

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

Form C-101
August 1, 2011

Permit 401811

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address OXY USA INC P.O. Box 4294 Houston, TX 772104294		2. OGRID Number 16696
		3. API Number 30-015-57409
4. Property Code 337839	5. Property Name CEDAR CANYON 15 16 STATE COM	6. Well No. 076H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	15	24S	29E	P	1275	S	770	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	16	24S	29E	M	330	S	20	W	Eddy

9. Pool Information

PIERCE CROSSING; BONE SPRING, EAST	96473
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 2941
16. Multiple N	17. Proposed Depth 19631	18. Formation 2nd Bone Spring Sand	19. Contractor	20. Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	40.5	601	503	0
Int1	9.875	7.625	26.4	9700	1413	0
Prod	6.75	5.5	20	19631	591	9200

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3500	5000	
Blind	5000	5000	
Double Ram	5000	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> if applicable. Signature:	OIL CONSERVATION DIVISION
Printed Name: Electronically filed by Leslie T Reeves	Approved By: Jeffrey Harrison
Title: Advisor	Title: Petroleum Specialist III
Email Address: leslie_reeves@oxy.com	Approved Date: 10/30/2025 Expiration Date: 10/30/2027
Date: 10/24/2025 Phone: 713-497-2492	Conditions of Approval Attached

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals, & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 PAGE 1 OF 2
		Submittal Type: <input checked="" type="checkbox"/> Initial Submittal <input type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled

WELL LOCATION INFORMATION

API Number 30-015 -57409	Pool Code 96238	Pool Name CORRAL DRAW; BONE SPRING
Property Code 337839	Property Name CEDAR CANYON 15_16 STATE COM	Well Number 76H
OGRID No. 16696	Operator Name OXY USA INC.	Ground Level Elevation 2941'
Surface Owner: <input type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input checked="" type="checkbox"/> State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
P	15	24S	29E		1275' FSL	770' FEL	32.21374445	-103.96624030	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
M	16	24S	29E		330' FSL	20' FWL	32.21115573	-103.99789688	EDDY

Dedicated Acres 320	Infill or Defining Well INFILL	Defining Well API PENDING- CEDAR CANYON 75H	Overlapping Spacing Unit (Y/N) N	Consolidation Code C
Order Numbers: N/A			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
P	15	24S	29E		330' FSL	50' FEL	32.21113895	-103.96391103	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
P	15	24S	29E		330' FSL	100' FEL	32.21113948	-103.96407269	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude (NAD83)	Longitude (NAD83)	County
M	16	24S	29E		330' FSL	100' FWL	32.21115634	-103.99763821	EDDY

Unitized Area or Area of Uniform Interest N/A	Spacing Unit Type: <input checked="" type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation 2941'
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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 10/30/2025
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.



Signature and Seal of Professional Surveyor

Certificate Number

21653

Date of Survey

JUNE 20, 2025

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.

BHL (NAD83) X:645080.05' / Y:440714.40' LAT:32.21115573 / LON:-103.99789688
BHL (NAD27) X:603896.09' / Y:440655.54' LAT:32.21103288 / LON:-103.99740810

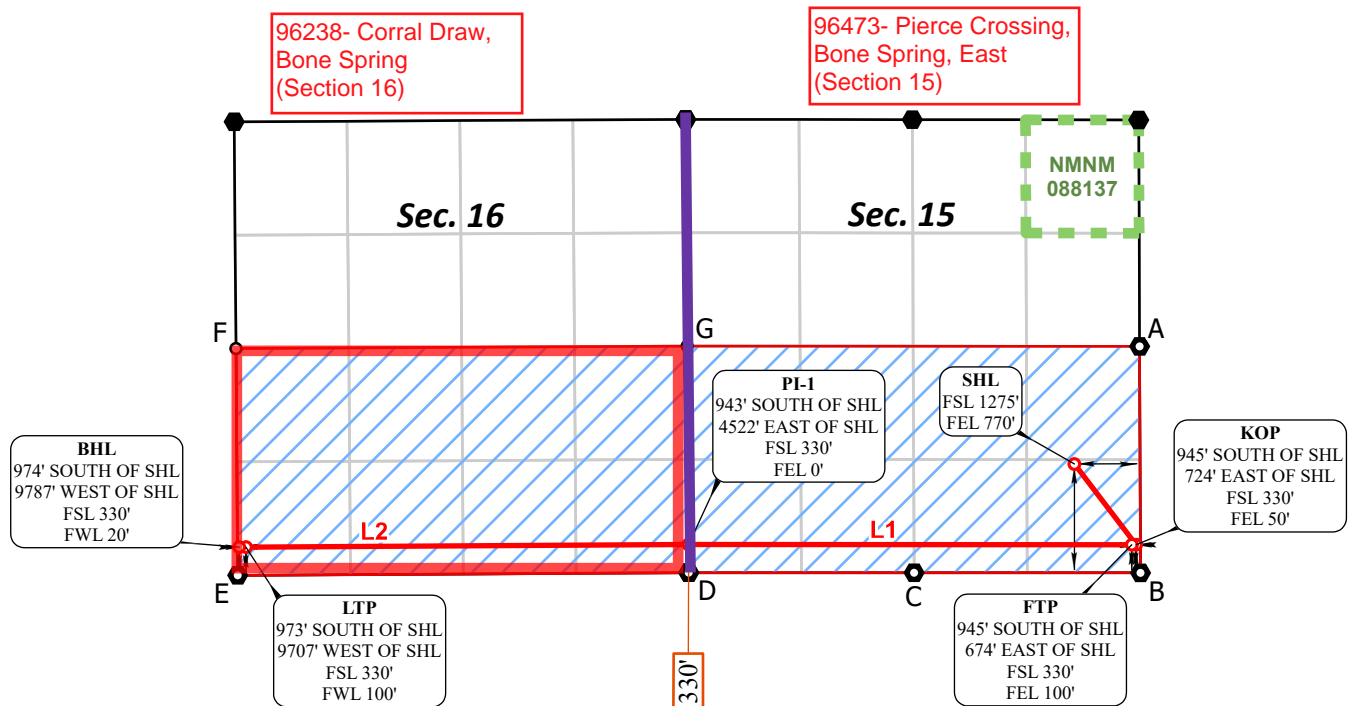
LTP (NAD83) X:645160.05' / Y:440714.87' LAT:32.21115634 / LON:-103.99763821
LTP (NAD27) X:603976.09' / Y:440656.01' LAT:32.21103349 / LON:-103.99714944

PI-1 (NAD83) X:650345.70' / Y:440745.18' LAT:32.21119402 / LON:-103.98087111
PI-1 (NAD27) X:609161.71' / Y:440686.33' LAT:32.21107112 / LON:-103.98038280

FTP (NAD83) X:655541.15' / Y:440742.78' LAT:32.21113948 / LON:-103.96407269
FTP (NAD27) X:614357.14' / Y:440683.93' LAT:32.21101652 / LON:-103.96358485

KOP (NAD83) X:655591.15' / Y:440742.76' LAT:32.21113895 / LON:-103.96391103
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SHL (NAD83) X:654867.52' / Y:441688.13' LAT:32.21374445 / LON:-103.96624030
SHL (NAD27) X:613683.53' / Y:441629.26' LAT:32.21362154 / LON:-103.96575230



CORNER COORDINATES NAD 83, SPCS NM EAST	CORNER COORDINATES NAD 27, SPCS NM EAST
A - X: 655632.16' / Y:443066.88'	A - X: 614448.21' / Y:443007.98'
B - X: 655642.43' / Y:440412.73'	B - X: 614458.41' / Y:440353.89'
C - X: 652989.19' / Y:440414.04'	C - X: 611805.17' / Y:440355.20'
D - X: 650347.93' / Y:440415.18'	D - X: 609163.93' / Y:440356.34'
E - X: 645062.61' / Y:440384.30'	E - X: 603878.64' / Y:440325.45'
F - X: 645041.96' / Y:443041.82'	F - X: 603858.05' / Y:442982.91'
G - X: 650330.01' / Y:443070.71'	G - X: 609146.08' / Y:443011.81'

*FTP TO LTP LINE BEARINGS

LINE	BEARING
L1	N 89°58'25" W ~ 5195.45'
L2	S 89°39'54" W ~ 5185.74'



○ Drill Line Events ● Section Corners — Drill Line — Dimension Lines □ Federal Leases □ HSU ● HSU Corners

All bearings and coordinates refer to New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet.

JOB No. 20251149_15489
REV 0 CCT 6/19/2025

Distances/areas relative to NAD 83 grid measurements. Combined Scale Factor: 0.99978238 and a Convergence Angle: 0.18792022°

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Sara Guthrie 10/7/2025
Signature Date

Sara Guthrie
Printed Name

sara_guthrie@oxy.com
Email Address

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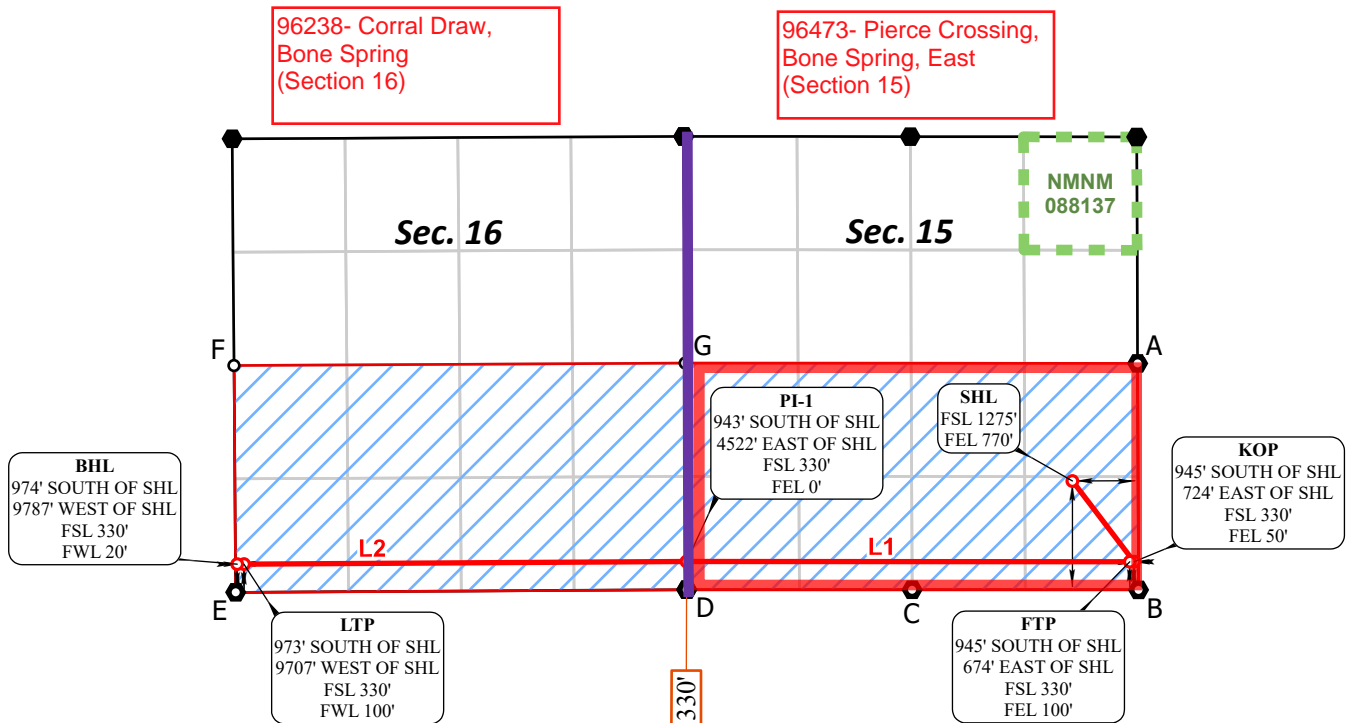
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G - X: 650330.01' / Y:443070.71'

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B - X: 614458.41' / Y:440353.89'
C - X: 611805.17' / Y:440355.20'
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REV 0 CCT 6/19/2025

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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

Form APD Conditions

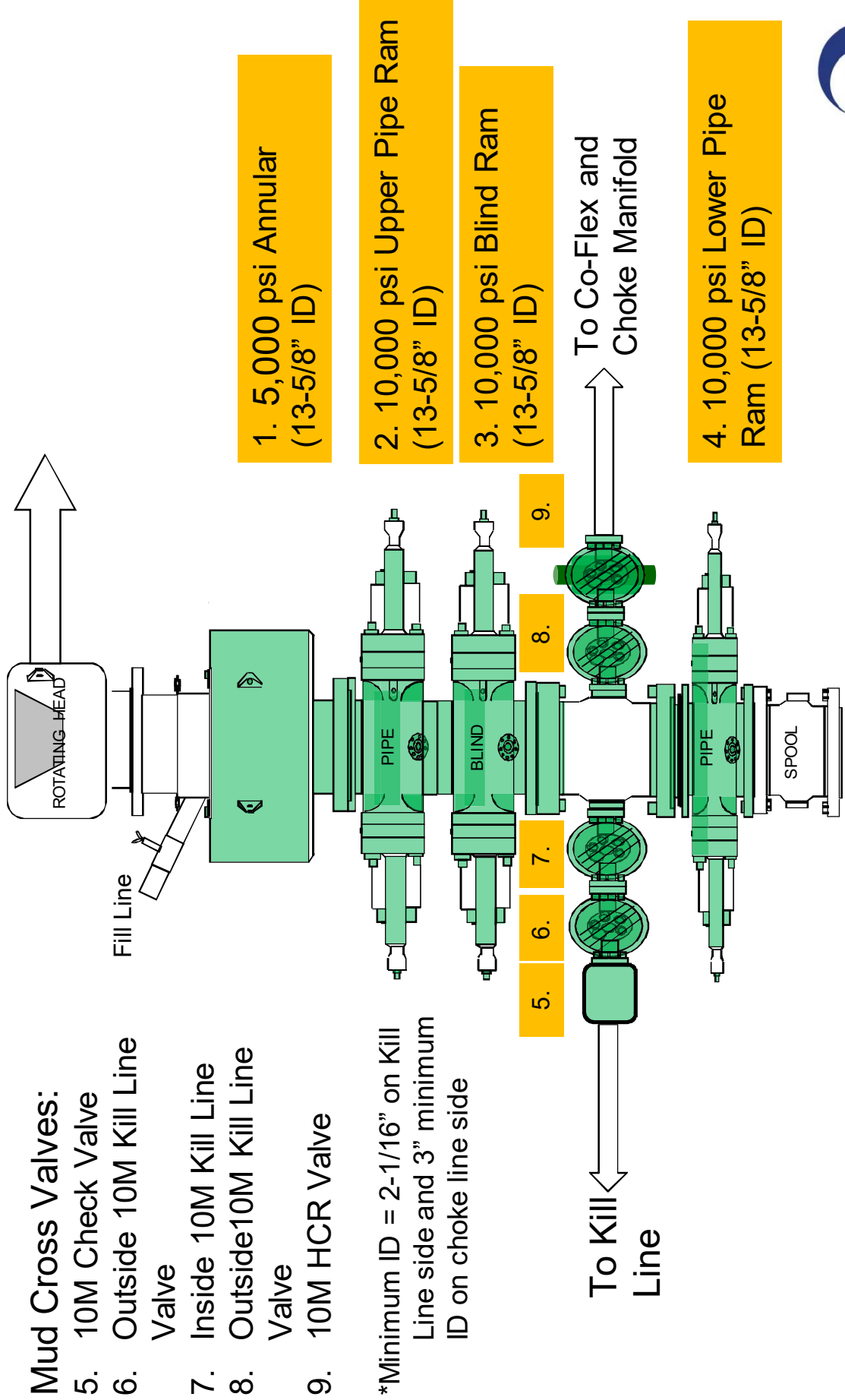
Permit 401811

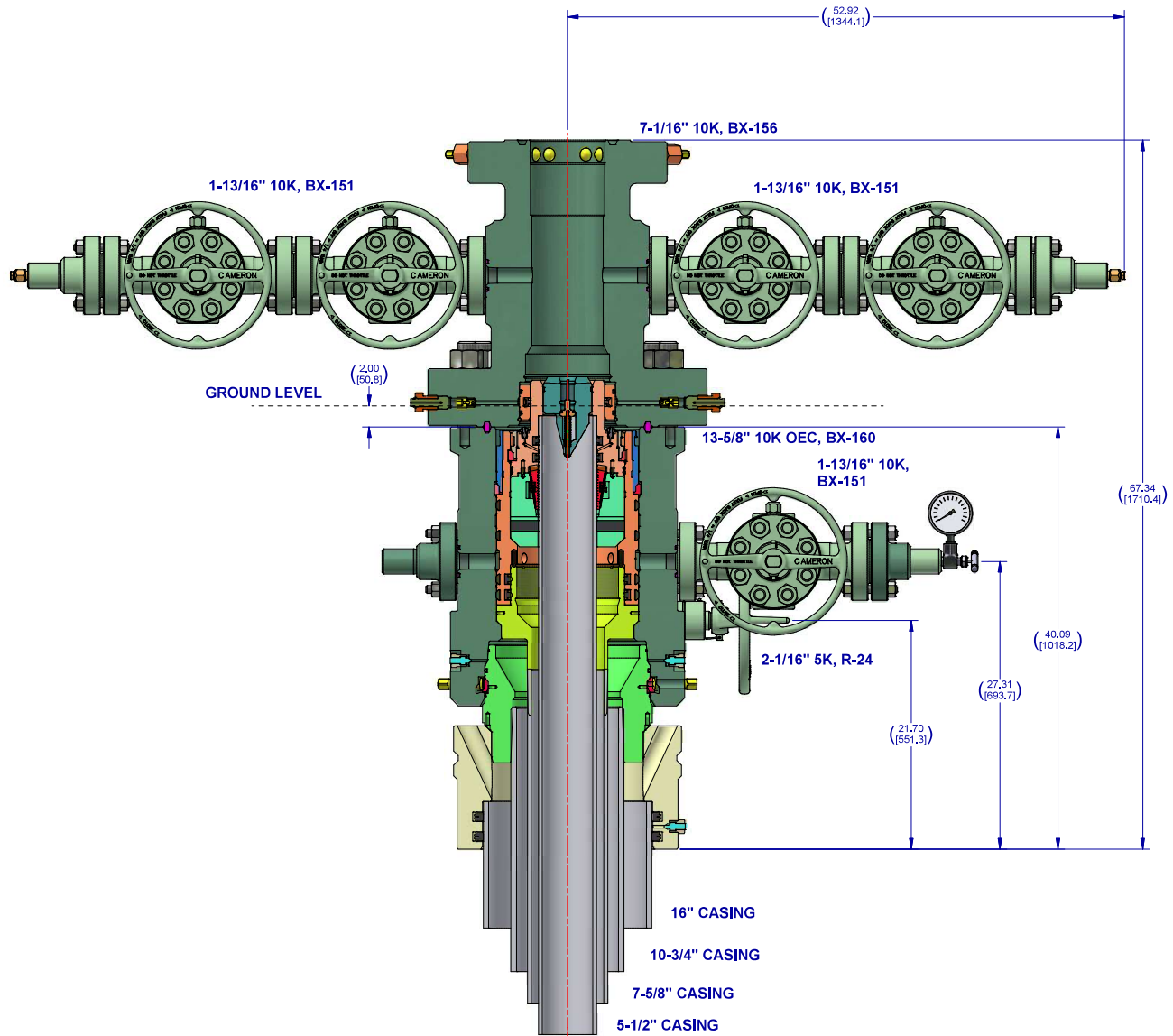
PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: OXY USA INC [16696] P.O. Box 4294 Houston, TX 772104294	API Number: 30-015-57409
	Well: CEDAR CANYON 15 16 STATE COM #076H

OCD Reviewer	Condition
jeffrey.harrison	No additives containing PFAS chemicals will be added to the drilling fluids or completion fluids used during drilling, completions, or recompletions operations.
jeffrey.harrison	All logs run on the well must be submitted to NMOCD.
jeffrey.harrison	Cement is required to circulate on both surface and intermediate1 strings of casing.
jeffrey.harrison	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.
jeffrey.harrison	A [C-103] Sub. Drilling (C-103N) is required within (10) days of spud.
jeffrey.harrison	Notify the OCD 24 hours prior to casing & cement.
jeffrey.harrison	File As Drilled C-102 and a directional Survey with C-104 completion packet.
jeffrey.harrison	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.
jeffrey.harrison	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.
jeffrey.harrison	NSP required if not included in an existing order or not an infill to an appropriate defining well in the same pool and spacing unit.


5/10M BOP Stack



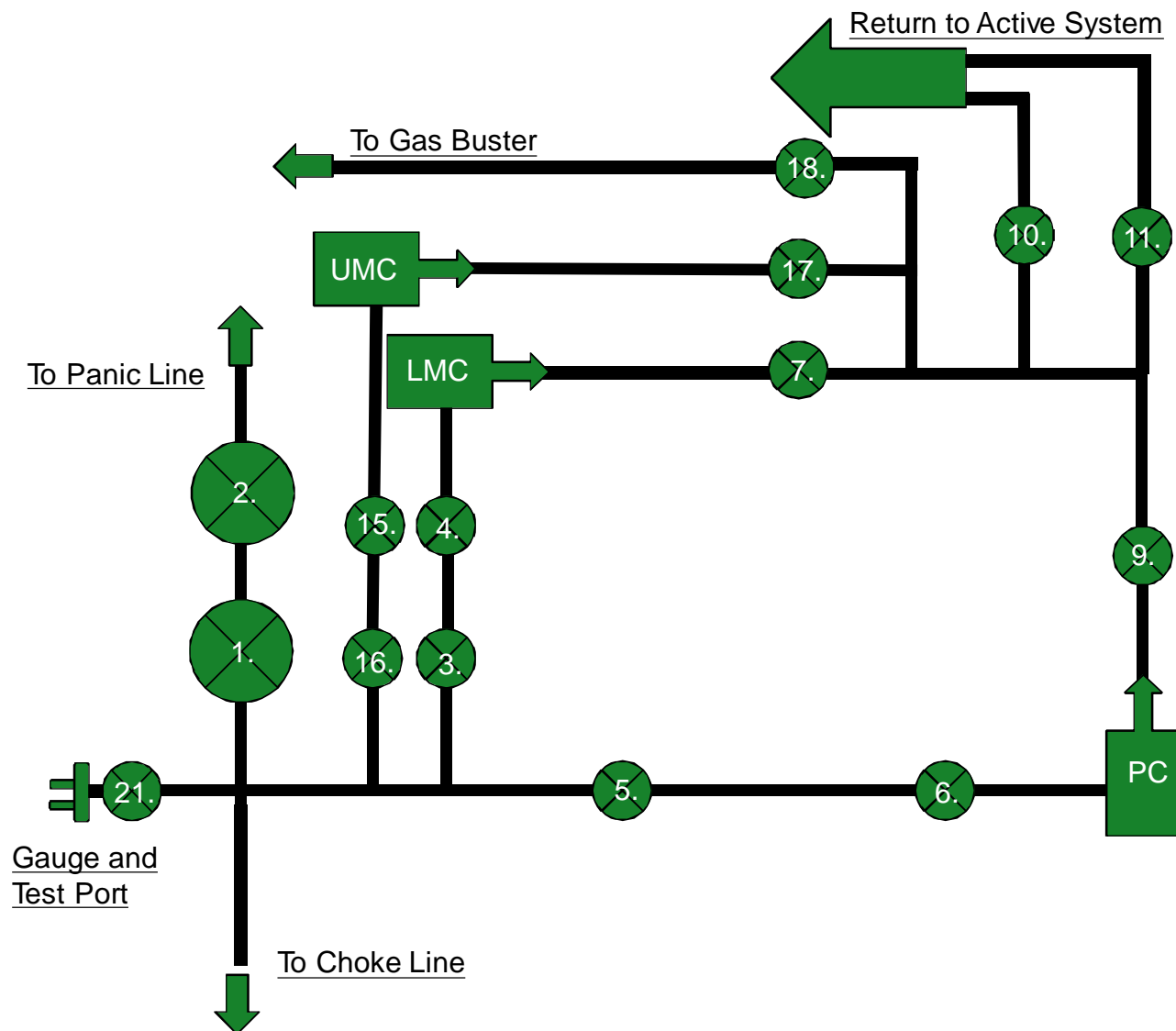
**Notes:**

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		SURFACE SYSTEMS
DRAWN BY D. GOTTUNG	DATE 2 Dec 21	OXY 13-5/8" 10K ADAPT 16" X 10-3/4" X 7-5/8" X 5-1/2"	REC 01
CHECKED BY D. GOTTUNG	DATE 2 Dec 21		
APPROVED BY D. GOTTUNG	DATE 2 Dec 21		
ESTIMATED WEIGHT 6515.617 LBS 2955.434 KG	INTERNAL USE ONLY		
SHEET 4 of 4		SD-053434-94-05	10/20/2021-0

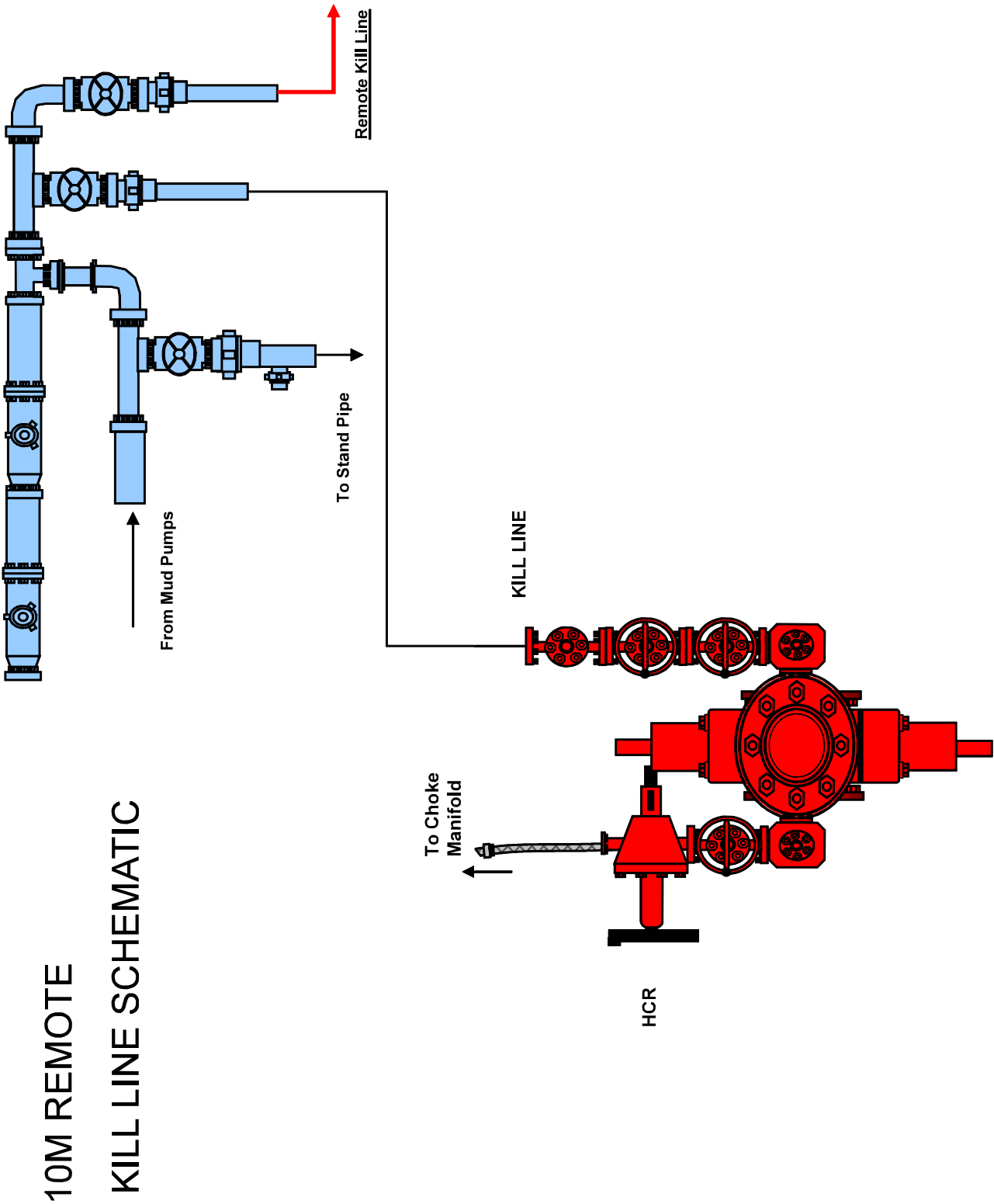
10M Choke Panel



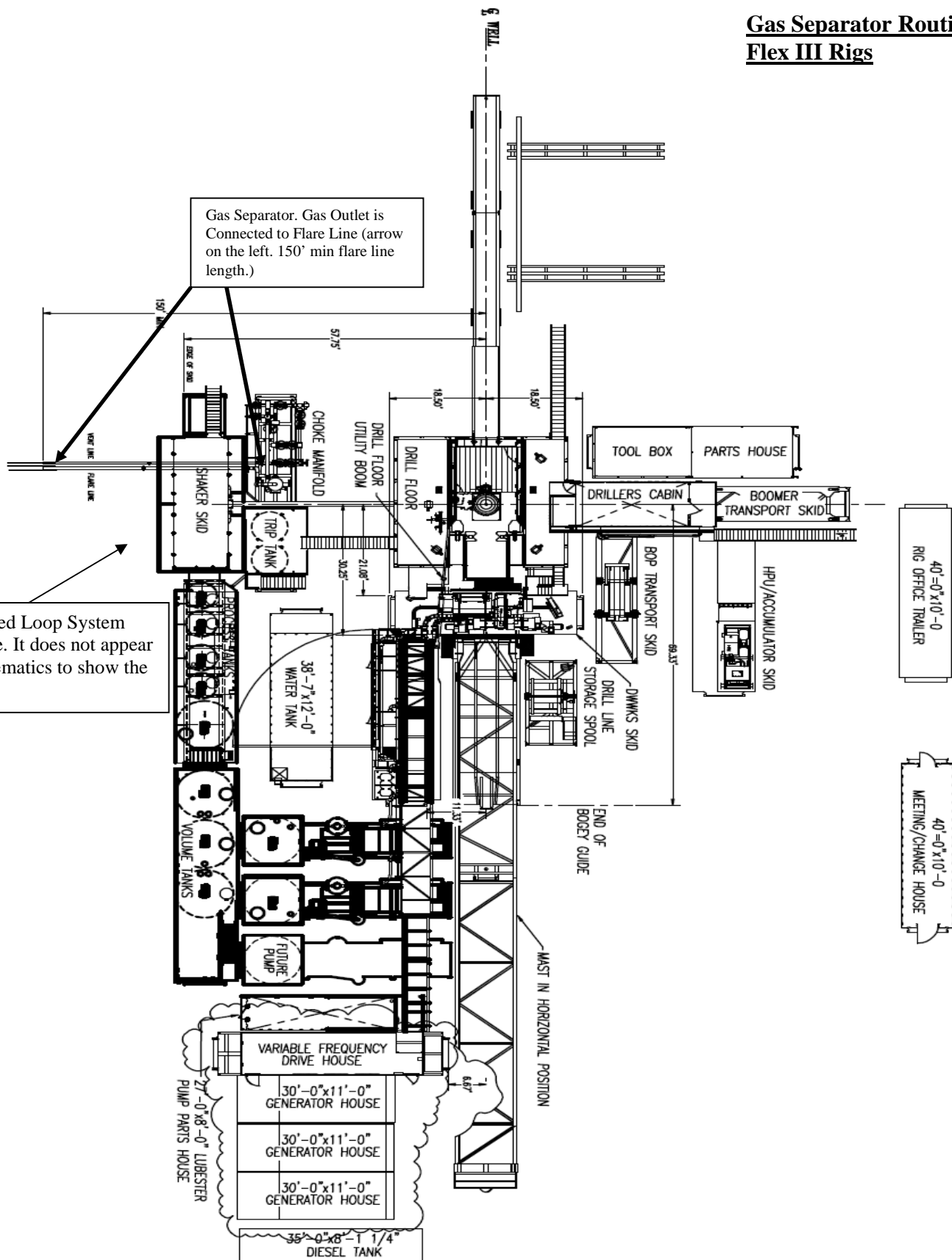
1. Choke Manifold Valve
2. Choke Manifold Valve
3. Choke Manifold Valve
4. Choke Manifold Valve
5. Choke Manifold Valve
6. Choke Manifold Valve
7. Choke Manifold Valve
8. PC – Power Choke
9. Choke Manifold Valve
10. Choke Manifold Valve
11. Choke Manifold Valve
12. LMC – Lower Manual Choke
13. UMC –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

21. Vertical Choke Manifold Valve

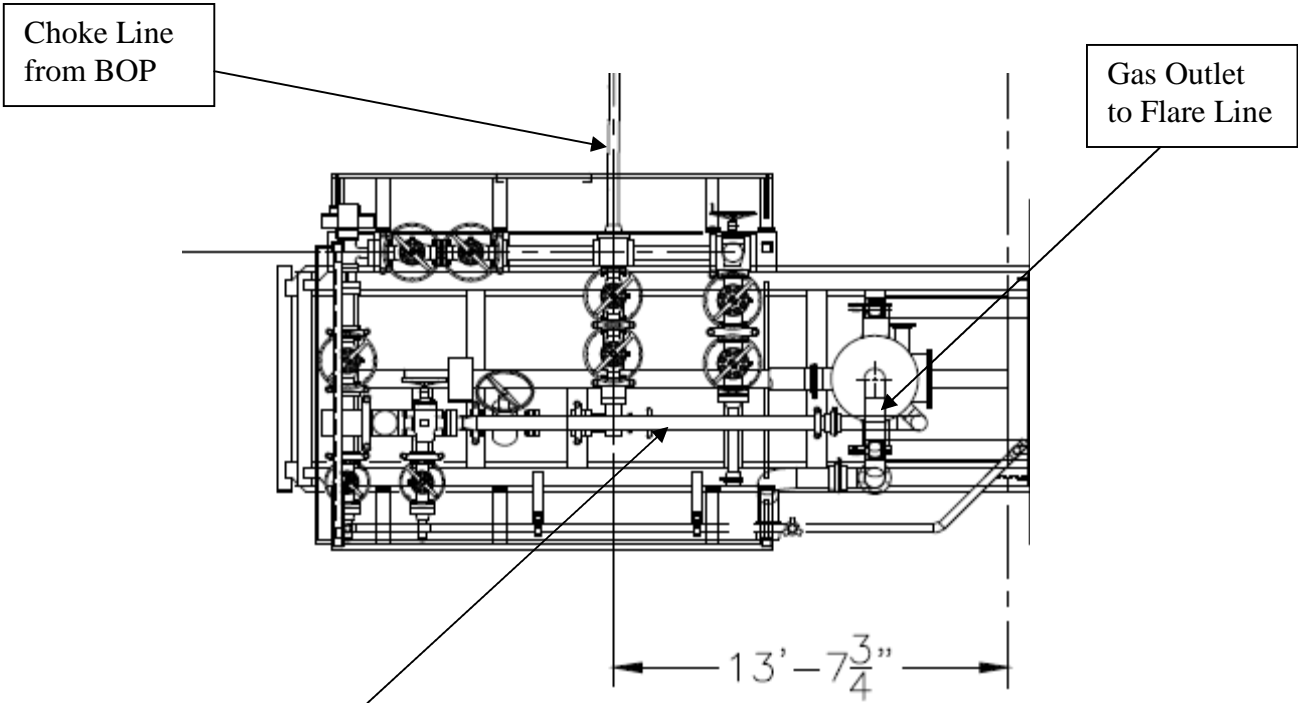
***All Valves 3" minimum**



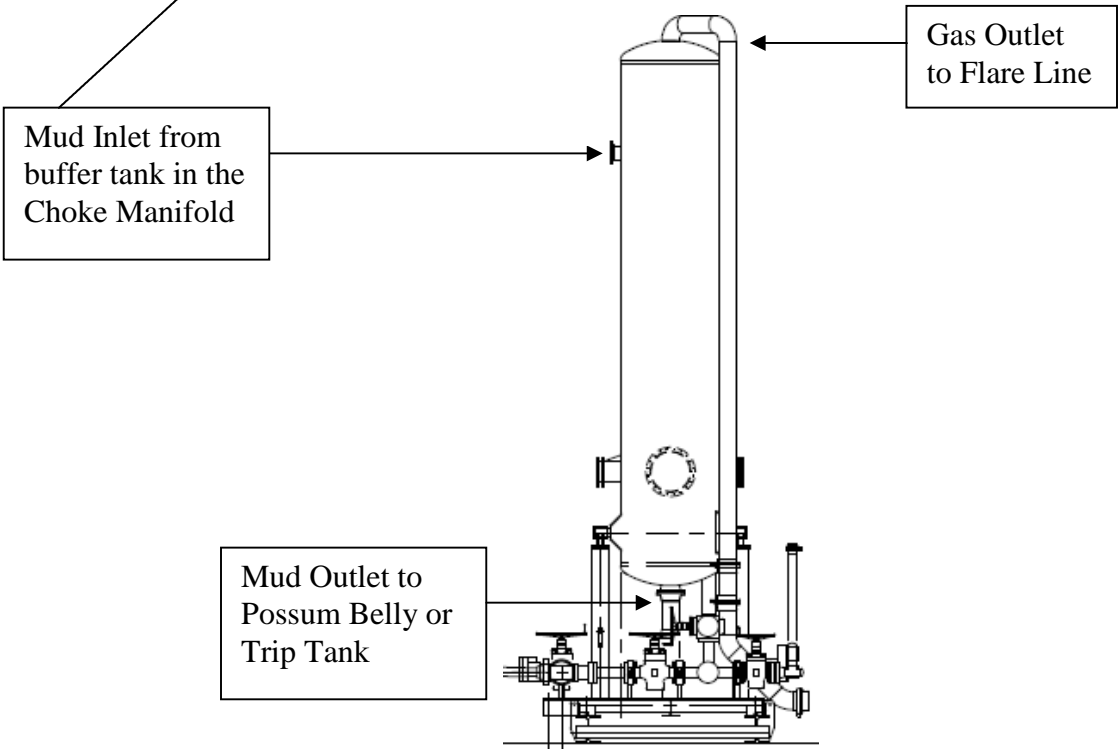
Gas Separator Routing Flex III Rigs



Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)





Certificate of Conformity

ContiTech

Certificate Number H100161	COM Order Reference 1429702	Customer Name & Address	
Customer Purchase Order No: 740382384		HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA	
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: Date: 06/27/22	Gerson Mejia-Lazo 	

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

Item	Part No.	Description	Qty	Serial Number	Specifications
30	RECERTIFICATION	3" ID 10K Choke and Kill Hose x 35ft OAL	1	70024	ContiTech Standard

ContiTech Oil Marine Corp.

11535 Brittmoore Park Drive Houston, TX 77041, USA

Internal



Hydrostatic Test Certificate

ContiTech

Certificate Number H100161	COM Order Reference 1429702	Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No: 740382384		
Project:		
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Accepted by COM Inspection Signed: Gerson Mejia-Lazo Date: 06/27/22	Accepted by Client Inspection

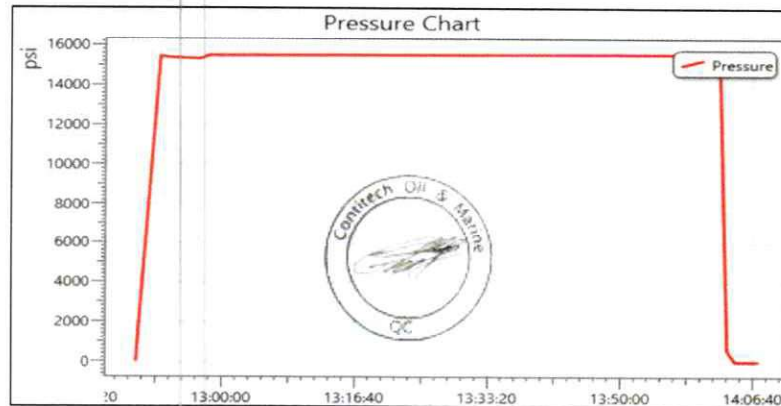
We certify that the goods detailed hereon have been inspected as described below by our Quality Management System, and to the best of our knowledge are found to conform the requirements of the above referenced purchase order as issued to ContiTech Oil & Marine Corporation.

Item	Part No.	Description	Qty	Serial Number	Work. Press. (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
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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



ContiTech Oil Marine Corp.

11535 Brittmoore Park Drive Houston, TX 77041, USA

Internal

SIGNATURE: *Norma Cobb*
 TITLE: QUALITY ASSURANCE
 DATE: 11/20/2019

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

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.

CERTIFICATE OF CONFORMANCE

EMAIL: Troy.Schmidt@gates.com

FAX:

PHONE : (281) 602-4119

Houston, TX. 77086

7603 Prairie Oak Dr.

Gates Engineering & Services North America



THIS WORK DEC 23/22
 IN USE
 AS

02.9
 130021
 2019
 CHOKES
 HOSE



Revision 1_022819

PRODUCTION
11/20/2019
<i>[Signature]</i>

Production:
Date :
Signature :

QUALITY
11/20/2019
<i>[Signature]</i>

F-PRD-005

Quality:
Date :
Signature :

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.

4 1/16 10K FLANGES FLOAT
L41242 113018
15,000 PSI
10,000 PSI

End Fitting 2:
Assembly Code:
Test Pressure:
Working Pressure:

4 1/16 10K FLANGES FIXED
68903010-9879429
10KFR3.012.0CK411610KFIXFLT 55A 5C LE

End Fitting 1:
Grade Star No.:
CUSTOMER P/N:

3" X 12 FT GATES CHOKER & KILL HOSE ASSEMBLY WITH STAINLESS STEEL ARMOR C/W 4 1/16 10K FIX X FLOAT H25 SUITED FLANGES WITH BX 155 RING GROOVE SUPPLIED WITH SAFETY CLAMPS & SLINGS & LIFT EYE CLAMPS
--

Product Description:

11/20/2019
H2-112019-4
Norma Cabrera

Test Date:
Hose Serial No.:
Created By:

A-7 AUSTIN INC DBA AUSTIN HOSE
4128128 (RIG 1 PO 002773)
516982

Customer:
Customer Ref.:
Invoice No.:

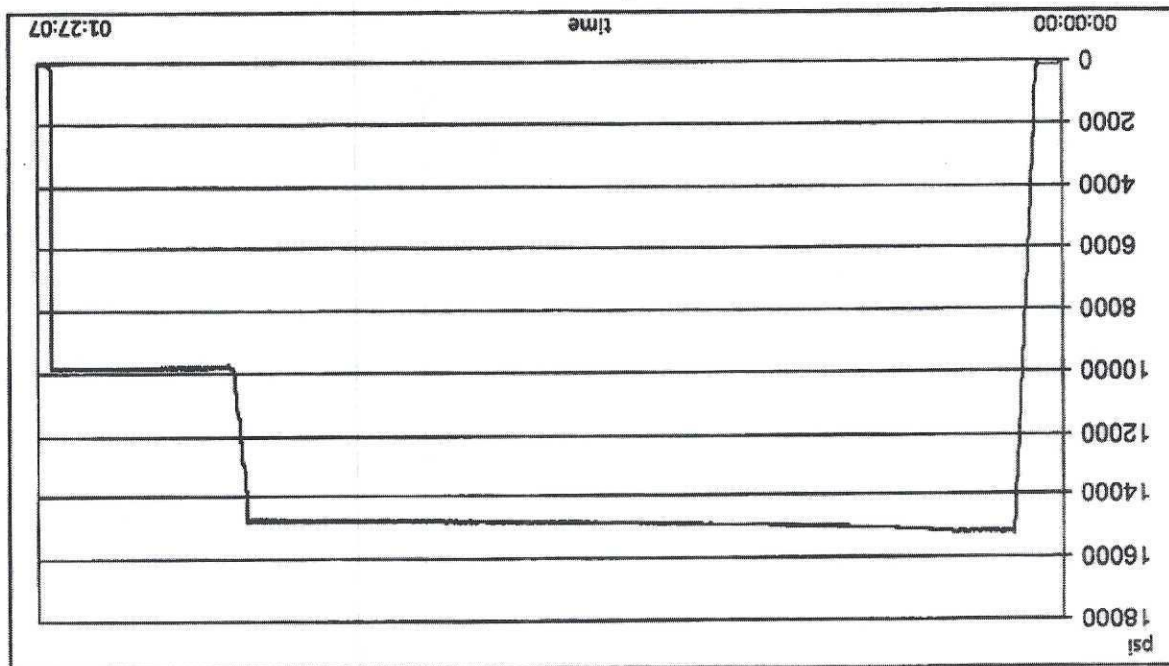
PRESSURE TEST CERTIFICATE

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

GATES ENGINEERING & SERVICES NORTH AMERICA

7603 Prairie Oak Dr.
Houston, TX 77086





Test operator: Roderick Shambra

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

0.24 inch

Length difference:

0.00 %

Work pressure hold:

900.00 sec

Work pressure:

9750.00 psi

Test pressure hold:

3600.00 sec

Test pressure:

15000.00 psi

Test procedure:

GTS-04-053

TEST INFORMATION

Customer reference:

516982

Production description:

Austin Hose

Company:

TEST OBJECT

Serial number:

H2-112019-4

Lot number:

L41242113018

Description:

3.0 10K MS C&K

Part number:

3.0 x 4-1/16 10K

Fitting 1:

Part number:

3.0 x 4-1/16 10K

Fitting 2:

Part number:

12 feet

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Part number:

Fitting 2:

Part number:

Length:

Length measurement result:

Pressure test result: PASS

Visual check:

Length difference:

Length difference:

Work pressure hold:

Work pressure:

Test pressure hold:

Test pressure:

Test procedure:

TEST INFORMATION

Customer reference:

Sales order #:

Production description:

Company:

TEST OBJECT

Serial number:

Lot number:

Description:

Part number:

Fitting 1:

Page 2/2

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

Comment

Description	Serial number	Calibration date	Calibration due date
S-25-A-W	110AMCLO	2019-03-17	2020-03-15
S-25-A-W	110APO2K	2019-04-16	2020-04-14

GAUGE TRACEABILITY



TEST REPORT

11/20/2019 12:13:07 PM

H2-1987

Rev Date: 12/17/2019
Rev NewGarrett Crawford, Director of Quality
DW Industries Inc.

Certificate Issue Date: 2/27/2020

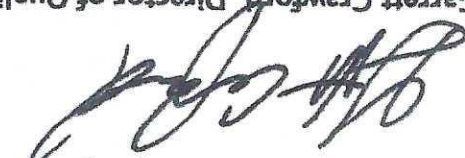
I DO HEREBY CERTIFY, AS THE AUTHORIZED REPRESENTATIVE OF DW INDUSTRIES, THAT THE PRODUCT LISTED ABOVE ARE OF THE QUALITY SPECIFIED AND CONFORM TO ALL REQUIREMENTS OF THE PURCHASE ORDER, INCLUDING: QUALITY CONTROL CLAUSES, DESIGN SPECIFICATIONS, DRAWINGS, PRESERVATION, PACKAGING, MARKING, AND PHYSICAL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

Purchase Order Information				Customer Name:
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	CITADEL DRILLING Customer Contact: PAUL HOFFMAN 432-241-5360
QTY Ordered:	1	Assembly Date:	02/26/2020	
DW Industries Part Number:	OA-5640-4815-1002-4	Serial Number:	022620DW-2	
Customer Purchase Order Number:	CONTACT PAUL HOFFMAN FOR INFO	DW Industries Work Order Number:	20020163	

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

COPY
Certificate of Performance



QP-018-OF, Rev New
Rev Date: 12/17/2019Garrett Crawford, Director of Quality
DW Industries Inc.

Certificate Issue Date: 2/27/2020

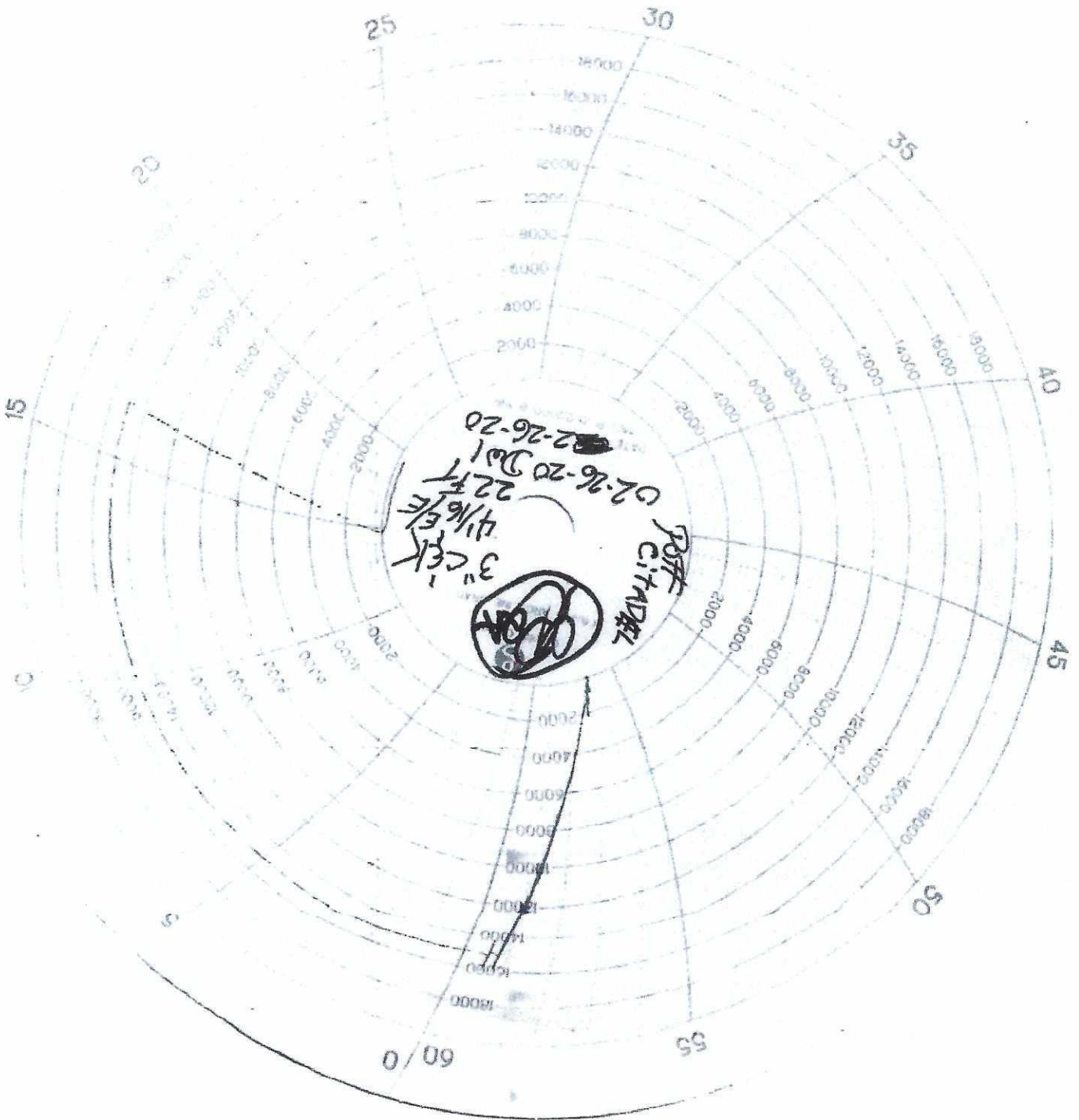
I DO HEREBY CERTIFY, AS THE AUTHORIZED REPRESENTATIVE OF DW INDUSTRIES, THAT THE PRODUCT LISTED ABOVE ARE OF THE QUALITY SPECIFIED AND CONFORM TO ALL REQUIREMENTS OF THE PURCHASE ORDER, INCLUDING: QUALITY CONTROL CLAUSES, DESIGN SPECIFICATIONS, DRAWINGS, PRESERVATION, PACKAGING, MARKING, AND PHYSICAL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

Purchase Order Information				Customer Name:	
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	CITADEL DRILLING	Customer Contact: PAUL HOFFMAN 432-241-5360
QTY Ordered:	1	Assembly Date:	02/26/2020		
DW Industries Part Number:	OA-5640-4822-4-1/16FXFL-ALE	Serial Number:	022620DW-1		
Customer Purchase Order Number:	CONTACT PAUL HOFFMAN FOR INFO	DW Industries Work Order Number:	20020164		

DW INDUSTRIES INC.
6287 LONG DRIVE
Houston, TX 77067
Tel. 713 644-8372 Fax 713-644-4947

COPY

Certificate of Conformance



COPY

Quality Assurance,
DW Industries, Inc.

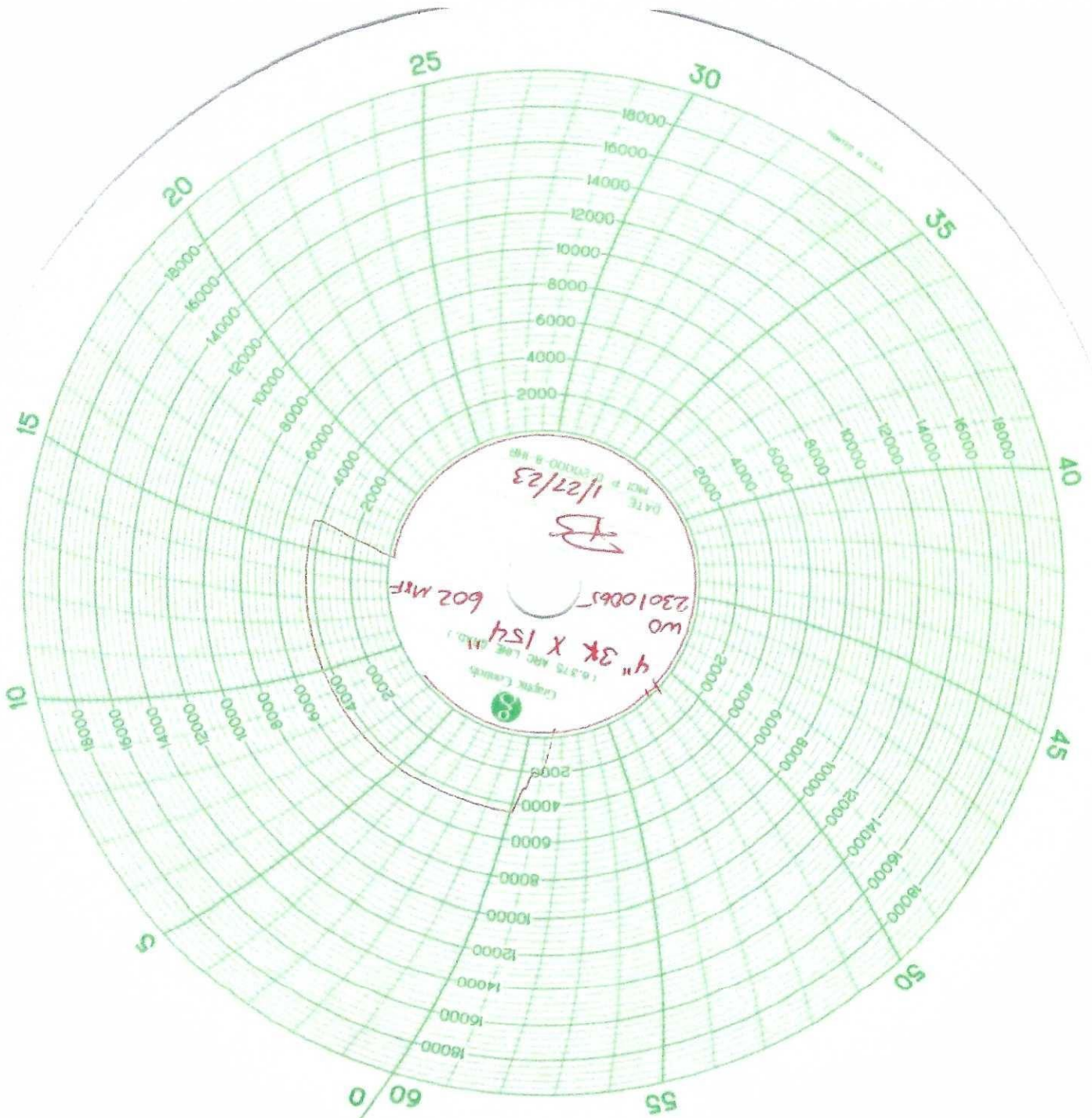
Certificate Issue Date: 1/27/2023

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, MARKING, AND PHYSICAL IDENTIFICATION REQUIREMENTS AND HAS BEEN PROCESSED IN ACCORDANCE WITH ISO-9001:2015, API Q1 AND API SPEC 7K.

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		

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

Certificate of Conformance



IN SERVICE
12-20-21

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/ollandgas

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
Date :	10/15/2021
Signature :	<i>Micky Mhina</i>

F-PRD-005B

Production:	PRODUCTION
Date :	10/15/2021
Signature :	<i>[Signature]</i>

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/ollandgas

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: _____

A handwritten signature in black ink, appearing to read "M. W. W.", written over a horizontal line.

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 OBJECT

Serial number: H3-101521-2

Lot number: L41975091719

Description:

Hose ID: 3" 10k ck

Part number:

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

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

Part number:

Description:

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

Part number:

Description:

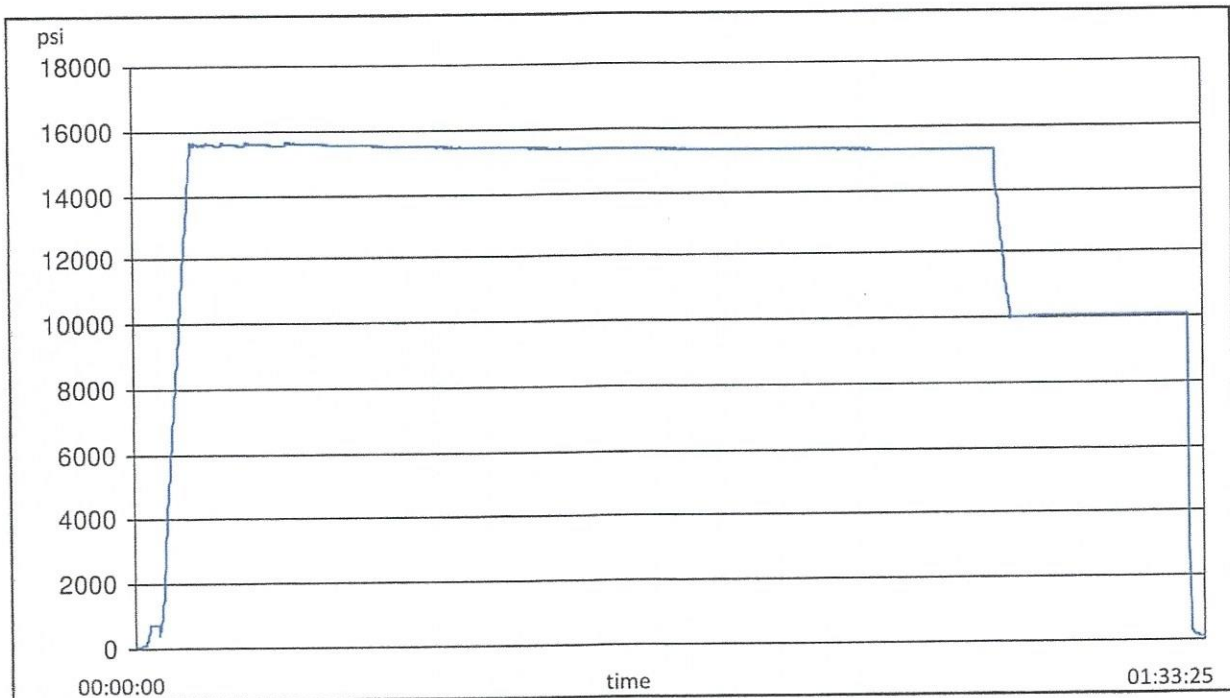
Visual check:

Pressure test result: PASS

Length measurement result:

Length: 35 feet

Test operator: francisco





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 H100163		COM Order Reference 1429702		Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA	
Customer Purchase Order No: 740382384					
Project:					
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA		Accepted by COM Inspection Signed: Gerson Mejia-Lazo Date: 07/14/22		Accepted by Client Inspection	

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

Item	Part No.	Description	Qty	Serial Number	Work. Press. (psi)	Test Press. (psi)	Test Time (minutes)
------	----------	-------------	-----	---------------	--------------------	-------------------	---------------------

50 RECERTIFICATION

3" ID 10K Choke and Kill Hose x 35ft OAL

1

70025

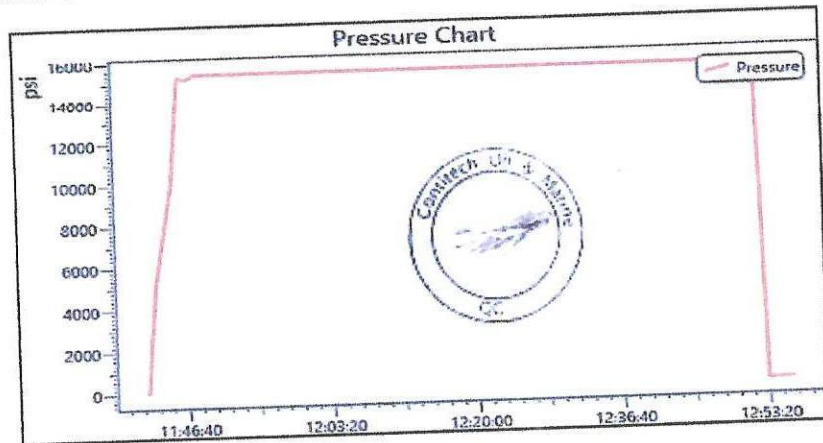
10,000

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





Certificate of Conformity

ContiTech

Certificate Number H100163	COM Order Reference 1429702	Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA	
Customer Purchase Order No: 740382384			
Project:			
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Accepted by COM Inspection Signed: Gerson Mejia-Lazo Date: 07/14/22 	Accepted by Client Inspection	

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

Item	Part No.	Description	Qty	Serial Number	Specifications
50	RECERTIFICATION	3" ID 10K Choke and Kill Hose x 35ft OAL	1	70025	ContiTech Standard

ARMORED CHOKE HOSE

Installed

4-29-22


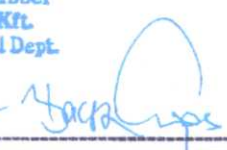


ContiTech

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 4 1/16" 10K API Swivel Flange end Hub	6026	AISI 4130	A0607J		
		AISI 4130	040841		
		AISI 4130	54194		
3" coupling with 4 1/16" 10K API b.w. Flange end	6016	AISI 4130	A0607J		
		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 ContiTech Rubber Industrial Kft. Quality Control Dept. (1)			
08. April 2019.		 			



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 repairable damages 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.

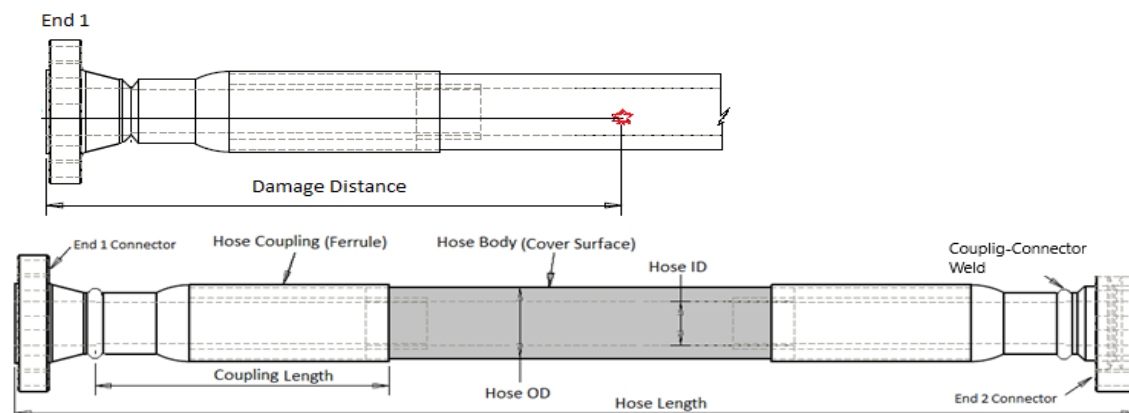




Figure 1: Generic Hose Assembly



Hose Assembly Evaluation Sheet

1.0 Observations and comments

	Comments
1	<div></div> <p>Photos: ID.</p>
2	<div></div> <p>Photo: Damaged armor areas</p>



Hose Assembly Evaluation Sheet

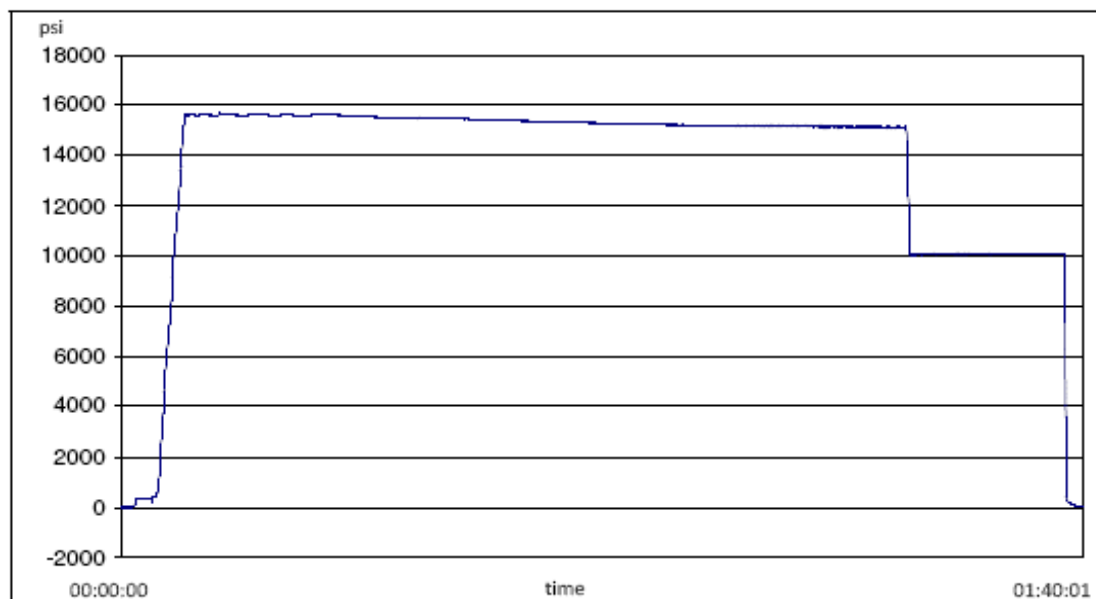
3	<div data-bbox="326 195 1253 873"></div> <p data-bbox="688 947 886 972">Photos: At Shipping.</p>
4	<div data-bbox="319 1005 1292 1715"></div> <p data-bbox="639 1751 935 1776">Photos: Armor and Engraving.</p>



Hose Assembly Evaluation Sheet

5	 <p style="text-align: center;">Photo: In the Crate</p>
---	---

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

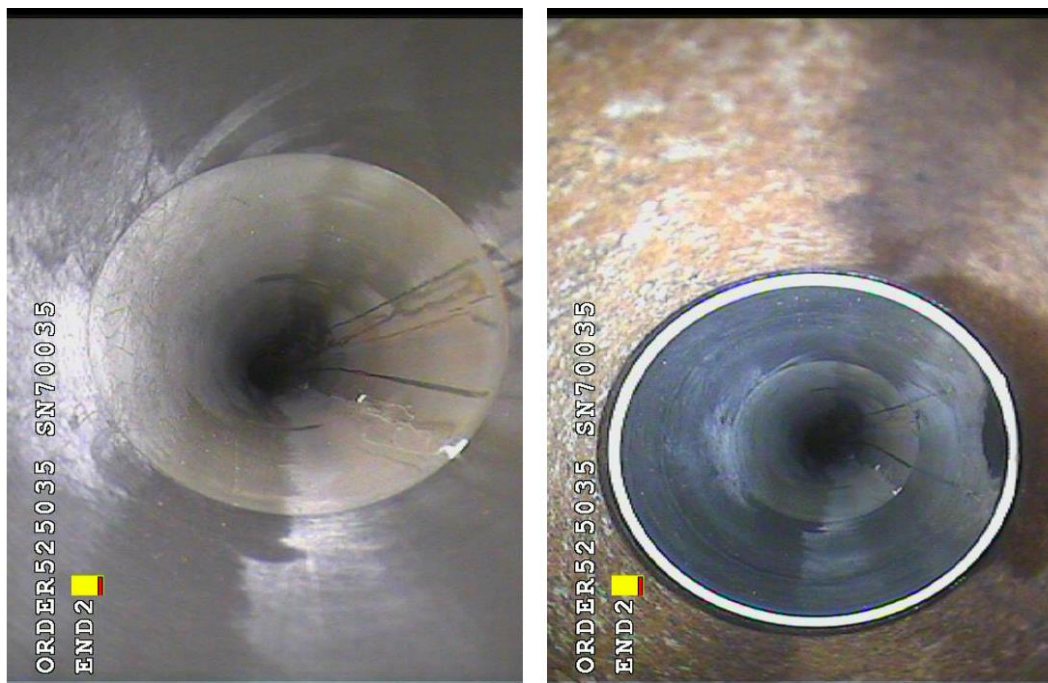
3. Hose borescope inspection

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

Company:

Production description:

Sales order #:

525035

Customer reference: 740398454 (88000240 |
SN:70035)

TEST OBJECT

Serial number:

H2-082722-1

Lot number:

Description:

Hose ID:

3 10k C&K

Part number:

TEST INFORMATION

Test procedure:

3 10K C&K

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

Fitting 1:

3.0 x 4-1/16 10K

Part number:

Description:

Fitting 2:

3.0 x 4-1/16 10K

Part number:

Description:

Visual check:

Pressure test result:

PASS

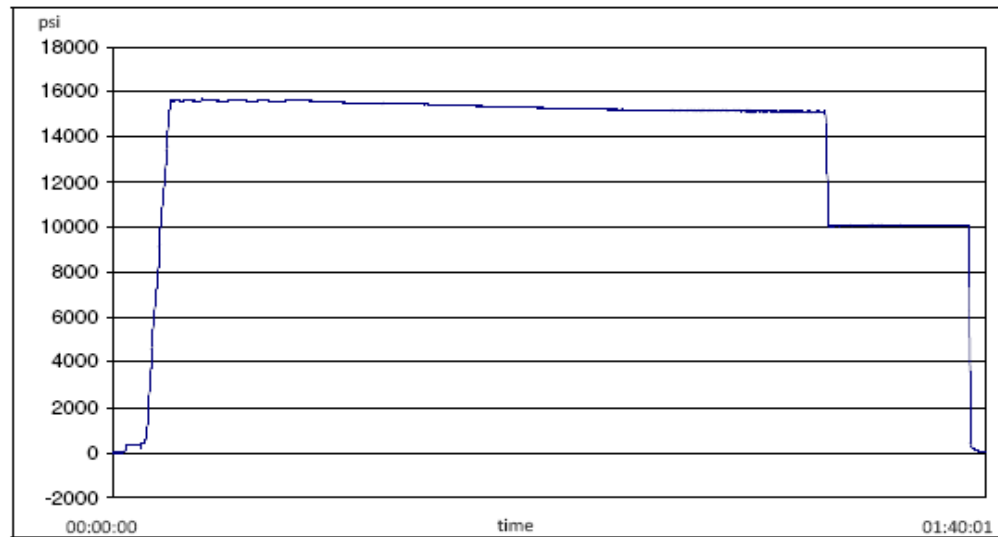
Length measurement result:

Length:

35 feet

Test operator:

Martin



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

Page 1/2

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



Hose Assembly Evaluation Sheet

APPENDIX 2:
Certificate of Conformance

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

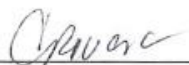
CERTIFICATE OF CONFORMANCE

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.

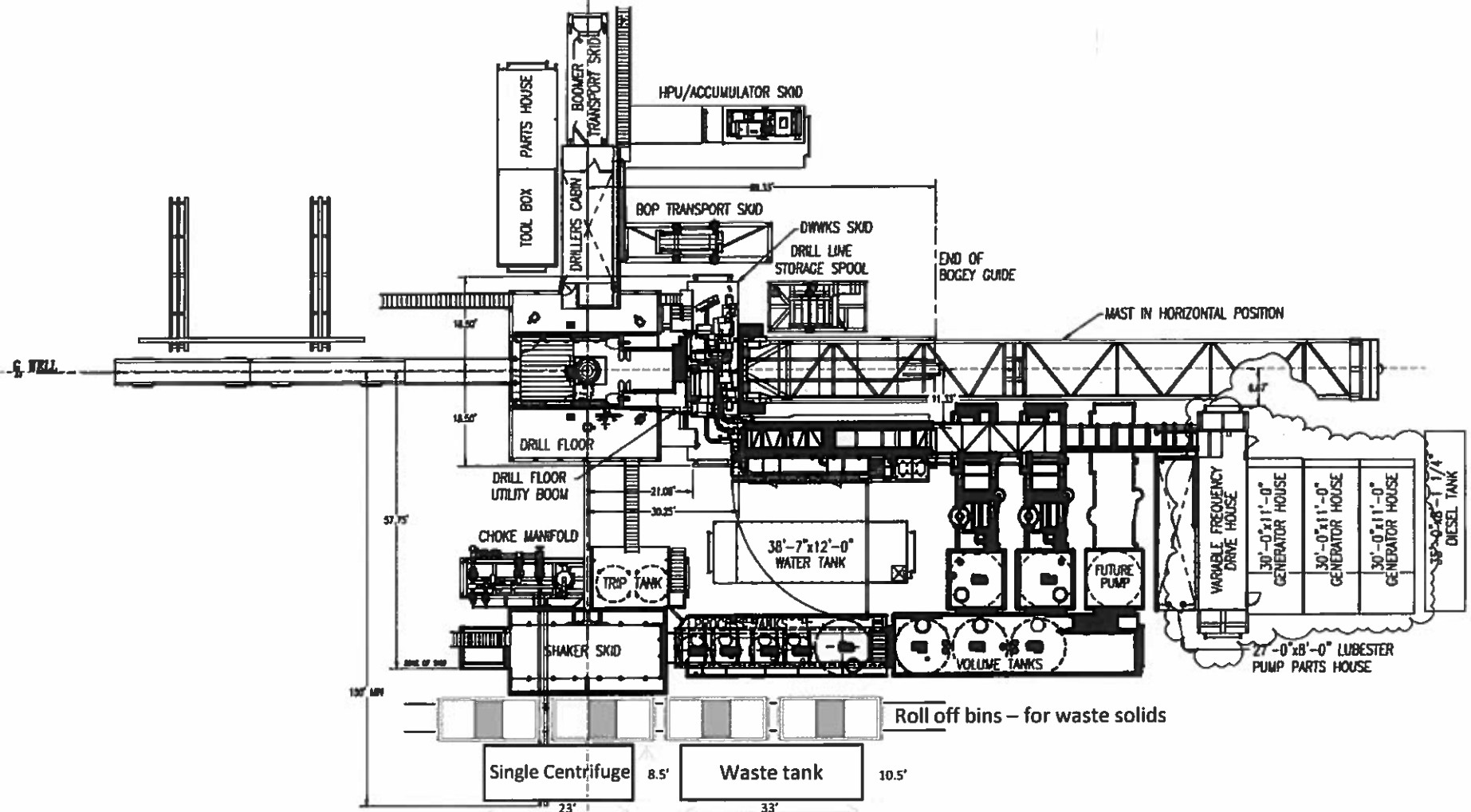
CUSTOMER: HELMERICH & PAYNE, INC
CUSTOMER P.O.#: 740398454 (88000240 | SN:70035)
CUSTOMER P/N: 88000240 | SN:70035

PART DESCRIPTION: INSPECT AND RETEST CUSTOMER HOSE 3IN X 35FT CHOKE & KILL ASSEMBLY C/W 4-1/16
FLANGES BX155 RING GROOVE EACH END

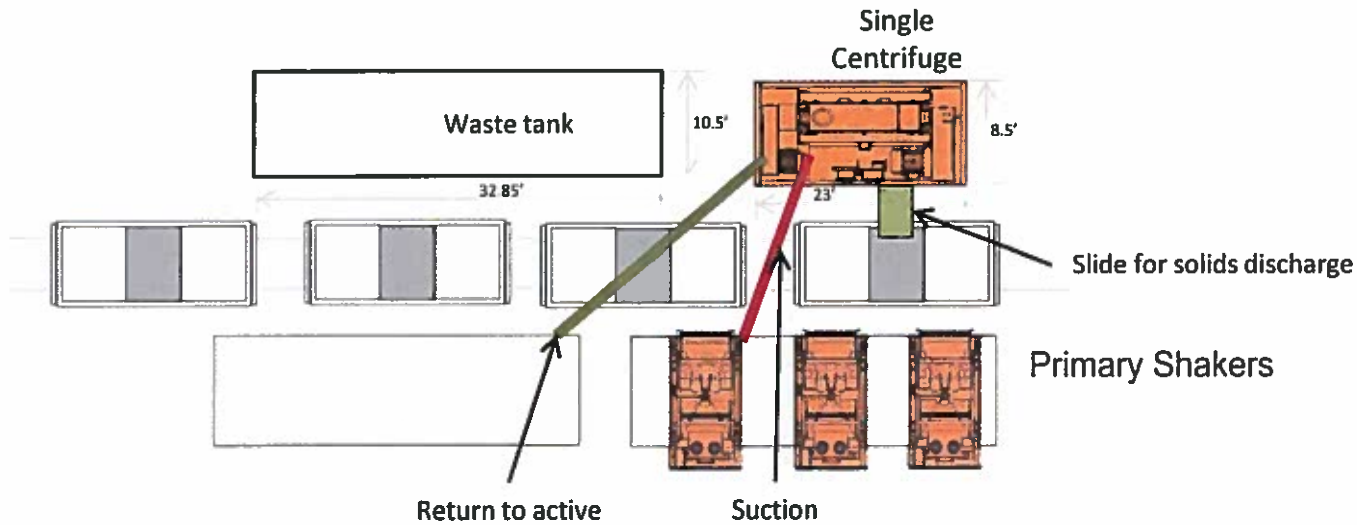
SALES ORDER #: 525035
QUANTITY: 1
SERIAL #: H2-082722-1 RE-TEST

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

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

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Cedar Canyon 15_16

Cedar Canyon 15_16 State Com 76H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

14 August, 2025

OXY
Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Cedar Canyon 15_16 State Com 76H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 2966.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 2966.00ft
Site:	Cedar Canyon 15_16	North Reference:	Grid
Well:	Cedar Canyon 15_16 State Com 76H	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	Cedar Canyon 15_16		
Site Position:		Northing:	444,814.77 usft
From:	Map	Easting:	643,617.12 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	32.222440
		Longitude:	-104.002586

Well	Cedar Canyon 15_16 State Com 76H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	6.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.20 °		
		Latitude:	32.213745
		Longitude:	-103.966241
		Ground Level:	2,941.00 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	8/14/2025	6.38	59.73	47,207.80000000

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	264.32

Plan Survey Tool Program	Date	8/14/2025		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,631.31	Permitting Plan (Wellbore #1)	B005Mc_MWD+HRGM+SA
				MWD+HRGM+Sag+MSA

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	
3,180.00	0.00	0.00	3,180.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,479.68	13.00	139.20	4,468.57	-111.10	95.91	1.00	1.00	0.00	139.20	
8,707.03	13.00	139.20	8,587.62	-830.76	717.17	0.00	0.00	0.00	0.00	
9,699.63	90.82	270.03	9,234.69	-945.18	142.35	10.00	7.84	13.18	129.95	
14,364.63	90.82	270.03	9,168.26	-943.02	-4,522.17	0.00	0.00	0.00	0.00	PI-1 (Cedar Canyon
14,388.77	90.82	269.66	9,167.91	-943.09	-4,546.32	1.50	0.00	-1.50	-89.92	
19,631.31	90.82	269.66	9,093.21	-973.81	-9,788.24	0.00	0.00	0.00	0.00	PBHL (Cedar

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Cedar Canyon 15_16 State Com 76H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 2966.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 2966.00ft
Site:	Cedar Canyon 15_16	North Reference:	Grid
Well:	Cedar Canyon 15_16 State Com 76H	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
3,180.00	0.00	0.00	3,180.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 1°/100'									
3,200.00	0.20	139.20	3,200.00	-0.03	0.02	-0.02	1.00	1.00	0.00
3,300.00	1.20	139.20	3,299.99	-0.95	0.82	-0.72	1.00	1.00	0.00
3,400.00	2.20	139.20	3,399.95	-3.20	2.76	-2.43	1.00	1.00	0.00
3,500.00	3.20	139.20	3,499.83	-6.76	5.84	-5.14	1.00	1.00	0.00
3,600.00	4.20	139.20	3,599.62	-11.65	10.05	-8.85	1.00	1.00	0.00
3,700.00	5.20	139.20	3,699.29	-17.85	15.41	-13.57	1.00	1.00	0.00
3,800.00	6.20	139.20	3,798.79	-25.37	21.90	-19.28	1.00	1.00	0.00
3,900.00	7.20	139.20	3,898.11	-34.20	29.52	-25.99	1.00	1.00	0.00
4,000.00	8.20	139.20	3,997.20	-44.34	38.28	-33.70	1.00	1.00	0.00
4,100.00	9.20	139.20	4,096.05	-55.79	48.16	-42.40	1.00	1.00	0.00
4,200.00	10.20	139.20	4,194.62	-68.54	59.17	-52.10	1.00	1.00	0.00
4,300.00	11.20	139.20	4,292.88	-82.60	71.30	-62.78	1.00	1.00	0.00
4,400.00	12.20	139.20	4,390.80	-97.95	84.56	-74.44	1.00	1.00	0.00
4,479.68	13.00	139.20	4,468.57	-111.10	95.91	-84.44	1.00	1.00	0.00
Hold 13° Tangent									
4,500.00	13.00	139.20	4,488.36	-114.56	98.90	-87.07	0.00	0.00	0.00
4,600.00	13.00	139.20	4,585.80	-131.59	113.60	-100.01	0.00	0.00	0.00
4,700.00	13.00	139.20	4,683.24	-148.61	128.29	-112.95	0.00	0.00	0.00
4,800.00	13.00	139.20	4,780.68	-165.63	142.99	-125.89	0.00	0.00	0.00
4,900.00	13.00	139.20	4,878.12	-182.66	157.68	-138.83	0.00	0.00	0.00
5,000.00	13.00	139.20	4,975.55	-199.68	172.38	-151.76	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Cedar Canyon 15_16 State Com 76H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 2966.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 2966.00ft
Site:	Cedar Canyon 15_16	North Reference:	Grid
Well:	Cedar Canyon 15_16 State Com 76H	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)
5,100.00	13.00	139.20	5,072.99	-216.71	187.08	-164.70	0.00	0.00	0.00
5,200.00	13.00	139.20	5,170.43	-233.73	201.77	-177.64	0.00	0.00	0.00
5,300.00	13.00	139.20	5,267.87	-250.75	216.47	-190.58	0.00	0.00	0.00
5,400.00	13.00	139.20	5,365.31	-267.78	231.16	-203.52	0.00	0.00	0.00
5,500.00	13.00	139.20	5,462.74	-284.80	245.86	-216.46	0.00	0.00	0.00
5,600.00	13.00	139.20	5,560.18	-301.83	260.56	-229.40	0.00	0.00	0.00
5,700.00	13.00	139.20	5,657.62	-318.85	275.25	-242.34	0.00	0.00	0.00
5,800.00	13.00	139.20	5,755.06	-335.87	289.95	-255.27	0.00	0.00	0.00
5,900.00	13.00	139.20	5,852.50	-352.90	304.65	-268.21	0.00	0.00	0.00
6,000.00	13.00	139.20	5,949.94	-369.92	319.34	-281.15	0.00	0.00	0.00
6,100.00	13.00	139.20	6,047.37	-386.94	334.04	-294.09	0.00	0.00	0.00
6,200.00	13.00	139.20	6,144.81	-403.97	348.73	-307.03	0.00	0.00	0.00
6,300.00	13.00	139.20	6,242.25	-420.99	363.43	-319.97	0.00	0.00	0.00
6,400.00	13.00	139.20	6,339.69	-438.02	378.13	-332.91	0.00	0.00	0.00
6,500.00	13.00	139.20	6,437.13	-455.04	392.82	-345.84	0.00	0.00	0.00
6,600.00	13.00	139.20	6,534.57	-472.06	407.52	-358.78	0.00	0.00	0.00
6,700.00	13.00	139.20	6,632.00	-489.09	422.21	-371.72	0.00	0.00	0.00
6,800.00	13.00	139.20	6,729.44	-506.11	436.91	-384.66	0.00	0.00	0.00
6,900.00	13.00	139.20	6,826.88	-523.14	451.61	-397.60	0.00	0.00	0.00
7,000.00	13.00	139.20	6,924.32	-540.16	466.30	-410.54	0.00	0.00	0.00
7,100.00	13.00	139.20	7,021.76	-557.18	481.00	-423.48	0.00	0.00	0.00
7,200.00	13.00	139.20	7,119.20	-574.21	495.70	-436.41	0.00	0.00	0.00
7,300.00	13.00	139.20	7,216.63	-591.23	510.39	-449.35	0.00	0.00	0.00
7,400.00	13.00	139.20	7,314.07	-608.25	525.09	-462.29	0.00	0.00	0.00
7,500.00	13.00	139.20	7,411.51	-625.28	539.78	-475.23	0.00	0.00	0.00
7,600.00	13.00	139.20	7,508.95	-642.30	554.48	-488.17	0.00	0.00	0.00
7,700.00	13.00	139.20	7,606.39	-659.33	569.18	-501.11	0.00	0.00	0.00
7,800.00	13.00	139.20	7,703.82	-676.35	583.87	-514.05	0.00	0.00	0.00
7,900.00	13.00	139.20	7,801.26	-693.37	598.57	-526.98	0.00	0.00	0.00
8,000.00	13.00	139.20	7,898.70	-710.40	613.26	-539.92	0.00	0.00	0.00
8,100.00	13.00	139.20	7,996.14	-727.42	627.96	-552.86	0.00	0.00	0.00
8,200.00	13.00	139.20	8,093.58	-744.44	642.66	-565.80	0.00	0.00	0.00
8,300.00	13.00	139.20	8,191.02	-761.47	657.35	-578.74	0.00	0.00	0.00
8,400.00	13.00	139.20	8,288.45	-778.49	672.05	-591.68	0.00	0.00	0.00
8,500.00	13.00	139.20	8,385.89	-795.52	686.75	-604.62	0.00	0.00	0.00
8,600.00	13.00	139.20	8,483.33	-812.54	701.44	-617.56	0.00	0.00	0.00
8,700.00	13.00	139.20	8,580.77	-829.56	716.14	-630.49	0.00	0.00	0.00
8,707.03	13.00	139.20	8,587.62	-830.76	717.17	-631.40	0.00	0.00	0.00
KOP, Build & Turn 10°/100'									
8,800.00	9.96	184.89	8,678.90	-846.72	723.33	-635.95	10.00	-3.26	49.15
8,900.00	14.68	227.96	8,776.76	-863.87	713.16	-624.13	10.00	4.71	43.06
9,000.00	23.01	245.55	8,871.39	-880.49	685.89	-595.35	10.00	8.33	17.59
9,100.00	32.27	253.79	8,959.91	-896.07	642.35	-550.48	10.00	9.26	8.25
9,200.00	41.85	258.61	9,039.64	-910.14	583.86	-490.89	10.00	9.58	4.82
9,300.00	51.56	261.90	9,108.14	-922.28	512.21	-418.39	10.00	9.71	3.28
9,400.00	61.34	264.39	9,163.34	-932.11	429.56	-335.17	10.00	9.78	2.50
9,500.00	71.16	266.46	9,203.57	-939.33	338.43	-243.77	10.00	9.82	2.07
9,600.00	81.00	268.30	9,227.59	-943.73	241.59	-146.97	10.00	9.84	1.84
9,699.63	90.82	270.03	9,234.69	-945.18	142.35	-48.08	10.00	9.85	1.74
Landing Point									
9,700.00	90.82	270.03	9,234.68	-945.18	141.98	-47.71	0.00	0.00	0.00
9,800.00	90.82	270.03	9,233.26	-945.13	41.99	51.78	0.00	0.00	0.00
9,900.00	90.82	270.03	9,231.84	-945.09	-58.00	151.28	0.00	0.00	0.00
10,000.00	90.82	270.03	9,230.41	-945.04	-157.99	250.77	0.00	0.00	0.00
10,100.00	90.82	270.03	9,228.99	-944.99	-257.98	350.27	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Cedar Canyon 15_16 State Com 76H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 2966.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 2966.00ft
Site:	Cedar Canyon 15_16	North Reference:	Grid
Well:	Cedar Canyon 15_16 State Com 76H	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)
10,200.00	90.82	270.03	9,227.56	-944.95	-357.97	449.76	0.00	0.00	0.00
10,300.00	90.82	270.03	9,226.14	-944.90	-457.96	549.26	0.00	0.00	0.00
10,400.00	90.82	270.03	9,224.71	-944.85	-557.95	648.75	0.00	0.00	0.00
10,500.00	90.82	270.03	9,223.29	-944.81	-657.94	748.24	0.00	0.00	0.00
10,600.00	90.82	270.03	9,221.87	-944.76	-757.93	847.74	0.00	0.00	0.00
10,700.00	90.82	270.03	9,220.44	-944.72	-857.92	947.23	0.00	0.00	0.00
10,800.00	90.82	270.03	9,219.02	-944.67	-957.91	1,046.73	0.00	0.00	0.00
10,900.00	90.82	270.03	9,217.59	-944.62	-1,057.90	1,146.22	0.00	0.00	0.00
11,000.00	90.82	270.03	9,216.17	-944.58	-1,157.89	1,245.71	0.00	0.00	0.00
11,100.00	90.82	270.03	9,214.75	-944.53	-1,257.88	1,345.21	0.00	0.00	0.00
11,200.00	90.82	270.03	9,213.32	-944.49	-1,357.87	1,444.70	0.00	0.00	0.00
11,300.00	90.82	270.03	9,211.90	-944.44	-1,457.86	1,544.20	0.00	0.00	0.00
11,400.00	90.82	270.03	9,210.47	-944.39	-1,557.85	1,643.69	0.00	0.00	0.00
11,500.00	90.82	270.03	9,209.05	-944.35	-1,657.84	1,743.18	0.00	0.00	0.00
11,600.00	90.82	270.03	9,207.63	-944.30	-1,757.83	1,842.68	0.00	0.00	0.00
11,700.00	90.82	270.03	9,206.20	-944.25	-1,857.82	1,942.17	0.00	0.00	0.00
11,800.00	90.82	270.03	9,204.78	-944.21	-1,957.81	2,041.67	0.00	0.00	0.00
11,900.00	90.82	270.03	9,203.35	-944.16	-2,057.80	2,141.16	0.00	0.00	0.00
12,000.00	90.82	270.03	9,201.93	-944.12	-2,157.79	2,240.65	0.00	0.00	0.00
12,100.00	90.82	270.03	9,200.51	-944.07	-2,257.78	2,340.15	0.00	0.00	0.00
12,200.00	90.82	270.03	9,199.08	-944.02	-2,357.77	2,439.64	0.00	0.00	0.00
12,300.00	90.82	270.03	9,197.66	-943.98	-2,457.76	2,539.14	0.00	0.00	0.00
12,400.00	90.82	270.03	9,196.23	-943.93	-2,557.75	2,638.63	0.00	0.00	0.00
12,500.00	90.82	270.03	9,194.81	-943.88	-2,657.74	2,738.13	0.00	0.00	0.00
12,600.00	90.82	270.03	9,193.39	-943.84	-2,757.73	2,837.62	0.00	0.00	0.00
12,700.00	90.82	270.03	9,191.96	-943.79	-2,857.72	2,937.11	0.00	0.00	0.00
12,800.00	90.82	270.03	9,190.54	-943.75	-2,957.71	3,036.61	0.00	0.00	0.00
12,900.00	90.82	270.03	9,189.11	-943.70	-3,057.70	3,136.10	0.00	0.00	0.00
13,000.00	90.82	270.03	9,187.69	-943.65	-3,157.69	3,235.60	0.00	0.00	0.00
13,100.00	90.82	270.03	9,186.27	-943.61	-3,257.68	3,335.09	0.00	0.00	0.00
13,200.00	90.82	270.03	9,184.84	-943.56	-3,357.67	3,434.58	0.00	0.00	0.00
13,300.00	90.82	270.03	9,183.42	-943.52	-3,457.66	3,534.08	0.00	0.00	0.00
13,400.00	90.82	270.03	9,181.99	-943.47	-3,557.65	3,633.57	0.00	0.00	0.00
13,500.00	90.82	270.03	9,180.57	-943.42	-3,657.64	3,733.07	0.00	0.00	0.00
13,600.00	90.82	270.03	9,179.15	-943.38	-3,757.63	3,832.56	0.00	0.00	0.00
13,700.00	90.82	270.03	9,177.72	-943.33	-3,857.62	3,932.05	0.00	0.00	0.00
13,800.00	90.82	270.03	9,176.30	-943.28	-3,957.61	4,031.55	0.00	0.00	0.00
13,900.00	90.82	270.03	9,174.87	-943.24	-4,057.60	4,131.04	0.00	0.00	0.00
14,000.00	90.82	270.03	9,173.45	-943.19	-4,157.59	4,230.54	0.00	0.00	0.00
14,100.00	90.82	270.03	9,172.03	-943.15	-4,257.58	4,330.03	0.00	0.00	0.00
14,200.00	90.82	270.03	9,170.60	-943.10	-4,357.57	4,429.52	0.00	0.00	0.00
14,300.00	90.82	270.03	9,169.18	-943.05	-4,457.56	4,529.02	0.00	0.00	0.00
14,364.63	90.82	270.03	9,168.26	-943.02	-4,522.17	4,593.32	0.00	0.00	0.00
Turn 1.5°/100'									
14,388.77	90.82	269.66	9,167.91	-943.09	-4,546.32	4,617.35	1.50	0.00	-1.50
Hold									
14,400.00	90.82	269.66	9,167.75	-943.15	-4,557.54	4,628.53	0.00	0.00	0.00
14,500.00	90.82	269.66	9,166.33	-943.74	-4,657.53	4,728.08	0.00	0.00	0.00
14,600.00	90.82	269.66	9,164.90	-944.33	-4,757.52	4,827.64	0.00	0.00	0.00
14,700.00	90.82	269.66	9,163.48	-944.91	-4,857.51	4,927.19	0.00	0.00	0.00
14,800.00	90.82	269.66	9,162.05	-945.50	-4,957.50	5,026.75	0.00	0.00	0.00
14,900.00	90.82	269.66	9,160.63	-946.08	-5,057.49	5,126.30	0.00	0.00	0.00
15,000.00	90.82	269.66	9,159.20	-946.67	-5,157.47	5,225.86	0.00	0.00	0.00
15,100.00	90.82	269.66	9,157.78	-947.26	-5,257.46	5,325.41	0.00	0.00	0.00
15,200.00	90.82	269.66	9,156.35	-947.84	-5,357.45	5,424.97	0.00	0.00	0.00

OXY

Planning Report

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Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 2966.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 2966.00ft
Site:	Cedar Canyon 15_16	North Reference:	Grid
Well:	Cedar Canyon 15_16 State Com 76H	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)
15,300.00	90.82	269.66	9,154.93	-948.43	-5,457.44	5,524.52	0.00	0.00	0.00
15,400.00	90.82	269.66	9,153.50	-949.01	-5,557.43	5,624.08	0.00	0.00	0.00
15,500.00	90.82	269.66	9,152.08	-949.60	-5,657.41	5,723.63	0.00	0.00	0.00
15,600.00	90.82	269.66	9,150.65	-950.19	-5,757.40	5,823.19	0.00	0.00	0.00
15,700.00	90.82	269.66	9,149.23	-950.77	-5,857.39	5,922.74	0.00	0.00	0.00
15,800.00	90.82	269.66	9,147.81	-951.36	-5,957.38	6,022.30	0.00	0.00	0.00
15,900.00	90.82	269.66	9,146.38	-951.94	-6,057.37	6,121.85	0.00	0.00	0.00
16,000.00	90.82	269.66	9,144.96	-952.53	-6,157.35	6,221.41	0.00	0.00	0.00
16,100.00	90.82	269.66	9,143.53	-953.12	-6,257.34	6,320.96	0.00	0.00	0.00
16,200.00	90.82	269.66	9,142.11	-953.70	-6,357.33	6,420.52	0.00	0.00	0.00
16,300.00	90.82	269.66	9,140.68	-954.29	-6,457.32	6,520.07	0.00	0.00	0.00
16,400.00	90.82	269.66	9,139.26	-954.87	-6,557.31	6,619.63	0.00	0.00	0.00
16,500.00	90.82	269.66	9,137.83	-955.46	-6,657.30	6,719.18	0.00	0.00	0.00
16,600.00	90.82	269.66	9,136.41	-956.04	-6,757.28	6,818.74	0.00	0.00	0.00
16,700.00	90.82	269.66	9,134.98	-956.63	-6,857.27	6,918.29	0.00	0.00	0.00
16,800.00	90.82	269.66	9,133.56	-957.22	-6,957.26	7,017.85	0.00	0.00	0.00
16,900.00	90.82	269.66	9,132.13	-957.80	-7,057.25	7,117.40	0.00	0.00	0.00
17,000.00	90.82	269.66	9,130.71	-958.39	-7,157.24	7,216.96	0.00	0.00	0.00
17,100.00	90.82	269.66	9,129.28	-958.97	-7,257.22	7,316.51	0.00	0.00	0.00
17,200.00	90.82	269.66	9,127.86	-959.56	-7,357.21	7,416.07	0.00	0.00	0.00
17,300.00	90.82	269.66	9,126.43	-960.15	-7,457.20	7,515.62	0.00	0.00	0.00
17,400.00	90.82	269.66	9,125.01	-960.73	-7,557.19	7,615.18	0.00	0.00	0.00
17,500.00	90.82	269.66	9,123.58	-961.32	-7,657.18	7,714.73	0.00	0.00	0.00
17,600.00	90.82	269.66	9,122.16	-961.90	-7,757.17	7,814.29	0.00	0.00	0.00
17,700.00	90.82	269.66	9,120.73	-962.49	-7,857.15	7,913.84	0.00	0.00	0.00
17,800.00	90.82	269.66	9,119.31	-963.08	-7,957.14	8,013.40	0.00	0.00	0.00
17,900.00	90.82	269.66	9,117.88	-963.66	-8,057.13	8,112.95	0.00	0.00	0.00
18,000.00	90.82	269.66	9,116.46	-964.25	-8,157.12	8,212.51	0.00	0.00	0.00
18,100.00	90.82	269.66	9,115.03	-964.83	-8,257.11	8,312.06	0.00	0.00	0.00
18,200.00	90.82	269.66	9,113.61	-965.42	-8,357.09	8,411.62	0.00	0.00	0.00
18,300.00	90.82	269.66	9,112.18	-966.01	-8,457.08	8,511.17	0.00	0.00	0.00
18,400.00	90.82	269.66	9,110.76	-966.59	-8,557.07	8,610.73	0.00	0.00	0.00
18,500.00	90.82	269.66	9,109.33	-967.18	-8,657.06	8,710.28	0.00	0.00	0.00
18,600.00	90.82	269.66	9,107.91	-967.76	-8,757.05	8,809.84	0.00	0.00	0.00
18,700.00	90.82	269.66	9,106.48	-968.35	-8,857.03	8,909.39	0.00	0.00	0.00
18,800.00	90.82	269.66	9,105.06	-968.94	-8,957.02	9,008.95	0.00	0.00	0.00
18,900.00	90.82	269.66	9,103.63	-969.52	-9,057.01	9,108.50	0.00	0.00	0.00
19,000.00	90.82	269.66	9,102.21	-970.11	-9,157.00	9,208.06	0.00	0.00	0.00
19,100.00	90.82	269.66	9,100.78	-970.69	-9,256.99	9,307.61	0.00	0.00	0.00
19,200.00	90.82	269.66	9,099.36	-971.28	-9,356.98	9,407.16	0.00	0.00	0.00
19,300.00	90.82	269.66	9,097.93	-971.86	-9,456.96	9,506.72	0.00	0.00	0.00
19,400.00	90.82	269.66	9,096.51	-972.45	-9,556.95	9,606.27	0.00	0.00	0.00
19,500.00	90.82	269.66	9,095.08	-973.04	-9,656.94	9,705.83	0.00	0.00	0.00
19,600.00	90.82	269.66	9,093.66	-973.62	-9,756.93	9,805.38	0.00	0.00	0.00
19,631.31	90.82	269.66	9,093.21	-973.81	-9,788.24	9,836.56	0.00	0.00	0.00
TD at 19631.31' MD									

OXY
Planning Report

Database:	HOPSP	Local Co-ordinate Reference:	Well Cedar Canyon 15_16 State Com 76H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=25' @ 2966.00ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=25' @ 2966.00ft
Site:	Cedar Canyon 15_16	North Reference:	Grid
Well:	Cedar Canyon 15_16 State Com 76H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

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
KOP (Cedar Canyon - plan misses target center by 1190.62ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-945.44	723.69	440,742.76	655,591.15	32.211139	-103.963911
PBHL (Cedar Canyon - plan hits target center - Point	0.00	0.00	9,093.21	-973.81	-9,788.24	440,714.40	645,080.05	32.211156	-103.997897
PI-1 (Cedar Canyon - plan hits target center - Point	0.00	0.00	9,168.26	-943.02	-4,522.17	440,745.18	650,345.70	32.211194	-103.980871
FTP (Cedar Canyon - plan misses target center by 208.68ft at 9278.92ft MD (9094.74 TVD, -919.90 N, 528.30 E) - Point	0.00	0.00	9,242.26	-945.42	673.68	440,742.78	655,541.15	32.211140	-103.964073

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
213.00	213.00	RUSTLER				
726.00	726.00	SALADO				
1,491.00	1,491.00	CASTILE				
3,043.00	3,043.00	DELAWARE				
3,076.00	3,076.00	BELL CANYON				
3,907.96	3,906.00	CHERRY CANYON				
5,199.56	5,170.00	BRUSHY CANYON				
6,827.26	6,756.00	BONE SPRING				
7,882.28	7,784.00	BONE SPRING 1ST				
8,638.66	8,521.00	BONE SPRING 2ND				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,180.00	3,180.00	0.00	0.00	Build 1°/100'
4,479.68	4,468.57	-111.10	95.91	Hold 13° Tangent
8,707.03	8,587.62	-830.76	717.17	KOP, Build & Turn 10°/100'
9,699.63	9,234.69	-945.18	142.35	Landing Point
14,364.63	9,168.26	-943.02	-4,522.17	Turn 1.5°/100'
14,388.77	9,167.91	-943.09	-4,546.32	Hold
19,631.31	9,093.21	-973.81	-9,788.24	TD at 19631.31' MD

Oxy USA Inc. - Cedar Canyon 15_16 State Com 76H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	9235	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	19631	Deepest Expected Fresh Water (ft):	213

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	213	213	
Salado	661	661	Salt
Marker Bed 126			Salt
Castile	1491	1491	Salt
Delaware	3043	3043	Oil/Gas/Brine
Bell Canyon	3076	3076	Oil/Gas/Brine
Cherry Canyon	3908	3906	Oil/Gas/Brine
Brushy Canyon	5200	5170	Losses
Bone Spring	6827	6756	Oil/Gas
Bone Spring 1st	7882	7784	Oil/Gas
Bone Spring 2nd	8639	8521	Oil/Gas
Bone Spring 3rd			Oil/Gas
Wolfcamp			Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

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

2. Casing Program

Section	Hole Size (in)	MD		TVD		Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
		From (ft)	To (ft)	From (ft)	To (ft)				
Surface	14.75	0	601	0	601	10.75	40.5	J-55	BTC
Intermediate	9.875	0	9700	0	9235	7.625	26.4	L-80 HC	BTC
Production	6.75	0	19631	0	9235	5.5	20	P-110	DWC/C-HT-IS

All casing strings will be tested in accordance with 43 CFR part 3170 Subpart 3172

All Casing SF Values will meet or exceed those below			
SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
1.00	1.100	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. Please see Annular Clearance Variance attachment for further details.

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	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-Q?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	
Is well located in R-111-Q and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd 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	503	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	570	1.68	13.2	5%	5,450	Circulate	Class C+Ret., Disper.
Int.	2	Intermediate 2S - Tail BH	843	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	591	1.84	13.3	25%	9,200	Circulate	Class C+Ret.

Offline Cementing Request

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. Please see Offline Cementing Variance

Bradenhead CBL Request

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. Please see Bradenhead CBL Variance attachment for further details.

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:
9.875" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	9235
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				
6.75" Hole	13-5/8"	5M	Annular		✓	70% of working pressure	9235
		5M	Blind Ram		✓	250 psi / 5000 psi	
			Pipe Ram				
			Double Ram		✓		
			Other*				

*Specify if additional ram is utilized

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 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

	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172.
	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 43 CFR part 3170 Subpart 3172.
	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 43 CFR part 3170 Subpart 3172 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 (intermediate and production) requirements as per the agreement reached in the OXY/BLM meeting on April 4th, 2025. Please see BOP Break Testing Variance attachment for further details.

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	601	0	601	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	601	9700	601	9235	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	9700	19631	9235	9235	Water-Based or Oil-Based Mud	9.5 - 12.5	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	6003 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	154°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

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 43 CFR part 3170 Subpart 3172. 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 snudder rig .	Yes
Total Estimated Cuttings Volume: 1429 bbls	



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.





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 <u>commence</u> .
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

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 43 CFR part 3170 Subpart 3172.

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: | <ol style="list-style-type: none"> 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: | <ol style="list-style-type: none"> 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: | <ol style="list-style-type: none"> 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: | <ol style="list-style-type: none"> 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
- Mud engineer:
- 1. Will remain in briefing / muster area until instructed by supervisor.
- 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 is 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

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

Submit Electronically
Via E-permitting

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:** 1 0 / 0 6 / 2 0 2 5

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: Whomping Willow 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: <i>Sara Guthrie</i>
Printed Name: Sara Guthrie
Title: Regulatory Advisor
E-mail Address: sara_guthrie@oxy.com
Date: 10/6/2025
Phone: 713-497-2851
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
CEDAR CANYON 15_16 STATE COM 71H	Pending	B-17-T24S-R29E	890' FNL & 1411' FEL	3100	5500	3000
CEDAR CANYON 15_16 STATE COM 72H	Pending	B-17-T24S-R29E	920' FNL & 1411' FEL	3100	5500	3000
CEDAR CANYON 15_16 STATE COM 73H	Pending	B-17-T24S-R29E	950' FNL & 1411' FEL	3100	5500	3000
CEDAR CANYON 15_16 STATE COM 74H	Pending	I-15-T24S-R29E	1335' FSL & 770' FEL	3100	5500	3000
CEDAR CANYON 15_16 STATE COM 75H	Pending	P-15-T24S-R29E	1305' FSL & 770' FEL	3100	5500	3000
CEDAR CANYON 15_16 STATE COM 76H	Pending	P-15-T24S-R29E	1275' FSL & 770' FEL	3100	5500	3000

V. Anticipated Schedule

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
CEDAR CANYON 15_16 STATE COM 71H	Pending	TBD	TBD	TBD	TBD	TBD
CEDAR CANYON 15_16 STATE COM 72H	Pending	TBD	TBD	TBD	TBD	TBD
CEDAR CANYON 15_16 STATE COM 73H	Pending	TBD	TBD	TBD	TBD	TBD
CEDAR CANYON 15_16 STATE COM 74H	Pending	TBD	TBD	TBD	TBD	TBD
CEDAR CANYON 15_16 STATE COM 75H	Pending	TBD	TBD	TBD	TBD	TBD
CEDAR CANYON 15_16 STATE COM 76H	Pending	TBD	TBD	TBD	TBD	TBD

Central Delivery Point Name : Whomping Willow CTB

Part VI. Separation Equipment

Operator will size the flowback separator to handle 6,500 Bbls of fluid and 6 MMscfd which is more than the expected peak rates for these wells. Each separator is rated to 1440 psig, 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

Alternatives to Reduce Flaring

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

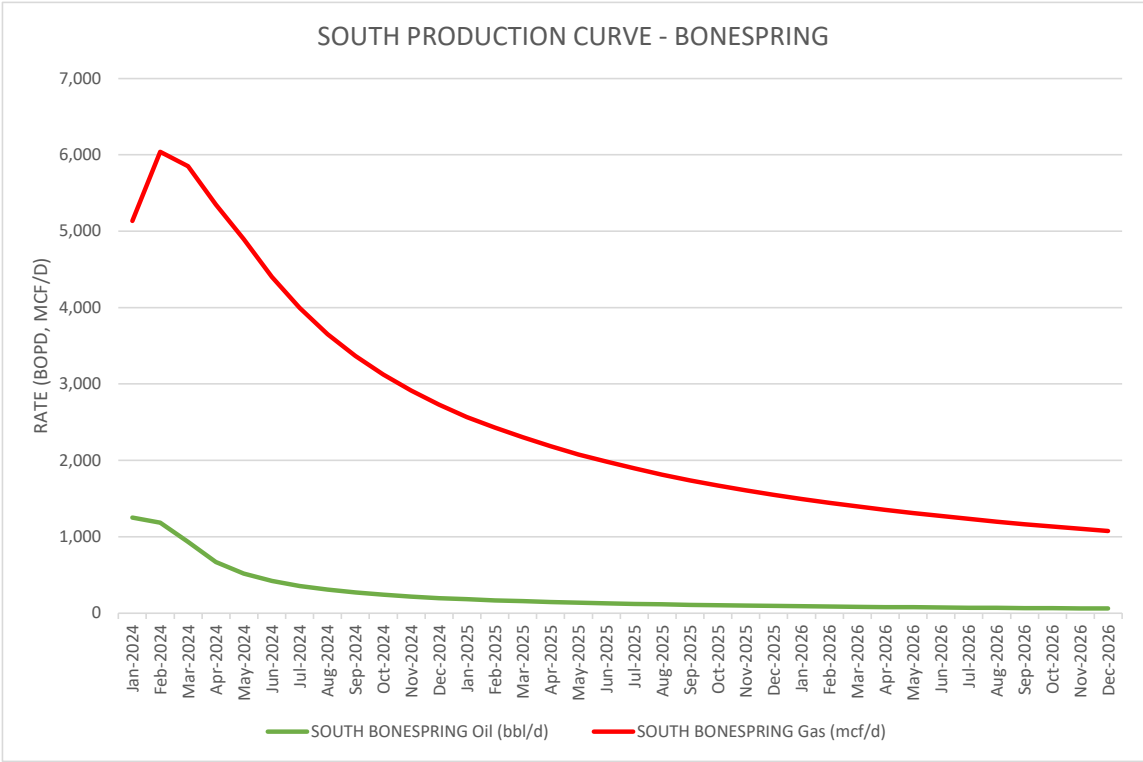
Compressed Natural Gas – On lease

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

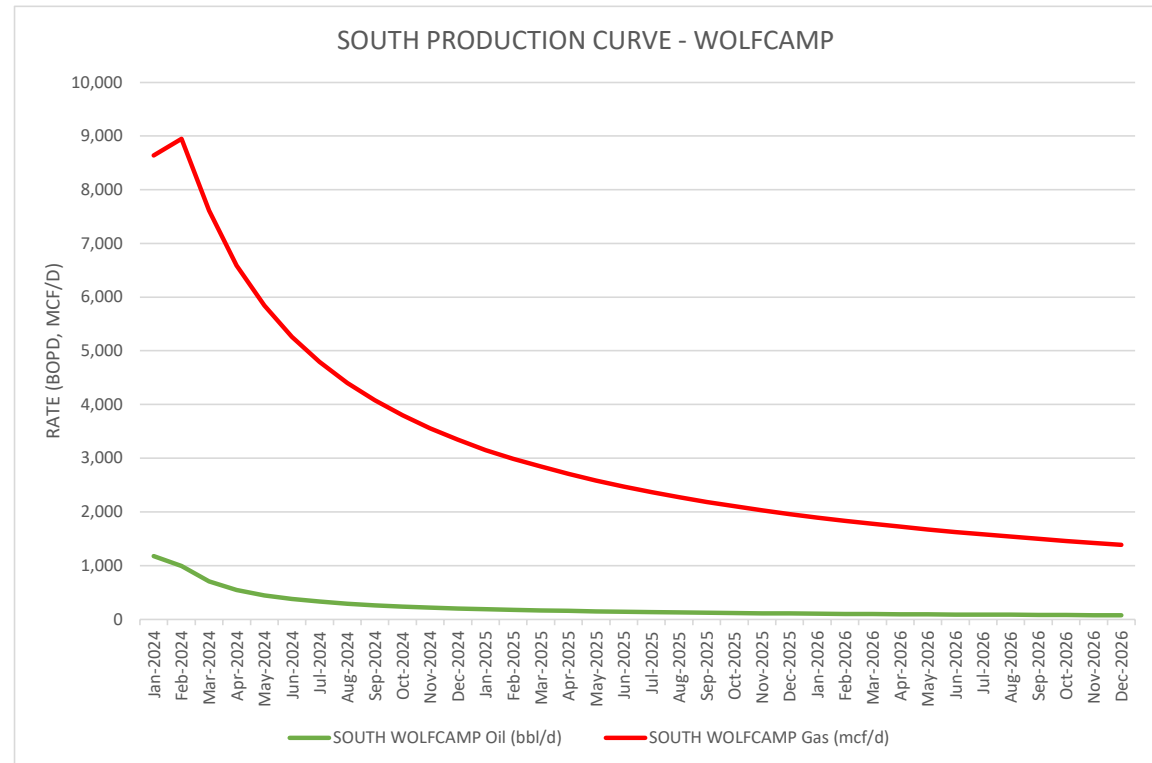
NGL Removal – On lease

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

	SOUTH BONESPRING	
	Oil (bbl/d)	Gas (mcf/d)
Jan-2024	1,250	5,135
Feb-2024	1,184	6,041
Mar-2024	933	5,849
Apr-2024	670	5,349
May-2024	517	4,893
Jun-2024	421	4,401
Jul-2024	355	3,994
Aug-2024	306	3,652
Sep-2024	270	3,368
Oct-2024	240	3,125
Nov-2024	217	2,915
Dec-2024	197	2,731
Jan-2025	181	2,566
Feb-2025	167	2,426
Mar-2025	155	2,301
Apr-2025	145	2,184
May-2025	136	2,078
Jun-2025	127	1,982
Jul-2025	120	1,894
Aug-2025	114	1,812
Sep-2025	108	1,739
Oct-2025	102	1,670
Nov-2025	98	1,607
Dec-2025	93	1,549
Jan-2026	89	1,493
Feb-2026	85	1,444
Mar-2026	82	1,398
Apr-2026	79	1,353
May-2026	76	1,311
Jun-2026	73	1,271
Jul-2026	71	1,234
Aug-2026	68	1,198
Sep-2026	66	1,165
Oct-2026	64	1,133
Nov-2026	62	1,104
Dec-2026	60	1,075



	SOUTH WOLFCAMP	
	Oil (bbl/d)	Gas (mcf/d)
Jan-2024	1,178	8,636
Feb-2024	995	8,951
Mar-2024	706	7,614
Apr-2024	544	6,588
May-2024	445	5,841
Jun-2024	377	5,261
Jul-2024	328	4,794
Aug-2024	291	4,402
Sep-2024	261	4,076
Oct-2024	238	3,797
Nov-2024	218	3,555
Dec-2024	201	3,343
Jan-2025	187	3,152
Feb-2025	175	2,990
Mar-2025	165	2,844
Apr-2025	156	2,708
May-2025	148	2,584
Jun-2025	140	2,471
Jul-2025	133	2,368
Aug-2025	127	2,272
Sep-2025	122	2,184
Oct-2025	117	2,104
Nov-2025	112	2,029
Dec-2025	108	1,959
Jan-2026	104	1,893
Feb-2026	101	1,834
Mar-2026	97	1,778
Apr-2026	94	1,725
May-2026	91	1,674
Jun-2026	89	1,626
Jul-2026	86	1,581
Aug-2026	84	1,538
Sep-2026	81	1,498
Oct-2026	79	1,460
Nov-2026	77	1,423
Dec-2026	75	1,389



BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached with OXY/BLM on April 4th, 2025.

BOPE Break Testing is ONLY permitted for 5M BOPE or less (utilizing a 10M BOPE system.)
Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.

BOP break test for the **intermediate or production** section under the following conditions:

- After a full BOP test is conducted.
- When skidding to drill an intermediate or production section which does not penetrate the deeper than the Wolf Camp formation (<5M).
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 3 CFR part 3170 Subpart 3172
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- In the event break testing is not utilized, then a full BOPE test would be conducted.
- 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

Subject: Request for a Variance Allowing Break Testing of a Blowout Preventer Stack

OXY USA Inc. (OXY) requests a variance to allow break testing of the Blowout Preventer (BOP) stack when skidding a drilling rig between wells on multi-well pads. This practice entails retesting only the connections of the **BOP** stack that have been disconnected during this operation and not a complete **BOP** test.

Background

43 CFR part 3170 Subpart 3172 states that a **BOP** test must be performed whenever any seal subject to test pressure is broken. The current interpretation of the Bureau of Land Management (BLM) is this requires a complete **BOP** test and not just a test of the affected component. 43 CFR part 3170 Subpart 3172, Section I.D.2. states, "Some situations may exist either on a well-by-well basis or field-wide basis whereby it is commonly accepted practice to vary a particular minimum standard(s) established in this Order. This situation can be resolved by requesting a variance...". OXY feels the practice of break testing the **BOP** stack is such a situation. Therefore, as per 43 CFR part 3170 Subpart 3172, Section IV., OXY submits this request for the variance.

Supporting Rationale

43 CFR part 3170 Subpart 3172 became effective on December 19, 1988, and has remained the standard for regulating BLM onshore drilling operations for almost 30 years. During this time there have been significant changes in drilling technology. **BLM** continues to use the variance request process to allow for the use of modern technology and acceptable engineering practices that have arisen since 43 CFR part 3170 Subpart 3172 was originally released. The drilling rig fleet OXY utilizes in New Mexico was built with many modern upgrades. One of which allows the rigs to skid between wells on multi-well pads. A part of this rig package is

a hydraulic winch system which safely installs and removes the BOP from the wellhead and carries it during skidding operations. This technology has made break testing a safe and reliable procedure.

American Petroleum Institute (API) standards, specifications and recommended practices are considered industry standards and are consistently utilized and referenced by the industry. 43 CFR part 3170 Subpart 3172 recognized API Recommended Practices (RP) 53 in its original development. API Standard 53, *Blowout Prevention Equipment Systems for Drilling Wells* (Fourth Edition, November 2012, Addendum 1, July 2016) recognizes break testing as an acceptable practice. Specifically, API Standard 53, Section 6.5.3.4.1.b states "Pressure tests on the well control equipment shall be conducted after the disconnection or repair of any pressure containment seal in the **BOP** stack, choke line, kill line, choke manifold, or wellhead assembly but limited to the affected component."

The Bureau of Safety and Environmental Enforcement (BSEE), Department of Interior, has also utilized the API standards, specifications and best practices in the development of its offshore oil and gas regulations and incorporates them by reference within its regulations. BSEE issued new offshore regulations under 30 CFR Part 250, *Oil and Gas and Sulphur Operations in the Outer Continental Shelf - Blowout Preventer Systems and Well Control*, which became effective on July 28, 2016. Section 250.737(d.1) states "Follow the testing requirements of API Standard 53". In addition, Section 250.737(d.8) has adopted language from **API** Standard 53 as it states "Pressure test affected **BOP** components following the disconnection or repair of any well-pressure containment seal in the wellhead or **BOP** stack assembly".

Break testing has been approved by the BLM in the past. See the Appendix for a Sundry Notice that was approved in 2015 by the Farmington Field Office. This approval granted permission for the operator to break test when skidding its Aztec 1000 rig on multi-well pads.

Oxy feels break testing and our current procedures meet the intent of 43 CFR part 3170 Subpart 3172 and often exceed it. We have not seen any evidence that break testing results in more components failing tests than seen on full BOP tests. As skidding operations take place within the 30-day full BOPE test window, the BOP shell and components such as the pipe rams and check valve get tested to the full rated working pressure more often. Therefore, there are more opportunities to ensure components are in good working order. Also, Oxy's standard requires complete BOP tests more often than that of 43 CFR part 3170 Subpart 3172. In addition to function testing the annular at least weekly and the pipe and blind rams on each trip, Oxy also performs a choke drill prior to drilling out every casing shoe. As a crew's training is a vital part of well control, this procedure to simulate step one of the Driller's Method exceeds the requirements of 43 CFR part 3170 Subpart 3172.

Procedures

- 1) OXY would perform BOP break testing on multi-well pads where multiple intermediate or production sections can be drilled and cased within the 21-day BOP test window
- 2) After performing a complete BOP test on the first well and drilling and casing the hole section, three breaks would be made on the BOP.
 - Between the check valve and the kill line
 - Between the HCR valve and the co-flex hose or the co-flex hose and the manifold
 - Between the BOP flange and the wellhead
- 3) The BOP is then lifted and removed from the wellhead by the hydraulic winch system
- 4) After skidding to the next well, the BOP is moved to the wellhead by the hydraulic winch system and installed
- 5) The choke line and kill line are reconnected
- 6) A test plug is installed in the wellhead with a joint of drill pipe and the internal parts of the check valve are removed
- 7) A shell test is performed against the upper pipe rams testing all three breaks
- 8) The internal parts of the check valve are reinstalled and the HCR valve is closed. A second test is performed on them
- 9) These tests consist of a 250 psi low test and a high test to the value submitted in the APD or SN (e.g., 5000 psi)
- 10) Perform a function test of components not pressure tested to include the lower pipe rams, the blind rams and the annular
- 11) If this were a three well pad, the same three breaks on the BOP would be made and steps 4 through 11 would be repeated
- 12) A second break test would only be done if the third hole section could be completed within the 21-day BOP test window
- 13) If a second break test is performed, additional components that were not tested on the initial break test will be tested on this break test

Notes:

- a. If any parts of the BOP are changed out or any additional breaks are made during the skidding operation, these affected components would also be tested as in step 9.
- b. As the choke manifold remains stationary during the skidding operation and the only break to the manifold is tested in step 8 above, no further testing of the manifold is done until the next full BOP test.

Summary

OXY requests a variance to allow break testing of the BOP stack when skidding drilling rigs between wells on multi-well pads. API standards, specifications and recommended practices are considered industry standards and are consistently utilized and referenced by the industry and the BLM. API Standard 53 recognizes break testing as an acceptable practice and BSEE adopted language from this standard into its newly created 30 CFR Part 250 which also supports break testing. Due to this, OXY feels this request meets the intent of 43 CFR part 3170

Bradenhead Cement CBL Variance Request

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

Four string wells:

- CBL is not required
- 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

Offline Cementing Variance Request

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.

1. Cement Program

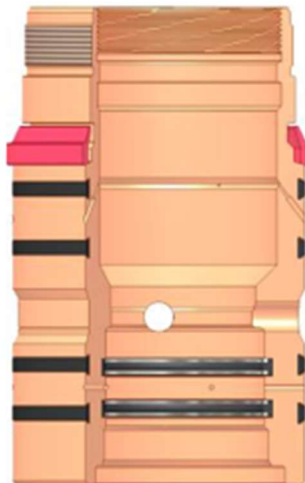
No changes to the cement program will take place for offline cementing.

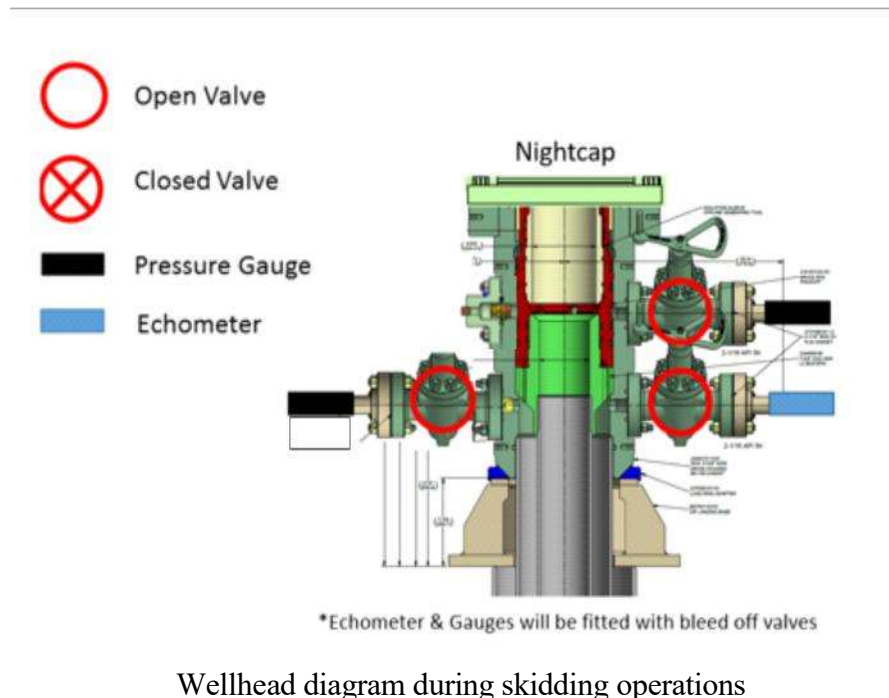
2. Offline Cementing Procedure

The operational sequence will be as follows:

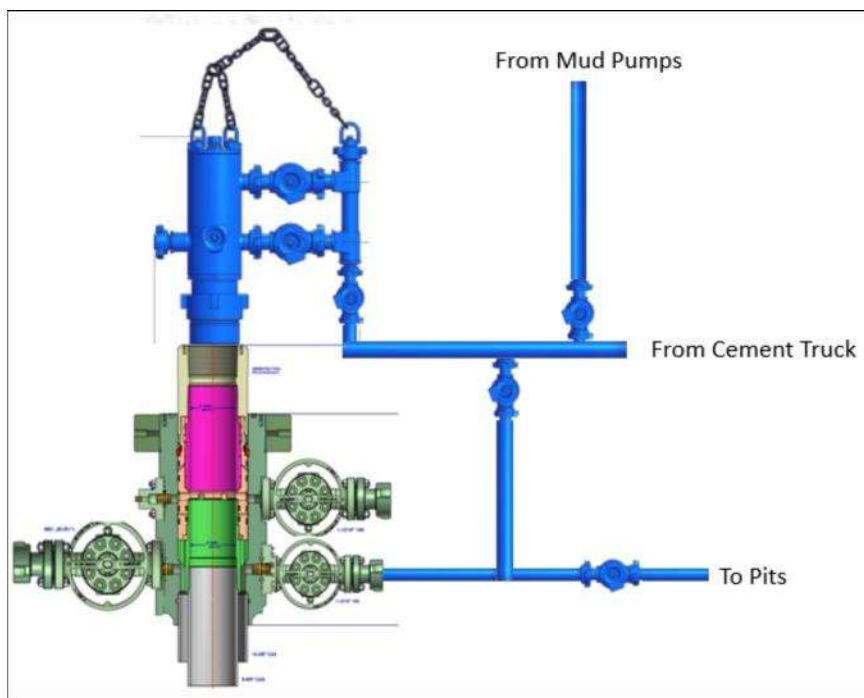
1. Run casing as per normal operations. While running casing, conduct negative pressure test and confirm integrity of the float equipment (float collar and shoe)
2. Land casing with mandrel
3. Fill pipe with kill weight fluid, do not circulate through floats and confirm well is static
4. Set annular packoff shown below and pressure test to confirm integrity of the seal.
Pressure ratings of wellhead components and valves is 5,000 psi

Annular packoff with both external and internal seals





5. After confirmation of both annular barriers and internal barriers, nipple down BOP and install cap flange.
 - a. If any barrier fails to test, the BOP stack will not be nipped down until after the cement job is completed with cement 500ft above the highest formation capable of flow with kill weight mud above or after it has achieved 50 psi compressive strength if cannot be verified.
6. Skid rig to next well on pad.
7. Confirm well is static before removing cap flange, flange will not be removed and offline cementing operations will not commence until well is under control. If well is not static, casing outlet valves will provide access to both the casing ID and annulus. Rig or third party pump truck will kill well prior to cementing or nipping up for further remediation.
 - a. Well Control Plan
 - i. The Drillers Method will be the primary well control method to regain control of the wellbore prior to cementing, if wellbore conditions do not permit the drillers method other methods of well control may be used
 - ii. Rig pumps or a 3rd party pump will be tied into the upper casing valve to pump down the casing ID
 - iii. A high pressure return line will be rigged up to lower casing valve and run to choke manifold to control annular pressure
 - iv. Once influx is circulated out of the hole, kill weight mud will be circulated
 - v. Well will be confirmed static
 - vi. Once confirmed static, cap flange will be removed to allow for offline cementing operations to commence
8. Install offline cement tool
9. Rig up cement equipment



Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
 - a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
 - b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
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.

Production Casing 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 43 CFR part 3170 Subpart 3172 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.