Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-015-55506

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

16. No of acres in lease

17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth

20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

22. Approximate date work will start*

23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature

Name *(Printed/Typed)*

Date

Title

Approved by *(Signature)*

Name *(Printed/Typed)*

Date

Title

Office

Application approval 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.
Conditions of approval, if any, are attached.

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 09/23/2024

Additional Operator Remarks

Location of Well

0. SHL: NWNW / 810 FNL / 764 FWL / TWSP: 24S / RANGE: 31E / SECTION: 8 / LAT: 32.2368869 / LONG: -103.8059156 (TVD: 0 feet, MD: 0 feet)

PPP: NWNW / 100 FNL / 440 FWL / TWSP: 24S / RANGE: 31E / SECTION: 8 / LAT: 32.2388396 / LONG: -103.806962 (TVD: 12513 feet, MD: 13107 feet)

PPP: SWSW / 1319 FSL / 440 FWL / TWSP: 24S / RANGE: 31E / SECTION: 8 / LAT: 32.2287244 / LONG: -103.8069666 (TVD: 12523 feet, MD: 16774 feet)

PPP: NENE / 0 FNL / 440 FWL / TWSP: 24S / RANGE: 31E / SECTION: 17 / LAT: 32.2245913 / LONG: -103.8069682 (TVD: 12527 feet, MD: 18095 feet)

BHL: SWSW / 20 FSL / 440 FWL / TWSP: 24S / RANGE: 31E / SECTION: 17 / LAT: 32.2101236 / LONG: -103.8069745 (TVD: 12541 feet, MD: 23357 feet)

BLM Point of Contact

Name: TENILLE C MOLINA
Title: Land Law Examiner
Phone: (575) 234-2224
Email: TCMOLINA@BLM.GOV

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024
Submit Electronically Via OCD Permitting		Submittal Type: ☑ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name	
30-015 -55506	98220	PURPLE SAGE; WOLFCAMP (GAS)	
Property Code	Property Name		Well Number
334580	CHUCK SMITH MDP1 8_17 FED COM		41H
OGRID No.	Operator Name		Ground Level Elevation
16696	OXY USA INC.		3490'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☑ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☑ Federal	

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	8	24S	31E		810' FNL	764' FWL	32.23688691	-103.80591565	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
M	17	24S	31E		20' FSL	440' FEL	32.21012362	-103.80697450	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
640.00	INFILL	30-015-54092	NO	
Order Numbers.			Well setbacks are under Common Ownership: ☐Yes ☐No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	8	24S	31E		50' FNL	440' FWL	32.23897707	-103.80696198	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	8	24S	31E		100' FNL	440' FWL	32.23883963	-103.80696204	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
M	17	24S	31E		100' FSL	440' FWL	32.21034352	-103.80697439	EDDY

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☑ Horizontal ☐ Vertical	Ground Floor Elevation:
		3490'

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Sara Guthrie 9/25/2024

Signature Date

Sara Guthrie

Printed Name

Sara_Guthrie@oxy.com

Email Address

SURVEYOR CERTIFICATIONS

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

18 *SURVEYOR CERTIFICATION*
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey: JULY 3, 2023
Signature and Seal of Professional Surveyor

LLOYD P. SHORT NEW MEXICO 21653 PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number 21653

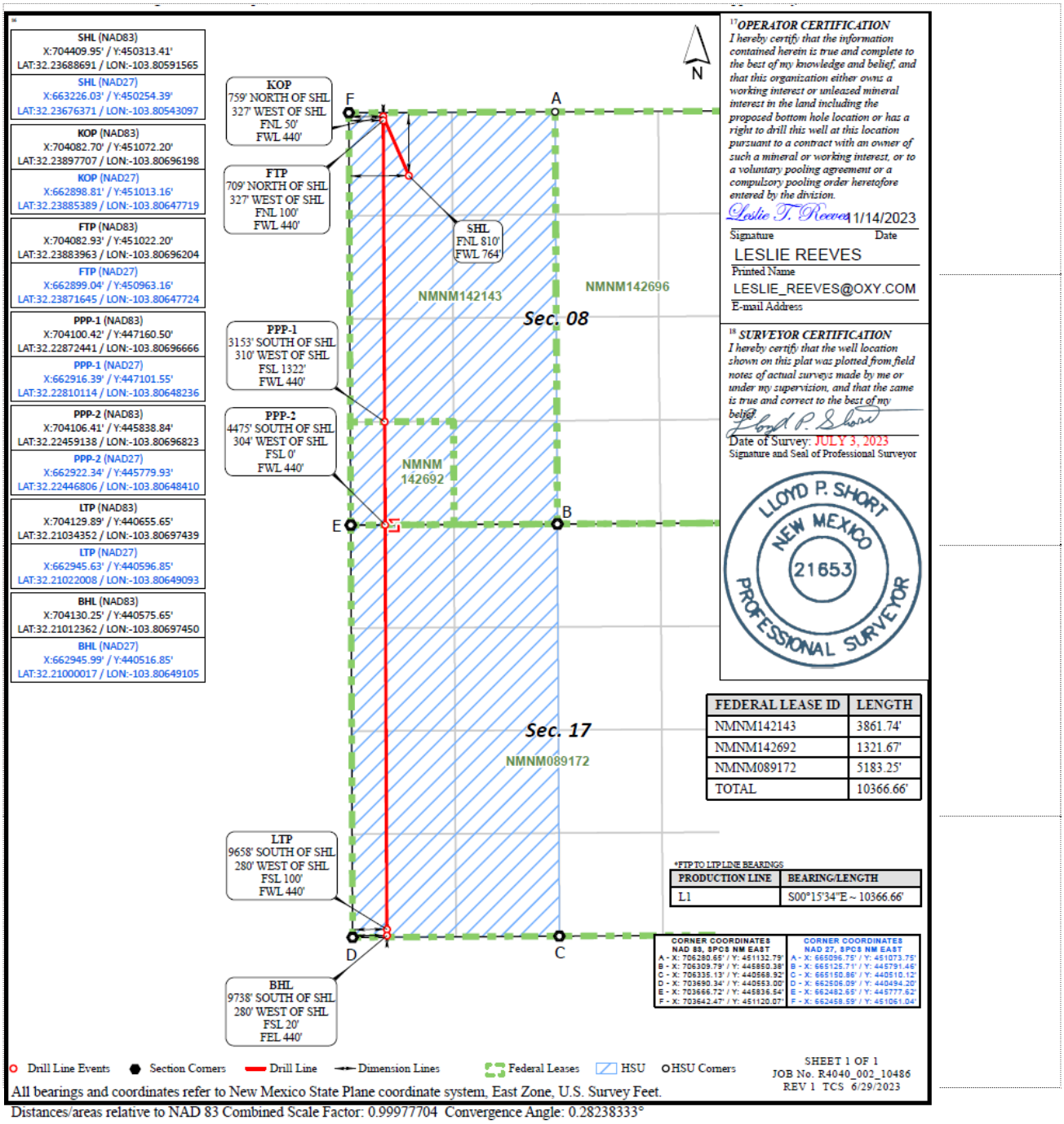
Date of Survey July 3, 2023

Note: 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.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: OXY USA INC. **OGRID:** 16696 **Date:** 12/14/22

II. Type: ☑ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
SEE ATTACHED						

IV. Central Delivery Point Name: Sand Dunes South Corridor 18 CTB [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
SEE ATTACHED						

VI. Separation Equipment: ☑ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☑ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☑ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☑ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☑ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Leslie T. Reeves
Printed Name:	LESLIE REEVES
Title:	REGULATORY MANAGER
E-mail Address:	LESLIE_REEVES@OXY.COM
Date:	12/14/2022
Phone:	713-497-2492

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

III. Well(s)

Well Name	API	WELL LOCATION (ULSTR)	Footages	ANTICIPATED OIL BBL/D	ANTICIPATED GAS MCF/D	ANTICIPATED PROD WATER BBL/D
CHUCK SMITH MDP1 8_17 FED COM 1H	PENDING	C-8-T24S-R31E	361' FNL 2535' FWL	2000	4500	3900
CHUCK SMITH MDP1 8_17 FED COM 2H	PENDING	C-8-T24S-R31E	361' FNL 2565' FWL	2000	4500	3900
CHUCK SMITH MDP1 8_17 FED COM 3H	PENDING	C-8-T24S-R31E	361' FNL 2595' FWL	2000	4500	3900
CHUCK SMITH MDP1 8_17 FED COM 4H	PENDING	B-8-T24S-R31E	731' FNL 1335' FEL	2000	4500	3900
CHUCK SMITH MDP1 8_17 FED COM 5H	PENDING	B-8-T24S-R31E	701' FNL 1335' FEL	2000	4500	3900
CHUCK SMITH MDP1 8_17 FED COM 11H	PENDING	C-8-T24S-R31E	360' FNL 2445' FWL	1100	4600	3000
CHUCK SMITH MDP1 8_17 FED COM 12H	PENDING	C-8-T24S-R31E	360' FNL 2475' FWL	1100	4600	3000
CHUCK SMITH MDP1 8_17 FED COM 13H	PENDING	B-8-T24S-R31E	821' FNL 1335' FEL	1100	4600	3000
CHUCK SMITH MDP1 8_17 FED COM 14H	PENDING	B-8-T24S-R31E	791' FNL 1335' FEL	1100	4600	3000
CHUCK SMITH MDP1 8_17 FED COM 21H	PENDING	M-5-T24S-R31E	280' FSL 1305' FWL	1500	7300	2100
CHUCK SMITH MDP1 8_17 FED COM 22H	PENDING	N-5-T24S-R31E	280' FSL 1335' FWL	1500	7300	2100
CHUCK SMITH MDP1 8_17 FED COM 23H	PENDING	N-5-T24S-R31E	280' FSL 1365' FWL	1500	7300	2100
CHUCK SMITH MDP1 8_17 FED COM 24H	PENDING	O-5-T24S-R31E	279' FSL 1550' FEL	1500	7300	2100
CHUCK SMITH MDP1 8_17 FED COM 25H	PENDING	O-5-T24S-R31E	279' FSL 1520' FEL	1500	7300	2100
CHUCK SMITH MDP1 8_17 FED COM 26H	PENDING	O-5-T24S-R31E	279'FSL 1490'FEL	1500	7300	2100
CHUCK SMITH MDP1 8_17 FED COM 31H	PENDING	M-5-T24S-R31E	280' FSL 1215' FWL	2100	4700	2400
CHUCK SMITH MDP1 8_17 FED COM 32H	PENDING	M-5-T24S-R31E	280' FSL 1245' FWL	2100	4700	2400
CHUCK SMITH MDP1 8_17 FED COM 33H	PENDING	O-5-T24S-R31E	280' FSL 1760' FEL	2100	4700	2400
CHUCK SMITH MDP1 8_17 FED COM 34H	PENDING	O-5-T24S-R31E	280' FSL 1730' FEL	2100	4700	2400
CHUCK SMITH MDP1 8_17 FED COM 41H	PENDING	C-8-T24S-R31E	360' FNL 2325' FWL	800	7800	3900
CHUCK SMITH MDP1 8_17 FED COM 42H	PENDING	C-8-T24S-R31E	360' FNL 2355' FWL	800	7800	3900
CHUCK SMITH MDP1 8_17 FED COM 43H	PENDING	C-8-T24S-R31E	360' FNL 2385' FWL	800	7800	3900
CHUCK SMITH MDP1 8_17 FED COM 44H	PENDING	O-5-T24S-R31E	279' FSL 1670' FEL	800	7800	3900
CHUCK SMITH MDP1 8_17 FED COM 45H	PENDING	O-5-T24S-R31E	279' FSL 1640' FEL	800	7800	3900
CHUCK SMITH MDP1 8_17 FED COM 46H	PENDING	O-5-T24S-R31E	279' FSL 1610' FEL	800	7800	3900

V. Anticipated Schedule

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
CHUCK SMITH MDP1 8_17 FED COM 1H	PENDING	7/15/2023	10/1/2023	10/27/2023	11/6/2023	11/7/2023
CHUCK SMITH MDP1 8_17 FED COM 2H	PENDING	7/16/2023	9/7/2023	10/27/2023	11/6/2023	11/7/2023
CHUCK SMITH MDP1 8_17 FED COM 3H	PENDING	7/17/2023	9/19/2023	10/27/2023	11/6/2023	11/7/2023
CHUCK SMITH MDP1 8_17 FED COM 4H	PENDING	7/18/2023	10/2/2023	10/25/2023	11/2/2023	11/3/2023
CHUCK SMITH MDP1 8_17 FED COM 5H	PENDING	7/19/2023	10/14/2023	10/25/2023	11/2/2023	11/3/2023
CHUCK SMITH MDP1 8_17 FED COM 11H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 12H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 13H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 14H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 21H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 22H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 23H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 24H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 25H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 26H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 31H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 32H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 33H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 34H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 41H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 42H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 43H	PENDING	TBD	TBD	TBD	TBD	TBD
CHUCK SMITH MDP1 8_17 FED COM 44H	PENDING	10/1/2023	12/16/2023	1/31/2024	2/10/2024	2/11/2024
CHUCK SMITH MDP1 8_17 FED COM 45H	PENDING	10/2/2023	1/15/2024	1/31/2024	2/10/2024	2/11/2024
CHUCK SMITH MDP1 8_17 FED COM 46H	PENDING	10/3/2023	12/31/2023	1/31/2024	2/10/2024	2/11/2024

Part VI. Separation Equipment

Operator will size the flowback separator to handle 11,000 Bbls of fluid and 6-10MMscfd which is more than the expected peak rates for these wells. Each separator is rated to 1440psig, and pressure control valves and automated communication will cause the wells to shut in in the event of an upset at the facility, therefore no gas will be flared on pad during an upset. Current Oxy practices avoid use of flare or venting on pad, therefore if there is an upset or emergency condition at the facility, the wells will immediately shut down, and reassume production once the condition has cleared.

VII. Operational Practices

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, where a gas transporter system is in place. The gas produced from production facility is dedicated to Enterprise Field Services, LLC ("Enterprise") and is connected to Enterprise low/high pressure gathering system located in Eddy County, New Mexico. OXY USA INC. ("OXY") provides (periodically) to Enterprise a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, OXY and Enterprise have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Enterprise's Processing Plant located in Sec. 36, Twn. 24S, Rng. 30E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Enterprise system at that time. Based on current information, it is OXY's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

VIII. Best Management Practices

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease

  Only a portion of gas is consumed operating the generator, remainder of gas will be flared

- Compressed Natural Gas – On lease

  Gas flared would be minimal, but might be uneconomical to operate when gas volume declines

- NGL Removal – On lease

  Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

Oxy USA Inc. - Chuck Smith MDP1 8_17 Fed Com 41H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	12541	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	23358	Deepest Expected Fresh Water (ft):	606

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	606	606	
Salado	969	969	Salt
Castile	2833	2833	Salt
Delaware	4228	4228	Oil/Gas/Brine
Bell Canyon	4250	4250	Oil/Gas/Brine
Cherry Canyon	5209	5208	Oil/Gas/Brine
Brushy Canyon	6457	6430	Losses
Bone Spring	8191	8097	Oil/Gas
Bone Spring 1st	9264	9129	Oil/Gas
Bone Spring 2nd	9951	9789	Oil/Gas
Bone Spring 3rd	11248	11036	Oil/Gas
Wolfcamp	11718	11488	Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

		MD		TVD					
Section	Hole Size (in)	From (ft)	To (ft)	From (ft)	To (ft)	Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
Surface	17.5	0	909	0	909	13.375	54.5	J-55	BTC
Intermediate	12.25	0	12055	0	11808	9.625	40	L-80 HC	BTC
Production	8.75	0	12605	0	12225	7	32	P-110	DQX
Production	8.5	12605	23358	12225	12541	5.5	20	P-110	Wedge 461

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

*Oxy requests the option to run production casing with DQX, TORQ DQW, Wedge 425, Wedge 461, and/or Wedge 441 connections to accommodate hole conditions or drilling operations.

All Casing SF Values will meet or exceed those below			
SF Collapse	**SF Burst**	**Body SF Tension**	**Joint SF Tension**
1.125	1.2	1.4	1.4

Annular Clearance Variance Request

As per the agreement reached in the Oxy/BLM face-to-face meeting on Feb 22, 2018, Oxy requests permission to allow deviation from the 0.422" annular clearance requirement from Onshore Order #2 under the following conditions:

1. Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500' overlap between both casings.
2. Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

	Y or N
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.	Y
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 well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) 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?	

3. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft^3/ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	950	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	1066	1.65	13.2	5%	6,707	Circulate	Class H+Accel., Disper., Salt
Int.	2	Intermediate 2S - Tail BH	1520	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	2593	1.38	13.2	25%	11,555	Circulate	Class H+Ret., Disper., Salt

Offline Cementing

Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

The summarized operational sequence will be as follows:
Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).
Land casing.
Fill pipe with kill weight fluid, and confirm well is static.
If well Oxy requests a variance to cement the 9.625" and/or 7.625" intermediate casing strings offline in accordance to the approved variance, EC Tran 461365.

The summarized operational sequence will be as follows:

1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe).
2. Land casing.
3. Fill pipe with kill weight fluid, and confirm well is static.
   a. If well is not static notify BLM and kill well.
   b. Once well is static notify BLM with intent to proceed with nipple down and offline cementing.
4. Set and pressure test annular packoff.
5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange. If any barrier fails to test, the BOP stack will not be nippled down until after the cement job is completed.
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange.
8. If well is not static notify BLM and kill well prior to cementing or nippling up for further remediation.
9. Install offline cement tool.
10. Rig up cement equipment.
    a. Notify BLM prior to cement job.
11. Perform cement job.
12. Confirm well is static and floats are holding after cement job.
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8" intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

Three string wells:

- CBL will be required on one well per pad
- If the pumped volume of cement is less than permitted in the APD, BLM will be notified and a CBL may be run
- Echometer will be used after bradenhead cement job to determine TOC before pumping top-out cement

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:	Deepest TVD Depth (ft) per Section:
12.25" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	11808
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
8.75" Hole	13-5/8"	5M	Annular	✓	100% of working pressure	12541
		10M	Blind Ram	✓	250 psi / 10000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			

*Specify if additional ram is utilized

Per BLM's Memorandum No. NM-2017-008: *Decision and Rationale for a Variance Allowing the Use of a 5M Annular Preventer with a 10M BOP Stack*, Oxy requests to employ a 5M annular with a 10M BOPE stack in the pilot and lateral sections of the well and will ensure that two barriers to flow are maintained at all times. Please see attached Well Control Plan.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table 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 and floor safety valve (inside BOP) and choke lines and choke manifold.

	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 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.	
	Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. 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. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.	

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

BOP break test under the following conditions:
- After a full BOP test is conducted
- When skidding to drill an intermediate section where ICP is set into the third Bone Spring or shallower.

If the kill line is broken prior to skid, two tests will be performed.
1) Wellhead flange, co-flex hose, kill line connections and upper pipe rams
2) Wellhead flange, HCR valve, check valve, upper pipe rams

If the kill line is not broken prior to skid, only one test will be performed.
1)Wellhead flange, co-flex hose, check valve, upper pipe rams

Oxy will use Cameron ADAPT wellhead system that uses an OEC top flange connection. This connection has been fully vetted and verified by API to Spec 6A and carries an API monogram.

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	909	0	909	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	909	12055	909	11808	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	12055	23358	11808	12541	Water-Based or Oil-Based Mud	9.5 - 13.5	38-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole).
	Stated logs run will be in the Completion Report and submitted to the BLM.
No	Logs are planned based on well control or offset log information.
No	Drill stem test? If yes, explain
No	Coring? If yes, explain

Additional logs planned		Interval
No	Resistivity	
No	Density	
Yes	CBL	Production string
Yes	Mud log	Bone Spring – TD
No	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	8804 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	181°F

Pump high viscosity sweeps as needed for hole cleaning. 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. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 3 well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

Total Estimated Cuttings Volume: 1827 bbls

Attachments
_x__ Directional Plan
_x__ H2S Contingency Plan
_x__ Flex III Attachments
_x__ Spudder Rig Attachment
_x__ Premium Connection Specs

9. Company Personnel

Name	Title	Office Phone	Mobile Phone
Garrett Granier	Drilling Engineer	713-513-6633	832-265-0581
Derek Adam	Drilling Engineer Supervisor	713-366-5170	916-802-8873
Casey Martin	Drilling Superintendent	713-497-2530	337-764-4278
Kevin Threadgill	Drilling Manager	713-366-5958	361-815-0788

OXY USA Inc
APD ATTACHMENT: SPUDDER RIG DATA

OPERATOR NAME / NUMBER: OXY USA Inc

1. SUMMARY OF REQUEST:

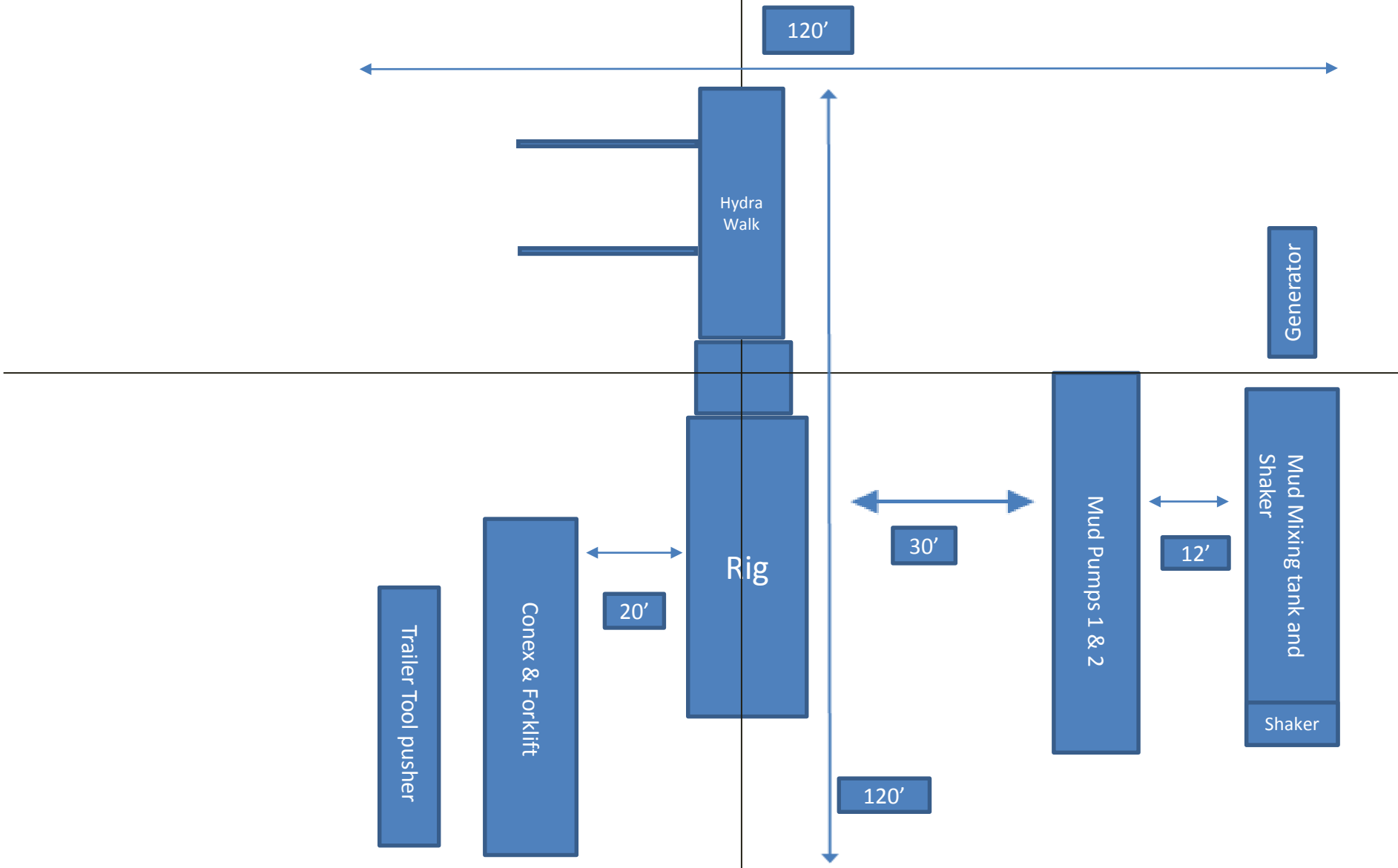
Oxy USA respectfully requests approval for the following operations for the surface hole in the drill plan:

1. Utilize a spudder rig to pre-set surface casing for time and cost savings.

2. Description of Operations

1. Spudder rig will move in to drill the surface hole and pre-set surface casing on the well.
    a. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. The spudder rig will utilize fresh water-based mud to drill the surface hole to TD. Solids control will be handled entirely on a closed loop basis. No earth pits will be used.
2. The wellhead will be installed and tested as soon as the surface casing is cut off and the WOC time has been reached.
3. A blind flange at the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. Spudder rig operations are expected to take 2-3 days per well on the pad.
5. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
6. Drilling operations will begin with a larger rig and a BOP stack equal to or greater than the pressure rating that was permitted will be nippled up and tested on the wellhead before drilling operations resume on each well.
    a. The larger rig will move back onto the location within 90 days from the point at which the wells are secured and the spudder rig is moved off location.
    b. The BLM will be contacted / notified 24 hours before the larger rig moves back on the pre-set locations.
7. Oxy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
8. Once the rig is removed, Oxy will secure the wellhead area by placing a guard rail around the cellar area.

Spudder Rig Layout



PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Chuck Smith MDP1 8_17
Well: Chuck Smith MDP1 8_17 Fed Com 41H
Wellbore: Wellbore #1
Design: Permitting Plan

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

System Datum: Mean Sea Level

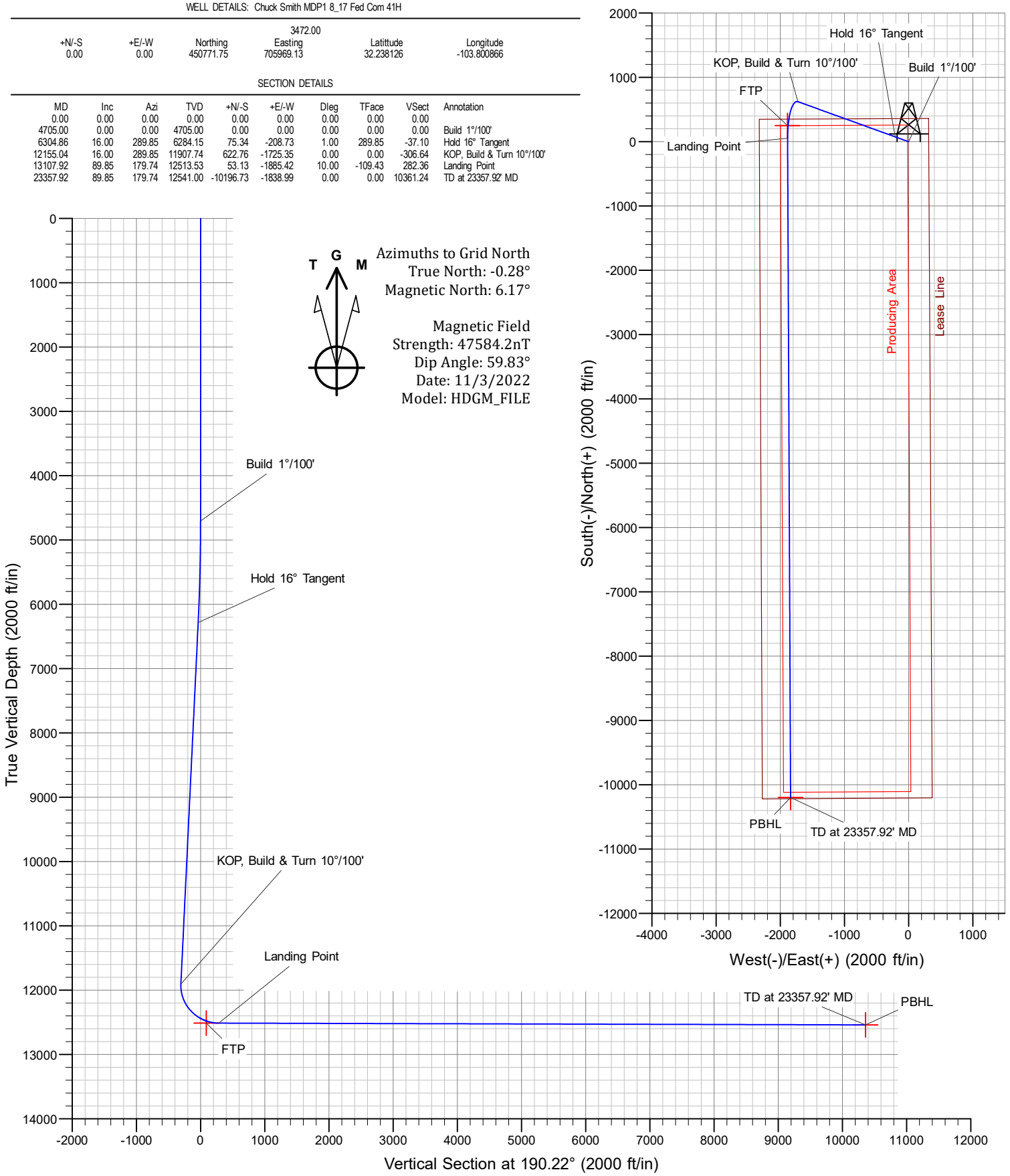
WELL DETAILS: Chuck Smith MDP1 8_17 Fed Com 41H

3472.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	450771.75	705969.13	32.238126	-103.800866

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4705.00	0.00	0.00	4705.00	0.00	0.00	0.00	0.00	0.00	Build 1°/100'
6304.86	16.00	289.85	6284.15	75.34	-208.73	1.00	289.85	-37.10	Hold 16° Tangent
12155.04	16.00	289.85	11907.74	622.76	-1725.35	0.00	0.00	-306.64	KOP, Build & Turn 10°/100'
13107.92	89.85	179.74	12513.53	53.13	-1885.42	10.00	-109.43	282.36	Landing Point
23357.92	89.85	179.74	12541.00	-10196.73	-1838.99	0.00	0.00	10361.24	TD at 23357.92' MD



T G M

Azimuths to Grid North
True North: -0.28°
Magnetic North: 6.17°

Magnetic Field
Strength: 47584.2nT
Dip Angle: 59.83°
Date: 11/3/2022
Model: HDGM_FILE

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)
Chuck Smith MDP1 8_17
Chuck Smith MDP1 8_17 Fed Com 41H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

03 November, 2022

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3497.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Project PRD NM DIRECTIONAL PLANS (NAD 1983)

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

Site Chuck Smith MDP1 8_17

Site Position:		**Northing:**	450,665.22 usft	**Latitude:**	32.237835
From:	Map	**Easting:**	705,784.47 usft	**Longitude:**	-103.801465
Position Uncertainty:	0.89 ft	**Slot Radius:**	13.200 in		

Well Chuck Smith MDP1 8_17 Fed Com 41H

Well Position	**+N/-S**	0.00 ft	**Northing:**	450,771.75 usf	**Latitude:**	32.238126
	+E/-W	0.00 ft	**Easting:**	705,969.13 usf	**Longitude:**	-103.800866
Position Uncertainty		2.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,472.00 ft
Grid Convergence:		0.28 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	11/3/2022	6.45	59.83	47,584.20000000

Design Permitting Plan

Audit Notes:

Version:	**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	190.22

Plan Survey Tool Program **Date** 11/3/2022

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	23,357.73	Permitting Plan (Wellbore #1)	B001Mb_MWD+HRGM OWSG MWD + HRGM	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,705.00	0.00	0.00	4,705.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,304.86	16.00	289.85	6,284.15	75.34	-208.73	1.00	1.00	0.00	289.85	
12,155.04	16.00	289.85	11,907.74	622.76	-1,725.35	0.00	0.00	0.00	0.00	
13,107.92	89.85	179.74	12,513.53	53.13	-1,885.42	10.00	7.75	-11.56	-109.43	
23,357.92	89.85	179.74	12,541.00	-10,196.73	-1,838.99	0.00	0.00	0.00	0.00	PBHL (Chuck Smith

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3497.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,705.00	0.00	0.00	4,705.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.95	289.85	4,800.00	0.27	-0.74	-0.13	1.00	1.00	0.00
4,900.00	1.95	289.85	4,899.96	1.13	-3.12	-0.55	1.00	1.00	0.00
5,000.00	2.95	289.85	4,999.87	2.58	-7.14	-1.27	1.00	1.00	0.00
5,100.00	3.95	289.85	5,099.69	4.62	-12.80	-2.28	1.00	1.00	0.00
5,200.00	4.95	289.85	5,199.38	7.25	-20.10	-3.57	1.00	1.00	0.00
5,300.00	5.95	289.85	5,298.93	10.48	-29.03	-5.16	1.00	1.00	0.00

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3497.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	6.95	289.85	5,398.30	14.29	-39.60	-7.04	1.00	1.00	0.00
5,500.00	7.95	289.85	5,497.45	18.70	-51.80	-9.21	1.00	1.00	0.00
5,600.00	8.95	289.85	5,596.36	23.68	-65.62	-11.66	1.00	1.00	0.00
5,700.00	9.95	289.85	5,695.01	29.26	-81.06	-14.41	1.00	1.00	0.00
5,800.00	10.95	289.85	5,793.35	35.42	-98.12	-17.44	1.00	1.00	0.00
5,900.00	11.95	289.85	5,891.36	42.16	-116.79	-20.76	1.00	1.00	0.00
6,000.00	12.95	289.85	5,989.00	49.47	-137.07	-24.36	1.00	1.00	0.00
6,100.00	13.95	289.85	6,086.26	57.37	-158.95	-28.25	1.00	1.00	0.00
6,200.00	14.95	289.85	6,183.09	65.84	-182.42	-32.42	1.00	1.00	0.00
6,300.00	15.95	289.85	6,279.48	74.89	-207.48	-36.87	1.00	1.00	0.00
6,304.86	16.00	289.85	6,284.15	75.34	-208.73	-37.10	1.00	1.00	0.00
6,400.00	16.00	289.85	6,375.61	84.24	-233.40	-41.48	0.00	0.00	0.00
6,500.00	16.00	289.85	6,471.73	93.60	-259.32	-46.09	0.00	0.00	0.00
6,600.00	16.00	289.85	6,567.86	102.96	-285.25	-50.70	0.00	0.00	0.00
6,700.00	16.00	289.85	6,663.99	112.32	-311.17	-55.30	0.00	0.00	0.00
6,800.00	16.00	289.85	6,760.11	121.67	-337.10	-59.91	0.00	0.00	0.00
6,900.00	16.00	289.85	6,856.24	131.03	-363.02	-64.52	0.00	0.00	0.00
7,000.00	16.00	289.85	6,952.37	140.39	-388.94	-69.13	0.00	0.00	0.00
7,100.00	16.00	289.85	7,048.49	149.74	-414.87	-73.73	0.00	0.00	0.00
7,200.00	16.00	289.85	7,144.62	159.10	-440.79	-78.34	0.00	0.00	0.00
7,300.00	16.00	289.85	7,240.75	168.46	-466.72	-82.95	0.00	0.00	0.00
7,400.00	16.00	289.85	7,336.88	177.82	-492.64	-87.56	0.00	0.00	0.00
7,500.00	16.00	289.85	7,433.00	187.17	-518.57	-92.16	0.00	0.00	0.00
7,600.00	16.00	289.85	7,529.13	196.53	-544.49	-96.77	0.00	0.00	0.00
7,700.00	16.00	289.85	7,625.26	205.89	-570.41	-101.38	0.00	0.00	0.00
7,800.00	16.00	289.85	7,721.38	215.25	-596.34	-105.98	0.00	0.00	0.00
7,900.00	16.00	289.85	7,817.51	224.60	-622.26	-110.59	0.00	0.00	0.00
8,000.00	16.00	289.85	7,913.64	233.96	-648.19	-115.20	0.00	0.00	0.00
8,100.00	16.00	289.85	8,009.76	243.32	-674.11	-119.81	0.00	0.00	0.00
8,200.00	16.00	289.85	8,105.89	252.67	-700.04	-124.41	0.00	0.00	0.00
8,300.00	16.00	289.85	8,202.02	262.03	-725.96	-129.02	0.00	0.00	0.00
8,400.00	16.00	289.85	8,298.14	271.39	-751.88	-133.63	0.00	0.00	0.00
8,500.00	16.00	289.85	8,394.27	280.75	-777.81	-138.24	0.00	0.00	0.00
8,600.00	16.00	289.85	8,490.40	290.10	-803.73	-142.84	0.00	0.00	0.00
8,700.00	16.00	289.85	8,586.52	299.46	-829.66	-147.45	0.00	0.00	0.00
8,800.00	16.00	289.85	8,682.65	308.82	-855.58	-152.06	0.00	0.00	0.00
8,900.00	16.00	289.85	8,778.78	318.17	-881.51	-156.67	0.00	0.00	0.00
9,000.00	16.00	289.85	8,874.90	327.53	-907.43	-161.27	0.00	0.00	0.00
9,100.00	16.00	289.85	8,971.03	336.89	-933.35	-165.88	0.00	0.00	0.00
9,200.00	16.00	289.85	9,067.16	346.25	-959.28	-170.49	0.00	0.00	0.00
9,300.00	16.00	289.85	9,163.29	355.60	-985.20	-175.10	0.00	0.00	0.00
9,400.00	16.00	289.85	9,259.41	364.96	-1,011.13	-179.70	0.00	0.00	0.00
9,500.00	16.00	289.85	9,355.54	374.32	-1,037.05	-184.31	0.00	0.00	0.00
9,600.00	16.00	289.85	9,451.67	383.68	-1,062.98	-188.92	0.00	0.00	0.00
9,700.00	16.00	289.85	9,547.79	393.03	-1,088.90	-193.53	0.00	0.00	0.00
9,800.00	16.00	289.85	9,643.92	402.39	-1,114.82	-198.13	0.00	0.00	0.00
9,900.00	16.00	289.85	9,740.05	411.75	-1,140.75	-202.74	0.00	0.00	0.00
10,000.00	16.00	289.85	9,836.17	421.10	-1,166.67	-207.35	0.00	0.00	0.00
10,100.00	16.00	289.85	9,932.30	430.46	-1,192.60	-211.96	0.00	0.00	0.00
10,200.00	16.00	289.85	10,028.43	439.82	-1,218.52	-216.56	0.00	0.00	0.00
10,300.00	16.00	289.85	10,124.55	449.18	-1,244.45	-221.17	0.00	0.00	0.00
10,400.00	16.00	289.85	10,220.68	458.53	-1,270.37	-225.78	0.00	0.00	0.00
10,500.00	16.00	289.85	10,316.81	467.89	-1,296.29	-230.38	0.00	0.00	0.00
10,600.00	16.00	289.85	10,412.93	477.25	-1,322.22	-234.99	0.00	0.00	0.00
10,700.00	16.00	289.85	10,509.06	486.60	-1,348.14	-239.60	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3497.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,800.00	16.00	289.85	10,605.19	495.96	-1,374.07	-244.21	0.00	0.00	0.00
10,900.00	16.00	289.85	10,701.32	505.32	-1,399.99	-248.81	0.00	0.00	0.00
11,000.00	16.00	289.85	10,797.44	514.68	-1,425.92	-253.42	0.00	0.00	0.00
11,100.00	16.00	289.85	10,893.57	524.03	-1,451.84	-258.03	0.00	0.00	0.00
11,200.00	16.00	289.85	10,989.70	533.39	-1,477.76	-262.64	0.00	0.00	0.00
11,300.00	16.00	289.85	11,085.82	542.75	-1,503.69	-267.24	0.00	0.00	0.00
11,400.00	16.00	289.85	11,181.95	552.11	-1,529.61	-271.85	0.00	0.00	0.00
11,500.00	16.00	289.85	11,278.08	561.46	-1,555.54	-276.46	0.00	0.00	0.00
11,600.00	16.00	289.85	11,374.20	570.82	-1,581.46	-281.07	0.00	0.00	0.00
11,700.00	16.00	289.85	11,470.33	580.18	-1,607.39	-285.67	0.00	0.00	0.00
11,800.00	16.00	289.85	11,566.46	589.53	-1,633.31	-290.28	0.00	0.00	0.00
11,900.00	16.00	289.85	11,662.58	598.89	-1,659.23	-294.89	0.00	0.00	0.00
12,000.00	16.00	289.85	11,758.71	608.25	-1,685.16	-299.50	0.00	0.00	0.00
12,100.00	16.00	289.85	11,854.84	617.61	-1,711.08	-304.10	0.00	0.00	0.00
12,155.04	16.00	289.85	11,907.74	622.76	-1,725.35	-306.64	0.00	0.00	0.00
12,200.00	15.09	273.35	11,951.08	625.20	-1,737.03	-306.97	10.00	-2.01	-36.68
12,300.00	17.52	238.20	12,047.28	618.02	-1,762.89	-295.31	10.00	2.43	-35.15
12,400.00	24.11	216.67	12,140.84	593.64	-1,787.94	-266.88	10.00	6.59	-21.53
12,500.00	32.42	204.78	12,228.91	552.82	-1,811.43	-222.53	10.00	8.31	-11.89
12,600.00	41.42	197.47	12,308.81	496.78	-1,832.65	-163.62	10.00	9.00	-7.31
12,700.00	50.74	192.41	12,378.13	427.25	-1,850.94	-91.95	10.00	9.32	-5.06
12,800.00	60.22	188.56	12,434.75	346.32	-1,865.76	-9.67	10.00	9.49	-3.85
12,900.00	69.80	185.38	12,476.95	256.46	-1,876.64	80.69	10.00	9.58	-3.18
13,000.00	79.43	182.58	12,503.46	160.40	-1,883.27	176.41	10.00	9.63	-2.80
13,100.00	89.08	179.95	12,513.46	61.05	-1,885.44	274.56	10.00	9.65	-2.63
13,107.92	89.85	179.74	12,513.53	53.13	-1,885.42	282.36	10.00	9.66	-2.60
13,200.00	89.85	179.74	12,513.78	-38.95	-1,885.01	372.90	0.00	0.00	0.00
13,300.00	89.85	179.74	12,514.04	-138.95	-1,884.55	471.23	0.00	0.00	0.00
13,400.00	89.85	179.74	12,514.31	-238.95	-1,884.10	569.56	0.00	0.00	0.00
13,500.00	89.85	179.74	12,514.58	-338.95	-1,883.65	667.89	0.00	0.00	0.00
13,600.00	89.85	179.74	12,514.85	-438.94	-1,883.19	766.22	0.00	0.00	0.00
13,700.00	89.85	179.74	12,515.12	-538.94	-1,882.74	864.55	0.00	0.00	0.00
13,800.00	89.85	179.74	12,515.38	-638.94	-1,882.29	962.88	0.00	0.00	0.00
13,900.00	89.85	179.74	12,515.65	-738.94	-1,881.84	1,061.21	0.00	0.00	0.00
14,000.00	89.85	179.74	12,515.92	-838.94	-1,881.38	1,159.54	0.00	0.00	0.00
14,100.00	89.85	179.74	12,516.19	-938.94	-1,880.93	1,257.87	0.00	0.00	0.00
14,200.00	89.85	179.74	12,516.46	-1,038.94	-1,880.48	1,356.20	0.00	0.00	0.00
14,300.00	89.85	179.74	12,516.72	-1,138.94	-1,880.02	1,454.53	0.00	0.00	0.00
14,400.00	89.85	179.74	12,516.99	-1,238.93	-1,879.57	1,552.86	0.00	0.00	0.00
14,500.00	89.85	179.74	12,517.26	-1,338.93	-1,879.12	1,651.19	0.00	0.00	0.00
14,600.00	89.85	179.74	12,517.53	-1,438.93	-1,878.66	1,749.53	0.00	0.00	0.00
14,700.00	89.85	179.74	12,517.80	-1,538.93	-1,878.21	1,847.86	0.00	0.00	0.00
14,800.00	89.85	179.74	12,518.06	-1,638.93	-1,877.76	1,946.19	0.00	0.00	0.00
14,900.00	89.85	179.74	12,518.33	-1,738.93	-1,877.31	2,044.52	0.00	0.00	0.00
15,000.00	89.85	179.74	12,518.60	-1,838.93	-1,876.85	2,142.85	0.00	0.00	0.00
15,100.00	89.85	179.74	12,518.87	-1,938.92	-1,876.40	2,241.18	0.00	0.00	0.00
15,200.00	89.85	179.74	12,519.14	-2,038.92	-1,875.95	2,339.51	0.00	0.00	0.00
15,300.00	89.85	179.74	12,519.40	-2,138.92	-1,875.49	2,437.84	0.00	0.00	0.00
15,400.00	89.85	179.74	12,519.67	-2,238.92	-1,875.04	2,536.17	0.00	0.00	0.00
15,500.00	89.85	179.74	12,519.94	-2,338.92	-1,874.59	2,634.50	0.00	0.00	0.00
15,600.00	89.85	179.74	12,520.21	-2,438.92	-1,874.13	2,732.83	0.00	0.00	0.00
15,700.00	89.85	179.74	12,520.48	-2,538.92	-1,873.68	2,831.16	0.00	0.00	0.00
15,800.00	89.85	179.74	12,520.74	-2,638.91	-1,873.23	2,929.49	0.00	0.00	0.00
15,900.00	89.85	179.74	12,521.01	-2,738.91	-1,872.78	3,027.82	0.00	0.00	0.00
16,000.00	89.85	179.74	12,521.28	-2,838.91	-1,872.32	3,126.15	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3497.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,100.00	89.85	179.74	12,521.55	-2,938.91	-1,871.87	3,224.48	0.00	0.00	0.00
16,200.00	89.85	179.74	12,521.82	-3,038.91	-1,871.42	3,322.81	0.00	0.00	0.00
16,300.00	89.85	179.74	12,522.08	-3,138.91	-1,870.96	3,421.14	0.00	0.00	0.00
16,400.00	89.85	179.74	12,522.35	-3,238.91	-1,870.51	3,519.47	0.00	0.00	0.00
16,500.00	89.85	179.74	12,522.62	-3,338.90	-1,870.06	3,617.81	0.00	0.00	0.00
16,600.00	89.85	179.74	12,522.89	-3,438.90	-1,869.60	3,716.14	0.00	0.00	0.00
16,700.00	89.85	179.74	12,523.16	-3,538.90	-1,869.15	3,814.47	0.00	0.00	0.00
16,800.00	89.85	179.74	12,523.42	-3,638.90	-1,868.70	3,912.80	0.00	0.00	0.00
16,900.00	89.85	179.74	12,523.69	-3,738.90	-1,868.25	4,011.13	0.00	0.00	0.00
17,000.00	89.85	179.74	12,523.96	-3,838.90	-1,867.79	4,109.46	0.00	0.00	0.00
17,100.00	89.85	179.74	12,524.23	-3,938.90	-1,867.34	4,207.79	0.00	0.00	0.00
17,200.00	89.85	179.74	12,524.50	-4,038.89	-1,866.89	4,306.12	0.00	0.00	0.00
17,300.00	89.85	179.74	12,524.76	-4,138.89	-1,866.43	4,404.45	0.00	0.00	0.00
17,400.00	89.85	179.74	12,525.03	-4,238.89	-1,865.98	4,502.78	0.00	0.00	0.00
17,500.00	89.85	179.74	12,525.30	-4,338.89	-1,865.53	4,601.11	0.00	0.00	0.00
17,600.00	89.85	179.74	12,525.57	-4,438.89	-1,865.08	4,699.44	0.00	0.00	0.00
17,700.00	89.85	179.74	12,525.84	-4,538.89	-1,864.62	4,797.77	0.00	0.00	0.00
17,800.00	89.85	179.74	12,526.10	-4,638.89	-1,864.17	4,896.10	0.00	0.00	0.00
17,900.00	89.85	179.74	12,526.37	-4,738.89	-1,863.72	4,994.43	0.00	0.00	0.00
18,000.00	89.85	179.74	12,526.64	-4,838.88	-1,863.26	5,092.76	0.00	0.00	0.00
18,100.00	89.85	179.74	12,526.91	-4,938.88	-1,862.81	5,191.09	0.00	0.00	0.00
18,200.00	89.85	179.74	12,527.18	-5,038.88	-1,862.36	5,289.42	0.00	0.00	0.00
18,300.00	89.85	179.74	12,527.44	-5,138.88	-1,861.90	5,387.76	0.00	0.00	0.00
18,400.00	89.85	179.74	12,527.71	-5,238.88	-1,861.45	5,486.09	0.00	0.00	0.00
18,500.00	89.85	179.74	12,527.98	-5,338.88	-1,861.00	5,584.42	0.00	0.00	0.00
18,600.00	89.85	179.74	12,528.25	-5,438.88	-1,860.55	5,682.75	0.00	0.00	0.00
18,700.00	89.85	179.74	12,528.52	-5,538.87	-1,860.09	5,781.08	0.00	0.00	0.00
18,800.00	89.85	179.74	12,528.78	-5,638.87	-1,859.64	5,879.41	0.00	0.00	0.00
18,900.00	89.85	179.74	12,529.05	-5,738.87	-1,859.19	5,977.74	0.00	0.00	0.00
19,000.00	89.85	179.74	12,529.32	-5,838.87	-1,858.73	6,076.07	0.00	0.00	0.00
19,100.00	89.85	179.74	12,529.59	-5,938.87	-1,858.28	6,174.40	0.00	0.00	0.00
19,200.00	89.85	179.74	12,529.86	-6,038.87	-1,857.83	6,272.73	0.00	0.00	0.00
19,300.00	89.85	179.74	12,530.12	-6,138.87	-1,857.37	6,371.06	0.00	0.00	0.00
19,400.00	89.85	179.74	12,530.39	-6,238.86	-1,856.92	6,469.39	0.00	0.00	0.00
19,500.00	89.85	179.74	12,530.66	-6,338.86	-1,856.47	6,567.72	0.00	0.00	0.00
19,600.00	89.85	179.74	12,530.93	-6,438.86	-1,856.02	6,666.05	0.00	0.00	0.00
19,700.00	89.85	179.74	12,531.20	-6,538.86	-1,855.56	6,764.38	0.00	0.00	0.00
19,800.00	89.85	179.74	12,531.46	-6,638.86	-1,855.11	6,862.71	0.00	0.00	0.00
19,900.00	89.85	179.74	12,531.73	-6,738.86	-1,854.66	6,961.04	0.00	0.00	0.00
20,000.00	89.85	179.74	12,532.00	-6,838.86	-1,854.20	7,059.37	0.00	0.00	0.00
20,100.00	89.85	179.74	12,532.27	-6,938.85	-1,853.75	7,157.70	0.00	0.00	0.00
20,200.00	89.85	179.74	12,532.54	-7,038.85	-1,853.30	7,256.04	0.00	0.00	0.00
20,300.00	89.85	179.74	12,532.80	-7,138.85	-1,852.85	7,354.37	0.00	0.00	0.00
20,400.00	89.85	179.74	12,533.07	-7,238.85	-1,852.39	7,452.70	0.00	0.00	0.00
20,500.00	89.85	179.74	12,533.34	-7,338.85	-1,851.94	7,551.03	0.00	0.00	0.00
20,600.00	89.85	179.74	12,533.61	-7,438.85	-1,851.49	7,649.36	0.00	0.00	0.00
20,700.00	89.85	179.74	12,533.88	-7,538.85	-1,851.03	7,747.69	0.00	0.00	0.00
20,800.00	89.85	179.74	12,534.14	-7,638.85	-1,850.58	7,846.02	0.00	0.00	0.00
20,900.00	89.85	179.74	12,534.41	-7,738.84	-1,850.13	7,944.35	0.00	0.00	0.00
21,000.00	89.85	179.74	12,534.68	-7,838.84	-1,849.67	8,042.68	0.00	0.00	0.00
21,100.00	89.85	179.74	12,534.95	-7,938.84	-1,849.22	8,141.01	0.00	0.00	0.00
21,200.00	89.85	179.74	12,535.22	-8,038.84	-1,848.77	8,239.34	0.00	0.00	0.00
21,300.00	89.85	179.74	12,535.48	-8,138.84	-1,848.32	8,337.67	0.00	0.00	0.00
21,400.00	89.85	179.74	12,535.75	-8,238.84	-1,847.86	8,436.00	0.00	0.00	0.00
21,500.00	89.85	179.74	12,536.02	-8,338.84	-1,847.41	8,534.33	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 3497.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,600.00	89.85	179.74	12,536.29	-8,438.83	-1,846.96	8,632.66	0.00	0.00	0.00
21,700.00	89.85	179.74	12,536.56	-8,538.83	-1,846.50	8,730.99	0.00	0.00	0.00
21,800.00	89.85	179.74	12,536.82	-8,638.83	-1,846.05	8,829.32	0.00	0.00	0.00
21,900.00	89.85	179.74	12,537.09	-8,738.83	-1,845.60	8,927.65	0.00	0.00	0.00
22,000.00	89.85	179.74	12,537.36	-8,838.83	-1,845.14	9,025.99	0.00	0.00	0.00
22,100.00	89.85	179.74	12,537.63	-8,938.83	-1,844.69	9,124.32	0.00	0.00	0.00
22,200.00	89.85	179.74	12,537.90	-9,038.83	-1,844.24	9,222.65	0.00	0.00	0.00
22,300.00	89.85	179.74	12,538.16	-9,138.82	-1,843.79	9,320.98	0.00	0.00	0.00
22,400.00	89.85	179.74	12,538.43	-9,238.82	-1,843.33	9,419.31	0.00	0.00	0.00
22,500.00	89.85	179.74	12,538.70	-9,338.82	-1,842.88	9,517.64	0.00	0.00	0.00
22,600.00	89.85	179.74	12,538.97	-9,438.82	-1,842.43	9,615.97	0.00	0.00	0.00
22,700.00	89.85	179.74	12,539.24	-9,538.82	-1,841.97	9,714.30	0.00	0.00	0.00
22,800.00	89.85	179.74	12,539.50	-9,638.82	-1,841.52	9,812.63	0.00	0.00	0.00
22,900.00	89.85	179.74	12,539.77	-9,738.82	-1,841.07	9,910.96	0.00	0.00	0.00
23,000.00	89.85	179.74	12,540.04	-9,838.81	-1,840.62	10,009.29	0.00	0.00	0.00
23,100.00	89.85	179.74	12,540.31	-9,938.81	-1,840.16	10,107.62	0.00	0.00	0.00
23,200.00	89.85	179.74	12,540.58	-10,038.81	-1,839.71	10,205.95	0.00	0.00	0.00
23,300.00	89.85	179.74	12,540.85	-10,138.81	-1,839.26	10,304.28	0.00	0.00	0.00
23,357.92	89.85	179.74	12,541.00	-10,196.73	-1,838.99	10,361.24	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Chuck Smith - plan misses target center by 33.09ft at 12915.99ft MD (12482.27 TVD, 241.44 N, -1878.00 E) - Point	0.00	0.00	12,513.00	250.47	-1,886.32	451,022.20	704,082.93	32.238840	-103.806962
PBHL (Chuck Smith - plan hits target center - Point	0.00	0.00	12,541.00	-10,196.73	-1,838.99	440,575.65	704,130.25	32.210124	-103.806975

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
606.00	606.00	RUSTLER			
969.00	969.00	SALADO			
2,833.00	2,833.00	CASTILE			
4,228.00	4,228.00	DELAWARE			
4,250.00	4,250.00	BELL CANYON			
5,208.65	5,208.00	CHERRY CANYON			
6,456.59	6,430.00	BRUSHY CANYON			
8,190.75	8,097.00	BONE SPRING			
9,264.33	9,129.00	BONE SPRING 1ST			
9,950.93	9,789.00	BONE SPRING 2ND			
11,248.17	11,036.00	BONE SPRING 3RD			
11,718.38	11,488.00	WOLFCAMP			
11,899.39	11,662.00	WOLFCAMP A			

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Chuck Smith MDP1 8_17 Fed Com 41H
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Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 3497.00ft
Site:	Chuck Smith MDP1 8_17	**North Reference:**	Grid
Well:	Chuck Smith MDP1 8_17 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,705.00	4,705.00	0.00	0.00	Build 1°/100'
6,304.86	6,284.15	75.34	-208.73	Hold 16° Tangent
12,155.04	11,907.74	622.76	-1,725.35	KOP, Build & Turn 10°/100'
13,107.92	12,513.53	53.13	-1,885.42	Landing Point
23,357.92	12,541.00	-10,196.73	-1,838.99	TD at 23357.92' MD

Chuck Smith MDP1 8-17 Federal Com 41H

APD - Geology COAs (Potash or WIPP)

- For at least one well per pad (deepest well within initial development preferred) the record of the drilling rate (ROP) along with the Gamma Ray (GR) and Neutron (CNL) well logs run from TVD to surface in the vertical section of the hole shall be submitted to the BLM office as well as all other logs run on the full borehole 30 days from completion. Any other logs run on the wellbore, excluding cement remediation, should also be sent. Only digital copies of the logs in .TIF or .LAS formats are necessary; paper logs are no longer required. Logs shall be emailed to blm-cfo-geology@doimspp.onmicrosoft.com. Well completion report should have .pdf copies of any CBLs or Temp Logs run on the wellbore.

- Exceptions: In areas where there is extensive log coverage (in particular the salt zone adjacent to a pad), Operators are encouraged to contact BLM Geologists to discuss if additional GR and N logs are necessary on a pad. Operator may request a waiver of the GR and N log requirement due to good well control or other reasons to be approved by BLM Geologist prior to well completion. A waiver approved by BLM must be attached to completion well report to satisfy COAs.

- The top of the Rustler, top and bottom of the Salt, and the top of the Capitan Reef (if present) are to be recorded on the Completion Report.

- No H2S has been encountered within one-mile of the proposed project

Drilling COAs within Known Potash Leasing Area:

Any oil and gas well operator within the KPLA must notify both potash operators as soon as possible if any of the following conditions are encountered during oil and gas operations: (1) Indication of any well collision event, (2) Suspected well fluid flow (oil, gas, or produced water) outside of casing, (3) Sustained annulus pressure between the 1st intermediate and next innermost casing string in excess of 500 psi above the baseline pressure of the well, or above 1500 psi total, (4) Increasing pressure buildup rates (psi/day) across multiple successive bleed-off cycles on the annulus between the 1st intermediate and next innermost casing during well production, or (5) Sustained losses in excess of 50% through the salt interval during drilling.

Questions? Contact Thomas Evans, BLM Geologist at 575-234-5965 or tvevans@blm.gov

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INCORPORATED
WELL NAME & NO.:	CHUCK SMITH MDP1 8-17 FEDERAL COM 41H
LOCATION:	Section 5, T.24 S., R.31 E.
COUNTY:	Eddy County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	( ) None	(•) Secretary	( ) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	(•) Multibowl	( ) Both
Wellhead Variance	( ) Diverter		
Other	[ ] 4 String	[ ] Capitan Reef	[ ] WIPP
Other	[ ] Fluid Filled	[ ] Pilot Hole	[ ] Open Annulus
Cementing	[ ] Contingency Cement Squeeze	[ ] EchoMeter	[x] Primary Cement Squeeze
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit
Special Requirements	[ ] Batch Sundry		
Special Requirements Variance	[x] Break Testing	[x] Offline Cementing	[ ] Casing Clearance

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated AT SPUD. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Primary Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **909** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

Approval Date: 09/23/2024

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **24 hours in the Potash Area** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **9-5/8** inch intermediate casing shall be set at approximately **12,055** feet. **KEEP CASING MINIMUM 2/3 FULL FOR COLLAPSE SF. REVIEW EXTERNAL PRESSURE IN PRESSURE TEST LOAD CASE.** The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon**

b. Second stage:

- Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified

❖ In Secretary Potash Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Operator has proposed to pump down 13-3/8" X 9-5/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 9-5/8" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.

 Approval Date: 09/23/2024

If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

Bradenhead squeeze in the production interval is only as an edge case remediation measure and is NOT approved in this COA. If production cement job experiences losses and a bradenhead squeeze is needed for tie-back, BLM Engineering should be notified prior to job with volumes and planned wellbore schematic. CBL will be needed when this occurs.

3. The **7** inch x **5.5** inch tapered production casing shall be set at approximately **23,358** feet. The minimum required fill of cement behind the **7** inch x **5.5** inch production casing is:

   Option 1 (Single Stage):

   - Cement should tie-back at least **500 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 3500 (70% Working Pressure) psi.**

   a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
   b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
   c. Manufacturer representative shall install the test plug for the initial BOP test.
   d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
   e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in Onshore Order 1 and 2.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

(Note: For a minimum 5M BOPE or less (Utilizing a 10M BOPE system)
BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200’ TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing
Contact the BLM prior to the commencement of any offline cementing procedure.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:
a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

Contact Eddy County Petroleum Engineering Inspection Staff:
Email or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220;
BLM_NM_CFO_DrillingNotifications@BLM.GOV; (575) 361-2822

Contact Lea County Petroleum Engineering Inspection Staff:
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
b. When the operator proposes to set surface casing with Spudder Rig
i. Notify the BLM when moving in and removing the Spudder Rig.
ii. Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
iii. BOP/BOPE test to be conducted per 43 CFR 3172 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

A. CASING
1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of

Approval Date: 09/23/2024

the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR 3172.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
iii. Manufacturer representative shall install the test plug for the initial BOP test.
iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
v. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
i. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
ii. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
iii. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
iv. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
v. The results of the test shall be reported to the appropriate BLM office.
vi. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
vii. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30

Approval Date: 09/23/2024

minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

viii. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR 3172.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

KPI 9/7/2024

Approval Date: 09/23/2024

Permian Drilling
Hydrogen Sulfide Drilling Operations Plan
New Mexico

Scope

This contingency plan establishes guidelines for the public, all company employees, and contract employees who's work activities may involve exposure to hydrogen sulfide (H2S) gas.
While drilling this well, it is possible to encounter H2S bearing formations. At all times, the first barrier to control H2S emissions will be the drilling fluid, which will have a density high enough to control influx.

Objective

1. Provide an immediate and predetermined response plan to any condition when H2S is detected. All H2S detections in excess of 10 parts per million (ppm) concentration are considered an Emergency.

2. Prevent any and all accidents, and prevent the uncontrolled release of hydrogen sulfide into the atmosphere.

3. Provide proper evacuation procedures to cope with emergencies.

4. Provide immediate and adequate medical attention should an injury occur.

Discussion

Implementation:	This plan with all details is to be fully implemented before drilling to commence.
Emergency response Procedure:	This section outlines the conditions and denotes steps to be taken in the event of an emergency.
Emergency equipment Procedure:	This section outlines the safety and emergency equipment that will be required for the drilling of this well.
Training provisions:	This section outlines the training provisions that must be adhered to prior to drilling.
Drilling emergency call lists:	Included are the telephone numbers of all persons to be contacted should an emergency exist.
Briefing:	This section deals with the briefing of all people involved in the drilling operation.
Public safety:	Public safety personnel will be made aware of any potential evacuation and any additional support needed.
Check lists:	Status check lists and procedural check lists have been included to insure adherence to the plan.
General information:	A general information section has been included to supply support information.

Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on the well:

1. The hazards and characteristics of H2S.
2. Proper use and maintenance of personal protective equipment and life support systems.
3. H2S detection.
4. Proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures and prevailing winds.
5. Proper techniques for first aid and rescue procedures.
6. Physical effects of hydrogen sulfide on the human body.
7. Toxicity of hydrogen sulfide and sulfur dioxide.
8. Use of SCBA and supplied air equipment.
9. First aid and artificial respiration.
10. Emergency rescue.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile strength tubular is to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling a well, blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan.

H2S training refresher must have been taken within one year prior to drilling the well. Specifics on the well to be drilled will be discussed during the pre-spud meeting. H2S and well control (choke) drills will be performed while drilling the well, at least on a weekly basis. This plan shall be available in the well site. All personnel will be required to carry the documentation proving that the H2S training has been taken.

Service company and visiting personnel

A. Each service company that will be on this well will be notified if the zone contains H2S.

B. Each service company must provide for the training and equipment of their employees before they arrive at the well site.

C. Each service company will be expected to attend a well site briefing

Emergency Equipment Requirements

1. Well control equipment

The well shall have hydraulic BOP equipment for the anticipated pressures. Equipment is to be tested on installation and follow Oxy Well Control standard, as well as BLM Onshore Order #2.

Special control equipment:

A. Hydraulic BOP equipment with remote control on ground. Remotely operated choke.
B. Rotating head
C. Gas buster equipment shall be installed before drilling out of surface pipe.

2. Protective equipment for personnel

A. Four (4) 30-minute positive pressure air packs (2 at each briefing area) on location.

B. Adequate fire extinguishers shall be located at strategic locations.

C. Radio / cell telephone communication will be available at the rig.

- Rig floor and trailers.
- Vehicle.

3. Hydrogen sulfide sensors and alarms

A. H2S sensor with alarms will be located on the rig floor, at the bell nipple, and at the flow line. These monitors will be set to alarm at 10 ppm with strobe light, and audible alarm.
B. Hand operated detectors with tubes.
C. H2S monitor tester (to be provided by contract Safety Company.)
D. There shall be one combustible gas detector on location at all times.

4. Visual Warning Systems

A. One sign located at each location entrance with the following language:

Caution – potential poison gas
Hydrogen sulfide
No admittance without authorization

Wind sock – wind streamers:

A. One 36” (in length) wind sock located at protection center, at height visible from rig floor.
B. One 36” (in length) wind sock located at height visible from pit areas.

Condition flags

A. One each condition flag to be displayed to denote conditions.

green – normal conditions
yellow – potential danger
red – danger, H2S present

B. Condition flag shall be posted at each location sign entrance.

5. Mud Program

The mud program is designed to minimize the risk of having H2S and other formation fluids at surface. Proper mud weight and safe drilling practices will be applied. H2S scavengers will be used to minimize the hazards while drilling. Below is a summary of the drilling program.

Mud inspection devices:

Garrett gas train or hatch tester for inspection of sulfide concentration in mud system.

6. Metallurgy

A. Drill string, casing, tubing, wellhead, blowout preventers, drilling spools or adapters, kill lines, choke manifold, lines and valves shall be suitable for the H2S service.
B. All the elastomers, packing, seals and ring gaskets shall be suitable for H2S service.

7. Well Testing

No drill stem test will be performed on this well.

8. Evacuation plan

Evacuation routes should be established prior to well spud for each well and discussed with all rig personnel.

9. Designated area

A. Parking and visitor area: all vehicles are to be parked at a predetermined safe distance from the wellhead.
B. There will be a designated smoking area.
C. Two briefing areas on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds perpendicularly, or at a 45-degree angle if wind direction tends to shift in the area.

Emergency procedures

A. In the event of any evidence of H2S level above 10 ppm, take the following steps:

1. The Driller will pick up off bottom, shut down the pumps, slow down the pipe rotation.

2. Secure and don escape breathing equipment, report to the upwind designated safe briefing / muster area.

3. All personnel on location will be accounted for and emergency search should begin for any missing, the Buddy System will be implemented.

4. Order non-essential personnel to leave the well site, order all essential personnel out of the danger zone and upwind to the nearest designated safe briefing / muster area.

5. Entrance to the location will be secured to a higher level than our usual "Meet and Greet" requirement, and the proper condition flag will be displayed at the entrance to the location.

6. Take steps to determine if the H2S level can be corrected or suppressed and, if so, proceed as required.

B. If uncontrollable conditions occur:

1. Take steps to protect and/or remove any public in the down-wind area from the rig – partial evacuation and isolation. Notify necessary public safety personnel and appropriate regulatory entities (i.e. BLM) of the situation.

2. Remove all personnel to the nearest upwind designated safe briefing / muster area or off location.

3. Notify public safety personnel of safe briefing / muster area.

4. An assigned crew member will blockade the entrance to the location. No unauthorized personnel will be allowed entry to the location.

5. Proceed with best plan (at the time) to regain control of the well. Maintain tight security and safety procedures.

C. Responsibility:

1. Designated personnel.

a. Shall be responsible for the total implementation of this plan.
b. Shall be in complete command during any emergency.
c. Shall designate a back-up.

All personnel:	1. On alarm, don escape unit and report to the nearest upwind designated safe briefing / muster area upw 2. Check status of personnel (buddy system). 3. Secure breathing equipment. 4. Await orders from supervisor.
Drill site manager:	1. Don escape unit if necessary and report to nearest upwind designated safe briefing / muster area. 2. Coordinate preparations of individuals to return to point of release with tool pusher and driller (using the buddy system). 3. Determine H2S concentrations. 4. Assess situation and take control measures.
Tool pusher:	1. Don escape unit Report to up nearest upwind designated safe briefing / muster area. 2. Coordinate preparation of individuals to return to point of release with tool pusher drill site manager (using the buddy system). 3. Determine H2S concentration. 4. Assess situation and take control measures.
Driller:	1. Don escape unit, shut down pumps, continue

	rotating DP. 2. Check monitor for point of release. 3. Report to nearest upwind designated safe briefing / muster area. 4. Check status of personnel (in an attempt to rescue, use the buddy system). 5. Assigns least essential person to notify Drill Site Manager and tool pusher by quickest means in case of their absence. 6. Assumes the responsibilities of the Drill Site Manager and tool pusher until they arrive should they be absent.
Derrick man Floor man #1 Floor man #2	1. Will remain in briefing / muster area until instructed by supervisor.
Mud engineer:	1. Report to nearest upwind designated safe briefing / muster area. 2. When instructed, begin check of mud for ph and H2S level. (Garett gas train.)
Safety personnel:	1. Mask up and check status of all personnel and secure operations as instructed by drill site manager.

Taking a kick

When taking a kick during an H2S emergency, all personnel will follow standard Well control procedures after reporting to briefing area and masking up.

Open-hole logging

All unnecessary personnel off floor. Drill Site Manager and safety personnel should monitor condition, advise status and determine need for use of air equipment.

Running casing or plugging

Following the same “tripping” procedure as above. Drill Site Manager and safety personnel should determine if all personnel have access to protective equipment.

Ignition procedures

The decision to ignite the well is the responsibility of the operator (Oxy Drilling Management). The decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope controlling the blowout under the prevailing conditions at the well.

Instructions for igniting the well

1. Two people are required for the actual igniting operation. They must wear self-contained breathing units and have a safety rope attached. One man (tool pusher or safety engineer) will check the atmosphere for explosive gases with the gas monitor. The other man is responsible for igniting the well.
2. Primary method to ignite: 25 mm flare gun with range of approximately 500 feet.
3. Ignite upwind and do not approach any closer than is warranted.
4. Select the ignition site best for protection, and which offers an easy escape route.
5. Before firing, check for presence of combustible gas.
6. After lighting, continue emergency action and procedure as before.
7. All unassigned personnel will remain in briefing area until instructed by supervisor or directed by the Drill Site Manager.

Remember: After well is ignited, burning hydrogen sulfide will convert to sulfur dioxide, which is also highly toxic. **Do not assume the area is safe after the well is ignited.**

Status check list

Note: All items on this list must be completed before drilling to production casing point.

1. H2S sign at location entrance.
2. Two (2) wind socks located as required.
3. Four (4) 30-minute positive pressure air packs (2 at each Briefing area) on location for all rig personnel and mud loggers.
4. Air packs inspected and ready for use.
5. Cascade system and hose line hook-up as needed.
6. Cascade system for refilling air bottles as needed.
7. Condition flag on location and ready for use.
8. H2S detection system hooked up and tested.
9. H2S alarm system hooked up and tested.
10. Hand operated H2S detector with tubes on location.
11. 1 – 100’ length of nylon rope on location.
12. All rig crew and supervisors trained as required.
13. All outside service contractors advised of potential H2S hazard on well.
14. No smoking sign posted and a designated smoking area identified.
15. Calibration of all H2S equipment shall be noted on the IADC report.

Checked by:_____ Date:_____

Procedural check list during H2S events

Perform each tour:

1. Check fire extinguishers to see that they have the proper charge.

2. Check breathing equipment to ensure that it in proper working order.

3. Make sure all the H2S detection system is operative.

Perform each week:

1. Check each piece of breathing equipment to make sure that demand or forced air regulator is working. This requires that the bottle be opened and the mask assembly be put on tight enough so that when you inhale, you receive air or feel air flow.

2. BOP skills (well control drills).

3. Check supply pressure on BOP accumulator stand by source.

4. Check breathing equipment mask assembly to see that straps are loosened and turned back, ready to put on.

5. Check pressure on breathing equipment air bottles to make sure they are charged to full volume. (Air quality checked for proper air grade “D” before bringing to location)

6. Confirm pressure on all supply air bottles.

7. Perform breathing equipment drills with on-site personnel.

8. Check the following supplies for availability.

   A. Emergency telephone list.
   B. Hand operated H2S detectors and tubes.

General evacuation plan

1. When the company approved supervisor (Drill Site Manager, consultant, rig pusher, or driller) determines the H2S gas cannot be limited to the well location and the public will be involved, he will activate the evacuation plan.

2. Drill Site Manager or designee will notify local government agency that a hazardous condition exists and evacuation needs to be implemented.

3. Company or contractor safety personnel that have been trained in the use of H2S detection equipment and self-contained breathing equipment will monitor H2S concentrations, wind directions, and area of exposure. They will delineate the outer perimeter of the hazardous gas area. Extension to the evacuation area will be determined from information gathered.

4. Law enforcement personnel (state police, police dept., fire dept., and sheriff's dept.) Will be called to aid in setting up and maintaining road blocks. Also, they will aid in evacuation of the public if necessary.

5. After the discharge of gas has been controlled, company safety personnel will determine when the area is safe for re-entry.

Important: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

Emergency actions

Well blowout – if emergency

1. Evacuate all personnel to "Safe Briefing / Muster Areas" or off location if needed.
2. If sour gas – evacuate rig personnel.
3. If sour gas – evacuate public within 3000 ft radius of exposure.
4. Don SCBA and shut well in if possible using the buddy system.
5. Notify Drilling Superintendent and call 911 for emergency help (fire dept and ambulance) if needed.
6. Implement the Blowout Contingency Plan, and Drilling Emergency Action Plan.
6. Give first aid as needed.

Person down location/facility

1. If immediately possible, contact 911. Give location and wait for confirmation.
2. Don SCBA and perform rescue operation using buddy system.

Toxic effects of hydrogen sulfide

Hydrogen sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 ppm, which is .001% by volume. Hydrogen sulfide is heavier than air (specific gravity – 1.192) and colorless. It forms an explosive mixture with air between 4.3 and 46.0 percent by volume. Hydrogen sulfide is almost as toxic as hydrogen cyanide and is between five and six times more toxic than carbon monoxide. Toxicity data for hydrogen sulfide and various other gases are compared in table i. Physical effects at various hydrogen sulfide exposure levels are shown in table ii.

Table i
Toxicity of various gases

Common name	Chemical formula	Specific gravity (sc=1)	Threshold limit (1)	Hazardous limit (2)	Lethal concentration (3)
Hydrogen Cyanide	Hcn	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H2S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	So2	2.21	5 ppm	-	1000 ppm
Chlorine	Cl2	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	Co	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	Co2	1.52	5000 ppm	5%	10%
Methane	Ch4	0.55	90,000 ppm	Combustible above 5% in air	

1) threshold limit – concentration at which it is believed that all workers may be repeatedly exposed day after day without adverse effects.

2) hazardous limit – concentration that will cause death with short-term exposure.

3) lethal concentration – concentration that will cause death with short-term exposure.

Toxic effects of hydrogen sulfide

Table ii
Physical effects of hydrogen sulfide

Percent (%)	Ppm	Concentration Grains 100 std. Ft3*	Physical effects
0.001	<10	00.65	Obvious and unpleasant odor.

0.002	10	01.30	Safe for 8 hours of exposure.
0.010	100	06.48	Kill smell in 3 – 15 minutes. May sting eyes and throat.
0.020	200	12.96	Kills smell shortly; stings eyes and throat.
0.050	500	32.96	Dizziness; breathing ceases in a few minutes; needs prompt artificial respiration.
0.070	700	45.36	Unconscious quickly; death will result if not rescued promptly.
0.100	1000	64.30	Unconscious at once; followed by death within minutes.

*at 15.00 psia and 60’f.

Use of self-contained breathing equipment (SCBA)

1. Written procedures shall be prepared covering safe use of SCBA's in dangerous atmosphere, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available SCBA.

2 SCBA's shall be inspected frequently at random to insure that they are properly used, cleaned, and maintained.

3. Anyone who may use the SCBA's shall be trained in how to insure proper face-piece to face seal. They shall wear SCBA's in normal air and then wear them in a test atmosphere. (note: such items as facial hair {beard or sideburns} and eyeglasses will not allow proper seal.) Anyone that may be reasonably expected to wear SCBA's should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses or contact lenses.

4. Maintenance and care of SCBA's:

   a. A program for maintenance and care of SCBA's shall include the following:
      1. Inspection for defects, including leak checks.
      2. Cleaning and disinfecting.
      3. Repair.
      4. Storage.

   b. Inspection, self-contained breathing apparatus for emergency use shall be inspected monthly.
      1. Fully charged cylinders.
      2. Regulator and warning device operation.
      3. Condition of face piece and connections.
      4. Rubber parts shall be maintained to keep them pliable and prevent deterioration.

   c. Routinely used SCBA's shall be collected, cleaned and disinfected as frequently as necessary to insure proper protection is provided.

5. Persons assigned tasks that requires use of self-contained breathing equipment shall be certified physically fit (medically cleared) for breathing equipment usage at least annually.

6. SCBA's should be worn when:

   A. Any employee works near the top or on top of any tank unless test reveals less than 10 ppm of H2S.

B. When breaking out any line where H2S can reasonably be expected.

C. When sampling air in areas to determine if toxic concentrations of H2S exists.

D. When working in areas where over 10 ppm H2S has been detected.

E. At any time there is a doubt as to the H2S level in the area to be entered.

Rescue
First aid for H2S poisoning

Do not panic!

Remain calm – think!

1. Don SCBA breathing equipment.

2. Remove victim(s) utilizing buddy system to fresh air as quickly as possible. (go up-wind from source or at right angle to the wind. Not down wind.)

3. Briefly apply chest pressure – arm lift method of artificial respiration to clean the victim's lungs and to avoid inhaling any toxic gas directly from the victim's lungs.

4. Provide for prompt transportation to the hospital, and continue giving artificial respiration if needed.

5. Hospital(s) or medical facilities need to be informed, before-hand, of the possibility of H2S gas poisoning – no matter how remote the possibility is.

6. Notify emergency room personnel that the victim(s) has been exposed to H2S gas.

Besides basic first aid, everyone on location should have a good working knowledge of artificial respiration.

Revised CM 6/27/2012

Permian Drilling
Hydrogen Sulfide Drilling Operations Plan

Open drill site. No homes or buildings are near the proposed location.

1. Escape

   Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the Southeast side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.

▲ H2S Detectors. At least three detectors will be installed: bell nipple, rig floor and Shakers.

● Briefing Areas. At least two briefing areas will be placed, 90 deg off.

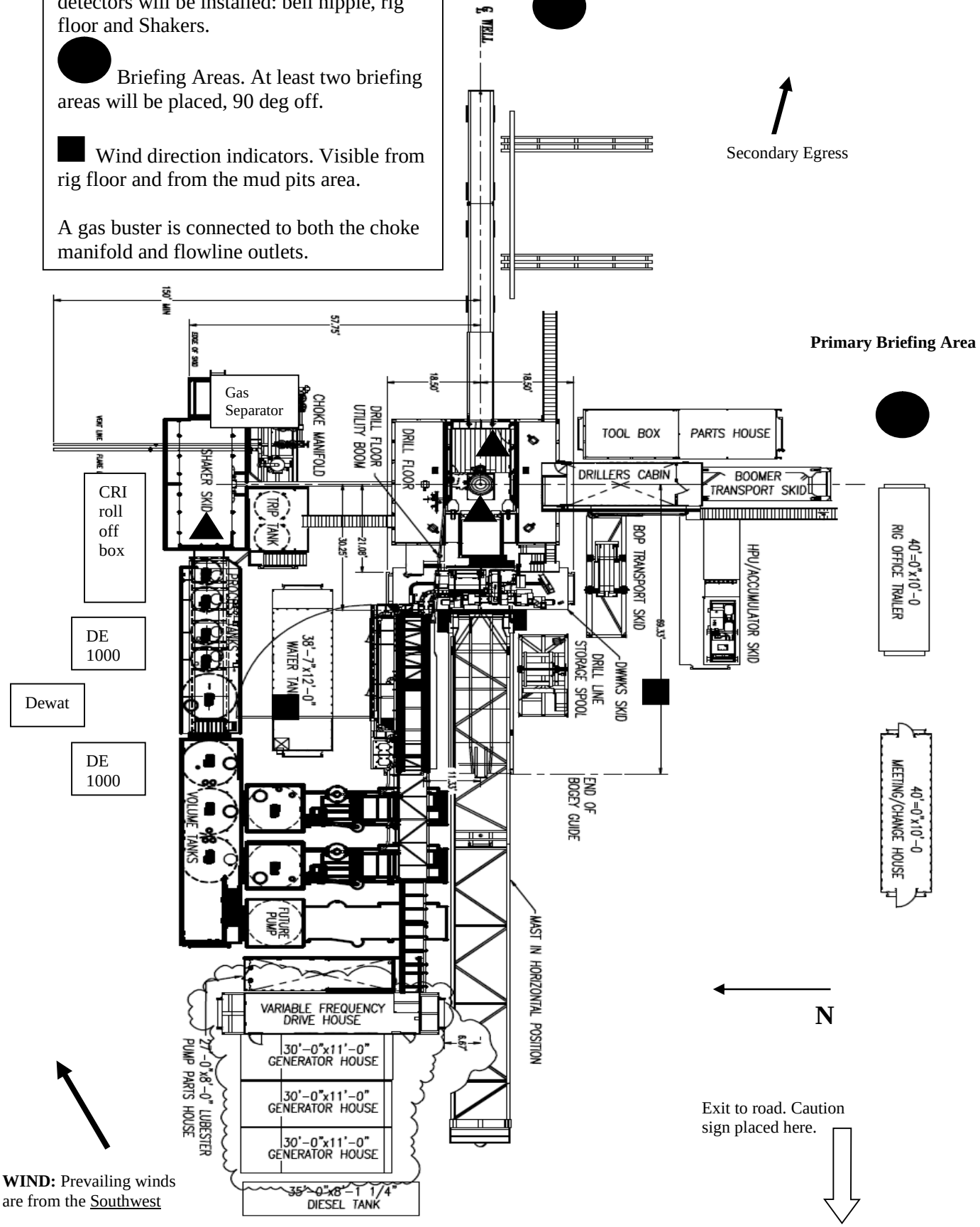
■ Wind direction indicators. Visible from rig floor and from the mud pits area.

A gas buster is connected to both the choke manifold and flowline outlets.

Secondary Briefing Area

Secondary Egress

Primary Briefing Area

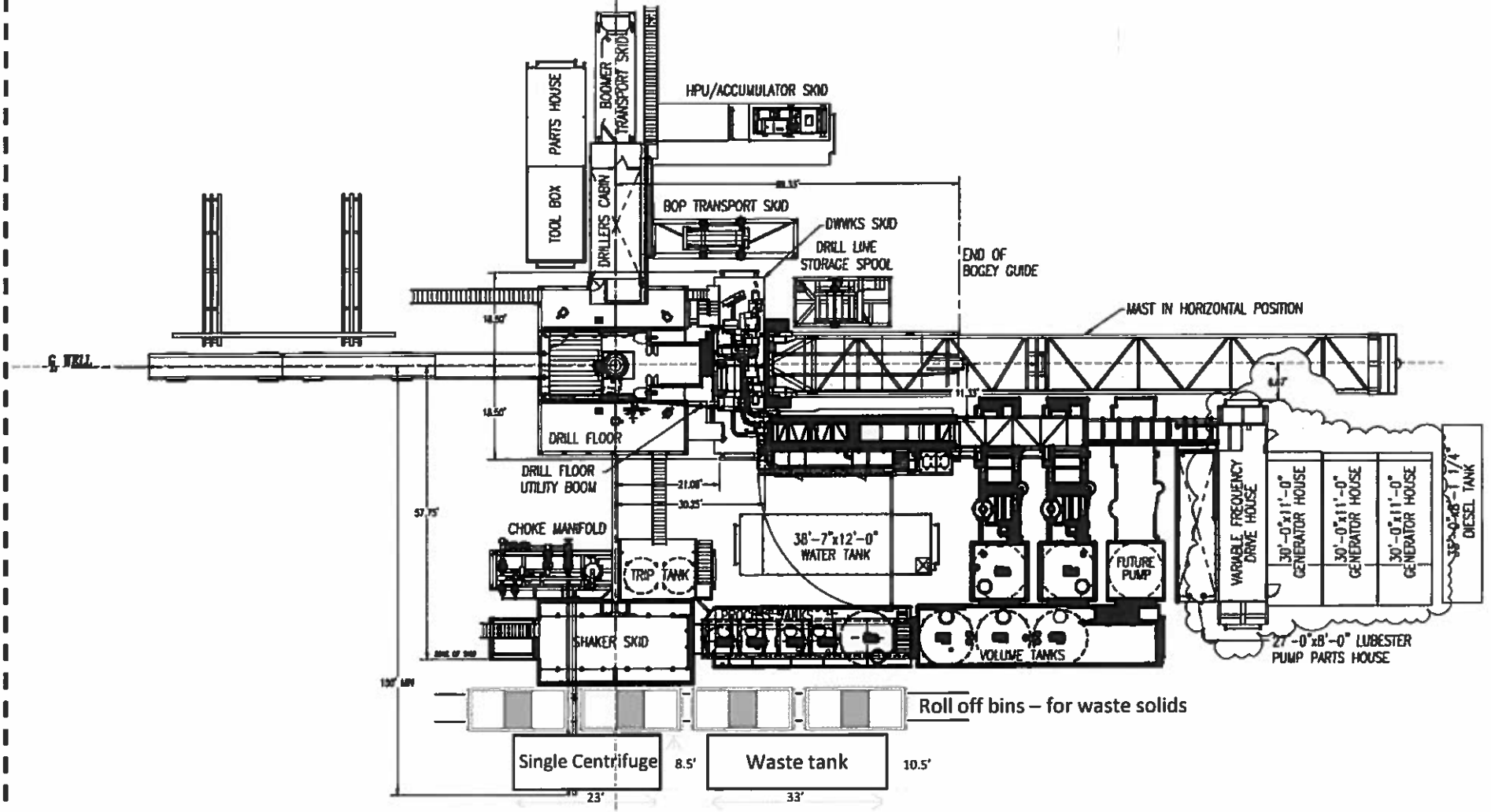


WIND: Prevailing winds are from the Southwest

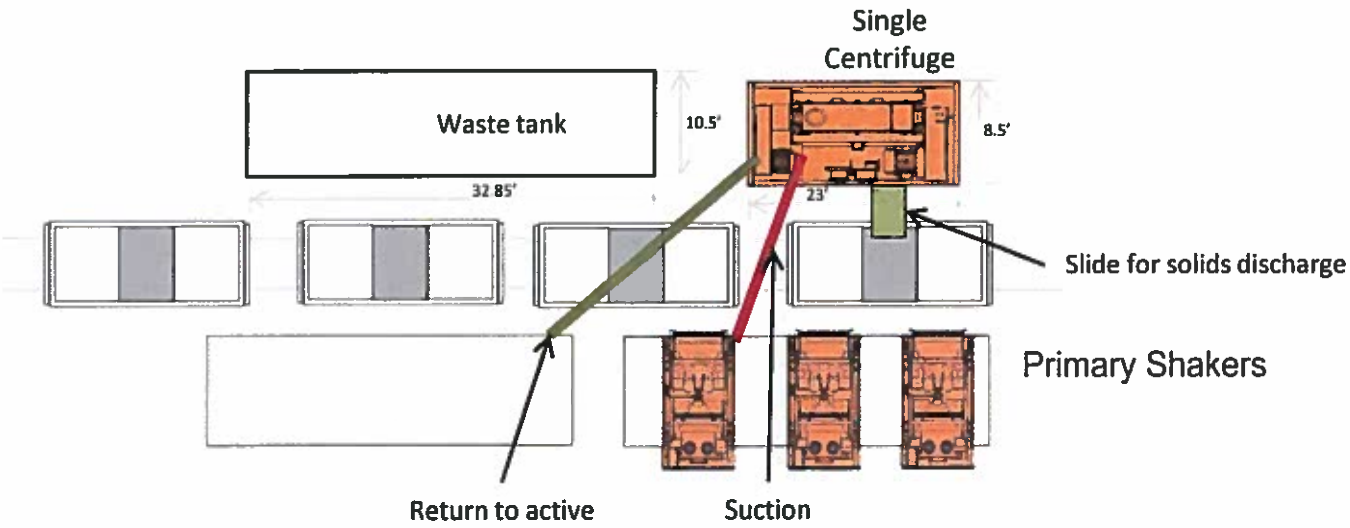
Exit to road. Caution sign placed here.

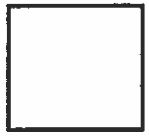
Oxy Single Centrifuge Closed Loop System – New Mexico Flex III

May 28, 2013



Oxy





Oxy Single Centrifuge Closed Loop System – New Mexico Flex III

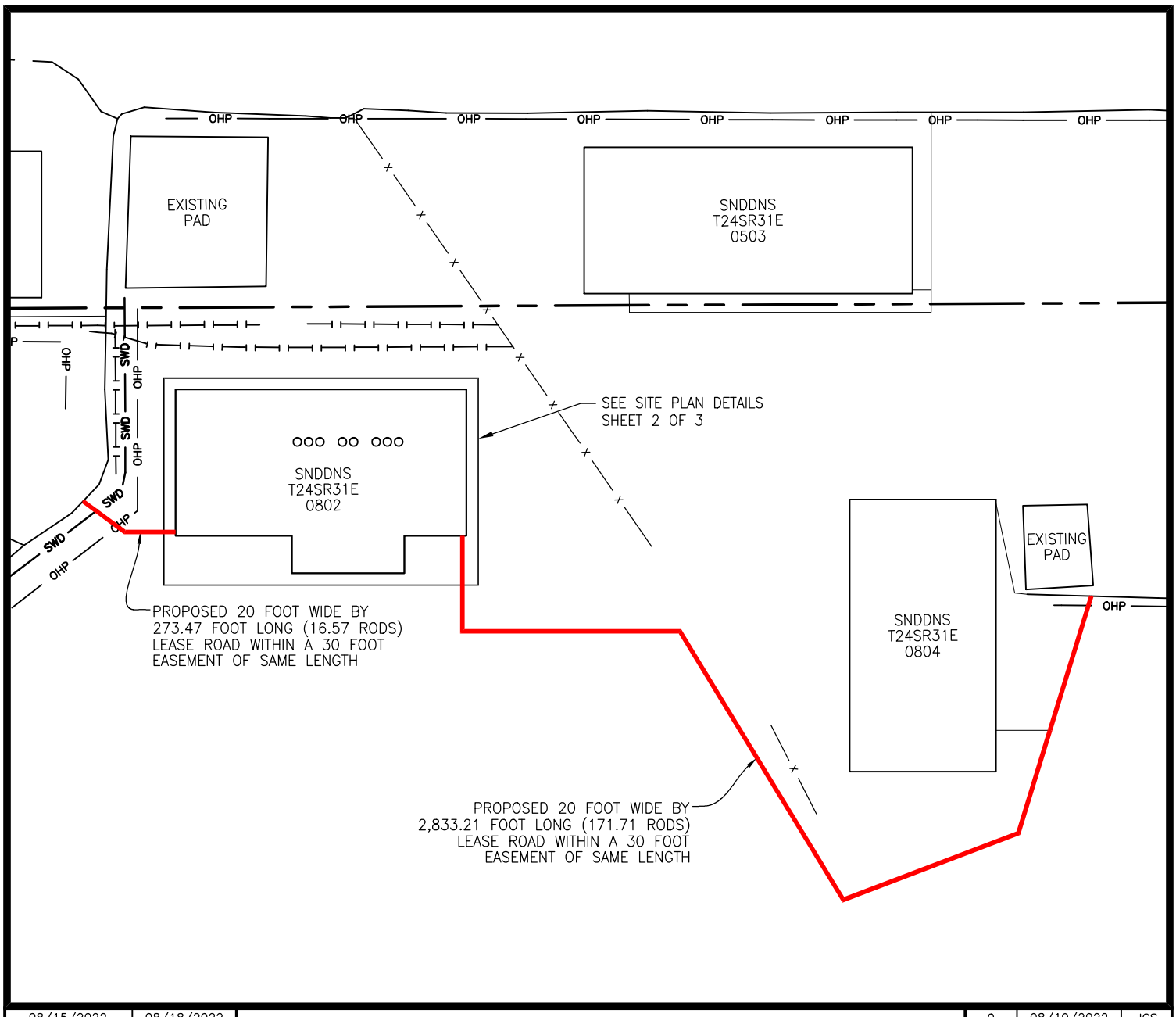
May 28, 2013

SITE PLAN

SNDDNS_T24SR31E_0802
SEC. 8 TWP. 24-S RGE. 31-E
SURVEY: N.M.P.M.
COUNTY: EDDY
OPERATOR: OXY USA, INC.
U.S.G.S. TOPOGRAPHIC MAP: BIG SINKS, N.M.
FAA PERMIT NEEDED: NO

TANK BATTERY
RECLAMATION
30' TOP SOIL
20' DISTURBANCE AREA

200' 0' 200' 400'
SCALE: 1" = 400'



08/15/2022	08/18/2022
DATE SURVEYED	DATE DRAWN

0	08/19/2022	JCS
REV.	DATE	BY

BASIS OF BEARING
ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.99977704 CONVERGENCE ANGLE OF 0.28238333°.)

LEGEND

- EXISTING ROAD
- PROPOSED ROAD
- SURFACE SITE EDGE
- EXIST. PIPELINE
- MONUMENT
- QUARTER SPLIT
- OHP — OVERHEAD POWER
- x — x — FENCE
- SECTION LINE
- PL — PROPERTY LINE
- W — W — WATER LINE
- SWD — SALT WATER LINE

SEPTEMBER 9, 2022

LLOYD P. SHORT NEW MEXICO 21653 PROFESSIONAL SURVEYOR

LLOYD P. SHORT 21653

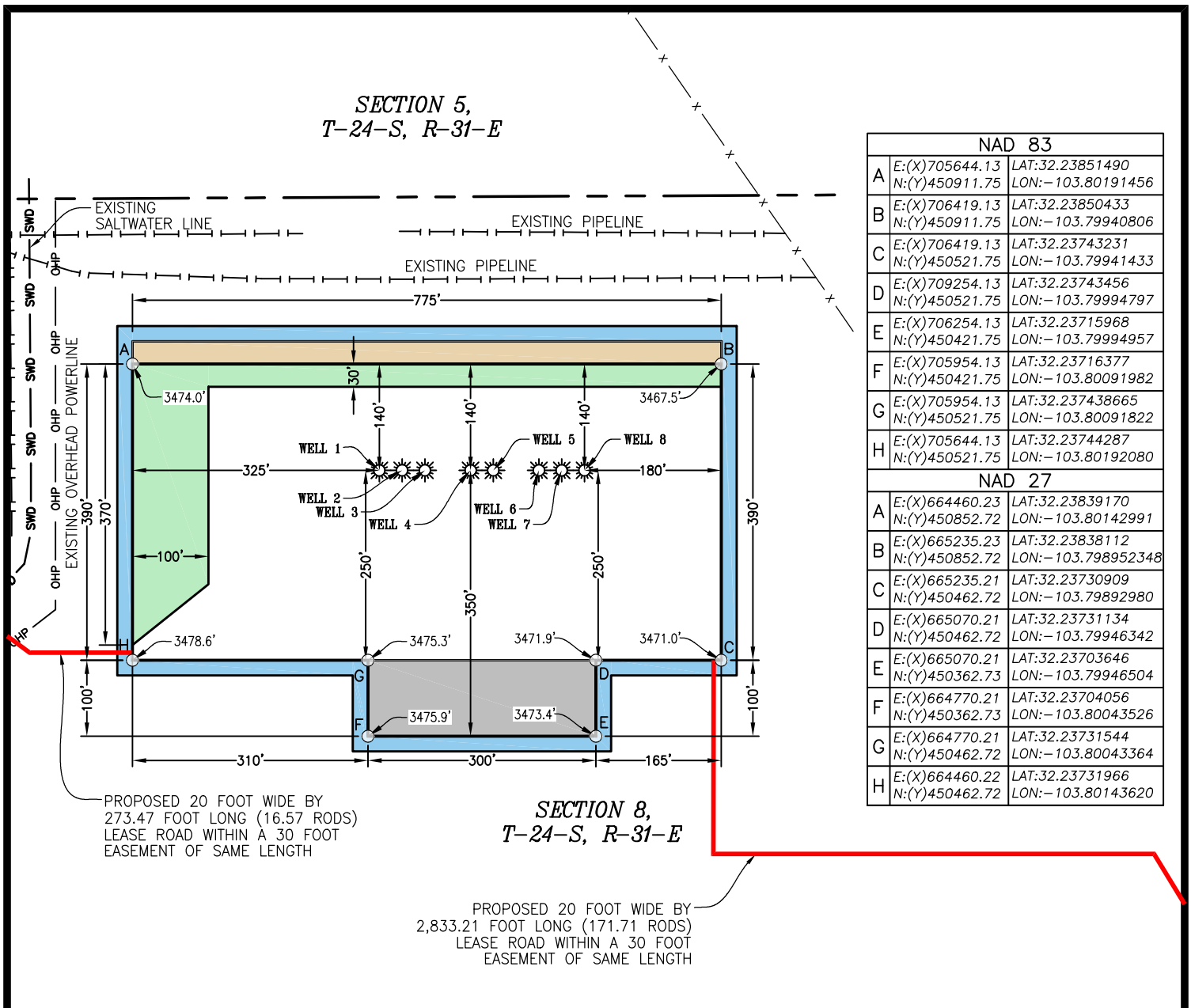
PREPARED BY:
R-SQUARED GLOBAL, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R4289_003
SHEET 1 OF 3

SITE PLAN

SNDDNS_T24SR31E_0802
SEC. 8 TWP. 24-S RGE. 31-E
SURVEY: N.M.P.M.
COUNTY: EDDY
OPERATOR: OXY USA, INC.
U.S.G.S. TOPOGRAPHIC MAP: BIG SINKS, N.M.
FAA PERMIT NEEDED: NO

TANK BATTERY
RECLAMATION
30' TOP SOIL
20' DISTURBANCE AREA

100' 0' 100' 200'
SCALE: 1" = 200'



NAD 83		
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B	E:(X)706419.13 N:(Y)450911.75	LAT:32.23850433 LON:-103.79940806
C	E:(X)706419.13 N:(Y)450521.75	LAT:32.23743231 LON:-103.79941433
D	E:(X)709254.13 N:(Y)450521.75	LAT:32.23743456 LON:-103.79994797
E	E:(X)706254.13 N:(Y)450421.75	LAT:32.23715968 LON:-103.79994957
F	E:(X)705954.13 N:(Y)450421.75	LAT:32.23716377 LON:-103.80091982
G	E:(X)705954.13 N:(Y)450521.75	LAT:32.237438665 LON:-103.80091822
H	E:(X)705644.13 N:(Y)450521.75	LAT:32.23744287 LON:-103.80192080
NAD 27		
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B	E:(X)665235.23 N:(Y)450852.72	LAT:32.23838112 LON:-103.798952348
C	E:(X)665235.21 N:(Y)450462.72	LAT:32.23730909 LON:-103.79892980
D	E:(X)665070.21 N:(Y)450462.72	LAT:32.23731134 LON:-103.79946342
E	E:(X)665070.21 N:(Y)450362.73	LAT:32.23703646 LON:-103.79946504
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08/15/2022	08/18/2022
DATE SURVEYED	DATE DRAWN

0	08/19/2022	JCS
REV.	DATE	BY

BASIS OF BEARING
ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.99977704 CONVERGENCE ANGLE OF 0.28238333°.)

LEGEND

- EXISTING ROAD
- PROPOSED ROAD
- SURFACE SITE EDGE
- EXIST. PIPELINE
- MONUMENT
- QUARTER SPLIT
- OHP — OVERHEAD POWER
- x — x — FENCE
- SECTION LINE
- PROPERTY LINE
- W — W — WATER LINE
- SWD — SALT WATER LINE

SEPTEMBER 9, 2022

Lloyd P. Short 21653

LLOYD P. SHORT 21653

LLOYD P. SHORT NEW MEXICO 21653 PROFESSIONAL SURVEYOR

PREPARED BY:
R-SQUARED GLOBAL, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R4289_003
SHEET 2 OF 3

SITE PLAN

SNDDNS_T24SR31E_0802
SEC. 8 TWP. 24-S RGE. 31-E
SURVEY: N.M.P.M.
COUNTY: EDDY
OPERATOR: OXY USA, INC.
U.S.G.S. TOPOGRAPHIC MAP: BIG SINKS, N.M.
FAA PERMIT NEEDED: NO

TANK BATTERY
RECLAMATION
30' TOP SOIL
20' DISTURBANCE AREA

WELL 1
CHUCK SMITH MDP1 8-17 FED COM 41H
OXY USA, INC.
360' FNL 2,325' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:705969.13' / Y:450771.75'
LAT:32.23812564N / LON:103.80086569W
NAD 27, SPCS NM EAST
X:664785.22' / Y:45012.72'
LAT:32.23800243N / LON:103.80038109W
ELEVATION = 3,472'

WELL 2
CHUCK SMITH MDP1 8-17 FED COM 42H
OXY USA, INC.
360' FNL 2,355' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:705999.13' / Y:450771.75'
LAT:32.23812523N / LON:103.80076867W
NAD 27, SPCS NM EAST
X:664815.22' / Y:450712.72'
LAT:32.23800202N / LON:103.80028407W
ELEVATION = 3,472'

WELL 3
CHUCK SMITH MDP1 8-17 FED COM 43H
OXY USA, INC.
360' FNL 2,385' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:706029.13' / Y:450771.75'
LAT:32.23812482N / LON:103.80067164W
NAD 27, SPCS NM EAST
X:664845.22' / Y:450712.72'
LAT:32.23800162N / LON:103.80018705W
ELEVATION = 3,472'

WELL 4
CHUCK SMITH MDP1 8-17 FED COM 11H
OXY USA, INC.
360' FNL 2,445' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:706089.13' / Y:450771.75'
LAT:32.23812401N / LON:103.80047759W
NAD 27, SPCS NM EAST
X:664905.22' / Y:450712.72'
LAT:32.23800080N / LON:103.79999300W
ELEVATION = 3,472'

WELL 5
CHUCK SMITH MDP1 8-17 FED COM 12H
OXY USA, INC.
360' FNL 2,475' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:706119.13' / Y:450771.75'
LAT:32.23812360N / LON:103.80038056W
NAD 27, SPCS NM EAST
X:664935.22' / Y:450712.72'
LAT:32.23800039N / LON:103.79989598W
ELEVATION = 3,471'

WELL 6
CHUCK SMITH MDP1 8-17 FED COM 1H
OXY USA, INC.
361' FNL 2,535' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:706179.13' / Y:450771.75'
LAT:32.23812278N / LON:103.80018651W
NAD 27, SPCS NM EAST
X:664995.22' / Y:450712.72'
LAT:32.23799957N / LON:103.7970193W
ELEVATION = 3,471'

WELL 7
CHUCK SMITH MDP1 8-17 FED COM 2H
OXY USA, INC.
361' FNL 2,565' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:706209.13' / Y:450771.75'
LAT:32.23812237N / LON:103.80008949W
NAD 27, SPCS NM EAST
X:665025.22' / Y:450712.72'
LAT:32.23799916N / LON:103.79960491W
ELEVATION = 3,471'

WELL 8
CHUCK SMITH MDP1 8-17 FED COM 3H
OXY USA, INC.
361' FWL 2,595' FWL, SECTION 8
NAD 83, SPCS NM EAST
X:706239.17' / Y:450771.83'
LAT:32.23812196N / LON:103.79999246W
NAD 27, SPCS NM EAST
X:665055.26' / Y:450712.80'
LAT:32.23799875N / LON:103.79950789W
ELEVATION = 3,470'

08/15/2022	08/18/2022
DATE SURVEYED	DATE DRAWN

0	08/19/2022	JCS
REV.	DATE	BY

BASIS OF BEARING
ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS, DISTANCES, COORDINATES AND AREAS ARE GRID MEASUREMENTS UTILIZING A COMBINED SCALE FACTOR OF 0.99977704 CONVERGENCE ANGLE OF 0.28238333°.)

LEGEND

- EXISTING ROAD
- PROPOSED ROAD
- SURFACE SITE EDGE
- EXIST. PIPELINE
- MONUMENT
- QUARTER SPLIT
- OHP — OVERHEAD POWER
- x — x — FENCE
- SECTION LINE
- PL — PROPERTY LINE
- W — W — WATER LINE
- SWD — SALT WATER LINE

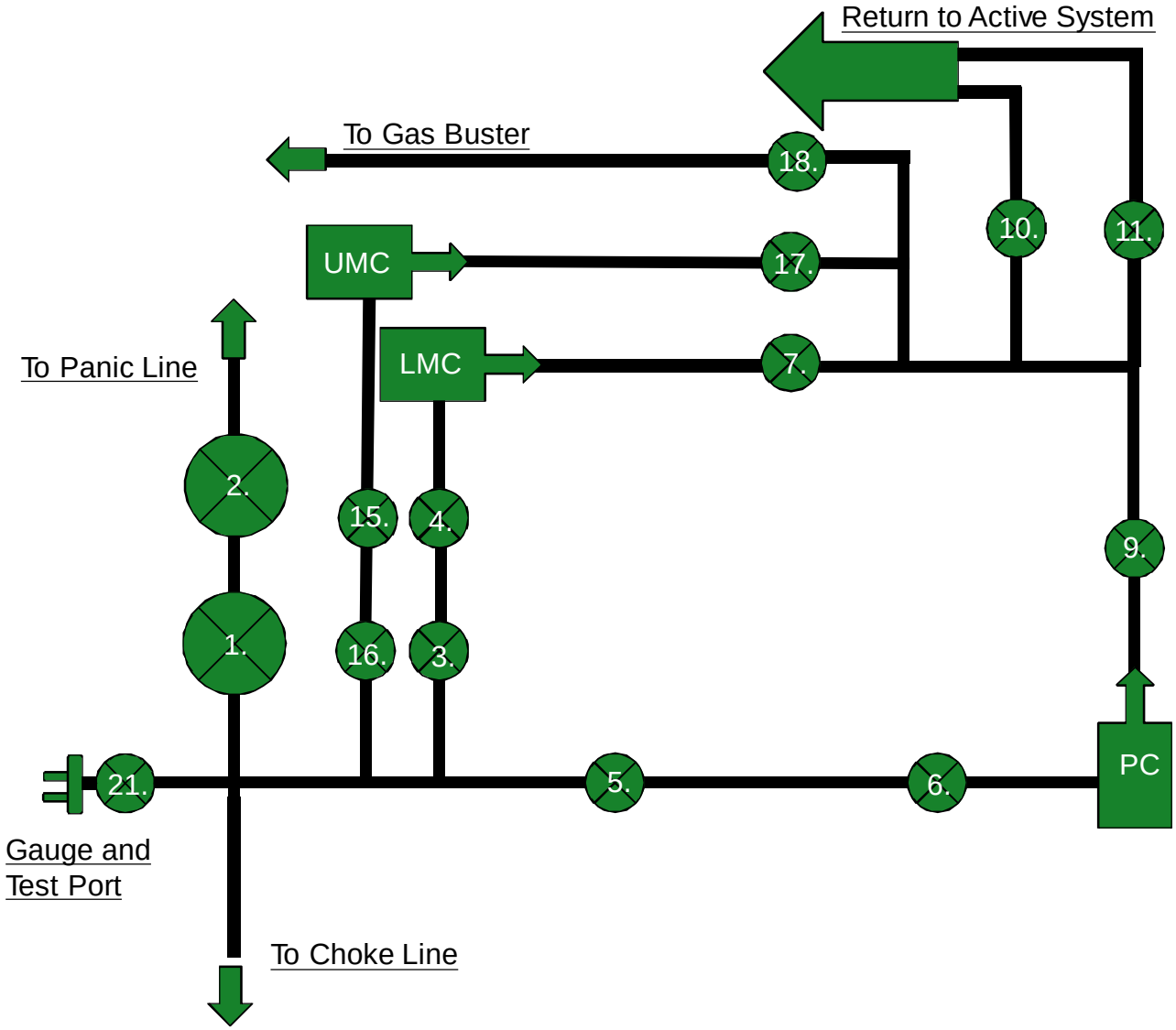
SEPTEMBER 9, 2022

LLOYD P. SHORT 21653

LLOYD P. SHORT
NEW MEXICO
21653
PROFESSIONAL SURVEYOR

PREPARED BY:
R-SQUARED GLOBAL, LLC
510 TRENTON ST.
WEST MONROE, LA 71291
318-323-6900 OFFICE
JOB No. R4289_003
SHEET 3 OF 3

10M Choke Panel

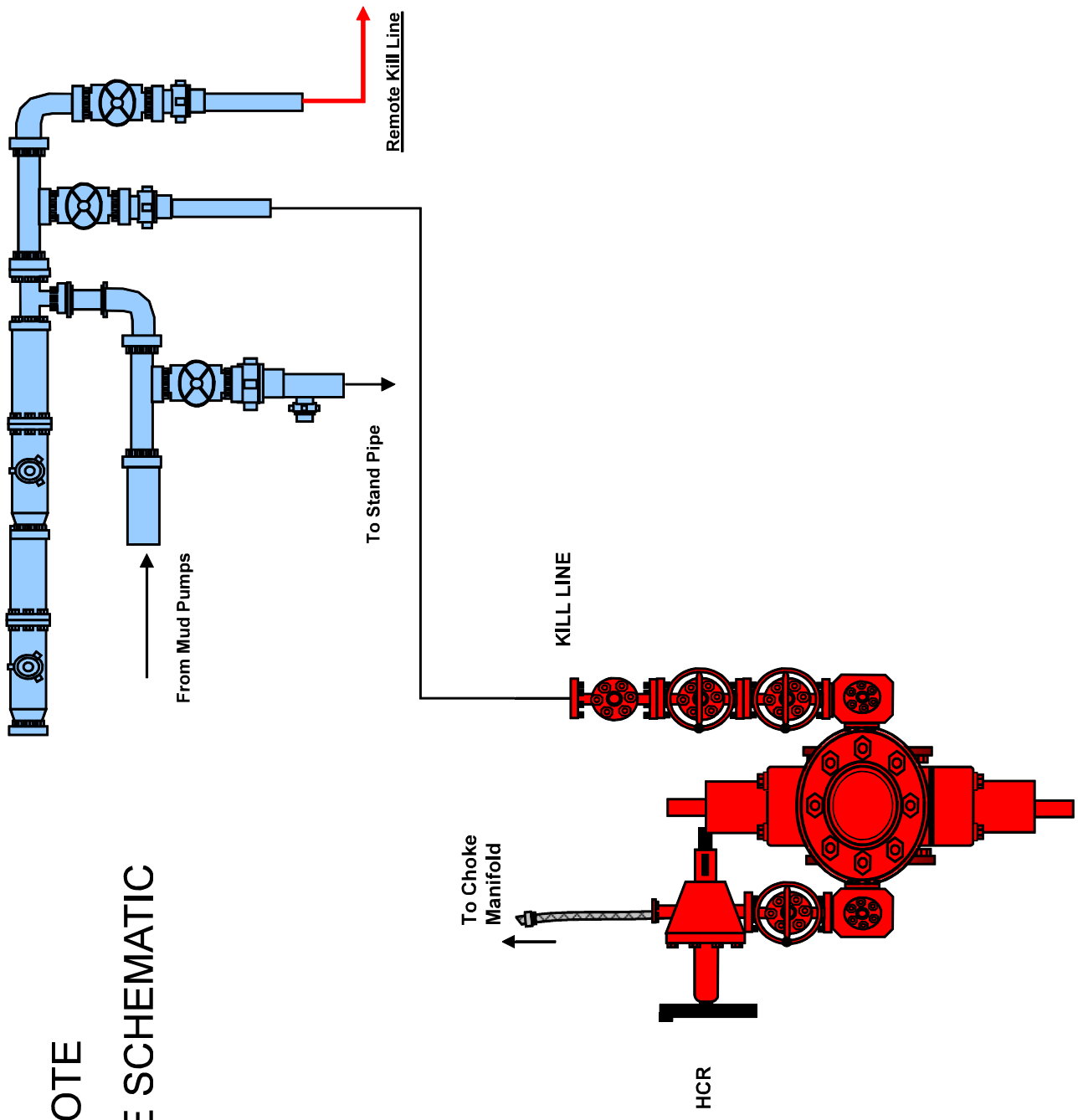


1. Choke Manifold Valve
2. Choke Manifold Valve
3. Choke Manifold Valve
4. Choke Manifold Valve
5. Choke Manifold Valve
6. Choke Manifold Valve
7. Choke Manifold Valve
8. PC – Power Choke
9. Choke Manifold Valve
10. Choke Manifold Valve
11. Choke Manifold Valve
12. LMC – Lower Manual Choke
13. UMC – Upper manual choke

15. Choke Manifold Valve
16. Choke Manifold Valve
17. Choke Manifold Valve
18. Choke Manifold Valve

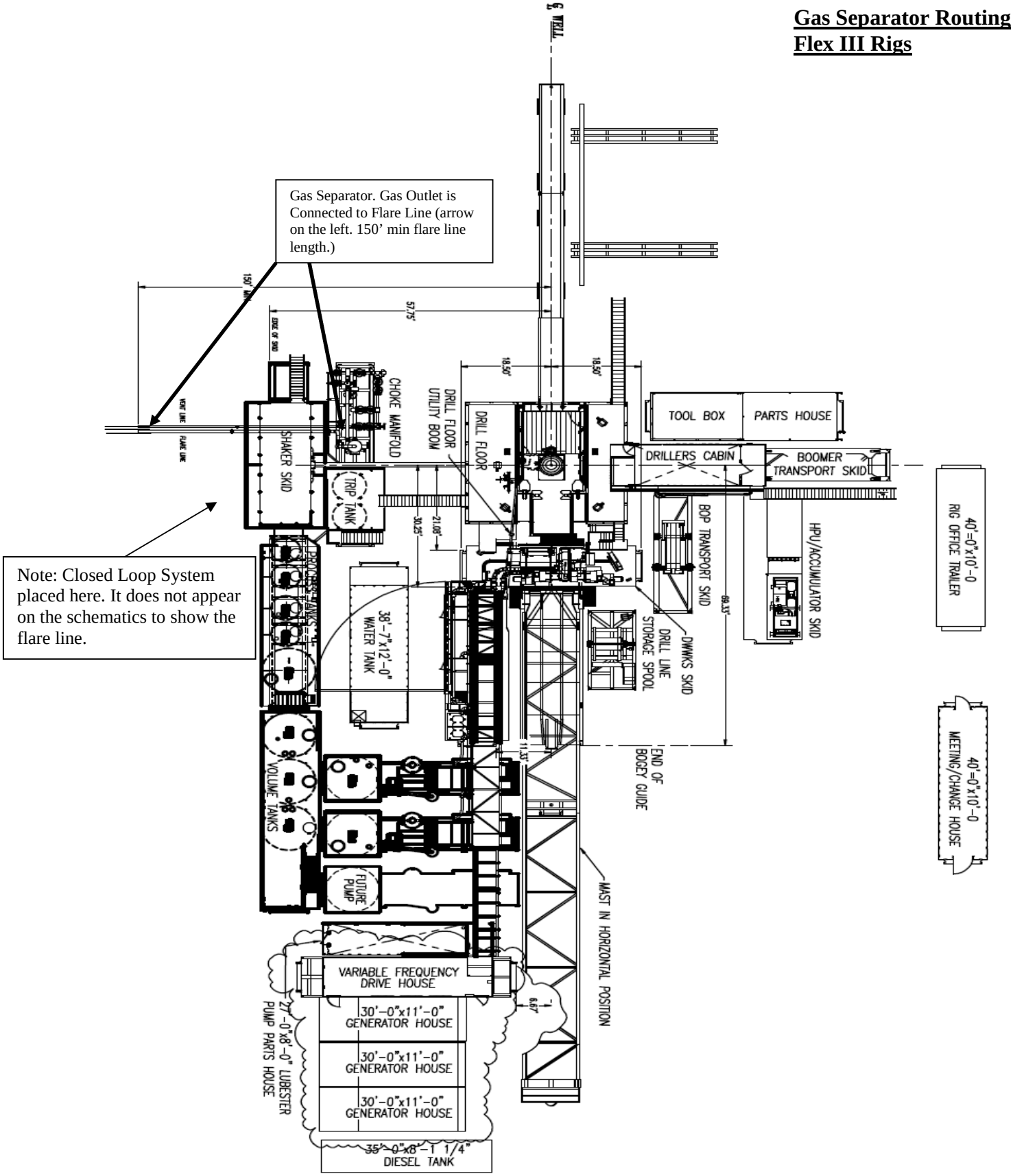
21. Vertical Choke Manifold Valve

***All Valves 3" minimum**

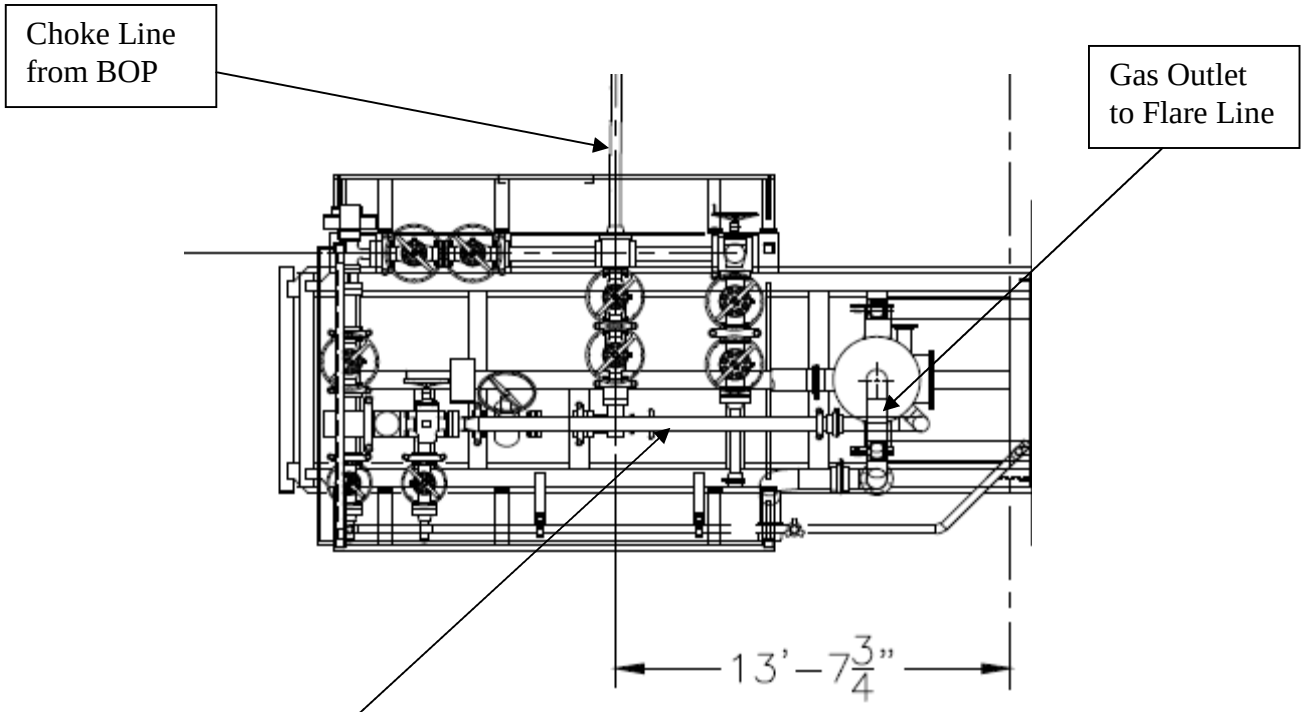


10M REMOTE KILL LINE SCHEMATIC

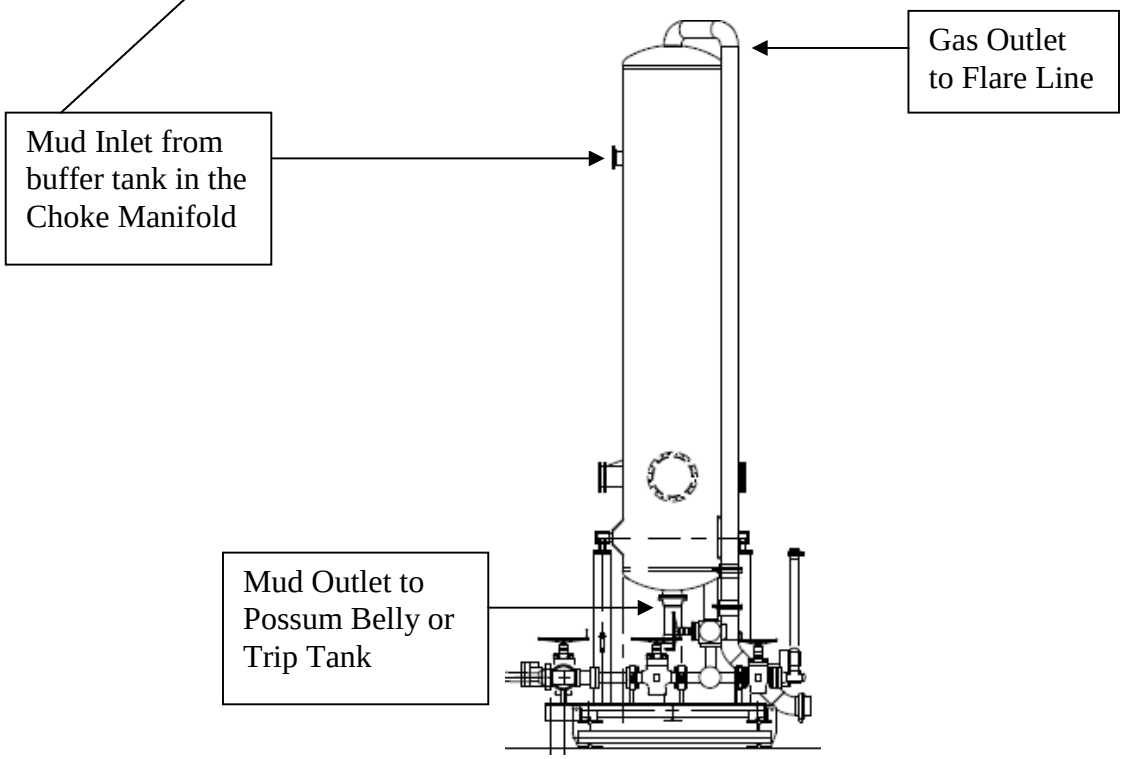
Gas Separator Routing
Flex III Rigs



Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)

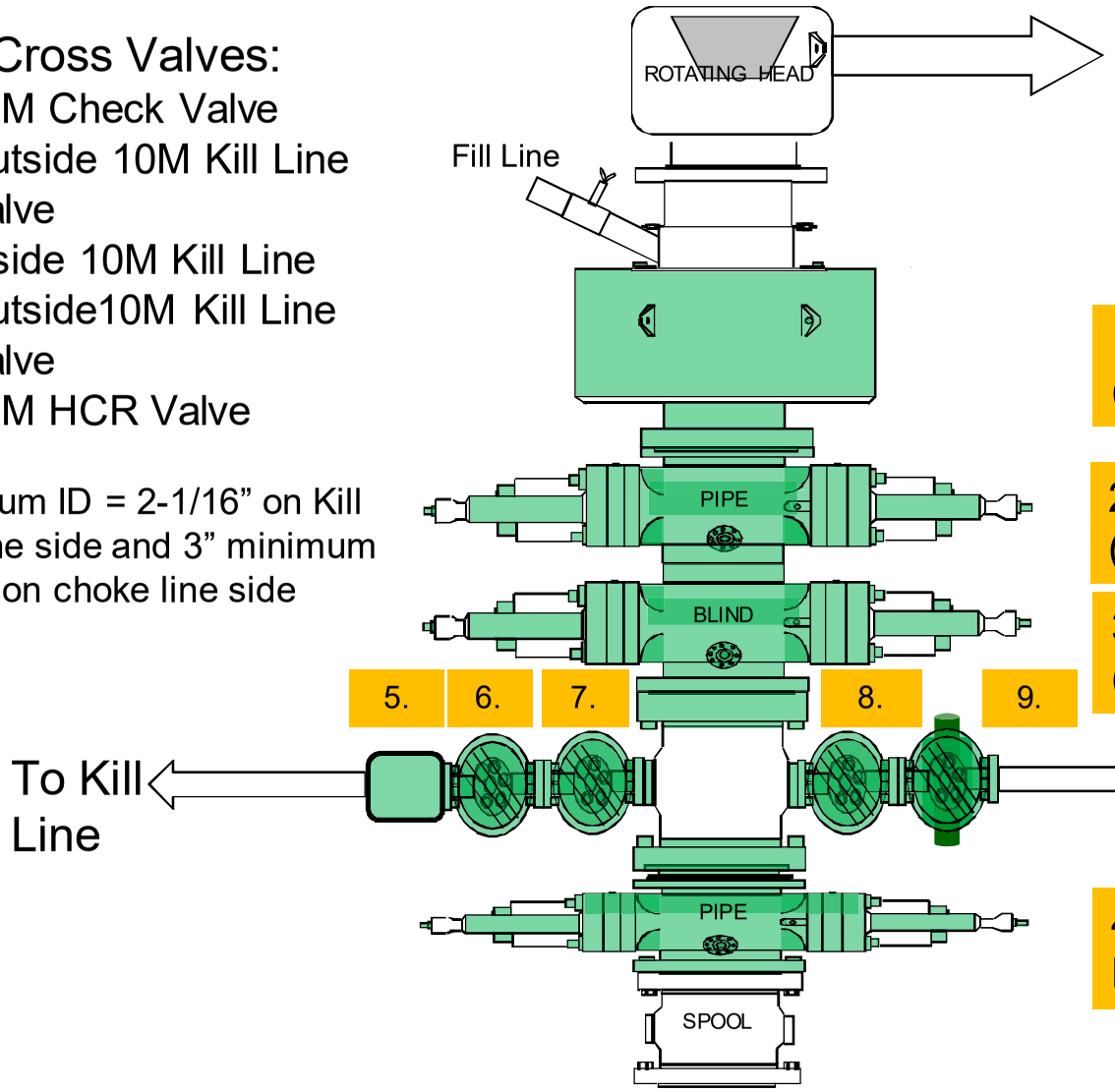


5/10M BOP Stack

Mud Cross Valves:

5. 10M Check Valve
6. Outside 10M Kill Line Valve
7. Inside 10M Kill Line
8. Outside10M Kill Line Valve
9. 10M HCR Valve

*Minimum ID = 2-1/16” on Kill Line side and 3” minimum ID on choke line side

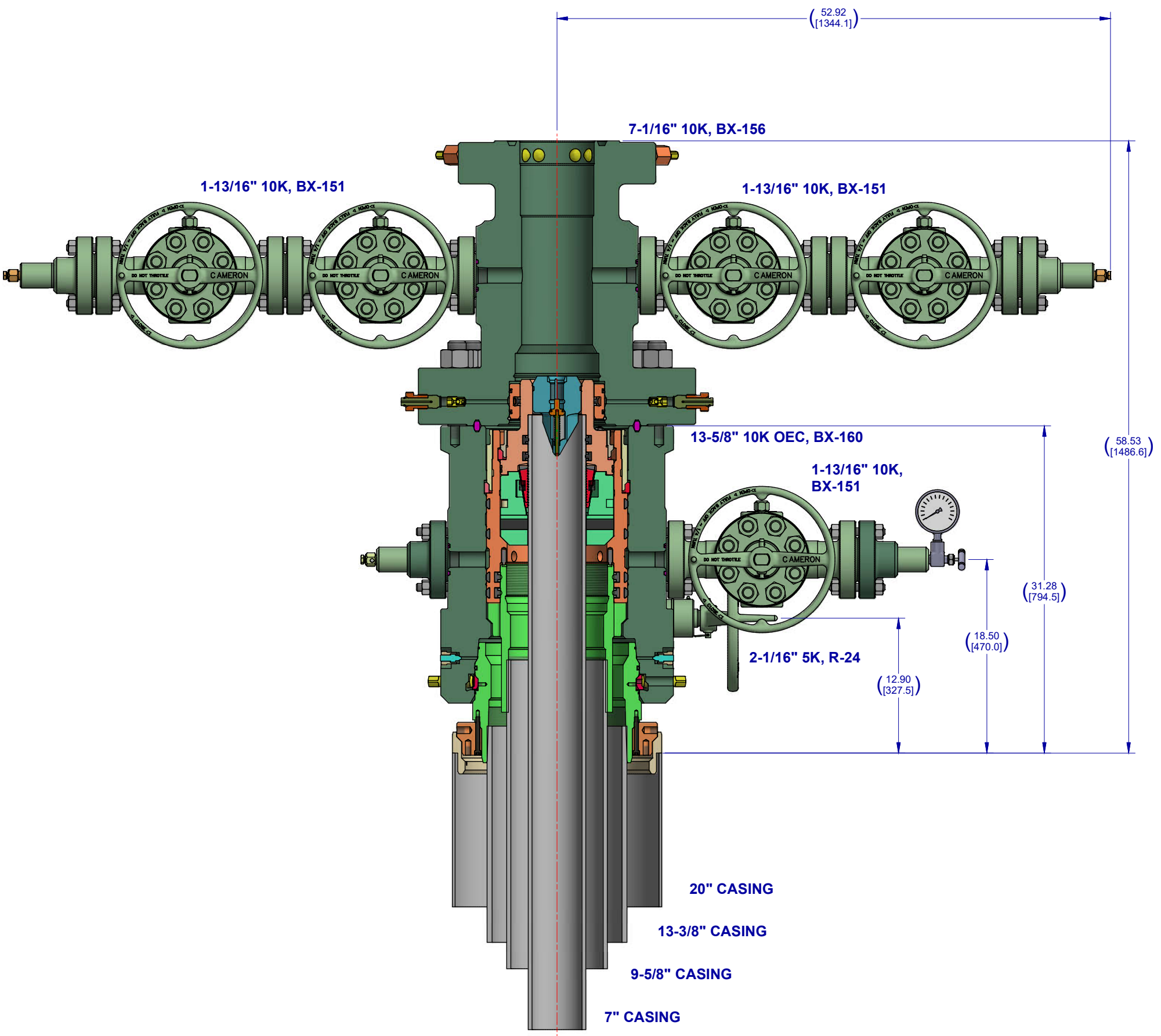


1. 5,000 psi Annular (13-5/8” ID)

2. 10,000 psi Upper Pipe Ram (13-5/8” ID)

3. 10,000 psi Blind Ram (13-5/8” ID)

4. 10,000 psi Lower Pipe Ram (13-5/8” ID)



Notes:

1. THIS IS A PROPOSAL DRAWING AND DIMENSIONS SHOWN ARE SUBJECT TO CHANGE DURING THE FINAL DESIGN PROCESS.

2. DIGITALLY ENABLED SOLUTIONS, CHOKES AND ESD'S AVAILABLE ON REQUEST

CONFIDENTIAL

SURFACE TREATMENT	DO NOT SCALE		CAMERON A Schlumberger Company	SURFACE SYSTEMS
	DRAWN BY: D. GOTTUNG	DATE 18 Feb 22		
MATERIAL & HEAT TREAT	CHECKED BY: D. GOTTUNG	DATE 18 Feb 22	OXY 13-5/8" 10K ADAPT 20" X 13-3/8" X 9-5/8" X 7"	
	APPROVED BY: D. GOTTUNG	DATE 18 Feb 22		
ESTIMATED WEIGHT: 6115.068 LBS 2773.748 KG	INITIAL USE B/M:		SHEET 1 OF 1	SD-053434-94-12 REV: 01

INVENTOR - D

Certificate of Conformity

ContiTech

Certificate Number	COM Order Reference	Customer Name & Address
H100161	1429702	HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No:	740382384	
Project:		

Test Center Address	Accepted by COM Inspection	Accepted by Client Inspection
ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Gerson Mejia-Lazo Date: 06/27/22	

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	Qnty	Serial Number	Specifications
30	RECERTIFICATION	3" ID 10K Choke and Kill Hose x 35ft OAL	1	70024	ContiTech Standard

Hydrostatic Test Certificate

ContiTech

Certificate Number	COM Order Reference	Customer Name & Address
H100161	1429702	HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No:	740382384	
Project:		

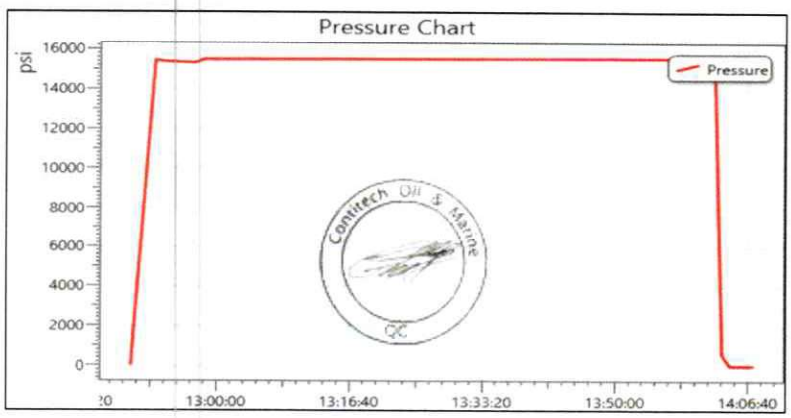
Test Center Address	Accepted by COM Inspection	Accepted by Client Inspection
ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Gerson Mejia-Lazo Date: 06/27/22	

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	Qnty	Serial Number	Work. Press. (psi)	Test Press. (psi)	Test Time (minutes)
30	RECERTIFICATION	3" ID 10K Choke and Kill Hose x 35ft OAL	1	70024	10,000	15,000	60

Record Information	
Start Time	6/8/2022 12:49:19
End Time	6/8/2022 14:07:25
Interval	00:01:00
Number	79
MaxValue	15762
MinValue	-7
AvgValue	14395
RecordName	70024-sh
RecordNumber	235

Gauge Information	
Model	ADT680
SN	21817380014
Range	(0-40000)psi
Unit	psi



THIS UNIT DEC 23/22
IN USE AS.

@ Rig
2021
2019
CHOKE
HOSE

Gates Engineering & Services North America
7603 Prairie Oak Dr.
Houston, TX. 77086
PHONE : (281) 602-4119
FAX:
EMAIL: Troy.Schmidt@gates.com

CERTIFICATE OF CONFORMANCE

This is to certify that all parts and materials included in this shipment have manufactured and/or processed in accordance with various Gates and API assembly and test specifications. Records of required tests are on-file and subject to examination. Test reports and subsequent test graphs have been made available with this shipment. Additional supporting documentation related to materials, welding, weld inspections, and heat-treatment activities are available upon request.

CUSTOMER:	A-7 AUSTIN INC DBA AUSTIN HOSE
CUSTOMERS P.O.#:	4128128 (RIG 1 PO 002773)
CUSTOMER P/N:	10KFR3.012.0CK411610KFIXXFLT SSA SC LE
PART DESCRIPTION:	3" X 12 FT GATES CHOKE & KILL HOSE ASSEMBLY WITH STAINLESS STEEL ARMOR C/W 4 1/16 10K FIX X FLOAT H2S SUITED FLANGES WITH BX 155 RING GROOVE SUPPLIED WITH SAFETY CLAMPS & SLINGS & LIFT EYE CLAMPS
SALES ORDER #:	516982
QUANTITY:	1
SERIAL #:	H2-112019-4

SIGNATURE: Norma Cabrera

TITLE: QUALITY ASSURANCE

DATE: 11/20/2019

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX 77086

PHONE: (281) 602 - 4119
FAX:
EMAIL: Troy.Schmidt@gates.com
WEB: www.gates.com

PRESSURE TEST CERTIFICATE

Customer:	A-7 AUSTIN INC DBA AUSTIN HOSE	Test Date:	11/20/2019
Customer Ref.:	4128128 (RIG 1 PO 002773)	Hose Serial No.:	H2-112019-4
Invoice No.:	516982	Created By:	Norma Cabrera

Product Description:	3" X 12 FT GATES CHOKE & KILL HOSE ASSEMBLY WITH STAINLESS STEEL ARMOR C/W 4 1/16 10K FIX X FLOAT H2S SUITED FLANGES WITH BX 155 RING GROOVE SUPPLIED WITH SAFETY CLAMPS & SLINGS & LIFT EYE CLAMPS

End Fitting 1:	4 1/16 10K FLANGES FIXED	End Fitting 2:	4 1/16 10K FLANGES FLOAT
Oracle Star No.:	68903010-9879429	Assembly Code:	L41242 113018
CUSTOMER P/N:	10KFR3.012.0CK411610KFIXXFLT SSA SC LE	Test Pressure:	15,000 PSI.
		Working Pressure:	10,000 PSI.

Gates Engineering & Services North America certifies that:

The following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements. This hose assembly was pressure tested using equipment and instrumentation that has been calibrated in accordance with the requirements set-forth in the GESNA management system.

Quality:	QUALITY	Production:	PRODUCTION
Date :	11/20/2019	Date :	11/20/2019
Signature :	Norma Cabrera	Signature :	

F-PRD-005

Revision 1_022819

H2-1987

11/20/2019 12:13:07 PM

TEST REPORT

CUSTOMER

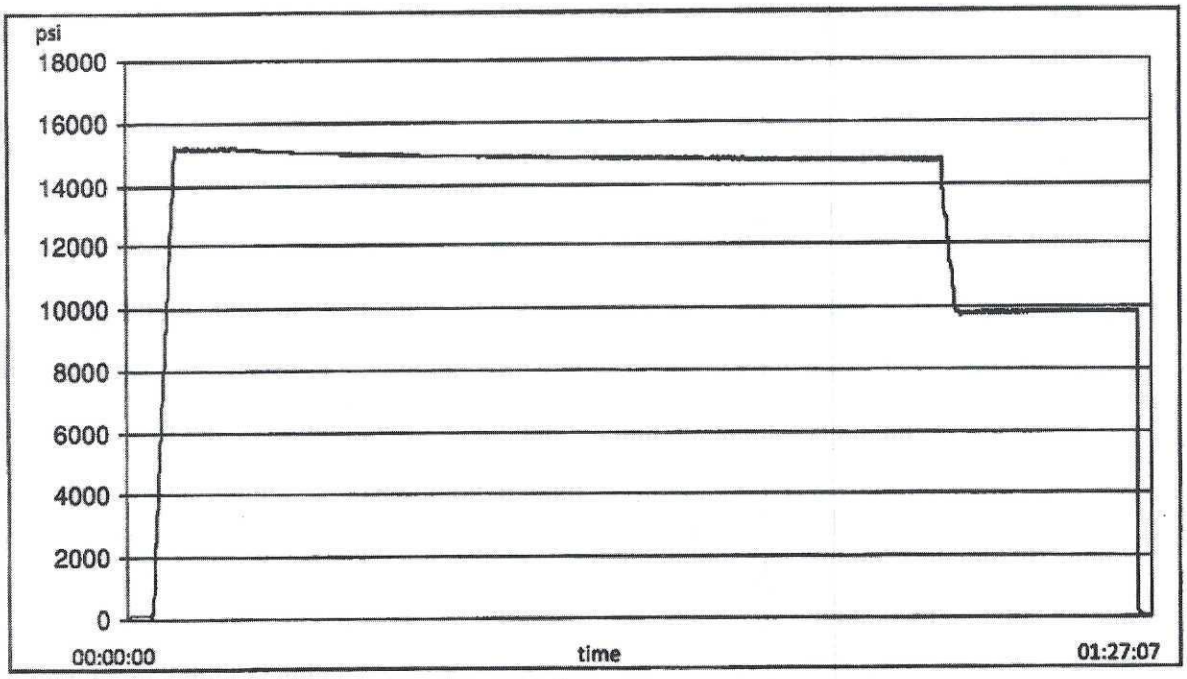
Company:	Austin Hose
Production description:	
Sales order #:	516982
Customer reference:	

TEST INFORMATION

Test procedure:	GTS-04-053	
Test pressure:	15000.00	psi
Test pressure hold:	3600.00	sec
Work pressure:	9750.00	psi
Work pressure hold:	900.00	sec
Length difference:	0.00	%
Length difference:	0.24	inch
Visual check:		
Pressure test result:	PASS	
Length measurement result:		
Test operator:	Roderick Shambra	

TEST OBJECT

Serial number:	H2-112019-4
Lot number:	L41242113018
Description:	
Hose ID:	3.0 10k MS C&K
Part number:	
Fitting 1:	3.0 x 4-1/16 10K
Part number:	
Description:	
Fitting 2:	3.0 x 4-1/16 10K
Part number:	
Description:	
Length:	12 feet



Filename: D:\Certificates\Report_112019-H2-112019-4.pdf

H2-1987

11/20/2019 12:13:07 PM

TEST REPORT

GAUGE TRACEABILITY

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110AMCL0	2019-03-17	2020-03-15
S-25-A-W	110AP02K	2019-04-16	2020-04-14

Comment

Certificate of Conformance

COPY

DW INDUSTRIES INC.
6287 Long Drive
Houston, TX 77087
Tel. 713 644-8372 Fax 713-644-4947

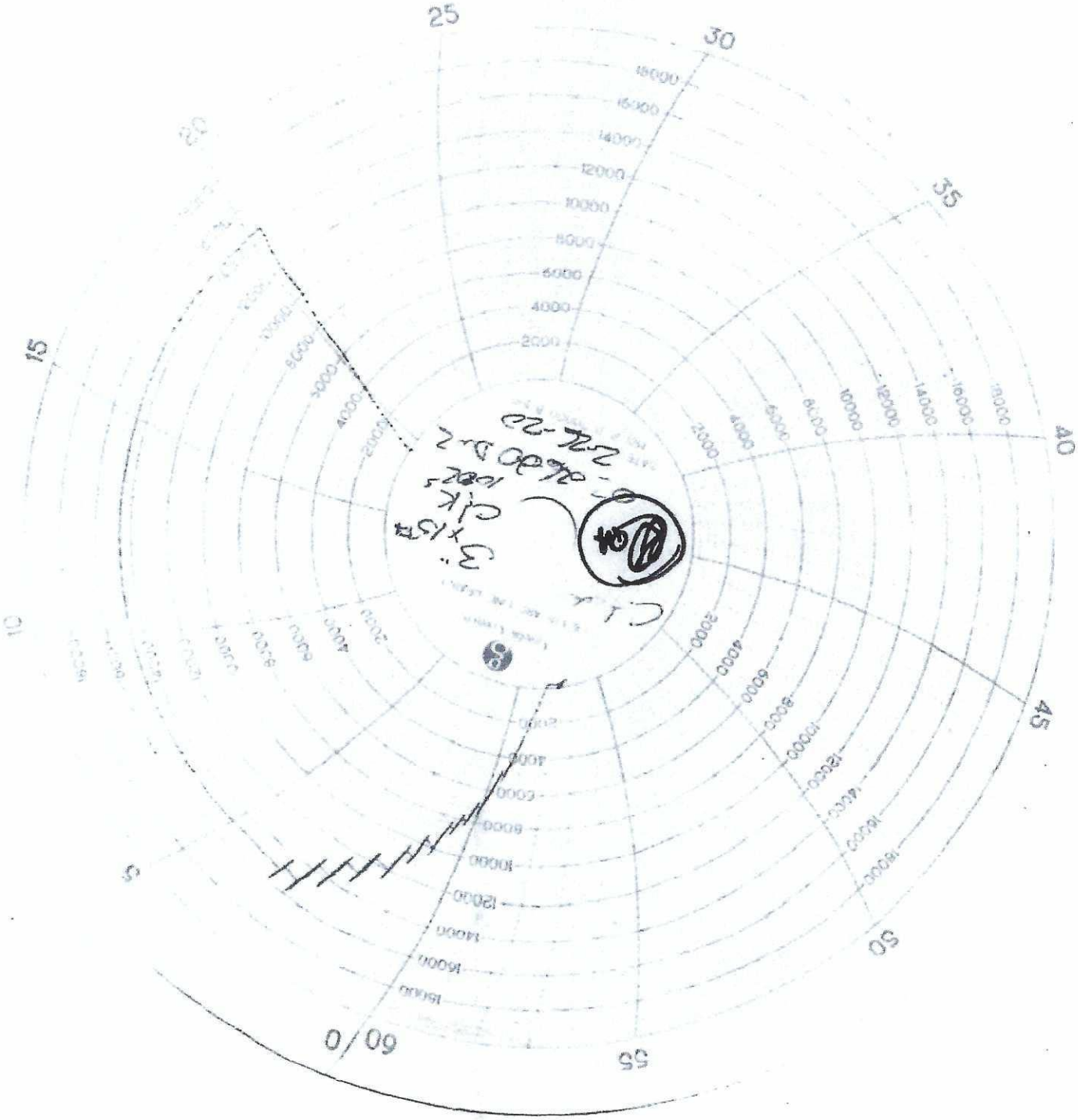
Customer Name:	CITADEL DRILLING		**Customer Contact:**	PAUL HOFFMAN 432-241-5360	
Purchase Order Information	**Customer Purchase Order Number:**	CONTACT PAUL HOFFMAN FOR INFO		**DW Industries Work Order Number:**	20020163
	DW Industries Part Number:	OA-5640-4815-1002-4		**Serial Number:**	022620DW-2
	QTY Ordered:	1		**Assembly Date:**	02/26/2020
	Customer Part Number:	OA-5640-4815-1002-4	**Part Description:**	3" 10,000 psi WP CHOKE HOSE M X F 4" 1002 HAMMER UNIONS C/W CLAMPS	

I DO HEREBY CERTIFY, AS THE AUTHORIZED REPRESENTATIVE OF DW INDUSTRIES, THAT THE PRODUCT LISTED ABOVE ARE OF THE QUALITY SPECIFIED AND CONFORM TO ALL REQUIREMENTS OF THE PURCHASE ORDER, INCLUDING: QUALITY CONTROL CLAUSES, DESIGN SPECIFICATIONS, DRAWINGS, PRESERVATION, PACKAGING, PACKING, MARKING, AND PHYSICAL IDENTIFICATION REQUIREMENTS AND HAS BEEN PROCESSED IN ACCORDANCE WITH ISO-9001:2015, API Q1 AND API SPEC 7K.

Certificate Issue Date: 2/27/2020

Garrett Crawford, Director of Quality
DW Industries Inc.

QF-018-OF. Rev New
Rev Date: 12/17/2019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Certificate of Conformance

COPY

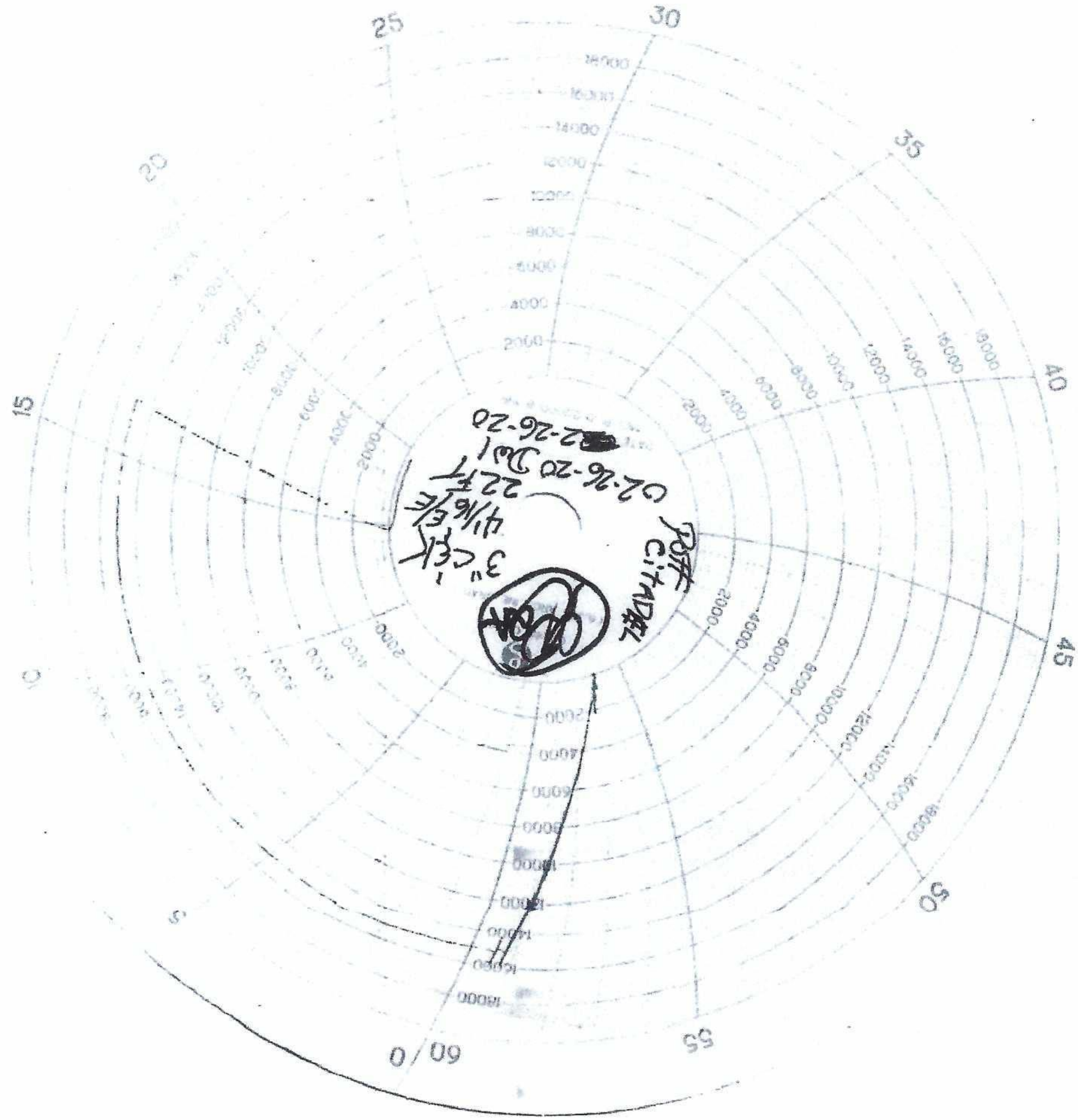
DW INDUSTRIES INC.
6287 Long Drive
Houston, TX 77087
Tel. 713 644-8372 Fax 713-644-4947

Customer Name:	CITADEL DRILLING		**Customer Contact:**	PAUL HOFFMAN 432-241-5360	
Purchase Order Information	**Customer Purchase Order Number:**	CONTACT PAUL HOFFMAN FOR INFO		**DW Industries Work Order Number:**	20020164
	DW Industries Part Number:	OA-5640-4822-4-1/16FXFL-ALE		**Serial Number:**	022620DW-1
	QTY Ordered:	1		**Assembly Date:**	02/26/2020
	Customer Part Number:	OA-5640-4822-4-1/16FXFL-ALE	**Part Description:**	3" 10,000 psi WP CHOKE HOSE 4-1/16" FIXED BY FLOAT FLANGES C/W SS ARMOR & LIFTING EYES	

I DO HEREBY CERTIFY, AS THE AUTHORIZED REPRESENTATIVE OF DW INDUSTRIES, THAT THE PRODUCT LISTED ABOVE ARE OF THE QUALITY SPECIFIED AND CONFORM TO ALL REQUIREMENTS OF THE PURCHASE ORDER, INCLUDING: QUALITY CONTROL CLAUSES, DESIGN SPECIFICATIONS, DRAWINGS, PRESERVATION, PACKAGING, PACKING, MARKING, AND PHYSICAL IDENTIFICATION REQUIREMENTS AND HAS BEEN PROCESSED IN ACCORDANCE WITH ISO-9001:2015, API Q1 AND API SPEC 7K.

Certificate Issue Date: 2/27/2020

Garrett Crawford, Director of Quality
DW Industries Inc.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02-26-20
CITADEL
22#

COPY

Certificate of Conformance

DW INDUSTRIES INC.
6287 Long Drive
Houston, TX 77087
Tel. 713 644-8372 Fax 713-644-4947

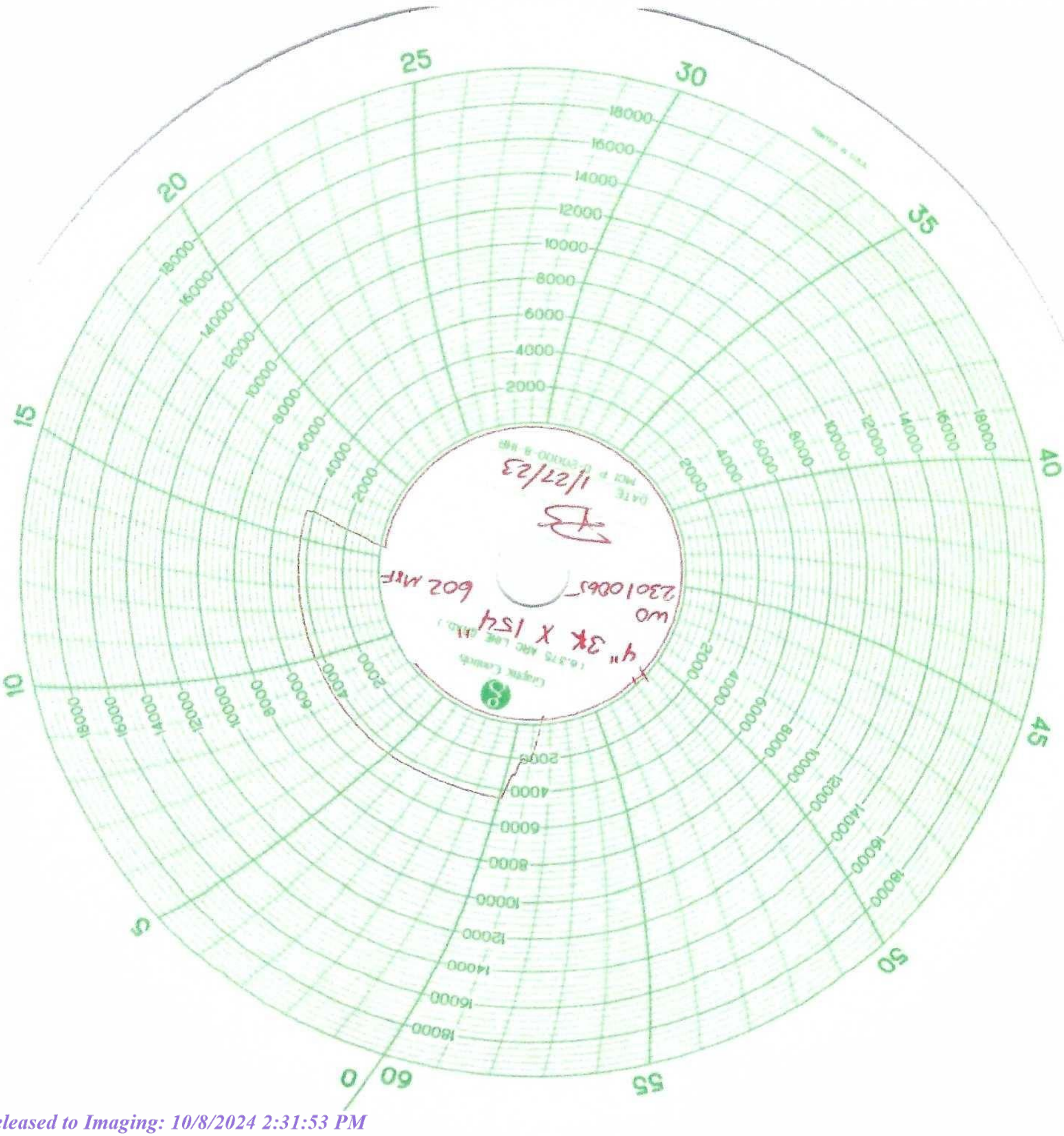
Customer Name:	ASUTIN HOSE		**Customer Contact:**	JUDY LOERA	
Purchase Order Information	**Customer Purchase Order Number:**	00704977		**DW Industries Work Order Number:**	23010065
	DW Industries Part Number:	OA-PS5038-64154"-602		**Serial Number:**	23010065
	QTY Ordered:	1		**Assembly Date:**	1/27/2023
	Customer Part Number:		**Part Description:**	4"X154" 3K W/4" FIG 602 MXF	

I DO HEREBY CERTIFY, AS THE AUTHORIZED REPRESENTATIVE OF DW INDUSTRIES, THAT THE PRODUCT LISTED ABOVE ARE OF THE QUALITY SPECIFIED AND CONFORM TO ALL REQUIREMENTS OF THE PURCHASE ORDER, INCLUDING: QUALITY CONTROL CLAUSES, DESIGN SPECIFICATIONS, DRAWINGS, PRESERVATION, PACKAGING, PACKING, MARKING, AND PHYSICAL IDENTIFICATION REQUIREMENTS AND HAS BEEN PROCESSED IN ACCORDANCE WITH ISO-9001:2015, API Q1 AND API SPEC 7K.

Certificate Issue Date: 1/27/2023

Quality Assurance,
DW Industries, Inc.

QF-018-OF, Rev New
Rev Date: 12/17/2019


1/27/23
4" 3K X 154

IN SERVICE
12-20-21

BLACK GOLD®

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr. Suite 190
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/oilandgas

PRESSURE TEST CERTIFICATE

Customer:	A-7 AUSTIN INC DBA AUSTIN HOSE	Test Date:	10/15/2021
Customer Ref.:	00595477	Hose Serial No.:	H3-101521-2
Invoice No.:	521925	Created By:	Micky Mhina

Product Description:	3" X 35' GATES FIRE RATED CHOKE & KILL HOSE ASSEMBLY SUITED FOR H2S SERVICE C/W 4 1/16 10K FIXED X FLOAT HEAT TREATED FLANGES SUPPLIED WITH STAINLESS STEEL ARMOR SAFETY CLAMPS & LIFT EYES

End Fitting 1:	4 1/16 10K FIXED FLANGE	End Fitting 2:	4 1/16 10K FLOAT HEAT TREATED FLANGES
Oracle Star No.:	68703010-10074881	Assembly Code:	L41975 091719
CUSTOMER P/N:	10K3.035.0CK411610KFIXXFLTW/SSA/SC/LE	Test Pressure:	15,000 PSI.
		Working Pressure:	10,000 PSI.

Gates Engineering & Services North America certifies that:

The following hose assembly has successfully passed all pressure testing requirements set forth in Gates specifications: GTS-04-052 (for 5K assemblies) or GTS-04-053 (10K assemblies) or GTS-04-048 (15K assemblies), which include reference to Specification API 16C (2nd Edition); sections 7.5.4, 7.5.9, and 10.8.7. A test graph will accompany this test certificate to illustrate conformity to test requirements. This hose assembly was pressure tested using equipment and instrumentation that has been calibrated in accordance with the requirements set-forth in the GESNA management system.

Quality:	QUALITY	Production:	PRODUCTION
Date :	10/15/2021	Date :	10/15/2021
Signature :	Micky Mhina	Signature :	

F-PRD-005B

Revision 6_05032021

BLACK GOLD®

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/oilandgas

CERTIFICATE OF CONFORMANCE

This is to certify that all parts and materials included in this shipment have manufactured and/or processed in accordance with various Gates and API assembly and test specifications. Records of required tests are on-file and subject to examination. Test reports and subsequent test graphs have been made available with this shipment. Additional supporting documentation related to materials, welding, weld inspections, and heat-treatment activities are available upon request.

CUSTOMER:	A-7 AUSTIN INC DBA AUSTIN HOSE
CUSTOMER P.O.#:	00595477
CUSTOMER P./N.#:	10K3.035.0CK411610KFIXXFLTW/SSA/SC/LE
PART DESCRIPTION:	3" X 35' GATES FIRE RATED CHOKE & KILL HOSE ASSEMBLY SUITED FOR H2S SERVICE C/W 4 1/16 10K FIXED X FLOAT HEAT TREATED FLANGES SUPPLIED WITH STAINLESS STEEL ARMOR SAFETY CLAMPS & LIFT EYES
SALES ORDER #:	521925
QUANTITY:	1
SERIAL #:	H3-101521-2

SIGNATURE: Miulya Wulu

TITLE: QUALITY ASSURANCE

DATE: 10/15/2021

H3-6963

10/15/2021 10:15:57 AM

TEST REPORT

CUSTOMER

Company: Austin Distributing

Production description:

Sales order #: 521925

Customer reference:

TEST INFORMATION

Test procedure:	GTS-04-053	
Test pressure:	15000.00	psi
Test pressure hold:	3600.00	sec
Work pressure:	10000.00	psi
Work pressure hold:	900.00	sec
Length difference:	0.00	%
Length difference:	0.00	inch

Visual check:

Pressure test result: PASS

Length measurement result:

Test operator: francisco

TEST OBJECT

Serial number: H3-101521-2

Lot number: L41975091719

Description:

Hose ID: 3" 10k ck

Part number:

Fitting 1: 3.0 x 4-1/16 10K

Part number:

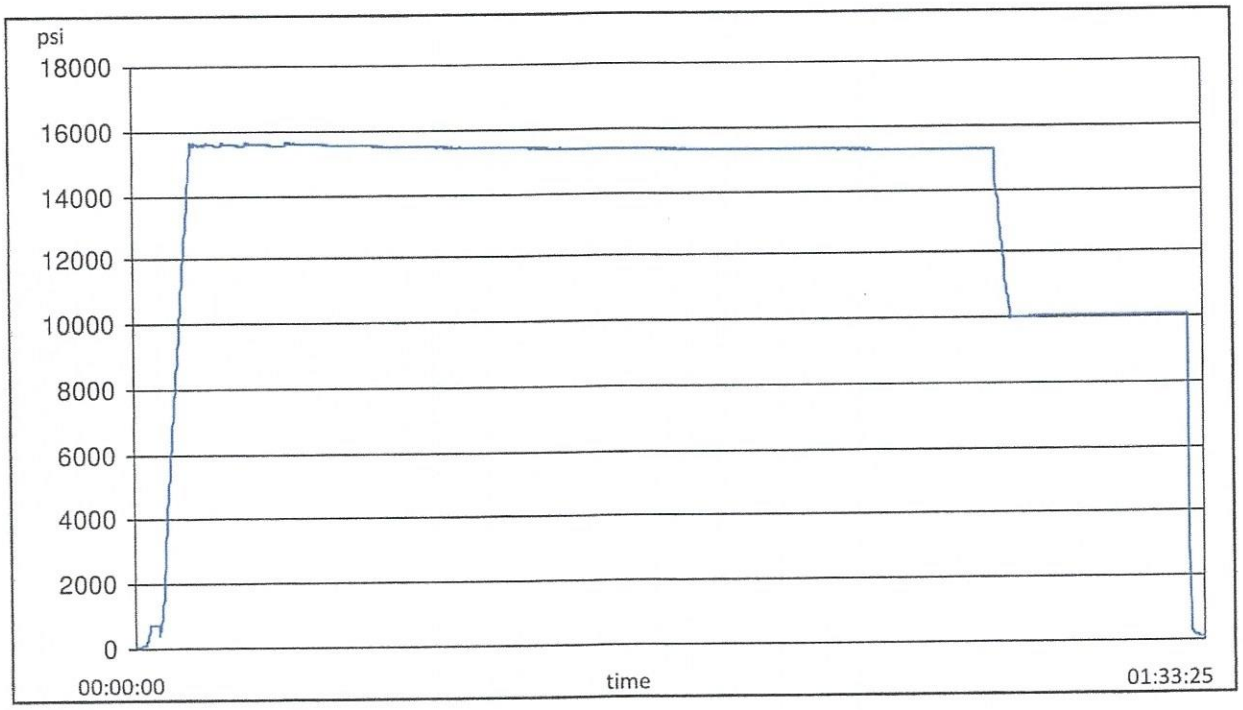
Description:

Fitting 2: 3.0 x 4-1/16 10K

Part number:

Description:

Length: 35 feet



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H3-6963

10/15/2021 10:15:57 AM

TEST REPORT

GAUGE TRACEABILITY

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110AQA1S	2021-02-24	2022-02-24
S-25-A-W	110D3PHQ	2021-03-11	2022-03-11

Comment

Hydrostatic Test Certificate

ContiTech

Certificate Number	COM Order Reference	Customer Name & Address
H100163	1429702	HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No:	740382384	
Project:		

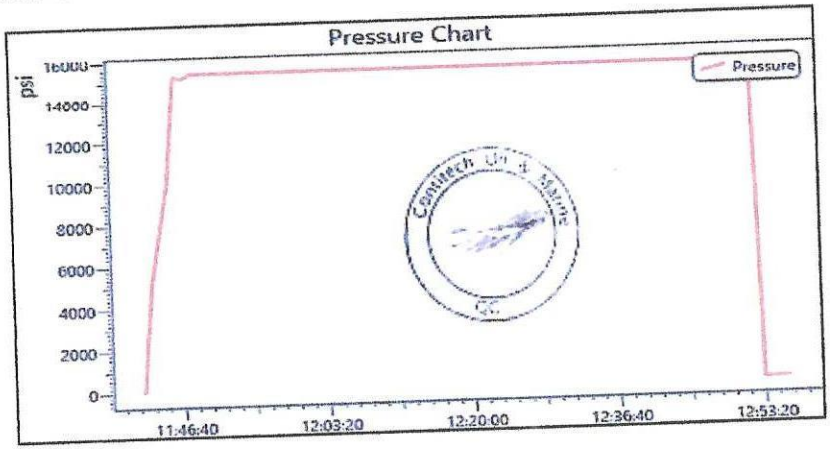
Test Center Address	Accepted by COM Inspection	Accepted by Client Inspection
ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Gerson Mejia-Lazo Date: 07/14/22	

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	Qnty	Serial Number	Work. Press. (psi)	Test Press. (psi)	Test Time (minutes)
50	RECERTIFICATION	3" ID 10K Choke and Kill Hose x 35ft OAL	1	70025	10,000	15,000	60

Record Information	
Start Time	6/14/2022 11:42:08
End Time	6/14/2022 12:56:14
Interval	00:01:00
Number	75
MaxValue	15888
MinValue	-8
AvgValue	14184
RecordName	70025-sh
RecordNumber	237

Gauge Information	
Model	ADT680
SN	21817380014
Range	(0-40000)psi
Unit	psi



Continental

Certificate of Conformity

ContiTech

Certificate Number	COM Order Reference	Customer Name & Address
H100163	1429702	HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No:	740382384	
Project:		

Test Center Address	Accepted by COM Inspection	Accepted by Client Inspection
ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Signed: Gerson Mejia-Lazo Date: 07/14/22	

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	Qnty	Serial Number	Specifications
50	RECERTIFICATION	3" ID 10K Choke and Kill Hose x 35ft OAL	1	70025	ContiTech Standard

ARMORED CHOKE HOSE

Installed

4-29-22

Continental

ContiTech

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 120 / 2019
	Page: 16 / 91

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE					CERT. N°:	75819	
PURCHASER:	ContiTech Oil & Marine Corp.				P.O. N°:	4501225327	
CONTITECH RUBBER order N°:	1127442	HOSE TYPE:	3"	ID	Choke and Kill Hose		
HOSE SERIAL N°:	75819	NOMINAL / ACTUAL LENGTH:			10,67 m / 10,68 m		
W.P. 69,0 MPa	10000 psi	T.P. 103,5 MPa	15000 psi		Duration:	60	min.

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	6026	AISI 4130	A0607J
4 1/16" 10K API Swivel Flange end		AISI 4130	040841
Hub		AISI 4130	54194
3" coupling with	6016	AISI 4130	A0607J
4 1/16" 10K API b.w. Flange end		AISI 4130	040431

Not Designed For Well Testing

API Spec 16 C 2nd Edition– FSL2

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
08. April 2019.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Hose Assembly Evaluation Sheet

Prepared by	Cristian Rivera		Date:	8/27/2022		QIN:	N/A
Customer:	HELMERICH & PAYNE, INC		Location:	H&P INT'L DRILLING CO 210 MAGNOLIA DR GALENA PARK,TX,77547-2738			
User contact:	MITCH MCKINNIS		Phone:			e-mail:	mitch.mckinnis@hpinc.com

	Parameters	Hose Details	Test Status
Application Information	PO	740398454 (88000240 | SN:70035)	PASS
	Gates SO	525035	
	Serial #:	88000240 | SN:70035	
	As Tested Serial:	H2-082722-1 RE-TEST	
	Hose ID:	3 IN	
	Hose type:	INSPECT AND RETEST CUSTOMER HOSE 3IN X 35FT CHOKE & KILL ASSEMBLY C/W 4-1/16 FLANGES BX155 RING GROOVE EACH END	
	Working pressure:	10000 PSI.	

1. Visual Examination

An API 16C, IN X 35FT CHOKE & KILL ASSEMBLY C/W 4-1/16 FLANGES BX155 RING GROOVE EACH END received from HELMERICH & PAYNE, INC for inspection, testing and external cosmetic repairs. The hydrostatic pressure testing was requested to 15000 PSI., by the customer HELMERICH & PAYNE, INC

Visual inspection and examination of external hose assembly showed some cosmetic dents and repairabledamages to the external armor at distance 32ft 9in. from EF2. (Need to fix a part of the hose.)

Both external & internal hose body and couplings of the hose were examined. Visual Inspection photos are in Table 2, while post inspection/testing pictures are in Table 4.

The hose was hydrostatically tested at 15000 PSI. test pressure with an hour-long hold. On completion of hydrostatic testing, an internal baroscopic examination was carried out, to check the condition of internal hose areas, mainly hose tube and coupling hose interface.

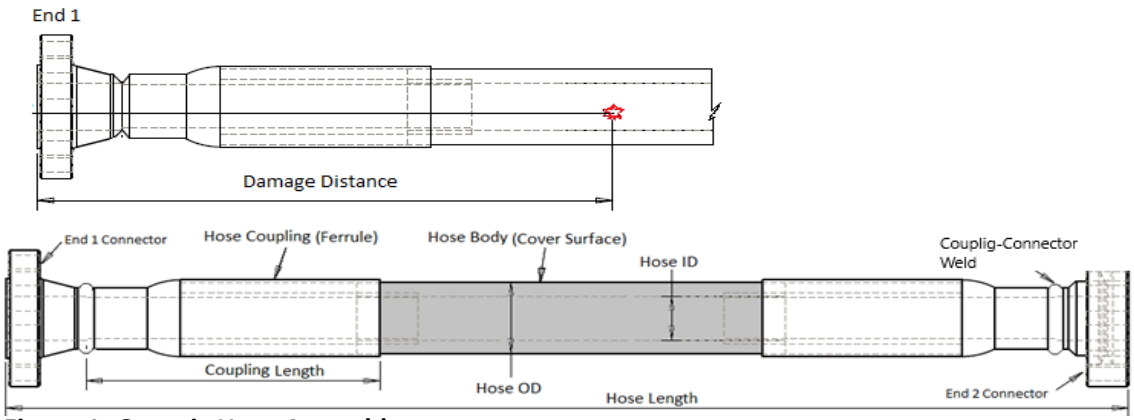


Figure 1: Generic Hose Assembly

Hose Assembly Evaluation Sheet

1.0 Observations and comments

	Comments
1	 **Photos: ID.**
2	 **Photo: Damaged armor areas**

Hose Assembly Evaluation Sheet

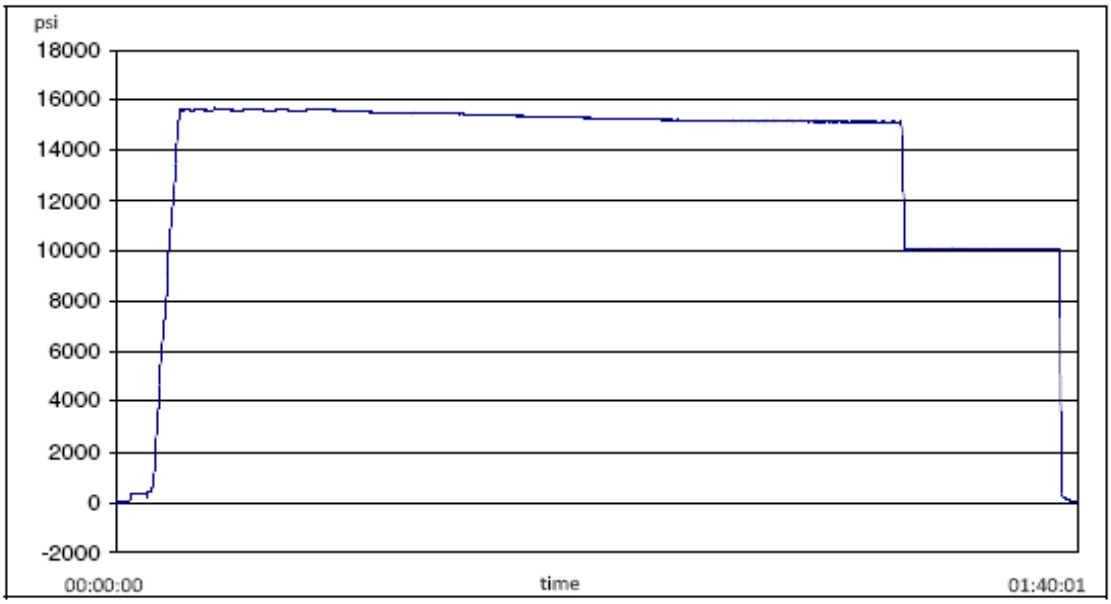
3	 **Photos: At Shipping.**
4	 **Photos: Armor and Engraving.**

Hose Assembly Evaluation Sheet

5	

Photo: In the Crate

2. Hydro Static Pressure test



2.1 Hydrostatic Pressure test Procedures

	Hose Type	Test Specification	Test Date	Technician
1	IN X 35FT CHOKE & KILL ASSEMBLY C/W 4-1/16	3 10K C&K	2022-08-27	Martin Orozco

2.2 Gates Hydrostatic Pressure tester

	Test Equipment	Serial No	Last Cal Date	Cal Due Date
1	S-25-A-W	110AMCLO	2022-01-10	2023-01-10
2	S-25-A-W	110BSEUZ	2022-03-09	2023-03-09

Hose Assembly Evaluation Sheet

2.3 Hydro Static Test Pressure results

	Details	Results	
1	Hydrostatic Test Results [1]	Pass	~~Fail~~
2	Failure Mode	None	
3	Hose Dispatched to the customer?	Yes	~~No~~

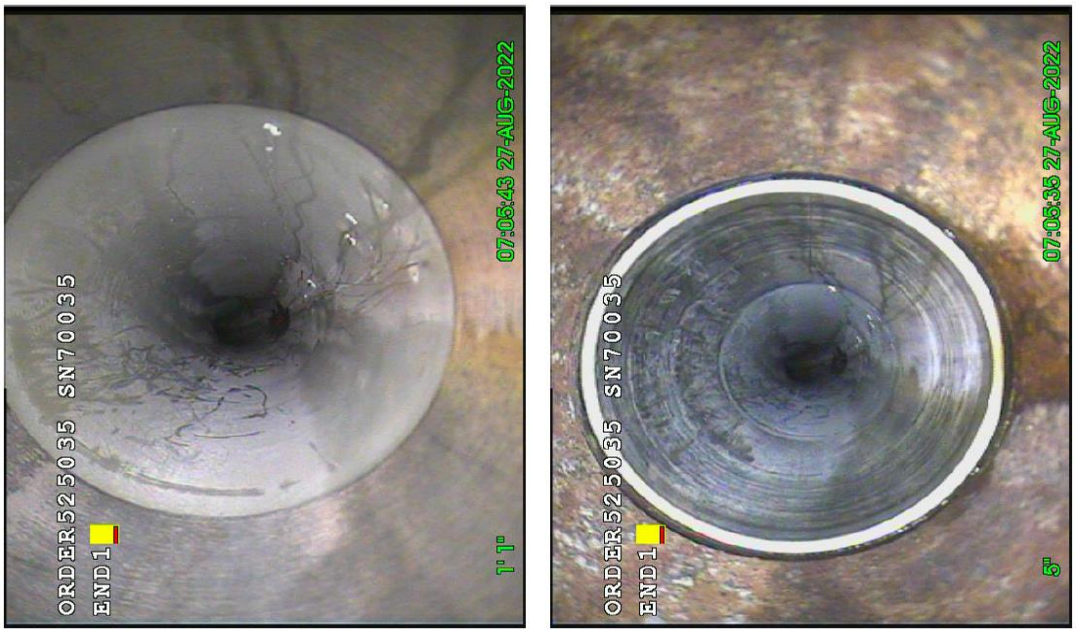
Note:

1. Hydrostatic Pressure report is given in Appendix 1

3. Hose borescope inspection

3.2 Internal Failure Details

	Type of Failure	Location of Defect	Ref. Photo	Defect Details
1	Liner breach/ collapse	None		None
2	Bulges/ Blisters	None		None
3	Other breach/failures	None		None



Photos: Liner/Coupling Interface END 1

Hose Assembly Evaluation Sheet

Photos: Liner/Coupling Interface END 2

Note

Borescope completed? *Yes*

4. Summary

Hose assembly successfully tested to requested test pressure of 15000 PSI. with an hour hold. It was then serialized and stamped, as H2-082722-1 RE-TEST. The bore scope showed no blisters or delamination in the internal lining/tube area. External damages were repaired as agreed with the customer.

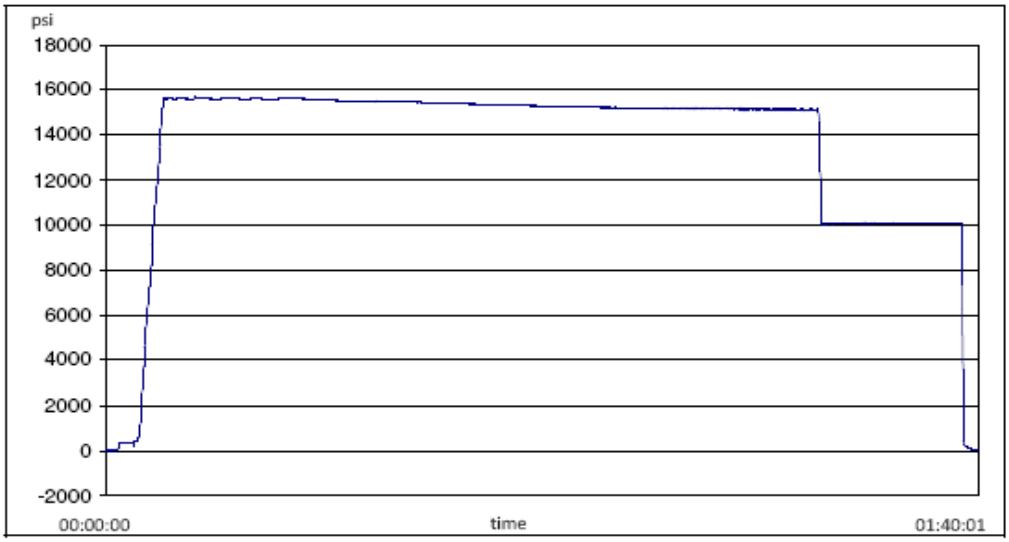
Hose Assembly Evaluation Sheet

APPENDIX 1:
Pressure Chart

H2-8316
8/27/2022 8:51:22 AM

TEST REPORT

CUSTOMER			**TEST OBJECT**		
Company:			Serial number:	H2-082722-1	
			Lot number:		
Production description:			Description:		
Sales order #:	525035				
Customer reference:	740398454 (88000240 | SN:70035)		Hose ID:	3 10k C&K	
			Part number:		
TEST INFORMATION					
Test procedure:	3 10K C&K		Fitting 1:	3.0 x 4-1/16 10K	
Test pressure:	15000.00	psi	Part number:		
Test pressure hold:	3600.00	sec	Description:		
Work pressure:	10000.00	psi			
Work pressure hold:	900.00	sec	Fitting 2:	3.0 x 4-1/16 10K	
Length difference:	0.00	%	Part number:		
Length difference:	0.00	inch	Description:		
Visual check:			Length:	35	feet
Pressure test result:	PASS				
Length measurement result:					
Test operator:	Martin				



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Hose Assembly Evaluation Sheet

H2-8316
8/27/2022 8:51:22 AM

TEST REPORT

GAUGE TRACEABILITY

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110AMCLO	2022-01-10	2023-01-10
S-25-A-W	110BSEUZ	2022-03-09	2023-03-09

Comment

Filename: D:\Certificates\Report_082722-H2-082722-1.pdf Page 2/2

Hose Assembly Evaluation Sheet

APPENDIX 2:
Certificate of Conformance

BLACK GOLD®

GATES ENGINEERING & SERVICES NORTH AMERICA
7603 Prairie Oak Dr.
Houston, TX. 77086

PHONE: +1 (281) 602-4100
FAX: +1 (281) 602-4147
EMAIL: gesna.quality@gates.com
WEB: www.gates.com/oilandgas

CERTIFICATE OF CONFORMANCE

This is to verify that the items detailed below meet the requirements of the Customer's Purchase Order referenced herein, and are in Conformance with applicable specifications, and that Records of Required Tests are on file and subject to examination. The following items were inspected and hydrostatically tested at **Gates Engineering & Services North America** facilities in Houston, TX, USA.

CUSTOMER:	HELMERICH & PAYNE, INC
CUSTOMER P.O.#:	740398454 (88000240 | SN:70035)
CUSTOMER P/N:	88000240 | SN:70035
PART DESCRIPTION:	INSPECT AND RETEST CUSTOMER HOSE 3IN X 35FT CHOKE & KILL ASSEMBLY C/W 4-1/16 FLANGES BX155 RING GROOVE EACH END
SALES ORDER #:	525035
QUANTITY:	1
SERIAL #:	H2-082722-1 RE-TEST

SIGNATURE: _____
TITLE: QUALITY ASSURANCE
DATE: 8/27/2022

Tenaris

TenarisHydril Wedge 425®

Coupling	Pipe Body
Grade: **P110-CY**	Grade: **P110-CY**
Body: **White**	1st Band: **White**
1st Band: **Grey**	2nd Band: **Grey**
2nd Band: **-**	3rd Band: **-**
3rd Band: **-**	4th Band: **-**
	5th Band: **-**
	6th Band: **-**

Outside Diameter	5.500 in.	**Wall Thickness**	0.361 in.	**Grade**	P110-CY
Min. Wall Thickness	87.50 %	**Pipe Body Drift**	API Standard	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	**Wall Thickness**	0.361 in.	**Body Yield Strength**	641 x1000 lb
Nominal Weight	20 lb/ft	**Plain End Weight**	19.83 lb/ft	**Min. Internal Yield Pressure**	12,640 psi
Drift	4.653 in.	**OD Tolerance**	API	**SMYS**	110,000 psi
Nominal ID	4.778 in.			**Collapse Pressure**	11,100 psi

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	5.777 in.	**Tension Efficiency**	90 %	**Minimum**	15,700 ft-lb
Connection ID	4.734 in.	**Joint Yield Strength**	577 x1000 lb	**Optimum**	19,600 ft-lb
Make-up Loss	5.823 in.	**Internal Pressure Capacity**	12,640 psi	**Maximum**	21,600 ft-lb
Threads per inch	3.77	**Compression Efficiency**	90 %		
Connection OD Option	Regular	**Compression Strength**	577 x1000 lb	**Operation Limit Torques**	
		Max. Allowable Bending	82 °/100 ft	**Operating Torque**	29,000 ft-lb
		External Pressure Capacity	11,100 psi	**Yield Torque**	36,000 ft-lb

Notes

This connection is fully interchangeable with:
TORQ® SFW™ - 5.5 in. - 0.361 in.
Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version

For the lastest performance data, always visit our website: www.tenaris.com

TenarisHydril

5.500" 20.00 lb/ft P110-CY TenarisHydril Wedge 461™ Matched Strength

Special Data Sheet
TH DS-20.0359
12 August 2020
Rev 00

Nominal OD	5.500 in.	**Wall Thickness**	0.361 in.	**Grade**	P110-CY
Min Wall Thickness	87.5%	**Type**	CASING	**Connection OD Option**	MATCHED STRENGTH

Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	**Nominal ID**	4.778 in.	**Body Yield Strength**	641 x 1000 lbs
Nominal Weight	20.00 lbs/ft	**Wall Thickness**	0.361 in.	**Internal Yield**	12640 psi
Standard Drift Diameter	4.653 in.	**Plain End Weight**	19.83 lbs/ft	**SMYS**	110000 psi
Special Drift Diameter	N/A	**OD Tolerance**	API	**Collapse Pressure**	11110 psi

Connection Data

Geometry		Performance		Make-up Torques	
Matched Strength OD	6.050 in.	**Tension Efficiency**	100%	**Minimum**	17000 ft-lbs
Make-up Loss	3.775 in.	**Joint Yield Strength**	641 x 1000 lbs	**Optimum**	18000 ft-lbs
Threads per in.	3.40	**Internal Yield**	12640 psi	**Maximum**	21600 ft-lbs
Connection OD Option	MATCHED STRENGTH	**Compression Efficiency**	100%	**Operational Limit Torques**	
Coupling Length	7.714 in.	**Compression Strength**	641 x 1000 lbs	**Operating Torque**	32000 ft-lbs
		Bending	92 °/100 ft	**Yield Torque**	38000 ft-lbs
		Collapse	11110 psi	**Buck-On Torques**	
				Minimum	21600 ft-lbs
				Maximum	23100 ft-lbs

Notes

*If you need to use torque values that are higher than the maximum indicated, please contact a local Tenaris technical sales representative

TenarisHydril

5.500" 20.00 lb/ft P110-CY TenarisHydril Wedge 461™ Matched Strength

Special Data Sheet
TH DS-20.0359
12 August 2020
Rev 00

Nominal OD	5.500 in.	**Wall Thickness**	0.361 in.	**Grade**	P110-CY
Min Wall Thickness	87.5%	**Type**	CASING	**Connection OD Option**	MATCHED STRENGTH

Pipe Body Data

Geometry				Performance	
Nominal OD	5.500 in.	**Nominal ID**	4.778 in.	**Body Yield Strength**	641 x 1000 lbs
Nominal Weight	20.00 lbs/ft	**Wall Thickness**	0.361 in.	**Internal Yield**	12640 psi
Standard Drift Diameter	4.653 in.	**Plain End Weight**	19.83 lbs/ft	**SMYS**	110000 psi
Special Drift Diameter	N/A	**OD Tolerance**	API	**Collapse Pressure**	11110 psi

Connection Data

Geometry		Performance		Make-up Torques	
Matched Strength OD	6.050 in.	**Tension Efficiency**	100%	**Minimum**	17000 ft-lbs
Make-up Loss	3.775 in.	**Joint Yield Strength**	641 x 1000 lbs	**Optimum**	18000 ft-lbs
Threads per in.	3.40	**Internal Yield**	12640 psi	**Maximum**	21600 ft-lbs
Connection OD Option	MATCHED STRENGTH	**Compression Efficiency**	100%	**Operational Limit Torques**	
Coupling Length	7.714 in.	**Compression Strength**	641 x 1000 lbs	**Operating Torque**	32000 ft-lbs
		Bending	92 °/100 ft	**Yield Torque**	38000 ft-lbs
		Collapse	11110 psi	**Buck-On Torques**	
				Minimum	21600 ft-lbs
				Maximum	23100 ft-lbs

Notes

*If you need to use torque values that are higher than the maximum indicated, please contact a local Tenaris technical sales representative

OXY's Minimum Design Criteria

Burst, Collapse, and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software. A sundry will be requested if any lesser grade or different size casing is substituted.

1) Casing Design Assumptions

a) Burst Loads

CSG Test (Surface)

- Internal: Displacement fluid + pressure required to comply with regulatory casing test pressures. This will comply with both Onshore Oil and Gas Order No. 2 and 19.15.16 of the OCD Rules.
- External: Pore pressure in open hole.

CSG Test (Intermediate)

- Internal: Displacement fluid + pressure required to comply with regulatory casing test pressures. This will comply with both Onshore Oil and Gas Order No. 2 and 19.15.16 of the OCD Rules.
- External: Mud Weight to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

CSG Test (Production)

- Internal:
  - For Drilling: Displacement fluid + pressure required to comply with regulatory casing test pressures. This will comply with both Onshore Oil and Gas Order No. 2 and 19.15.16 of the OCD Rules.
  - For Production: The design pressure test should be the greater of (1) the planned test pressure prior to stimulation down the casing. (2) the regulatory test pressure, and (3) the expected gas lift system pressure. The design test fluid should be the fluid associated with pressure test having the greatest pressure.
- External:
  - For Drilling: Mud Weight to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.
  - For Production: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

Gas Column (Surface)

- Internal: Assumes a full column of gas in the casing with a Gas/Oil Gradient of 0.1 psi/ft in the absence of better information. It is limited to the controlling pressure based on the fracture pressure at the shoe or the maximum expected pore pressure within the next drilling interval, whichever results in a lower surface pressure.
- External: Fluid gradient below TOC, pore pressure from the TOC to the Intermediate CSG shoe (if applicable), and MW of the drilling mud that was in the hole when the CSG was run from Intermediate CSG shoe to surface.

Bullheading (Surface / Intermediate)

- Internal: The string must be designed to withstand a pressure profile based on the fracture pressure at the casing shoe with a column of water above the shoe plus an additional surface pressure (in psi) of 0.02 X MD of the shoe to account for pumping friction pressure.
- External: Mud weight to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

Gas Kick (Intermediate)

- The string must be designed to at least a gas kick load case unless the rig is unable to detect a kick. For the gas kick load case, the internal pressure profile must be based on a minimum volume of 50 bbl or the minimum kick detection capability of the rig, whichever is greater, and a kick intensity of 2.0 ppg for Class 1, 1.0 ppg of Class 2, and 0.5 ppg for Class 3 and 4 wells.
- Internal: Influx depth of the maximum pore pressure of 0.55 “gas kick gravity” of gas to surface while drilling the next hole section.
- External: Mud weight to the TOC, cement mix water gradient below TOC, and pore pressure in open hole.

Tubing Leak Near Surface While Producing (Production)

- Internal: SITP plus a packer fluid gradient to the shoe or top of packer.
- External: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

Tubing Leak Near Surface While Stimulating (Production)

- Internal: Surface pressure or pressure-relief system pressure, whichever is lower plus packer fluid gradient.
- External: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

Injection / Stimulation Down Casing (Production)

- Internal: Surface pressure plus injection fluid gradient.
- External: Mud base-fluid density to TOC, cement mix water gradient (8.4 ppg) below TOC, and pore pressure in open hole.

b) Collapse Loads

Lost Circulation (Surface / Intermediate)

- Internal: Lost circulation at the TD of the next hole section, and the fluid level falls to a depth where the hydrostatic of the mud equals pore pressure at the depth of the lost circulation zone.
- External: MW of the drilling mud that was in the hole when the casing was run.

Cementing (Surface / Intermediate / Production)

- Internal: Displacement fluid density.
- External: Mud weight from TOC to surface and cement slurry weight from TOC to casing shoe.

Full Evacuation (Production)

- Internal: Full void pipe.
- External: MW of drilling mud in the hole when the casing was run.

c) Tension Loads

Running Casing (Surface / Intermediate / Production)

- Axial: Buoyant weight of the string plus the lesser of 100,000 lb or the string weight in air.

Green Cement (Surface / Intermediate / Production)

- Axial: Buoyant weight of the string plus cement plug bump pressure load.

PERFORMANCE DATA

ULTRA™ DQX **7.000 in** **0.453 in** **P110 CY**

Technical Data Sheet

Tubular Parameters

Size	7.000	in	Minimum Yield	110,000	psi
Nominal Weight	32.000	lbs/ft	Minimum Tensile	125,000	psi
Grade	P110 CY	-	Yield Load	1,025,000	lbs
PE Weight	31.700	lb/ft	Tensile Load	1,165,000	lbs
Wall Thickness	0.453	in	Min. Internal Yield Pressure	12,460	psi
Nominal ID	6.094	in	Collapse Pressure	10,780	psi
Drift Diameter	5.969	in			
Nom. Pipe Body Area	9.317	in^2			

Connection Parameters

Connection OD	7.875	in
Connection ID	6.094	in
Make-Up Loss	4.461	in
Critical Section Area	9.317	in^2
Tension Efficiency	100	%
Compression Efficiency	100	%
Yield Load In Tension	1,025,000	lbs
Min. Internal Yield Pressure	12,460	psi
Collapse Pressure	10,780	psi
Bending	72	°/100 ft
Special Drift Dia	6.000	in
Special Box OD	NA	in
Coupling Lgt	8.922	in
Box Critical Area	12.172	in^2
Special Box Critical Area	NA	in^2

Make-Up Torques

Min. Make-Up Torque	24,300	ft-lbs
Opt. Make-Up Torque	27,000	ft-lbs
Max. Make-Up Torque	29,700	ft-lbs
Operating Torque	36,700	ft-lbs
Yield Torque	43,200	ft-lbs

Printed on: June-23-2020

NOTE:

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

CONDITIONS

Action 386815

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 386815
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	10/8/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	10/8/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	10/8/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	10/8/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	10/8/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	10/8/2024