared by : <i>Leola Linder</i>
	Appr. by: <i>Leola Linder</i>

CHOKER AND KILL HOSES

id.: 3" 69 MPa x 35 ft (10,67 m)

DATA BOOK

Purchaser: H & P

Purchaser Order No.:

ContiTech Rubber Order No.: 531895


ContiTech Beattie Co. Order No.: 006227

NOT DESIGNED FOR WELL TESTING

CONTITECH RUBBER Industrial Kft.	No.: QC- DB- 380 / 2012
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 Contitech Rubber
 Industrial Kft.
 Quality Control Dept.
 (1)

CONTITECH RUBBER
Industrial Kft.

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Certificate of Registration

APIQR REGISTRATION NUMBER
0760

This certifies that the quality management system of
CONTITECH RUBBER INDUSTRIAL LTD.
Budapesti ut 10
Szeged
Hungary

*has been assessed by the American Petroleum Institute Quality Registrar (APIQR®) and
found it to be in conformance with the following standard:*

ISO 9001:2008

The scope of this registration and the approved quality management system applies to the
Design and Manufacture of High Pressure Hoses

APIQR® approves the organization's justification for excluding:
No Exclusions Identified as Applicable

COPY

Effective Date: October 15, 2010

Expiration Date: October 15, 2013

Registered Since: October 15, 2007

W. Dan Whittaker
Manager of Operations, APIQR

Accredited by Member of
the International
Accreditation Forum
Multilateral Recognition
Arrangement for Quality
Management Systems



This certificate is valid for the period specified herein. The registered organization must continually meet all requirements of APIQR's Registration Program and the requirements of the Registration Agreement. Registration is maintained and regularly monitored through annual full system audits. Further clarifications regarding the scope of this certificate and the applicability of ISO 9001 standard requirements may be obtained by consulting the registered organization. This certificate has been issued from APIQR offices located at 1220 L Street, N.W., Washington, D.C. 20005-4070, U.S.A., it is the property of APIQR, and must be returned upon request. To verify the authenticity of this certificate, go to www.api.org/compositelist.



3400 116 (07/09) 114

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Industrial Kft.

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Certificate of Authority to use the Official API Monogram**License Number: 16C-0004****ORIGINAL**

The American Petroleum Institute hereby grants to

CONTITECH RUBBER INDUSTRIAL LTD.**Budapesti ut 10
Szeged
Hungary**

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API Spec 16C and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram should be used in conjunction with this certificate number: **16C-0004**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following product: Flexible Choke and Kill Lines

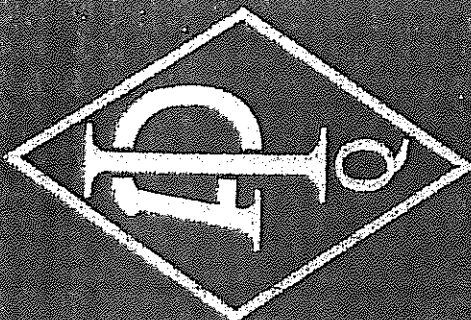
QMS Exclusions: No Exclusions Identified as Applicable

COPY

American Petroleum Institute

John D. Madh...

Director of Global Industry Services

Effective Date: OCTOBER 15, 2010**Expiration Date: OCTOBER 15, 2013**To verify the authenticity of this license, go to www.api.org/compositelist.**American
Petroleum
Institute**



CONTITECH RUBBER
Industrial Kft.

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QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 1599	
PURCHASER: ContiTech Beattie Co.				P.O. N°: 006227	
CONTITECH ORDER N°: 531895		HOSE TYPE: 3" ID Choke and Kill Hose			
HOSE SERIAL N°: 63393		NOMINAL / ACTUAL LENGTH: 10,67 m / 10,72 m			
W.P. 68,9 MPa 10000 psi		T.P. 103,4 MPa 15000 psi		Duration: 60 min.	
<p>Pressure test with water at ambient temperature</p> <p style="text-align: center;">See attachment. (1 page)</p> <p>↑ 10 mm = 10 Min. → 10 mm = 20 MPa</p>					
COUPLINGS Type		Serial N°		Quality	
3" coupling with		2156 2153		AISI 4130	
4 1/16" 10K API Flange end				AISI 4130	
				Heat N°	
				20231	
				34031	
NOT DESIGNED FOR WELL TESTING				API Spec 16 C	
				Temperature rate:"B"	
All metal parts are flawless					
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.					
STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.					
COUNTRY OF ORIGIN HUNGARY/EU					
Date:		Inspector		Quality Control	
23. August 2012.				ContiTech Rubber Industrial Kft. Quality Control Dept. (1)	

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Hose Data Sheet

CRI Order No.	531895
Customer	ContiTech Beattie Co.
Customer Order No	PO6227 Pbc13080-H&P
Item No.	1
Hose Type	Flexible Hose
Standard	API SPEC 16 C
Inside dia in inches	3
Length	35 ft
Type of coupling one end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSI C/W BX155RING GROOVE
Type of coupling other end	FLANGE 4 1/16" API SPEC 6A TYPE 6BX FOR 10000 PSI C/W BX155 RING GROOVE
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	USUAL PHOENIX
Cover	NOT FIRE RESISTANT
Outside protection	St. steel outer wrap
Internal stripwound tube	No
Lining	OIL RESISTANT
Safety clamp	No
Lifting collar	No
Element C	No
Safety chain	No
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
MBR operating [m]	1,60
MBR storage [m]	1,40
Type of packing	WOODEN CRATE ISPM-15

1. DRILLING WELL CONTROL PLAN

1.1 WELL CONTROL - CERTIFICATIONS

Required IADC/IWCF Well Control Certifications Supervisor Level:

Any personnel who supervises or operates the BOP must possess a valid current IADC training certification and photo identification. This would include the onsite drilling supervisor, tool pusher/rig manager, driller, and any personnel that will be acting in these capacities. Another example of this may be a wireline or snubbing crew rigged up on the rig to assist the rig, the operator of each system must also have a valid control certification for their level of operation.

BLM recognizes IADC training as the industry approved accredited training. Online self-certifications will not be acceptable. Enforcement actions for the lack of a valid Supervisory Level certificate shall be prompt action to correct the deficiency. **Enforcement actions include but are not limited to immediate replacement of personnel lacking certifications, drilling operations being shut down or installment of a 10M annular.**

IADC Driller Level for all Drillers and general knowledge for the Assistant Driller, Derrick Hands, Floor Hands and Motor Hands is recognized by the BLM; however, a Driller Level certification will need to be presented only if acting in a temporary Driller Level certification capacity.

Well Control-Position/Roles

IADC Well control training and certification is targeted toward each role, e.g., Supervisor Level toward those who direct, Driller Level to those who act, Introductory to those who need to know.

- **Supervisor Level**
 - Specifies and has oversight that the correct actions are carried out
 - Role is to supervise well control equipment, training, testing, and well control events
 - Directs the testing of BOP and other well control equipment
 - Regularly direct well control crew drills
 - Land based rigs – usually runs the choke during a well kill operation
 - Due to role on the rig, training and certification is targeted more toward management of well control and managing an influx out of the well
- **Driller Level**
 - Performs an action to prevent or respond to well control accident
 - Role is to monitor the well via electronic devices while drilling and detect unplanned influxes
 - Assist with the testing of BOP and other well control equipment
 - Regularly assist with well control crew drills
 - When influx is detected, responsible to close the BOP
 - Due to role on the rig, training and certification is targeted more toward monitoring and shutting the well in (closing the BOP) when an influx is detected

(Well Control-Positions/Roles Continued)

- **Derrick Hand, Assistant Driller Introductory Level**
 - Role is to assist Driller with kick detection by physically monitoring the well at the mixing pits/tanks
 - Regularly record mud weights/viscosity for analysis by the Supervisor level and mud engineer so pre-influx signs can be detected
 - Mix required kill fluids as directed by Supervisor or Driller
 - Due to role on the rig, training and certification is targeted more toward monitoring for influxes, either via mud samples or visual signs on the pits/tanks
- **Motorman, Floor Hand Introductory Level**
 - Role is to assist the Supervisor, Driller, or Derrick Hand with detecting influxes
 - Be certain all valves are aligned for proper well control as directed by Supervisor
 - Perform Supervisor or Driller assigned tasks during a well control event
 - Due to role on the rig, training and certification is targeted more toward monitoring for influxes

1.2 WELL CONTROL-COMPONENT AND PREVENTER COMPATIBILITY CHECKLIST

The table below, which covers the drilling and casing of the 10M Stack portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

- Example 6-1/8" Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drill pipe	4"	Upper and Lower 3.5-5.5" VBRs	10M
HWDP	4"	Upper and Lower 3.5-5.5" VBRs	10M
Drill collars and MWD tools	4.75-5"	Upper and Lower 3.5-5.5" VBRs	10M
Mud Motor	4.75-5.25"	Upper and Lower 3.5-5.5" VBRs	10M
Production casing	4.5"	Upper and Lower 3.5-5.5" VBRs	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

- VBR = Variable Bore Ram. Compatible range listed in chart.

1.3 WELL CONTROL-BOP TESTING

BOP Test will be completed per Onshore Oil and Gas Order #2 Well Control requirements. The 5M Annular Preventer on a required 10M BOP stack will be tested to 70 % of rated working

pressure including a 10 minute low pressure test. Pressure shall be maintained at least 10 minutes.

1.4 WELL CONTROL - DRILLS

The following drills are conducted and recorded in the Daily Drilling Report and the Contractor's reporting system while engaged in drilling operations:

Type	Frequency	Objective	Comments
Shallow gas kick drill - drilling	Once per well with crew on tour	Response training to a shallow gas influx	To be done prior to drilling surface hole if shallow gas is noted
Kick drill - drilling	Once per week per crew	Response training to an influx while drilling (bit on bottom)	Only one kick drill per week per crew is required, alternating between drilling and tripping.
Kick drill - tripping	Once per week per crew	Response training to an influx while tripping (bit off bottom). Practice stabbing TIW valve	

1.5 WELL CONTROL – MONITORING

- Drilling operations which utilize static fluid levels in the wellbore as the active barrier element, a means of accurately monitoring fill-up and displacement volumes during trips are available to the driller and operator. A recirculating trip tank is installed and equipped with a volume indicator easily read from the driller's / operator's position. This data is recorded on a calibrated chart recorder or digitally. The actual volumes are compared to the calculated volumes.
- The On-Site Supervisor ensures hole-filling and pit monitoring procedures are established and documented for every rig operation.
- The well is kept full of fluid with a known density and monitored at all times even when out of the hole.
- Flow checks are a minimum of 15 minutes.
- A flow check is made:
 - In the event of a drilling break.
 - After indications of down hole gains or losses.
 - Prior to all trips out of the hole.
 - After pulling into the casing shoe.
 - Before the BHA enters the BOP stack.
 - If trip displacement is incorrect.

Well Control-Monitoring (Continued)

- Prior to dropping a survey instrument.
- Prior to dropping a core ball.

- After a well kill operation.
- When the mud density is reduced in the well.
- Flow checks may be made at any time at the sole discretion of the driller or his designate. The Onsite Supervisor ensures that personnel are aware of this authority and the authority to close the well in immediately without further consultation.
- Record slow circulating rates (SCR) after each crew change, bit trip, and 500' of new hole drilled and after any variance greater than 0.2 ppg in MW. Slow pump rate recordings should include return flow percent, TVD, MD & pressure. SCR's will be done on all pumps at 30, 40 & 50 SPM. Pressures will be recorded at the choke panel. SCR will be recorded in the IADC daily report and ORB Wellview daily report
- Drilling blind (i.e. without returns) is permissible only in known lithology where the absence of hydrocarbons has been predetermined and written approval of the Drilling Manager.
- All open hole logs to be run with pack-off or lubricator.
- The Drilling Contractor has a fully working pit level totalizer / monitoring system with read out for the driller and an audible alarm set to 10 BBL gain / loss volume. Systems are selectable to enable monitoring of all pits in use. Pit volumes are monitored at all times, especially when transferring fluids. Both systems data is recorded on a calibrated chart recorder or electronically.
- The Drilling Contractor has a fully working return mud flow indicator with drillers display and an audible alarm, and is adjustable to record any variance in return volumes.

1.6 WELL CONTROL – SHUT IN

- The “hard shut in” method (i.e. against a closed choke using either an annular or ram type preventer) is the Company standard.
- The HCR(s) or failsafe valves are left closed during drilling to prevent any erosion and buildup of solids. The adjustable choke should also be left closed.
- The rig specific shut in procedure, the BOP configuration along with space-out position for the tool joints is posted in the Driller's control cabin or doghouse.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Manager.
- During a well kill by circulation, constant bottom hole pressure is maintained throughout.
- Kill sheets are maintained by the Driller and posted in the Driller's control cabin or doghouse. The sheet is updated at a minimum every 500 feet.

2. SHUT-IN PROCEDURES:

2.1 PROCEDURE WHILE DRILLING

- Sound alarm (alert crew)

- Space out drill string – Stop rotating, pick the drill string up off bottom, and space out to ensure no tool joint is located in the BOP element selected for initial closure.
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
 - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify toolpusher/company representative
- Gather all relevant data required:
 - SIDPP and SICP
 - Hole Depth and Hole TVD
 - Pit gain
 - Time
 - Kick Volume
 - Pipe depth
 - MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.2 PROCEDURE WHILE TRIPPING

- Sound alarm (alert crew)
- Stab full opening safety valve in the drill string and close.
- Space out drill string (ensure no tool joint is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
 - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
 - SIDPP and SICP
 - Hole Depth and Hole TVD
 - Pit gain

Procedure While Tripping (Continued)

- Time
- Kick Volume
- Pipe depth

- MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.3 PROCEDURE WHILE RUNNING CASING

- Sound alarm (alert crew)
- Stab crossover and full opening safety valve and close
- Space out casing (ensure no coupling is located in the BOP element selected for initial closure).
- Shut down pumps (stop pumps and observe well.)
- Shut-in Well - If flow is suspected or confirmed, close uppermost applicable BOP element. (HCR and choke will already be in the closed position.)
 - **Note:** Either the uppermost pipe ram or annular preventer can be used.
- Confirm shut-in
- Notify tool pusher/company representative
- Gather all relevant data required:
 - SIDPP and SICP
 - Hole Depth and Hole TVD
 - Pit gain
 - Time
 - Kick Volume
 - Pipe depth
 - MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit
- If pressure has built or is anticipated during the kill to reach 1,000 psi or greater, the annular preventer will not be used as the primary pressure control device and operations will swap to the upper BOP pipe ram.

2.4 PROCEDURE WITH NO PIPE IN HOLE (OPEN HOLE)

- Sound alarm (alert crew)
- Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- Confirm shut-in

- Notify toolpusher/company representative
- Gather all relevant data required:
 - Shut-In Pressure
 - Hole Depth and Hole TVD
 - Pit gain
 - Time
 - Kick Volume
 - MW in, MW out
 - SPR's (Slow Pump Rate's)
- Regroup and identify forward plan (let well stabilize, update kill sheet, inventory mud additives and mud volumes on location)
- Company Representative, Drilling Superintendent, Drilling Engineer and Drilling Manager will discuss well control kill method to be utilized. A verbal Risk Assessment and preferred kill method will be finalized. Initial Risk Assessment will be finalized within 1 hour of initial shut in.
- No well kill operation commences until there is a plan agreed by the Superintendent, On-Site Supervisor and the Drilling Contractor PIC.
- Recheck all pressures and fluid volume on accumulator unit.

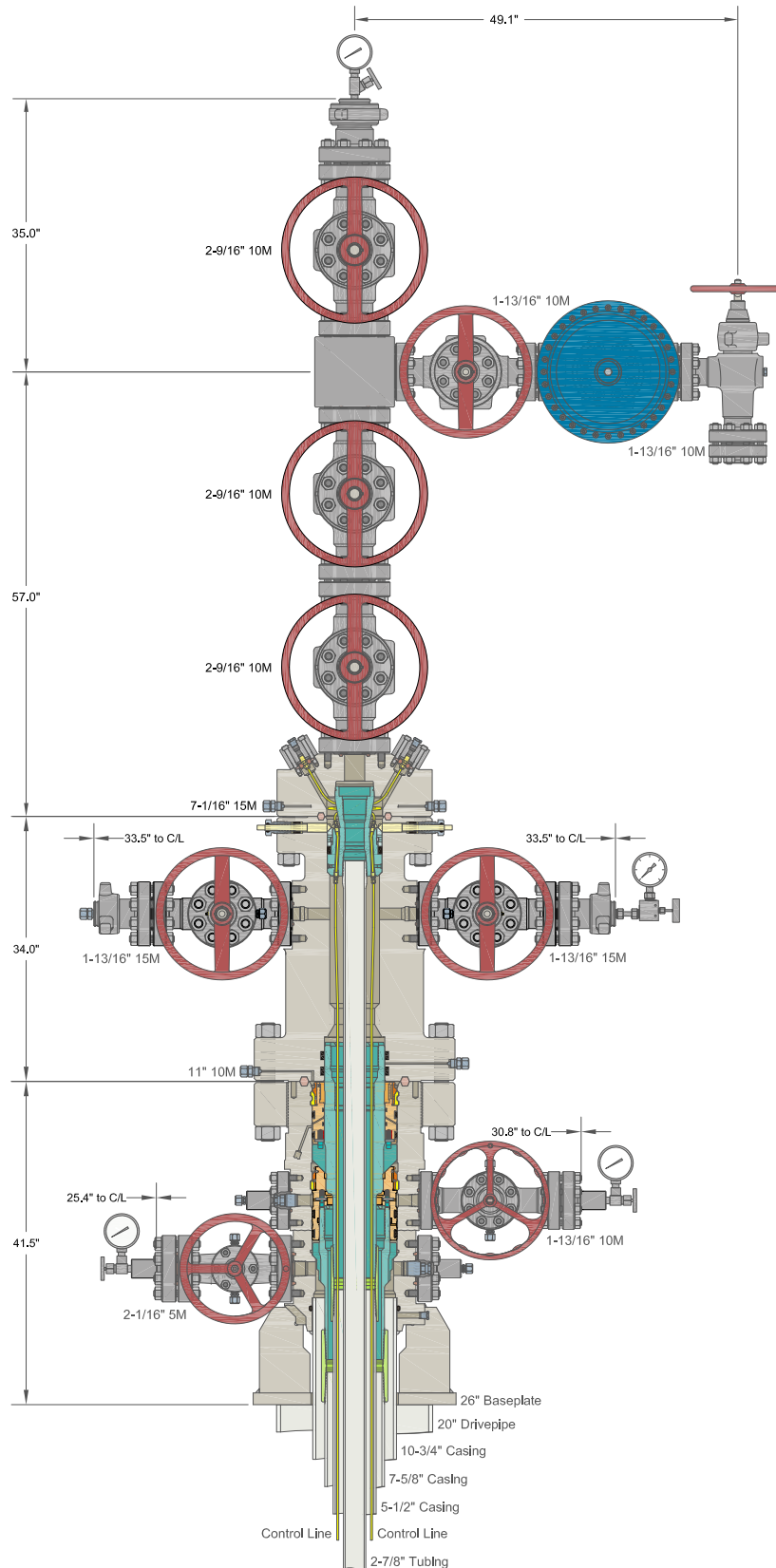
2.5 PROCEDURE WHILE PULLING BHA THRU STACK

- PRIOR to pulling last joint of drill pipe thru the stack.
- Perform flow check, if flowing.
- Sound alarm (alert crew).
- Stab full opening safety valve and close
- Space out drill string with tool joint just beneath the upper pipe ram.
- Shut-in using upper pipe ram. (HCR and choke will already be in the closed position).
- Confirm shut-in.
- Notify toolpusher/company representative
- Read and record the following:
 - SIDPP and SICP
 - Pit gain
 - Time
- Regroup and identify forward plan
- **With BHA in the stack and compatible ram preventer and pipe combo immediately available.**
 - Sound alarm (alert crew)
 - Stab crossover and full opening safety valve and close
 - Space out drill string with upset just beneath the compatible pipe ram.
 - Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
 - Confirm shut-in
 - Notify toolpusher/company representative
 - Read and record the following:
 - SIDPP and SICP
 - Pit gain

Procedures While Pulling BHA thru Stack (Continued)

- Time
- Regroup and identify forward plan

- **With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.**
 - Sound alarm (alert crew)
 - If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario.
 - If impossible to pick up high enough to pull the string clear of the stack:
 - Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close
 - Space out drill string with tool joint just beneath the upper pipe ram.
 - Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
 - Confirm shut-in
 - Notify toolpusher/company representative
 - Read and record the following:
 - SIDPP and SICP
 - Pit gain
 - Time



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ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC

20" x 10-3/4" x 7-5/8" x 5-1/2" x 2-7/8" MBU-T-SF Wellhead System
 With 11" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head
 And 2-9/16" 10M x 1-13/16" 10M Production Tree Assembly

DRAWN	DLE	29JAN21
APPRV		
DRAWING NO.	MVE0001002	

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 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 126171

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 126171
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	8/1/2022