U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

05/11/2023

Well Name: CORRAL BLUFF 11_14 FEDERAL COM

Well Location: T25S / R29E / SEC 2 / SWSW /

County or Parish/State:

Well Number: 32H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM15303

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001548023

Well Status: Approved Application for Permit to Drill

Operator: OXY USA INCORPORATED

Notice of Intent

Sundry ID: 2713444

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 01/31/2023

Time Sundry Submitted: 02:38

Date proposed operation will begin: 04/28/2023

Procedure Description: The new drill plan and C-102 are attached. The old BHL was 20 FSL, 940 FWL, Sec 14, T25S, R29E. The new BHL is 20 FSL, 840 FWL, Sec 14, T25S, R29E.

NOI Attachments

Procedure Description

IP8625WEL03NM_C102_CORRAL_BLUFF_11_14_FED_COM_32H_FLAT_20230201061209.pdf

CorralBluff11_14FedCom32H_SpudRigData_20230131143447.pdf

CorralBluff11_14FedCom32H_TNSWedge425_5.500in_20.00__P110CY_20230131143436.pdf

CorralBluff11_14FedCom32H_FlexHoseCert_20230131143435.pdf

CorralBluff11_14FedCom32H_H2SEmerContact_20230131143436.pdf

CorralBluff11_14FedCom32H_H2S2_20230131143435.pdf

CorralBluff11_14FedCom32H_TNSWedge461_5.500in_20.00__P110CY_20230131143436.pdf

CorralBluff11_14FedCom32H_TNSWedge441_5.500in_20.00__P110CY_20230131143436.pdf

CorralBluff11_14FedCom32H_BOP_20230131143424.pdf

CorralBluff11_14FedCom32H_ChkManifolds_20230131143424.pdf

Well Name: CORRAL BLUFF 11_14 FEDERAL COM

Well Location: T25S / R29E / SEC 2 / SWSW /

County or Parish/State:

Well Number: 32H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM15303

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001548023

Well Status: Approved Application for Permit to Drill

Operator: OXY USA INCORPORATED

CorralBluff11_14FedCom32H_13inADAPT_10.75in_7.625in_10x10_20230131143424.pdf

CorralBluff11_14FedCom32H_DrillPlan_20230131143425.pdf

CorralBluff11_14FedCom32H_DirectPlan_20230131143424.pdf

CorralBluff11_14FedCom32H_CsgCriteria_20230131143423.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: STEPHEN JANACEK

Signed on: FEB 01, 2023 06:12 AM

Name: OXY USA INCORPORATED

Title: Regulatory Engineer

Street Address: 5 Greenway Plaza, Suite 110

City: Houston **State:** TX

Phone: (713) 497-2417

Email address: stephen_janacek@oxy.com

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KEITH P IMMATTY

BLM POC Title: ENGINEER

BLM POC Phone: 5759884722

BLM POC Email Address: KIMMATTY@BLM.GOV

Disposition: Approved

Disposition Date: 04/13/2023

Signature: KEITH IMMATTY

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

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

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

☑ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-48023	98220	PURPLE SAGE WOLFCAMP (GAS)

[4] Property Code	[5] Property Name	[6] Well Number
329731	CORRAL BLUFF 11_14 FED COM	32H

[7] OGRID No.	[8] Operator Name	[9] Elevation
16696	OXY USA INC.	3037.2'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	25S	29E		575	SOUTH	680	WEST	EDDY

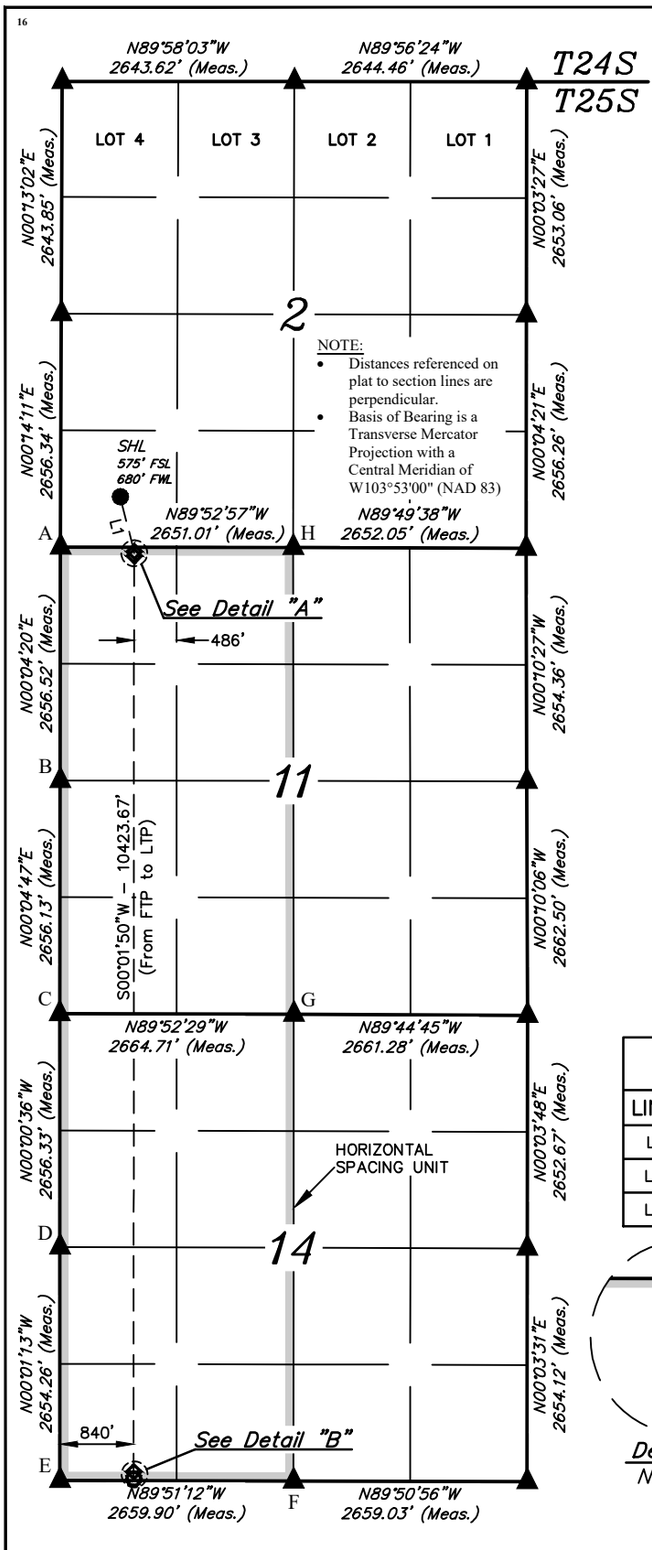
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	14	25S	29E		20	SOUTH	840	WEST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640 ~~1280~~	Y		

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.

16



● = SURFACE HOLE LOCATION
◇ = KICK OFF/TAKE POINTS
○ = BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°09'12.77" (32.153546°)
LONGITUDE = 103°57'41.54" (103.961538°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°09'12.32" (32.153423°)
LONGITUDE = 103°57'39.79" (103.961053°)
STATE PLANE NAD 83 (N.M. EAST)
N: 419794.12' E: 656397.45'
STATE PLANE NAD 27 (N.M. EAST)
N: 419735.70' E: 615212.87'

NAD 83 (KICK OFF POINT)
LATITUDE = 32°09'06.58" (32.151828°)
LONGITUDE = 103°57'39.70" (103.961027°)
NAD 27 (KICK OFF POINT)
LATITUDE = 32°09'06.14" (32.151704°)
LONGITUDE = 103°57'37.95" (103.960542°)
STATE PLANE NAD 83 (N.M. EAST)
N: 419169.59' E: 656557.74'
STATE PLANE NAD 27 (N.M. EAST)
N: 419111.19' E: 615373.14'

NAD 83 (FIRST TAKE POINT)
LATITUDE = 32°09'06.09" (32.151691°)
LONGITUDE = 103°57'39.70" (103.961027°)
NAD 27 (FIRST TAKE POINT)
LATITUDE = 32°09'05.64" (32.151567°)
LONGITUDE = 103°57'37.95" (103.960542°)
STATE PLANE NAD 83 (N.M. EAST)
N: 419119.60' E: 656557.89'
STATE PLANE NAD 27 (N.M. EAST)
N: 419061.20' E: 615373.29'

NAD 83 (LAST TAKE POINT)
LATITUDE = 32°07'22.95" (32.123043°)
LONGITUDE = 103°57'39.68" (103.961021°)
NAD 27 (LAST TAKE POINT)
LATITUDE = 32°07'22.51" (32.122919°)
LONGITUDE = 103°57'37.93" (103.960536°)
STATE PLANE NAD 83 (N.M. EAST)
N: 408698.18' E: 656595.88'
STATE PLANE NAD 27 (N.M. EAST)
N: 408639.99' E: 615411.01'

NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°07'22.16" (32.122823°)
LONGITUDE = 103°57'39.67" (103.961021°)
NAD 27 (BOTTOM HOLE LOCATION)
LATITUDE = 32°07'21.72" (32.122699°)
LONGITUDE = 103°57'37.93" (103.960536°)
STATE PLANE NAD 83 (N.M. EAST)
N: 408618.19' E: 656596.24'
STATE PLANE NAD 27 (N.M. EAST)
N: 408560.01' E: 615411.37'

[17] OPERATOR CERTIFICATION

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

Stephen Janacek 1/31/23
Signature Date

STEPHEN JANACEK
Printed Name

STEPHEN_JANACEK@OXY.COM
E-mail Address

[18] SURVEYOR CERTIFICATION

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

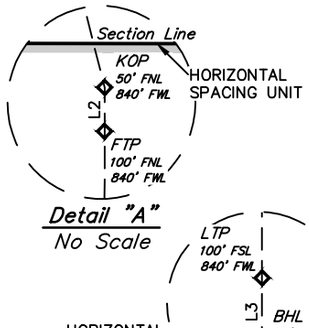
February 07, 2020
Date of Survey

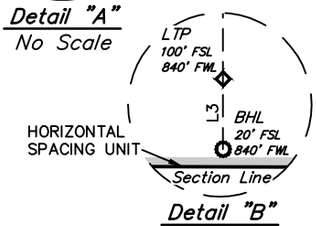
Signature and Seal of Professional Surveyor:

Certificate Number:

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S14°09'19"E	644.90'
L2	S00°04'20"W	50.00'
L3	S00°01'13"E	80.00'

HSU COORDINATES				
	NAD 27 N.M. STATE PLANE, EAST ZONE		NAD 83 N.M. STATE PLANE, EAST ZONE	
POINT	NORTHING	EASTING	NORTHING	EASTING
A	419159.38'	614533.18'	419217.79'	655717.77'
B	416503.49'	614540.87'	416561.84'	655725.53'
C	413847.98'	614548.20'	413906.27'	655732.93'
D	411192.28'	614559.68'	411250.52'	655744.48'
E	408538.65'	614571.64'	408596.84'	655756.51'
F	408542.96'	617230.95'	408601.14'	658415.85'
G	413853.29'	617212.33'	413911.59'	658397.08'
H	419165.04'	617183.61'	419223.44'	658368.22'





SCALE
DRAWN BY: R.J. 10-25-19
REV: 3 10-26-22 D.M.C.
(WELLBORE CHANGES & ADD HSU COORDINATES TABLE)

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)
Corral Bluff 11_14
Corral Bluff 11_14 Fed Com 32H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

05 December, 2022

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Corral Bluff 11_14 Fed Com 32H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3063.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3063.70ft
Site:	Corral Bluff 11_14	**North Reference:**	Grid
Well:	Corral Bluff 11_14 Fed Com 32H	**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 Corral Bluff 11_14

Site Position:		**Northing:**	419,542.96 usft	**Latitude:**	32.152848
From:	Map	**Easting:**	657,232.81 usft	**Longitude:**	-103.958842
Position Uncertainty:	1.00 ft	**Slot Radius:**	13.200 in		

Well Corral Bluff 11_14 Fed Com 32H

Well Position	**+N/-S**	0.00 ft	**Northing:**	419,794.12 usf	**Latitude:**	32.153546
	+E/-W	0.00 ft	**Easting:**	656,397.45 usf	**Longitude:**	-103.961538
Position Uncertainty		1.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,037.20 ft
Grid Convergence:		0.20 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	3/12/2020	6.78	59.80	47,795.50000000

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	178.98

Plan Survey Tool Program **Date** 12/5/2022

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,905.60	Permitting Plan (Wellbore #1)	B001Mb_MWD+HRGM	
				OWSG MWD + HRGM	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,415.00	0.00	0.00	7,415.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,415.00	10.00	157.00	8,409.93	-80.13	34.01	1.00	1.00	0.00	157.00	
9,785.48	10.00	157.00	9,759.59	-299.19	127.00	0.00	0.00	0.00	0.00	
10,594.03	90.07	179.79	10,239.70	-865.30	161.86	10.00	9.90	2.82	23.11	
20,905.60	90.07	179.79	10,227.70	-11,176.80	198.81	0.00	0.00	0.00	0.00	PBHL (Corral Bluff

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Corral Bluff 11_14 Fed Com 32H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3063.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3063.70ft
Site:	Corral Bluff 11_14	**North Reference:**	Grid
Well:	Corral Bluff 11_14 Fed Com 32H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Corral Bluff 11_14 Fed Com 32H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3063.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3063.70ft
Site:	Corral Bluff 11_14	**North Reference:**	Grid
Well:	Corral Bluff 11_14 Fed Com 32H	**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)
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,415.00	0.00	0.00	7,415.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.85	157.00	7,500.00	-0.58	0.25	0.58	1.00	1.00	0.00
7,600.00	1.85	157.00	7,599.97	-2.75	1.17	2.77	1.00	1.00	0.00
7,700.00	2.85	157.00	7,699.88	-6.52	2.77	6.57	1.00	1.00	0.00
7,800.00	3.85	157.00	7,799.71	-11.90	5.05	11.99	1.00	1.00	0.00
7,900.00	4.85	157.00	7,899.42	-18.88	8.02	19.02	1.00	1.00	0.00
8,000.00	5.85	157.00	7,998.98	-27.47	11.66	27.67	1.00	1.00	0.00
8,100.00	6.85	157.00	8,098.37	-37.65	15.98	37.93	1.00	1.00	0.00
8,200.00	7.85	157.00	8,197.55	-49.42	20.98	49.79	1.00	1.00	0.00
8,300.00	8.85	157.00	8,296.49	-62.79	26.65	63.25	1.00	1.00	0.00
8,400.00	9.85	157.00	8,395.16	-77.75	33.00	78.32	1.00	1.00	0.00
8,415.00	10.00	157.00	8,409.93	-80.13	34.01	80.72	1.00	1.00	0.00
8,500.00	10.00	157.00	8,493.64	-93.71	39.78	94.40	0.00	0.00	0.00
8,600.00	10.00	157.00	8,592.12	-109.70	46.56	110.51	0.00	0.00	0.00
8,700.00	10.00	157.00	8,690.60	-125.68	53.35	126.61	0.00	0.00	0.00
8,800.00	10.00	157.00	8,789.08	-141.67	60.13	142.71	0.00	0.00	0.00
8,900.00	10.00	157.00	8,887.56	-157.65	66.92	158.82	0.00	0.00	0.00
9,000.00	10.00	157.00	8,986.04	-173.63	73.70	174.92	0.00	0.00	0.00
9,100.00	10.00	157.00	9,084.52	-189.62	80.49	191.02	0.00	0.00	0.00
9,200.00	10.00	157.00	9,183.01	-205.60	87.27	207.12	0.00	0.00	0.00
9,300.00	10.00	157.00	9,281.49	-221.59	94.06	223.23	0.00	0.00	0.00
9,400.00	10.00	157.00	9,379.97	-237.57	100.84	239.33	0.00	0.00	0.00
9,500.00	10.00	157.00	9,478.45	-253.56	107.63	255.43	0.00	0.00	0.00
9,600.00	10.00	157.00	9,576.93	-269.54	114.41	271.53	0.00	0.00	0.00
9,700.00	10.00	157.00	9,675.41	-285.53	121.20	287.64	0.00	0.00	0.00
9,785.48	10.00	157.00	9,759.59	-299.19	127.00	301.40	0.00	0.00	0.00
9,800.00	11.35	159.90	9,773.86	-301.69	127.98	303.92	10.00	9.30	19.95
9,900.00	21.01	169.55	9,869.80	-328.63	134.63	330.97	10.00	9.66	9.65
10,000.00	30.89	173.23	9,959.61	-371.86	140.93	374.31	10.00	9.87	3.69
10,100.00	40.82	175.25	10,040.56	-430.07	146.67	432.61	10.00	9.93	2.02
10,200.00	50.77	176.59	10,110.20	-501.49	151.69	504.11	10.00	9.95	1.34
10,300.00	60.74	177.60	10,166.40	-583.95	155.83	586.62	10.00	9.97	1.00
10,400.00	70.71	178.42	10,207.46	-674.93	158.96	677.65	10.00	9.97	0.82
10,500.00	80.69	179.15	10,232.13	-771.69	161.00	774.43	10.00	9.98	0.73
10,594.03	90.07	179.79	10,239.70	-865.30	161.86	868.04	10.00	9.98	0.69

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Corral Bluff 11_14 Fed Com 32H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3063.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3063.70ft
Site:	Corral Bluff 11_14	**North Reference:**	Grid
Well:	Corral Bluff 11_14 Fed Com 32H	**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)
10,600.00	90.07	179.79	10,239.70	-871.27	161.89	874.02	0.00	0.00	0.00
10,700.00	90.07	179.79	10,239.58	-971.27	162.24	974.01	0.00	0.00	0.00
10,800.00	90.07	179.79	10,239.46	-1,071.27	162.60	1,074.00	0.00	0.00	0.00
10,900.00	90.07	179.79	10,239.35	-1,171.27	162.96	1,173.99	0.00	0.00	0.00
11,000.00	90.07	179.79	10,239.23	-1,271.27	163.32	1,273.98	0.00	0.00	0.00
11,100.00	90.07	179.79	10,239.11	-1,371.27	163.68	1,373.96	0.00	0.00	0.00
11,200.00	90.07	179.79	10,239.00	-1,471.27	164.03	1,473.95	0.00	0.00	0.00
11,300.00	90.07	179.79	10,238.88	-1,571.27	164.39	1,573.94	0.00	0.00	0.00
11,400.00	90.07	179.79	10,238.77	-1,671.27	164.75	1,673.93	0.00	0.00	0.00
11,500.00	90.07	179.79	10,238.65	-1,771.27	165.11	1,773.92	0.00	0.00	0.00
11,600.00	90.07	179.79	10,238.53	-1,871.27	165.47	1,873.91	0.00	0.00	0.00
11,700.00	90.07	179.79	10,238.42	-1,971.27	165.83	1,973.90	0.00	0.00	0.00
11,800.00	90.07	179.79	10,238.30	-2,071.27	166.18	2,073.89	0.00	0.00	0.00
11,900.00	90.07	179.79	10,238.18	-2,171.27	166.54	2,173.88	0.00	0.00	0.00
12,000.00	90.07	179.79	10,238.07	-2,271.26	166.90	2,273.87	0.00	0.00	0.00
12,100.00	90.07	179.79	10,237.95	-2,371.26	167.26	2,373.86	0.00	0.00	0.00
12,200.00	90.07	179.79	10,237.83	-2,471.26	167.62	2,473.85	0.00	0.00	0.00
12,300.00	90.07	179.79	10,237.72	-2,571.26	167.98	2,573.84	0.00	0.00	0.00
12,400.00	90.07	179.79	10,237.60	-2,671.26	168.33	2,673.83	0.00	0.00	0.00
12,500.00	90.07	179.79	10,237.48	-2,771.26	168.69	2,773.82	0.00	0.00	0.00
12,600.00	90.07	179.79	10,237.37	-2,871.26	169.05	2,873.81	0.00	0.00	0.00
12,700.00	90.07	179.79	10,237.25	-2,971.26	169.41	2,973.80	0.00	0.00	0.00
12,800.00	90.07	179.79	10,237.14	-3,071.26	169.77	3,073.79	0.00	0.00	0.00
12,900.00	90.07	179.79	10,237.02	-3,171.26	170.13	3,173.78	0.00	0.00	0.00
13,000.00	90.07	179.79	10,236.90	-3,271.26	170.48	3,273.77	0.00	0.00	0.00
13,100.00	90.07	179.79	10,236.79	-3,371.26	170.84	3,373.76	0.00	0.00	0.00
13,200.00	90.07	179.79	10,236.67	-3,471.26	171.20	3,473.75	0.00	0.00	0.00
13,300.00	90.07	179.79	10,236.55	-3,571.26	171.56	3,573.74	0.00	0.00	0.00
13,400.00	90.07	179.79	10,236.44	-3,671.25	171.92	3,673.73	0.00	0.00	0.00
13,500.00	90.07	179.79	10,236.32	-3,771.25	172.27	3,773.72	0.00	0.00	0.00
13,600.00	90.07	179.79	10,236.20	-3,871.25	172.63	3,873.71	0.00	0.00	0.00
13,700.00	90.07	179.79	10,236.09	-3,971.25	172.99	3,973.70	0.00	0.00	0.00
13,800.00	90.07	179.79	10,235.97	-4,071.25	173.35	4,073.69	0.00	0.00	0.00
13,900.00	90.07	179.79	10,235.86	-4,171.25	173.71	4,173.68	0.00	0.00	0.00
14,000.00	90.07	179.79	10,235.74	-4,271.25	174.07	4,273.67	0.00	0.00	0.00
14,100.00	90.07	179.79	10,235.62	-4,371.25	174.42	4,373.66	0.00	0.00	0.00
14,200.00	90.07	179.79	10,235.51	-4,471.25	174.78	4,473.65	0.00	0.00	0.00
14,300.00	90.07	179.79	10,235.39	-4,571.25	175.14	4,573.64	0.00	0.00	0.00
14,400.00	90.07	179.79	10,235.27	-4,671.25	175.50	4,673.63	0.00	0.00	0.00
14,500.00	90.07	179.79	10,235.16	-4,771.25	175.86	4,773.62	0.00	0.00	0.00
14,600.00	90.07	179.79	10,235.04	-4,871.25	176.22	4,873.61	0.00	0.00	0.00
14,700.00	90.07	179.79	10,234.92	-4,971.25	176.57	4,973.60	0.00	0.00	0.00
14,800.00	90.07	179.79	10,234.81	-5,071.24	176.93	5,073.59	0.00	0.00	0.00
14,900.00	90.07	179.79	10,234.69	-5,171.24	177.29	5,173.58	0.00	0.00	0.00
15,000.00	90.07	179.79	10,234.57	-5,271.24	177.65	5,273.57	0.00	0.00	0.00
15,100.00	90.07	179.79	10,234.46	-5,371.24	178.01	5,373.56	0.00	0.00	0.00
15,200.00	90.07	179.79	10,234.34	-5,471.24	178.36	5,473.55	0.00	0.00	0.00
15,300.00	90.07	179.79	10,234.23	-5,571.24	178.72	5,573.54	0.00	0.00	0.00
15,400.00	90.07	179.79	10,234.11	-5,671.24	179.08	5,673.53	0.00	0.00	0.00
15,500.00	90.07	179.79	10,233.99	-5,771.24	179.44	5,773.52	0.00	0.00	0.00
15,600.00	90.07	179.79	10,233.88	-5,871.24	179.80	5,873.51	0.00	0.00	0.00
15,700.00	90.07	179.79	10,233.76	-5,971.24	180.16	5,973.50	0.00	0.00	0.00
15,800.00	90.07	179.79	10,233.64	-6,071.24	180.51	6,073.49	0.00	0.00	0.00
15,900.00	90.07	179.79	10,233.53	-6,171.24	180.87	6,173.48	0.00	0.00	0.00
16,000.00	90.07	179.79	10,233.41	-6,271.24	181.23	6,273.47	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Corral Bluff 11_14 Fed Com 32H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3063.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3063.70ft
Site:	Corral Bluff 11_14	**North Reference:**	Grid
Well:	Corral Bluff 11_14 Fed Com 32H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,100.00	90.07	179.79	10,233.29	-6,371.24	181.59	6,373.46	0.00	0.00	0.00
16,200.00	90.07	179.79	10,233.18	-6,471.23	181.95	6,473.45	0.00	0.00	0.00
16,300.00	90.07	179.79	10,233.06	-6,571.23	182.31	6,573.44	0.00	0.00	0.00
16,400.00	90.07	179.79	10,232.95	-6,671.23	182.66	6,673.43	0.00	0.00	0.00
16,500.00	90.07	179.79	10,232.83	-6,771.23	183.02	6,773.42	0.00	0.00	0.00
16,600.00	90.07	179.79	10,232.71	-6,871.23	183.38	6,873.41	0.00	0.00	0.00
16,700.00	90.07	179.79	10,232.60	-6,971.23	183.74	6,973.40	0.00	0.00	0.00
16,800.00	90.07	179.79	10,232.48	-7,071.23	184.10	7,073.39	0.00	0.00	0.00
16,900.00	90.07	179.79	10,232.36	-7,171.23	184.46	7,173.38	0.00	0.00	0.00
17,000.00	90.07	179.79	10,232.25	-7,271.23	184.81	7,273.37	0.00	0.00	0.00
17,100.00	90.07	179.79	10,232.13	-7,371.23	185.17	7,373.36	0.00	0.00	0.00
17,200.00	90.07	179.79	10,232.01	-7,471.23	185.53	7,473.35	0.00	0.00	0.00
17,300.00	90.07	179.79	10,231.90	-7,571.23	185.89	7,573.34	0.00	0.00	0.00
17,400.00	90.07	179.79	10,231.78	-7,671.23	186.25	7,673.33	0.00	0.00	0.00
17,500.00	90.07	179.79	10,231.66	-7,771.23	186.60	7,773.32	0.00	0.00	0.00
17,600.00	90.07	179.79	10,231.55	-7,871.22	186.96	7,873.31	0.00	0.00	0.00
17,700.00	90.07	179.79	10,231.43	-7,971.22	187.32	7,973.29	0.00	0.00	0.00
17,800.00	90.07	179.79	10,231.32	-8,071.22	187.68	8,073.28	0.00	0.00	0.00
17,900.00	90.07	179.79	10,231.20	-8,171.22	188.04	8,173.27	0.00	0.00	0.00
18,000.00	90.07	179.79	10,231.08	-8,271.22	188.40	8,273.26	0.00	0.00	0.00
18,100.00	90.07	179.79	10,230.97	-8,371.22	188.75	8,373.25	0.00	0.00	0.00
18,200.00	90.07	179.79	10,230.85	-8,471.22	189.11	8,473.24	0.00	0.00	0.00
18,300.00	90.07	179.79	10,230.73	-8,571.22	189.47	8,573.23	0.00	0.00	0.00
18,400.00	90.07	179.79	10,230.62	-8,671.22	189.83	8,673.22	0.00	0.00	0.00
18,500.00	90.07	179.79	10,230.50	-8,771.22	190.19	8,773.21	0.00	0.00	0.00
18,600.00	90.07	179.79	10,230.38	-8,871.22	190.55	8,873.20	0.00	0.00	0.00
18,700.00	90.07	179.79	10,230.27	-8,971.22	190.90	8,973.19	0.00	0.00	0.00
18,800.00	90.07	179.79	10,230.15	-9,071.22	191.26	9,073.18	0.00	0.00	0.00
18,900.00	90.07	179.79	10,230.03	-9,171.22	191.62	9,173.17	0.00	0.00	0.00
19,000.00	90.07	179.79	10,229.92	-9,271.22	191.98	9,273.16	0.00	0.00	0.00
19,100.00	90.07	179.79	10,229.80	-9,371.21	192.34	9,373.15	0.00	0.00	0.00
19,200.00	90.07	179.79	10,229.69	-9,471.21	192.70	9,473.14	0.00	0.00	0.00
19,300.00	90.07	179.79	10,229.57	-9,571.21	193.05	9,573.13	0.00	0.00	0.00
19,400.00	90.07	179.79	10,229.45	-9,671.21	193.41	9,673.12	0.00	0.00	0.00
19,500.00	90.07	179.79	10,229.34	-9,771.21	193.77	9,773.11	0.00	0.00	0.00
19,600.00	90.07	179.79	10,229.22	-9,871.21	194.13	9,873.10	0.00	0.00	0.00
19,700.00	90.07	179.79	10,229.10	-9,971.21	194.49	9,973.09	0.00	0.00	0.00
19,800.00	90.07	179.79	10,228.99	-10,071.21	194.84	10,073.08	0.00	0.00	0.00
19,900.00	90.07	179.79	10,228.87	-10,171.21	195.20	10,173.07	0.00	0.00	0.00
20,000.00	90.07	179.79	10,228.75	-10,271.21	195.56	10,273.06	0.00	0.00	0.00
20,100.00	90.07	179.79	10,228.64	-10,371.21	195.92	10,373.05	0.00	0.00	0.00
20,200.00	90.07	179.79	10,228.52	-10,471.21	196.28	10,473.04	0.00	0.00	0.00
20,300.00	90.07	179.79	10,228.41	-10,571.21	196.64	10,573.03	0.00	0.00	0.00
20,400.00	90.07	179.79	10,228.29	-10,671.21	196.99	10,673.02	0.00	0.00	0.00
20,500.00	90.07	179.79	10,228.17	-10,771.20	197.35	10,773.01	0.00	0.00	0.00
20,600.00	90.07	179.79	10,228.06	-10,871.20	197.71	10,873.00	0.00	0.00	0.00
20,700.00	90.07	179.79	10,227.94	-10,971.20	198.07	10,972.99	0.00	0.00	0.00
20,800.00	90.07	179.79	10,227.82	-11,071.20	198.43	11,072.98	0.00	0.00	0.00
20,900.00	90.07	179.79	10,227.71	-11,171.20	198.79	11,172.97	0.00	0.00	0.00
20,905.60	90.07	179.79	10,227.70	-11,176.80	198.81	11,178.57	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Corral Bluff 11_14 Fed Com 32H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 3063.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 3063.70ft
Site:	Corral Bluff 11_14	**North Reference:**	Grid
Well:	Corral Bluff 11_14 Fed Com 32H	**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
PBHL (Corral Bluff - plan hits target center - Point	0.00	0.01	10,227.70	-11,176.80	198.81	408,618.19	656,596.24	32.122823	-103.961021
FTP (Corral Bluff - plan misses target center by 30.74ft at 10407.65ft MD (10209.94 TVD, -682.17 N, 159.16 E) - Point	0.00	0.00	10,239.70	-674.57	160.45	419,119.60	656,557.89	32.151691	-103.961027

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
325.70	325.70	RUSTLER			
758.70	758.70	SALADO			
1,623.70	1,623.70	CASTILE			
3,167.70	3,167.70	DELAWARE			
3,201.70	3,201.70	BELL CANYON			
4,058.70	4,058.70	CHERRY CANYON			
5,593.70	5,593.70	BRUSHY CANYON			
6,936.70	6,936.70	BONE SPRING			
7,835.08	7,834.70	BONE SPRING 1ST			
8,700.10	8,690.70	BONE SPRING 2ND			
9,872.28	9,843.70	BONE SPRING 3RD			
10,216.91	10,120.70	WOLFCAMP			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
7,415.00	7,415.00	0.00	0.00	Build 1°/100'
8,415.00	8,409.93	-80.13	34.01	Hold 10° Tangent
9,785.48	9,759.59	-299.19	127.00	KOP, Build & Turn 10°/100'
10,594.03	10,239.70	-865.30	161.86	Landing Point
20,905.60	10,227.70	-11,176.80	198.81	TD at 20905.60' MD

PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Corral Bluff 11_14
Well: Corral Bluff 11_14 Fed Com 32H
Wellbore: Wellbore #1
Design: Permitting Plan

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

System Datum: Mean Sea Level

WELL DETAILS: Corral Bluff 11_14 Fed Com 32H

3037.20

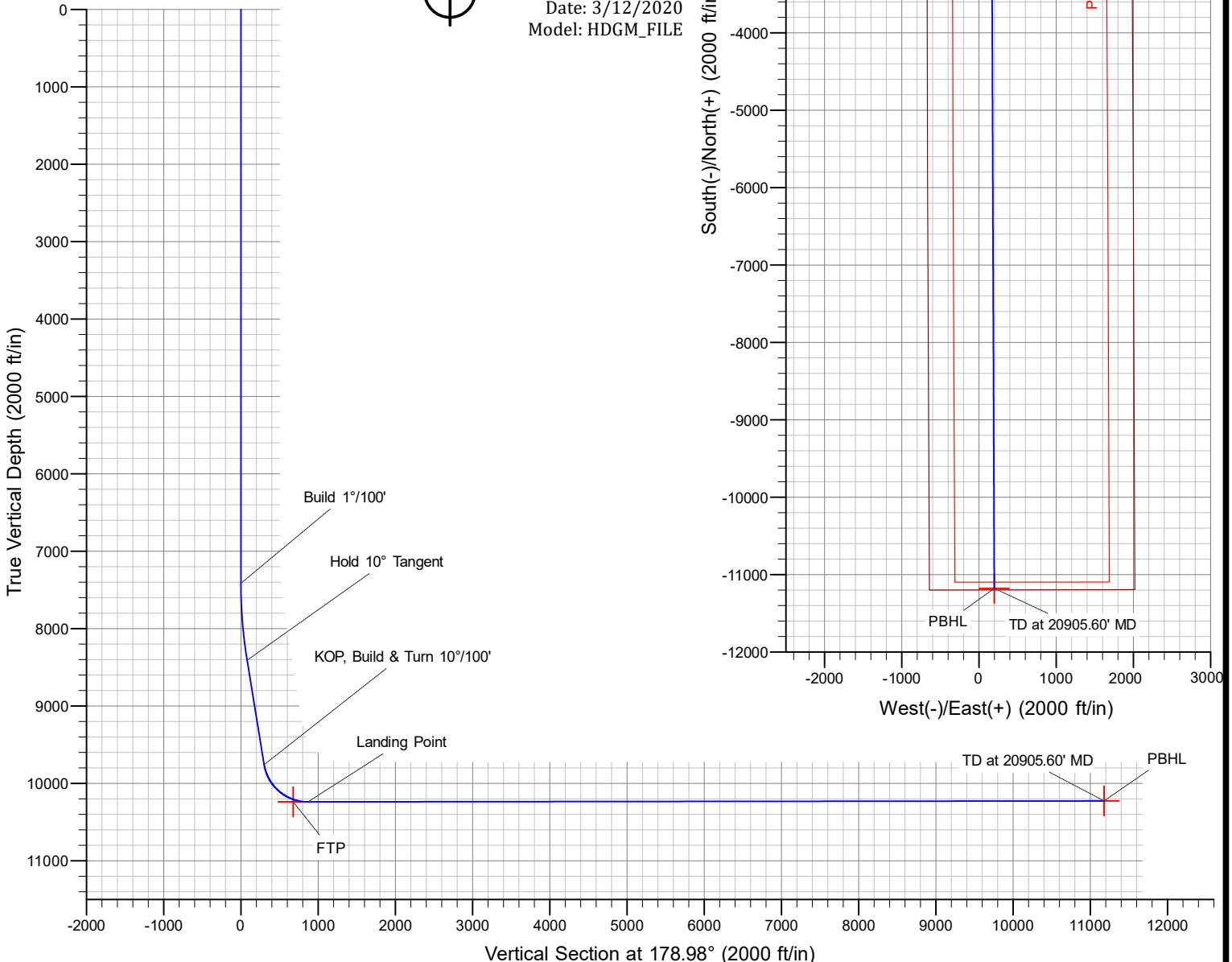
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	419794.12	656397.45	32.153546	-103.961538

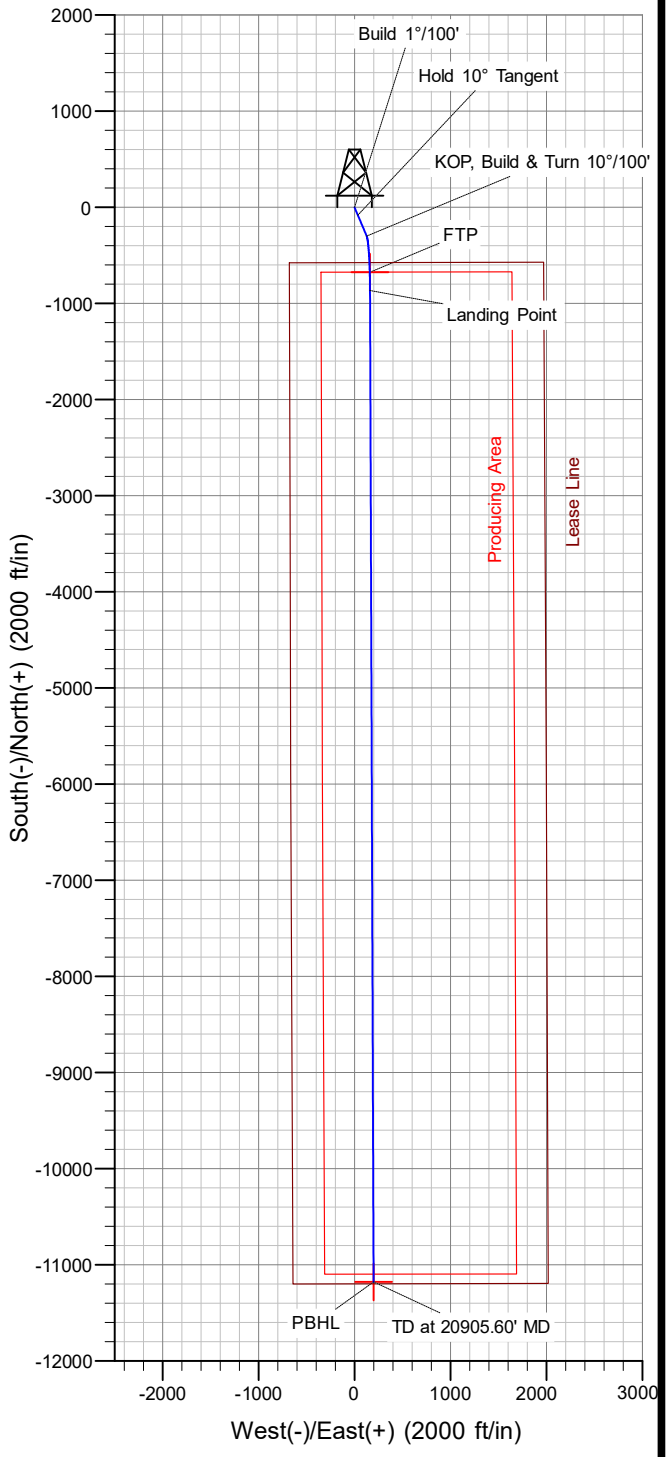
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7415.00	0.00	0.00	7415.00	0.00	0.00	0.00	0.00	0.00	Build 1°/100'
8415.00	10.00	157.00	8409.93	-80.13	34.01	1.00	157.00	80.72	Hold 10° Tangent
9785.48	10.00	157.00	9759.59	-299.19	127.00	0.00	0.00	301.40	KOP, Build & Turn 10°/100'
10594.03	90.07	179.79	10239.70	-865.30	161.86	10.00	23.11	868.04	Landing Point
20905.60	90.07	179.79	10227.70	-11176.80	198.81	0.00	0.00	11178.57	TD at 20905.60' MD

Azimuths to Grid North
True North: -0.20°
Magnetic North: 6.59°

Magnetic Field
Strength: 47795.5nT
Dip Angle: 59.80°
Date: 3/12/2020
Model: HDGM_FILE





Oxy USA Inc. - Corral Bluff 11_14 Fed Com 32H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	10240	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	20906	Deepest Expected Fresh Water (ft):	326

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	326	326	
Salado	759	759	Salt
Castile	1624	1624	Salt
Delaware	3168	3168	Oil/Gas/Brine
Bell Canyon	3202	3202	Oil/Gas/Brine
Cherry Canyon	4059	4059	Oil/Gas/Brine
Brushy Canyon	5594	5594	Losses
Bone Spring	6937	6937	Oil/Gas
Bone Spring 1st	7835	7835	Oil/Gas
Bone Spring 2nd	8700	8691	Oil/Gas
Bone Spring 3rd	9872	9844	Oil/Gas
Wolfcamp	10217	10121	Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

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

2. Casing Program

		MD		TVD					
Section	Hole Size (in)	From (ft)	To (ft)	From (ft)	To (ft)	Csg. OD (in)	Csg Wt. (ppf)	Grade	Conn.
Surface	14.75	0	699	0	699	10.75	45.5	J-55	BTC
Intermediate	9.875	0	9685	0	9660	7.625	26.4	L-80 HC	BTC
Production	6.75	0	20906	0	10240	5.5	20	P-110	Wedge 461

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

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

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

Annular Clearance Variance Request

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

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

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Section	Stage	Slurry:	Sacks	Yield (ft^3/ft)	Density (lb/gal)	Excess:	TOC	Placement	Description
Surface	1	Surface - Tail	585	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	525	1.65	13.2	5%	5,844	Circulate	Class H+Accel., Disper., Salt
Int.	2	Intermediate 2S - Tail BH	903	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	885	1.38	13.2	25%	9,185	Circulate	Class H+Ret., Disper., Salt

Offline Cementing

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

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

The summarized operational sequence will be as follows:

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

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

Three string wells:

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

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:	Deepest TVD Depth (ft) per Section:
9.875" Hole	13-5/8"	3M	Annular	✓	70% of working pressure	9660
		3M	Blind Ram	✓	250 psi / 3000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
6.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	10240
		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 Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

	Formation integrity test will be performed per Onshore Order #2.	
	On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.	
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.	

BOP Break Testing Request

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

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

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

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

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

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	699	0	699	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	699	9685	699	9660	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	9685	20906	9660	10240	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	6656 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	162°F

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal

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

8. Other facets of operation

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

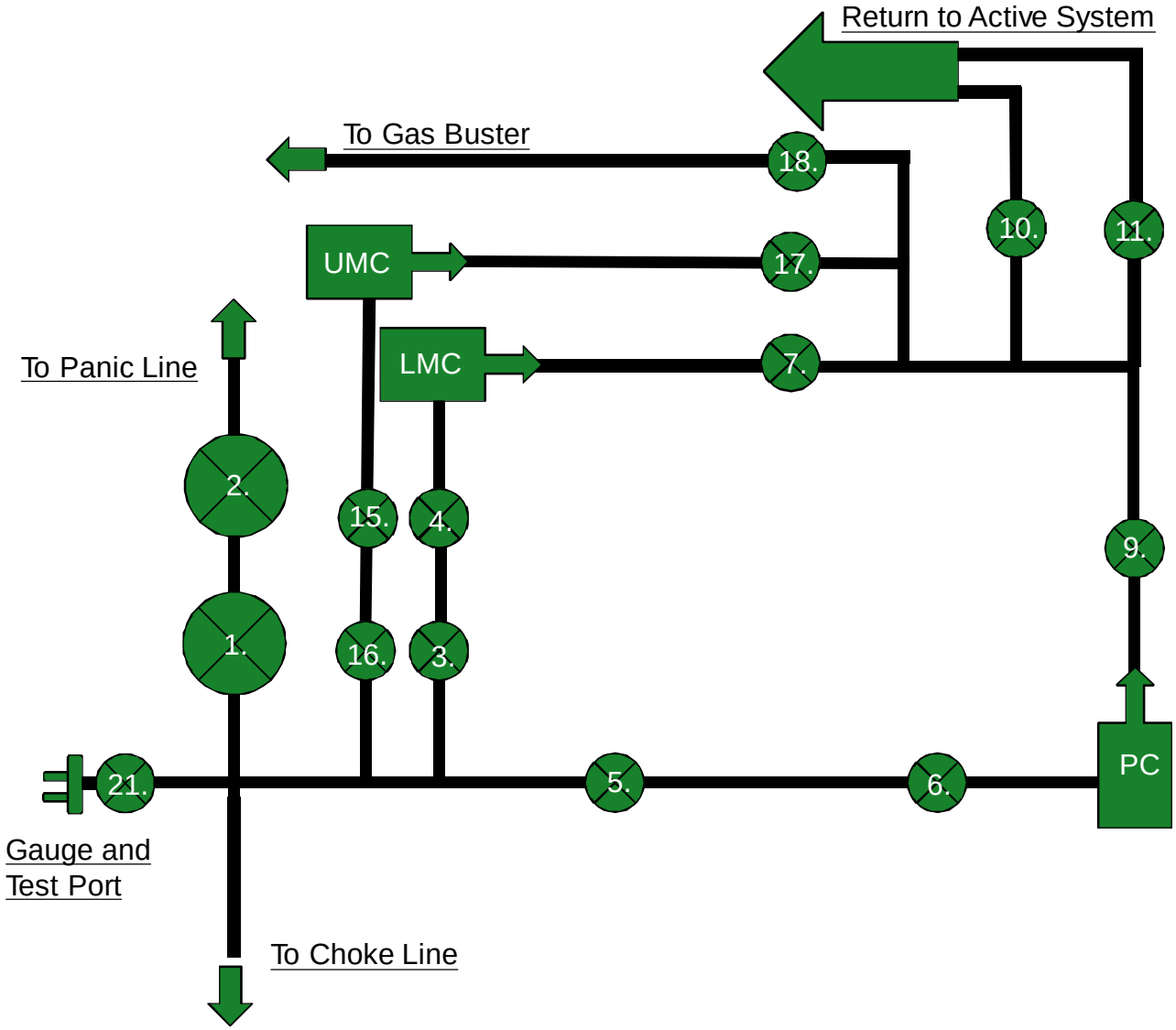
Total Estimated Cuttings Volume: 1496 bbls

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

9. Company Personnel

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

10M Choke Panel



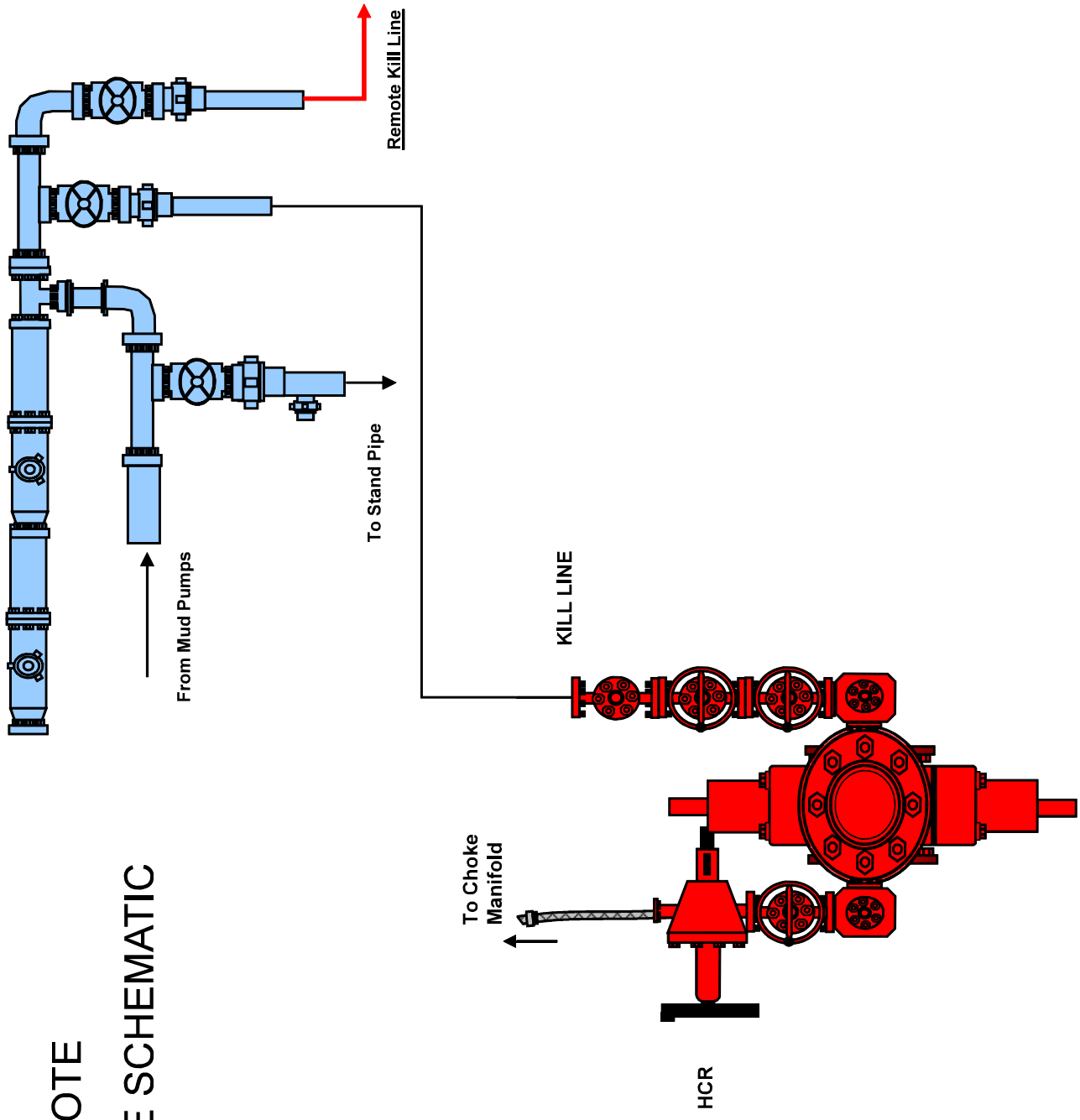
1. Choke Manifold Valve
2. Choke Manifold Valve
3. Choke Manifold Valve
4. Choke Manifold Valve
5. Choke Manifold Valve
6. Choke Manifold Valve
7. Choke Manifold Valve
8. PC – Power Choke
9. Choke Manifold Valve
10. Choke Manifold Valve
11. Choke Manifold Valve
12. LMC – Lower Manual Choke
13. UMC –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

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

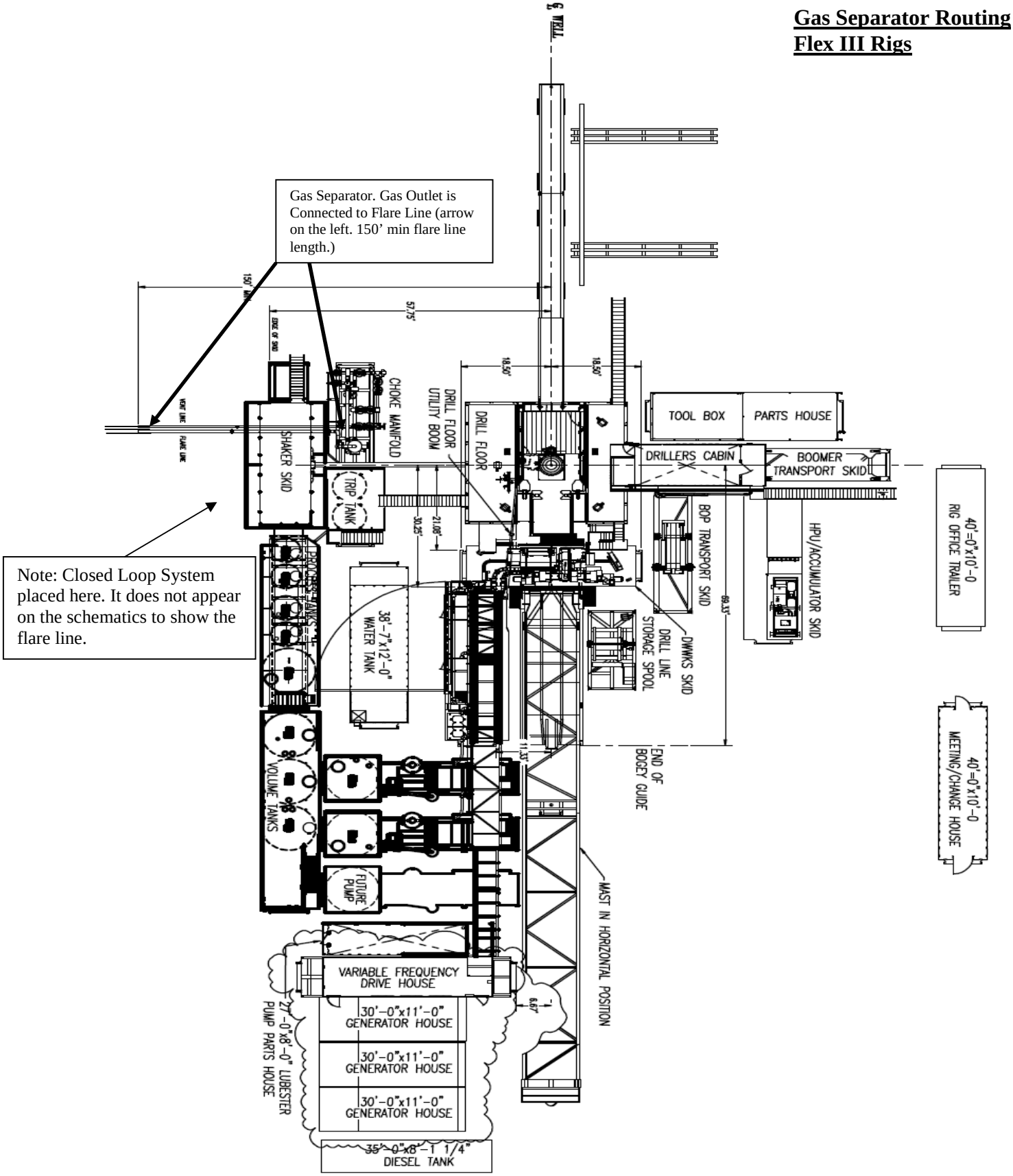
21. Vertical Choke Manifold Valve

***All Valves 3" minimum**

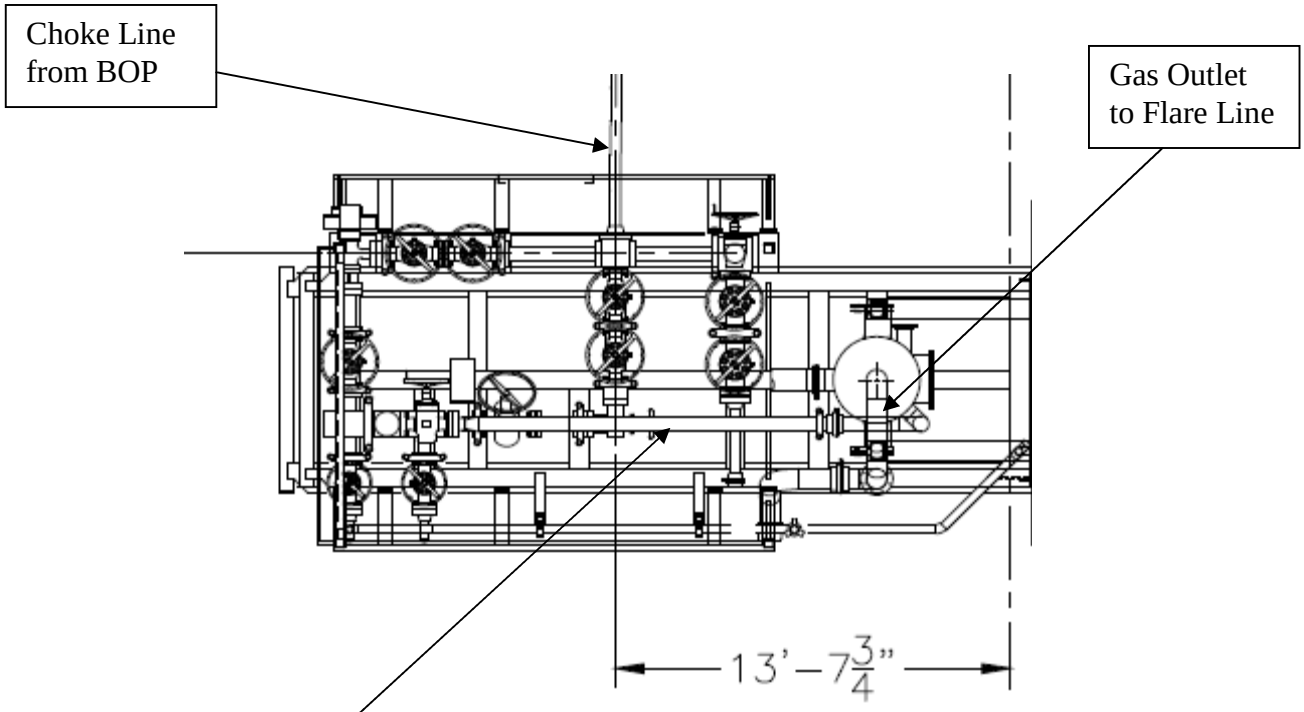
10M REMOTE KILL LINE SCHEMATIC



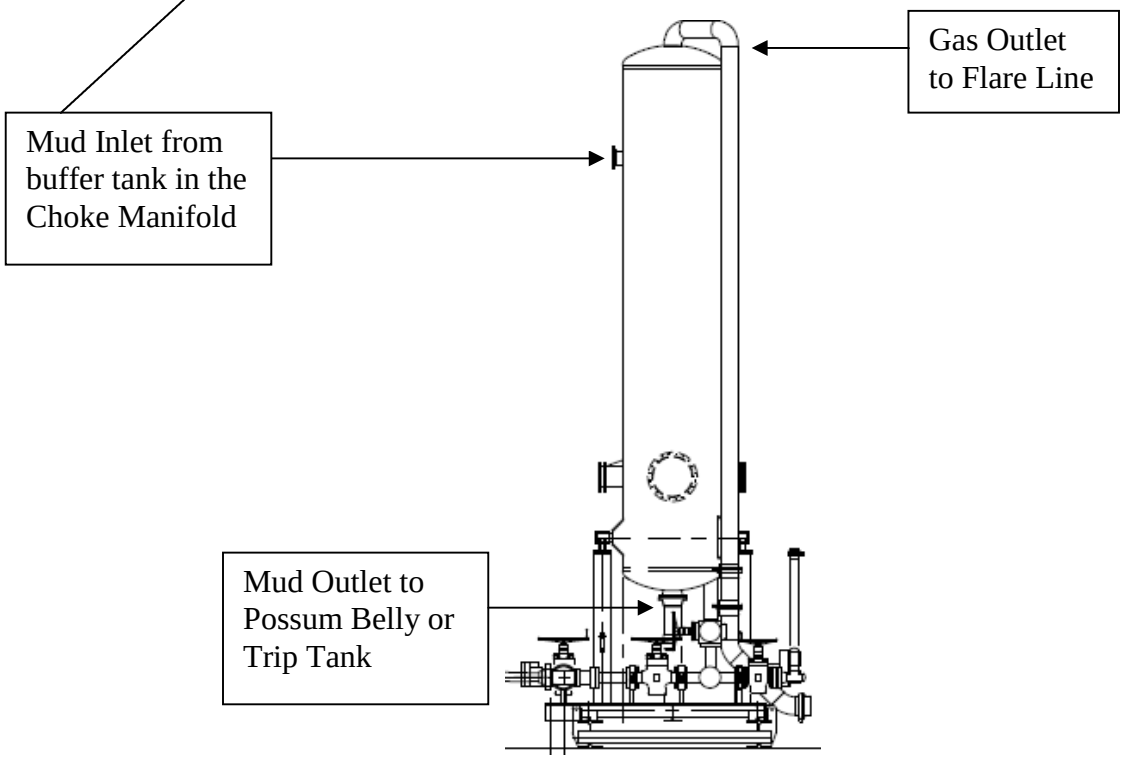
Gas Separator Routing
Flex III Rigs



Choke Manifold – Gas Separator (Top View)



Choke Manifold – Gas Separator (Side View)



OXY's Minimum Design Criteria

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

1) Casing Design Assumptions

a) Burst Loads

CSG Test (Surface)

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

CSG Test (Intermediate)

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

CSG Test (Production)

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

Gas Column (Surface)

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

Bullheading (Surface / Intermediate)

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

Gas Kick (Intermediate)

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

Tubing Leak Near Surface While Producing (Production)

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

Tubing Leak Near Surface While Stimulating (Production)

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

Injection / Stimulation Down Casing (Production)

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

b) Collapse Loads

Lost Circulation (Surface / Intermediate)

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

Cementing (Surface / Intermediate / Production)

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

Full Evacuation (Production)

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

c) Tension Loads

Running Casing (Surface / Intermediate / Production)

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

Green Cement (Surface / Intermediate / Production)

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

Continental CONTITECH

Fluid Technology

Quality Document

CERTIFICATE OF CONFORMITY

Supplier : CONTITECH RUBBER INDUSTRIAL KFT.
Equipment : 6 pcs. Choke and Kill Hose with installed couplings
Type : **3" x 10,67 m WP: 10000 psi**
Supplier File Number : 412638
Date of Shipment : April. 2008
Customer : Phoenix Beattie Co.
Customer P.o. : 002491
Referenced Standards / Codes / Specifications : API Spec 16 C
Serial No.: 52754,52755,52776,52777,52778,52782

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

Signed : .....

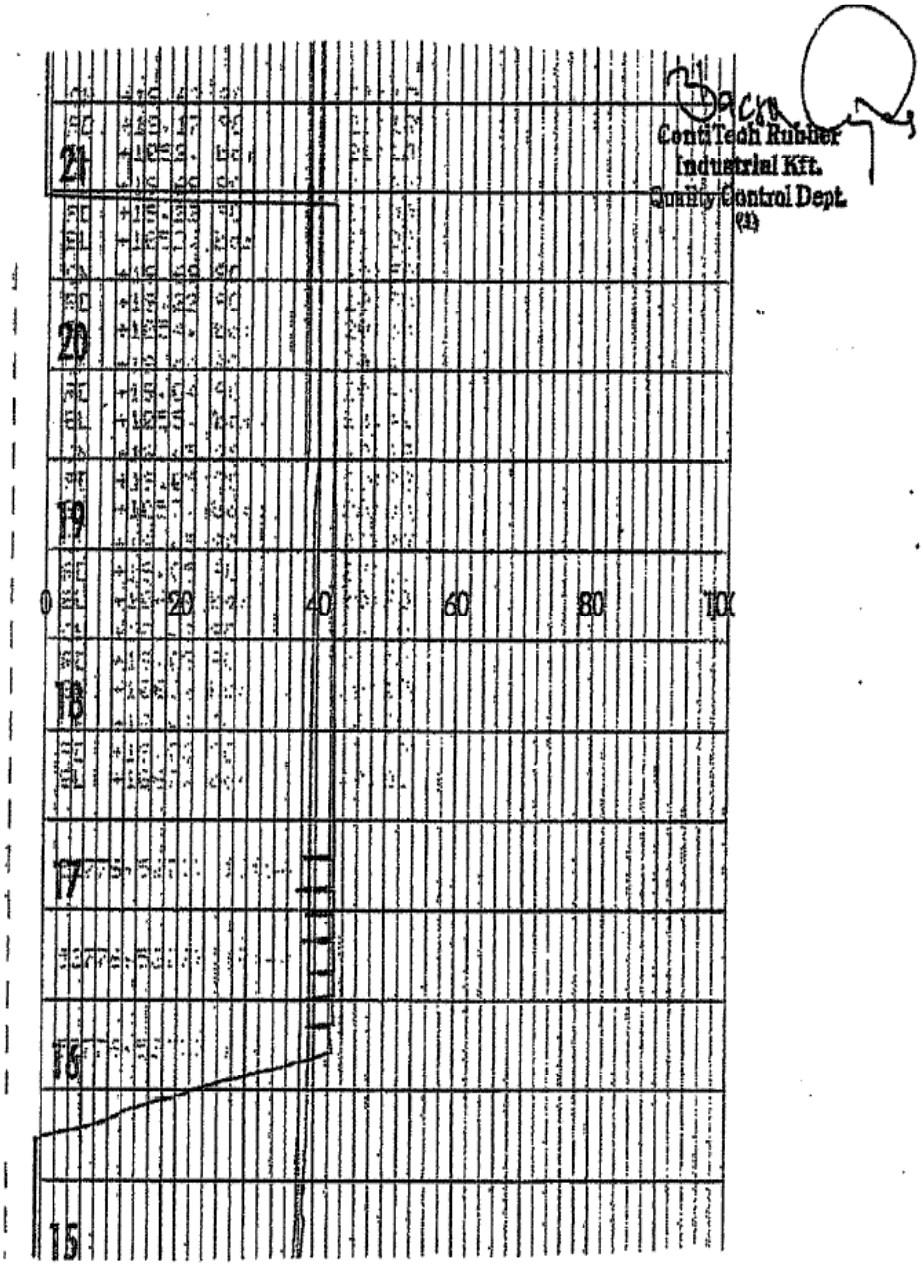
ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Date: 04. April. 2008

Position: Q.C. Manager

Coflex Hose Certification

Page: 1/1



Coflex Hose Certification

PHOENIX Beattie — Material Identification Certificate

PA No	006330	Client	HELMERICH & PAYNE INT'L DRILLING	Client Ref	370-369-001	Page	1

Part No	Description	Material Desc	Material Spec	Qty	WO No	Batch No	Test Cert No	Bin No	Drg No	Issue No
HP10CK3A-35-4F1	3" 10K 16C C&K HOSE x 35ft OAL			1	2491	52777/H884		WATER		
SECK3-HPF3	LIFTING & SAFETY EQUIPMENT TO			1	2440	002440		N/STK		
SC725-200CS	SAFETY CLAMP 200MM 7.25T	CARBON STEEL		1	2519	H665		22C		
SC725-132CS	SAFETY CLAMP 132MM 7.25T	CARBON STEEL		1	2242	H139		22		

We hereby certify that these goods have been inspected by our Quality Management System, and to the best of our knowledge are found to conform to relevant industry standards within the requirements of the purchase order as issued to Phoenix Beattie Corporation.

05/03/08.

Coflex Hose Certification

Form No 100/12

PHOENIX Beattie

Phoenix Beattie Corp
11535 Brittmoore Park Drive
Houston, TX 77041
Tel: (832) 327-0141
Fax: (832) 327-0148
E-mail mail@phoenixbeattie.com
www.phoenixbeattie.com

Delivery Note

Customer Order Number	370-369-001	Delivery Note Number	003078	Page	1

Customer / Invoice Address
HELMERICH & PAYNE INT'L DRILLING CO
1437 SOUTH BOULDER
TULSA, OK
74119

Delivery / Address
HELMERICH & PAYNE IDC
ATTN: JOE STEPHENSON - RIG 370
13609 INDUSTRIAL ROAD
HOUSTON, TX
77015

Customer Acc No	Phoenix Beattie Contract Manager	Phoenix Beattie Reference	Date
H01	JJL	006330	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
1	HP10CK3A-35-4F1 3" 10K 16C C&K HOSE x 35ft OAL CW 4.1/16" API SPEC FLANGE E/ End 1: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange End 2: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange c/w BX155 Standard ring groove at each end Suitable for H2S Service Working pressure: 10,000psi Test pressure: 15,000psi Standard: API 16C Full specification Armor Guarding: Included Fire Rating: Not Included Temperature rating: -20 Deg C to +100 Deg C	1	1	0
2	SECK3-HPF3 LIFTING & SAFETY EQUIPMENT TO SUIT HP10CK3-35-F1 2 x 160mm ID Safety Clamps 2 x 244mm ID Lifting Collars & element C's 2 x 7ft Stainless Steel wire rope 3/4" OD 4 x 7.75t Shackles	1	1	0
3	SC725-200CS SAFETY CLAMP 200MM 7.25T C/S GALVANISED	1	1	0

Continued...

Coflex Hose Certification

Continental CONTITECH

Fluid Technology

Quality Document

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE				CERT. N°: 746
PURCHASER: Phoenix Beattie Co.				P.O. N°: 002491
CONTITECH ORDER N°: 412638		HOSE TYPE: 3" ID		Choke and Kill Hose
HOSE SERIAL N°: 52777		NOMINAL / ACTUAL LENGTH:		10,67 m
W.P. 68,96 MPa	10000 psi	T.P. 103,4 MPa	15000 psi	Duration: 60 ~ min.

Pressure test with water at ambient temperature

See attachment. (1 page)

↑ 10 mm = 10 Min.

→ 10 mm = 25 MPa

COUPLINGS

Type	Serial N°	Quality	Heat N°
3" coupling with	917 913	AISI 4130	T7998A
4 1/16" Flange end		AISI 4130	26984

INFOCHIP INSTALLED

API Spec 16 C
Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

Date:	Inspector	Quality Control
04. April. 2008		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

Coflex Hose Certification

Form No 100/12

PHOENIX Beattie

Phoenix Beattie Corp
11535 Brittmoore Park Drive
Houston, TX 77041
Tel: (832) 327-0141
Fax: (832) 327-0148
E-mail mail@phoenixbeattie.com
www.phoenixbeattie.com

Delivery Note

Customer Order Number	370-369-001	Delivery Note Number	003078	Page	2

Customer / Invoice Address	Delivery / Address
HELMERICH & PAYNE INT'L DRILLING CO 1437 SOUTH BOULDER TULSA, OK 74119	HELMERICH & PAYNE IDC ATTN: JOE STEPHENSON - RIG 370 13609 INDUSTRIAL ROAD HOUSTON, TX 77015

Customer Acc No	Phoenix Beattie Contract Manager	Phoenix Beattie Reference	Date
H01	JJL	006330	05/23/2008

Item No	Beattie Part Number / Description	Qty Ordered	Qty Sent	Qty To Follow
4	SC725-132CS SAFETY CLAMP 132MM 7.25T C/S GALVANIZED C/W BOLTS	1	1	0
5	00CERT-HYDRO HYDROSTATIC PRESSURE TEST CERTIFICATE	1	1	0
6	00CERT-LOAD LOAD TEST CERTIFICATES	1	1	0
7	00FREIGHT INBOUND / OUTBOUND FREIGHT PRE-PAY & ADD TO FINAL INVOICE NOTE: MATERIAL MUST BE ACCOMPANIED BY PAPERWORK INCLUDING THE PURCHASE ORDER, RIG NUMBER TO ENSURE PROPER PAYMENT	1	1	0

Phoenix Beattie Inspection Signature :

Received In Good Condition : Signature

Print Name

Date

All goods remain the property of Phoenix Beattie until paid for in full. Any damage or shortage on this delivery must be advised within 5 days. Returns may be subject to a handling charge.

OXY USA Inc
APD ATTACHMENT: SPUDDER RIG DATA

OPERATOR NAME / NUMBER: OXY USA Inc

1. SUMMARY OF REQUEST:

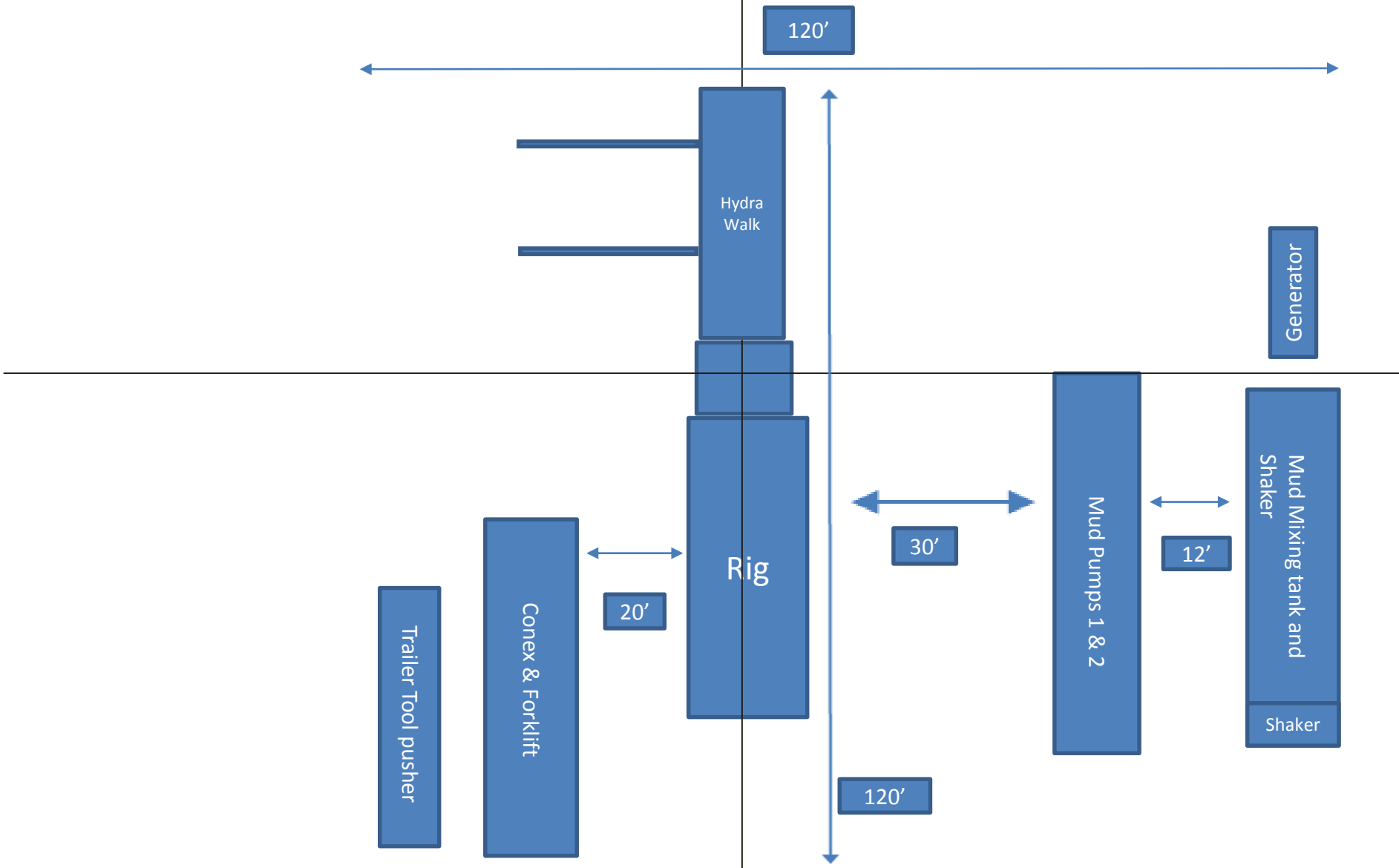
Oxy USA respectfully requests approval for the following operations for the surface hole in the drill plan:

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

2. Description of Operations

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

Spudder Rig Layout



Tenaris

TenarisHydril Wedge 425®

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

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

Pipe Body Data

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

Connection Data

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

Notes

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

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

Tenaris

TenarisHydril Wedge 441®

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

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

Pipe Body Data

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

Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	5.852 in.	**Tension Efficiency**	81.50 %	**Minimum**	15,000 ft-lb
Coupling Length	8.714 in.	**Joint Yield Strength**	522 x1000 lb	**Optimum**	16,000 ft-lb
Connection ID	4.778 in.	**Internal Pressure Capacity**	12,640 psi	**Maximum**	19,200 ft-lb
Make-up Loss	3.780 in.	**Compression Efficiency**	81.50 %		
Threads per inch	3.40	**Compression Strength**	522 x1000 lb	**Operation Limit Torques**	
Connection OD Option	Regular	**Max. Allowable Bending**	71 °/100 ft	**Operating Torque**	32,000 ft-lb
		External Pressure Capacity	11,100 psi	**Yield Torque**	38,000 ft-lb
				Buck-On	
				Minimum	19,200 ft-lb
				Maximum	20,700 ft-lb

Notes

This connection is fully interchangeable with:
Wedge 441® - 5.5 in. - 0.304 in.
Connections with Dopeless® Technology are fully compatible with the same connection in its Standard version

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

TenarisHydril

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

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

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

Pipe Body Data

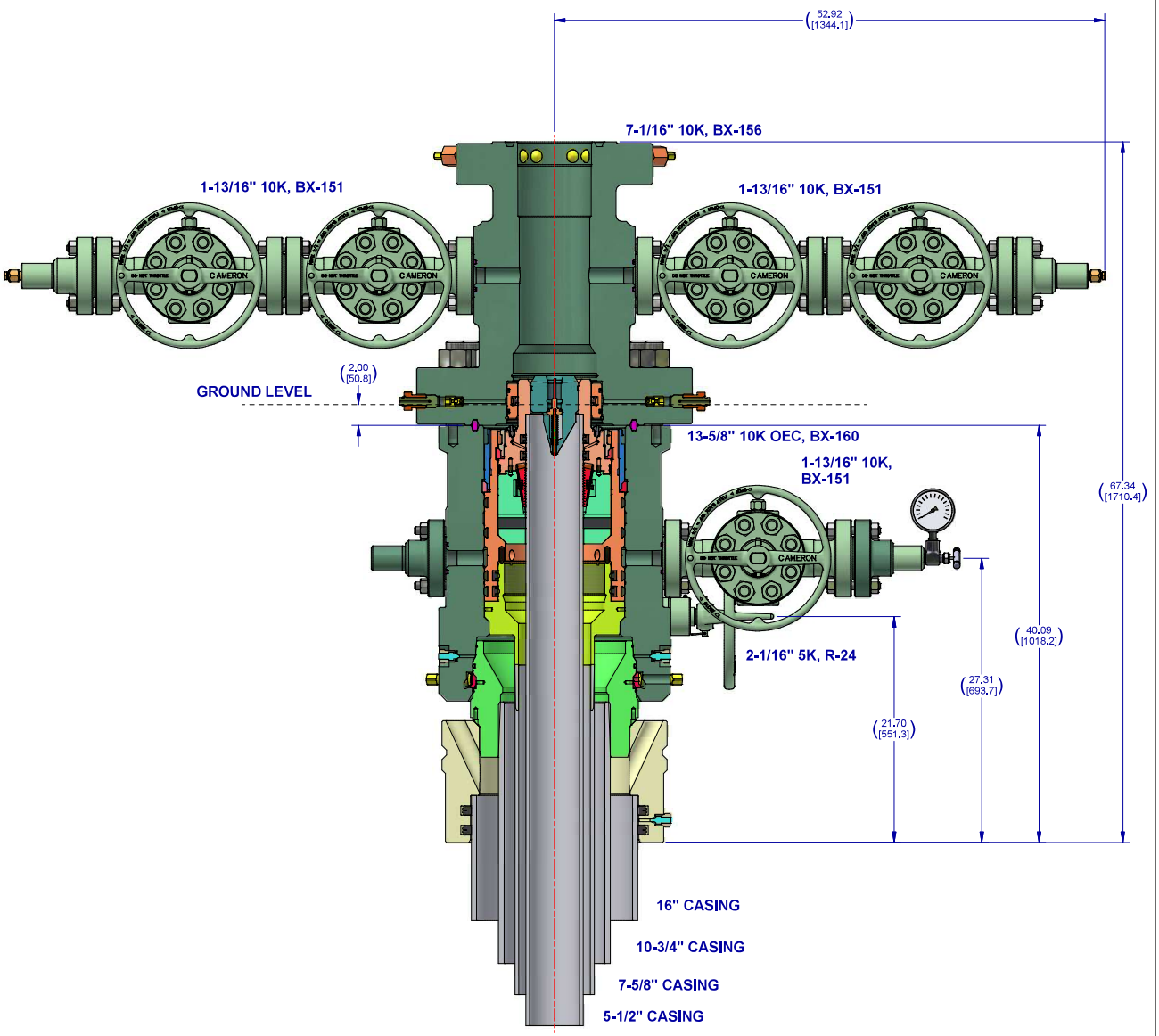
Geometry				Performance	
Nominal OD	5.500 in.	**Nominal ID**	4.778 in.	**Body Yield Strength**	641 x 1000 lbs
Nominal Weight	20.00 lbs/ft	**Wall Thickness**	0.361 in.	**Internal Yield**	12640 psi
Standard Drift Diameter	4.653 in.	**Plain End Weight**	19.83 lbs/ft	**SMYS**	110000 psi
Special Drift Diameter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

Connection Data

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

Notes

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



Notes:

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

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

CONFIDENTIAL

SURFACE TREATMENT	DO NOT SCALE		CAMERON A Schlumberger Company	SURFACE SYSTEMS
	DRAWN BY: D. GOTTUNG	DATE 2 Dec 21		
MATERIAL & HEAT TREAT	CHECKED 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"	
	APPROVED BY: D. GOTTUNG	DATE 2 Dec 21		
ESTIMATED WEIGHT:	6515,617 LBS [2955,434 KG]	INITIAL USE B/M:	SHEET 4 OF 4	SD-053434-94-05 REV: 01

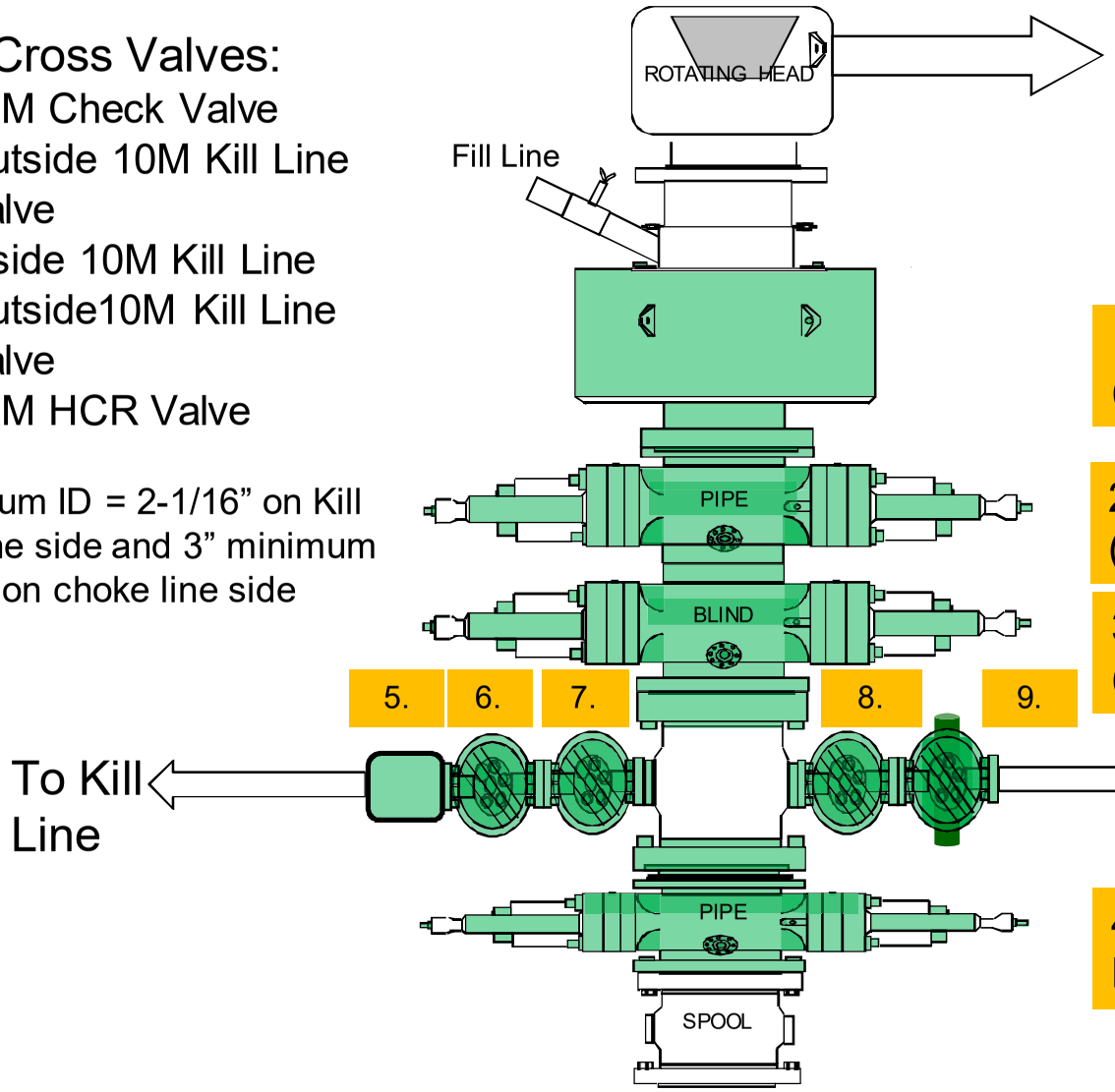
INVENTOR - D

5/10M BOP Stack

Mud Cross Valves:

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

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



1. 5,000 psi Annular (13-5/8” ID)

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

3. 10,000 psi Blind Ram (13-5/8” ID)

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 215997
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	NSL required	6/14/2023