

Well Name: CORRAL BLUFF 11_14 FEDERAL COM	Well Location: T25S / R29E / SEC 11 / NENE /	County or Parish/State:
Well Number: 37H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM15303	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001548025	Well Status: Approved Application for Permit to Drill	Operator: OXY USA INCORPORATED

Notice of Intent

Sundry ID: 2713589

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 02/01/2023	Time Sundry Submitted: 11:12
Date proposed operation will begin: 05/01/2023	

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

NOI Attachments

Procedure Description

- IP8632WEL03NM_C102_CORRAL_BLUFF_11_14_FED_COM_37H_FLAT_20230201111155.pdf
- CorralBluff11_14FedCom37H_TNSWedge461_5.500in_20.00__P110CY_20230201111154.pdf
- CorralBluff11_14FedCom37H_TNSWedge441_5.500in_20.00__P110CY_20230201111153.pdf
- CorralBluff11_14FedCom37H_H2S2_20230201111143.pdf
- CorralBluff11_14FedCom37H_FlexHoseCert_20230201111145.pdf
- CorralBluff11_14FedCom37H_DrillPlan_20230201111143.pdf
- CorralBluff11_14FedCom37H_SpudRigData_20230201111144.pdf
- CorralBluff11_14FedCom37H_H2SEmerContact_20230201111143.pdf
- CorralBluff11_14FedCom37H_TNSWedge425_5.500in_20.00__P110CY_20230201111143.pdf
- CorralBluff11_14FedCom37H_BOP_20230201111132.pdf

Well Name: CORRAL BLUFF 11_14 FEDERAL COM	Well Location: T25S / R29E / SEC 11 / NENE /	County or Parish/State:
Well Number: 37H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM15303	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001548025	Well Status: Approved Application for Permit to Drill	Operator: OXY USA INCORPORATED

CorralBluff11_14FedCom37H_13inADAPT_10.75in_7.625in_10x10_20230201111132.pdf

CorralBluff11_14FedCom37H_DirectPlan_20230201111132.pdf

CorralBluff11_14FedCom37H_DirectPlot_20230201111132.pdf

CorralBluff11_14FedCom37H_CsgCriteria_20230201111132.pdf

CorralBluff11_14FedCom37H_ChkManifolds_20230201111132.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 11:12 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	

☒ AMENDED REPORT

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PRD NM DIRECTIONAL PLANS (NAD 1983)

Corral Bluff 11_14

Corral Bluff 11_14 Fed Com 37H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

06 December, 2022

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Corral Bluff 11_14 Fed Com 37H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3096.30ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3096.30ft
Site:	Corral Bluff 11_14	North Reference:	Grid
Well:	Corral Bluff 11_14 Fed Com 37H	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
From:	Map	Easting:	657,232.81 usft
Position Uncertainty:	1.00 ft	Slot Radius:	13.200 in
		Latitude:	32.152848
		Longitude:	-103.958842

Well	Corral Bluff 11_14 Fed Com 37H		
Well Position	+N/-S	0.00 ft	Northing: 419,147.93 usf
	+E/-W	0.00 ft	Easting: 660,691.64 usf
Position Uncertainty	1.00 ft	Wellhead Elevation:	ft
Grid Convergence:	0.21 °	Ground Level:	3,069.80 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	11/18/2019	6.80	59.80	47,826.70000000

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	182.49

Plan Survey Tool Program	Date	12/6/2022		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,751.61	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	
6,995.00	0.00	0.00	6,995.00	0.00	0.00	0.00	0.00	0.00	0.00	
7,994.89	10.00	273.86	7,989.82	5.85	-86.83	1.00	1.00	0.00	273.86	
9,865.19	10.00	273.86	9,831.72	27.70	-410.83	0.00	0.00	0.00	0.00	
10,772.61	90.02	179.71	10,403.10	-545.94	-508.40	10.00	8.82	-10.38	-94.08	
20,751.61	90.02	179.71	10,399.30	-10,524.81	-457.24	0.00	0.00	0.00	0.00	PBHL (Corral Bluff

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Planning Report

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Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3096.30ft
Site:	Corral Bluff 11_14	North Reference:	Grid
Well:	Corral Bluff 11_14 Fed Com 37H	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

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Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3096.30ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3096.30ft
Site:	Corral Bluff 11_14	North Reference:	Grid
Well:	Corral Bluff 11_14 Fed Com 37H	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
6,995.00	0.00	0.00	6,995.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.05	273.86	7,000.00	0.00	0.00	0.00	1.00	1.00	0.00
7,100.00	1.05	273.86	7,099.99	0.06	-0.96	-0.02	1.00	1.00	0.00
7,200.00	2.05	273.86	7,199.96	0.25	-3.66	-0.09	1.00	1.00	0.00
7,300.00	3.05	273.86	7,299.86	0.55	-8.10	-0.19	1.00	1.00	0.00
7,400.00	4.05	273.86	7,399.66	0.96	-14.28	-0.34	1.00	1.00	0.00
7,500.00	5.05	273.86	7,499.35	1.50	-22.19	-0.53	1.00	1.00	0.00
7,600.00	6.05	273.86	7,598.88	2.15	-31.84	-0.76	1.00	1.00	0.00
7,700.00	7.05	273.86	7,698.22	2.91	-43.22	-1.04	1.00	1.00	0.00
7,800.00	8.05	273.86	7,797.35	3.80	-56.33	-1.35	1.00	1.00	0.00
7,900.00	9.05	273.86	7,896.24	4.80	-71.16	-1.70	1.00	1.00	0.00
7,994.89	10.00	273.86	7,989.82	5.85	-86.83	-2.08	1.00	1.00	0.00
8,000.00	10.00	273.86	7,994.86	5.91	-87.71	-2.10	0.00	0.00	0.00
8,100.00	10.00	273.86	8,093.34	7.08	-105.04	-2.52	0.00	0.00	0.00
8,200.00	10.00	273.86	8,191.82	8.25	-122.36	-2.93	0.00	0.00	0.00
8,300.00	10.00	273.86	8,290.30	9.42	-139.68	-3.35	0.00	0.00	0.00
8,400.00	10.00	273.86	8,388.78	10.59	-157.01	-3.76	0.00	0.00	0.00
8,500.00	10.00	273.86	8,487.26	11.75	-174.33	-4.18	0.00	0.00	0.00
8,600.00	10.00	273.86	8,585.74	12.92	-191.66	-4.59	0.00	0.00	0.00
8,700.00	10.00	273.86	8,684.22	14.09	-208.98	-5.01	0.00	0.00	0.00
8,800.00	10.00	273.86	8,782.70	15.26	-226.30	-5.42	0.00	0.00	0.00
8,900.00	10.00	273.86	8,881.19	16.42	-243.63	-5.84	0.00	0.00	0.00
9,000.00	10.00	273.86	8,979.67	17.59	-260.95	-6.25	0.00	0.00	0.00
9,100.00	10.00	273.86	9,078.15	18.76	-278.27	-6.67	0.00	0.00	0.00
9,200.00	10.00	273.86	9,176.63	19.93	-295.60	-7.08	0.00	0.00	0.00
9,300.00	10.00	273.86	9,275.11	21.10	-312.92	-7.49	0.00	0.00	0.00
9,400.00	10.00	273.86	9,373.59	22.26	-330.24	-7.91	0.00	0.00	0.00
9,500.00	10.00	273.86	9,472.07	23.43	-347.57	-8.32	0.00	0.00	0.00
9,600.00	10.00	273.86	9,570.55	24.60	-364.89	-8.74	0.00	0.00	0.00
9,700.00	10.00	273.86	9,669.03	25.77	-382.21	-9.15	0.00	0.00	0.00
9,800.00	10.00	273.86	9,767.52	26.94	-399.54	-9.57	0.00	0.00	0.00
9,865.19	10.00	273.86	9,831.72	27.70	-410.83	-9.84	0.00	0.00	0.00
9,900.00	10.34	254.15	9,865.99	27.05	-416.85	-8.93	10.00	0.99	-56.62
10,000.00	16.15	217.11	9,963.45	13.47	-433.92	5.37	10.00	5.80	-37.03
10,100.00	24.74	202.14	10,057.13	-17.08	-450.24	36.60	10.00	8.60	-14.97
10,200.00	34.08	194.77	10,144.17	-63.67	-465.31	83.81	10.00	9.34	-7.37
10,300.00	43.69	190.32	10,221.93	-124.90	-478.68	145.56	10.00	9.61	-4.46
10,400.00	53.42	187.21	10,288.05	-198.90	-489.93	219.98	10.00	9.73	-3.11
10,500.00	63.21	184.80	10,340.53	-283.42	-498.73	304.80	10.00	9.79	-2.40
10,600.00	73.03	182.79	10,377.75	-375.90	-504.81	397.46	10.00	9.82	-2.02

OXY

Planning Report

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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)
10,700.00	82.87	180.97	10,398.60	-473.52	-507.98	495.12	10.00	9.84	-1.82
10,772.61	90.02	179.71	10,403.10	-545.94	-508.40	567.49	10.00	9.85	-1.74
10,800.00	90.02	179.71	10,403.09	-573.33	-508.26	594.85	0.00	0.00	0.00
10,900.00	90.02	179.71	10,403.05	-673.33	-507.75	694.73	0.00	0.00	0.00
11,000.00	90.02	179.71	10,403.01	-773.33	-507.24	794.62	0.00	0.00	0.00
11,100.00	90.02	179.71	10,402.98	-873.33	-506.73	894.50	0.00	0.00	0.00
11,200.00	90.02	179.71	10,402.94	-973.33	-506.21	994.38	0.00	0.00	0.00
11,300.00	90.02	179.71	10,402.90	-1,073.32	-505.70	1,094.26	0.00	0.00	0.00
11,400.00	90.02	179.71	10,402.86	-1,173.32	-505.19	1,194.14	0.00	0.00	0.00
11,500.00	90.02	179.71	10,402.82	-1,273.32	-504.67	1,294.03	0.00	0.00	0.00
11,600.00	90.02	179.71	10,402.79	-1,373.32	-504.16	1,393.91	0.00	0.00	0.00
11,700.00	90.02	179.71	10,402.75	-1,473.32	-503.65	1,493.79	0.00	0.00	0.00
11,800.00	90.02	179.71	10,402.71	-1,573.32	-503.14	1,593.67	0.00	0.00	0.00
11,900.00	90.02	179.71	10,402.67	-1,673.32	-502.62	1,693.55	0.00	0.00	0.00
12,000.00	90.02	179.71	10,402.63	-1,773.32	-502.11	1,793.44	0.00	0.00	0.00
12,100.00	90.02	179.71	10,402.60	-1,873.31	-501.60	1,893.32	0.00	0.00	0.00
12,200.00	90.02	179.71	10,402.56	-1,973.31	-501.09	1,993.20	0.00	0.00	0.00
12,300.00	90.02	179.71	10,402.52	-2,073.31	-500.57	2,093.08	0.00	0.00	0.00
12,400.00	90.02	179.71	10,402.48	-2,173.31	-500.06	2,192.97	0.00	0.00	0.00
12,500.00	90.02	179.71	10,402.44	-2,273.31	-499.55	2,292.85	0.00	0.00	0.00
12,600.00	90.02	179.71	10,402.40	-2,373.31	-499.03	2,392.73	0.00	0.00	0.00
12,700.00	90.02	179.71	10,402.37	-2,473.31	-498.52	2,492.61	0.00	0.00	0.00
12,800.00	90.02	179.71	10,402.33	-2,573.30	-498.01	2,592.49	0.00	0.00	0.00
12,900.00	90.02	179.71	10,402.29	-2,673.30	-497.50	2,692.38	0.00	0.00	0.00
13,000.00	90.02	179.71	10,402.25	-2,773.30	-496.98	2,792.26	0.00	0.00	0.00
13,100.00	90.02	179.71	10,402.21	-2,873.30	-496.47	2,892.14	0.00	0.00	0.00
13,200.00	90.02	179.71	10,402.18	-2,973.30	-495.96	2,992.02	0.00	0.00	0.00
13,300.00	90.02	179.71	10,402.14	-3,073.30	-495.44	3,091.91	0.00	0.00	0.00
13,400.00	90.02	179.71	10,402.10	-3,173.30	-494.93	3,191.79	0.00	0.00	0.00
13,500.00	90.02	179.71	10,402.06	-3,273.30	-494.42	3,291.67	0.00	0.00	0.00
13,600.00	90.02	179.71	10,402.02	-3,373.29	-493.91	3,391.55	0.00	0.00	0.00
13,700.00	90.02	179.71	10,401.99	-3,473.29	-493.39	3,491.43	0.00	0.00	0.00
13,800.00	90.02	179.71	10,401.95	-3,573.29	-492.88	3,591.32	0.00	0.00	0.00
13,900.00	90.02	179.71	10,401.91	-3,673.29	-492.37	3,691.20	0.00	0.00	0.00
14,000.00	90.02	179.71	10,401.87	-3,773.29	-491.86	3,791.08	0.00	0.00	0.00
14,100.00	90.02	179.71	10,401.83	-3,873.29	-491.34	3,890.96	0.00	0.00	0.00
14,200.00	90.02	179.71	10,401.80	-3,973.29	-490.83	3,990.85	0.00	0.00	0.00
14,300.00	90.02	179.71	10,401.76	-4,073.28	-490.32	4,090.73	0.00	0.00	0.00
14,400.00	90.02	179.71	10,401.72	-4,173.28	-489.80	4,190.61	0.00	0.00	0.00
14,500.00	90.02	179.71	10,401.68	-4,273.28	-489.29	4,290.49	0.00	0.00	0.00
14,600.00	90.02	179.71	10,401.64	-4,373.28	-488.78	4,390.37	0.00	0.00	0.00
14,700.00	90.02	179.71	10,401.61	-4,473.28	-488.27	4,490.26	0.00	0.00	0.00
14,800.00	90.02	179.71	10,401.57	-4,573.28	-487.75	4,590.14	0.00	0.00	0.00
14,900.00	90.02	179.71	10,401.53	-4,673.28	-487.24	4,690.02	0.00	0.00	0.00
15,000.00	90.02	179.71	10,401.49	-4,773.28	-486.73	4,789.90	0.00	0.00	0.00
15,100.00	90.02	179.71	10,401.45	-4,873.27	-486.21	4,889.79	0.00	0.00	0.00
15,200.00	90.02	179.71	10,401.41	-4,973.27	-485.70	4,989.67	0.00	0.00	0.00
15,300.00	90.02	179.71	10,401.38	-5,073.27	-485.19	5,089.55	0.00	0.00	0.00
15,400.00	90.02	179.71	10,401.34	-5,173.27	-484.68	5,189.43	0.00	0.00	0.00
15,500.00	90.02	179.71	10,401.30	-5,273.27	-484.16	5,289.31	0.00	0.00	0.00
15,600.00	90.02	179.71	10,401.26	-5,373.27	-483.65	5,389.20	0.00	0.00	0.00
15,700.00	90.02	179.71	10,401.22	-5,473.27	-483.14	5,489.08	0.00	0.00	0.00
15,800.00	90.02	179.71	10,401.19	-5,573.27	-482.63	5,588.96	0.00	0.00	0.00
15,900.00	90.02	179.71	10,401.15	-5,673.26	-482.11	5,688.84	0.00	0.00	0.00
16,000.00	90.02	179.71	10,401.11	-5,773.26	-481.60	5,788.72	0.00	0.00	0.00

OXY Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Corral Bluff 11_14 Fed Com 37H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3096.30ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3096.30ft
Site:	Corral Bluff 11_14	North Reference:	Grid
Well:	Corral Bluff 11_14 Fed Com 37H	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	90.02	179.71	10,401.07	-5,873.26	-481.09	5,888.61	0.00	0.00	0.00
16,200.00	90.02	179.71	10,401.03	-5,973.26	-480.57	5,988.49	0.00	0.00	0.00
16,300.00	90.02	179.71	10,401.00	-6,073.26	-480.06	6,088.37	0.00	0.00	0.00
16,400.00	90.02	179.71	10,400.96	-6,173.26	-479.55	6,188.25	0.00	0.00	0.00
16,500.00	90.02	179.71	10,400.92	-6,273.26	-479.04	6,288.14	0.00	0.00	0.00
16,600.00	90.02	179.71	10,400.88	-6,373.25	-478.52	6,388.02	0.00	0.00	0.00
16,700.00	90.02	179.71	10,400.84	-6,473.25	-478.01	6,487.90	0.00	0.00	0.00
16,800.00	90.02	179.71	10,400.81	-6,573.25	-477.50	6,587.78	0.00	0.00	0.00
16,900.00	90.02	179.71	10,400.77	-6,673.25	-476.98	6,687.66	0.00	0.00	0.00
17,000.00	90.02	179.71	10,400.73	-6,773.25	-476.47	6,787.55	0.00	0.00	0.00
17,100.00	90.02	179.71	10,400.69	-6,873.25	-475.96	6,887.43	0.00	0.00	0.00
17,200.00	90.02	179.71	10,400.65	-6,973.25	-475.45	6,987.31	0.00	0.00	0.00
17,300.00	90.02	179.71	10,400.61	-7,073.25	-474.93	7,087.19	0.00	0.00	0.00
17,400.00	90.02	179.71	10,400.58	-7,173.24	-474.42	7,187.08	0.00	0.00	0.00
17,500.00	90.02	179.71	10,400.54	-7,273.24	-473.91	7,286.96	0.00	0.00	0.00
17,600.00	90.02	179.71	10,400.50	-7,373.24	-473.40	7,386.84	0.00	0.00	0.00
17,700.00	90.02	179.71	10,400.46	-7,473.24	-472.88	7,486.72	0.00	0.00	0.00
17,800.00	90.02	179.71	10,400.42	-7,573.24	-472.37	7,586.60	0.00	0.00	0.00
17,900.00	90.02	179.71	10,400.39	-7,673.24	-471.86	7,686.49	0.00	0.00	0.00
18,000.00	90.02	179.71	10,400.35	-7,773.24	-471.34	7,786.37	0.00	0.00	0.00
18,100.00	90.02	179.71	10,400.31	-7,873.23	-470.83	7,886.25	0.00	0.00	0.00
18,200.00	90.02	179.71	10,400.27	-7,973.23	-470.32	7,986.13	0.00	0.00	0.00
18,300.00	90.02	179.71	10,400.23	-8,073.23	-469.81	8,086.02	0.00	0.00	0.00
18,400.00	90.02	179.71	10,400.20	-8,173.23	-469.29	8,185.90	0.00	0.00	0.00
18,500.00	90.02	179.71	10,400.16	-8,273.23	-468.78	8,285.78	0.00	0.00	0.00
18,600.00	90.02	179.71	10,400.12	-8,373.23	-468.27	8,385.66	0.00	0.00	0.00
18,700.00	90.02	179.71	10,400.08	-8,473.23	-467.76	8,485.54	0.00	0.00	0.00
18,800.00	90.02	179.71	10,400.04	-8,573.23	-467.24	8,585.43	0.00	0.00	0.00
18,900.00	90.02	179.71	10,400.01	-8,673.22	-466.73	8,685.31	0.00	0.00	0.00
19,000.00	90.02	179.71	10,399.97	-8,773.22	-466.22	8,785.19	0.00	0.00	0.00
19,100.00	90.02	179.71	10,399.93	-8,873.22	-465.70	8,885.07	0.00	0.00	0.00
19,200.00	90.02	179.71	10,399.89	-8,973.22	-465.19	8,984.96	0.00	0.00	0.00
19,300.00	90.02	179.71	10,399.85	-9,073.22	-464.68	9,084.84	0.00	0.00	0.00
19,400.00	90.02	179.71	10,399.82	-9,173.22	-464.17	9,184.72	0.00	0.00	0.00
19,500.00	90.02	179.71	10,399.78	-9,273.22	-463.65	9,284.60	0.00	0.00	0.00
19,600.00	90.02	179.71	10,399.74	-9,373.22	-463.14	9,384.48	0.00	0.00	0.00
19,700.00	90.02	179.71	10,399.70	-9,473.21	-462.63	9,484.37	0.00	0.00	0.00
19,800.00	90.02	179.71	10,399.66	-9,573.21	-462.11	9,584.25	0.00	0.00	0.00
19,900.00	90.02	179.71	10,399.62	-9,673.21	-461.60	9,684.13	0.00	0.00	0.00
20,000.00	90.02	179.71	10,399.59	-9,773.21	-461.09	9,784.01	0.00	0.00	0.00
20,100.00	90.02	179.71	10,399.55	-9,873.21	-460.58	9,883.89	0.00	0.00	0.00
20,200.00	90.02	179.71	10,399.51	-9,973.21	-460.06	9,983.78	0.00	0.00	0.00
20,300.00	90.02	179.71	10,399.47	-10,073.21	-459.55	10,083.66	0.00	0.00	0.00
20,400.00	90.02	179.71	10,399.43	-10,173.20	-459.04	10,183.54	0.00	0.00	0.00
20,500.00	90.02	179.71	10,399.40	-10,273.20	-458.53	10,283.42	0.00	0.00	0.00
20,600.00	90.02	179.71	10,399.36	-10,373.20	-458.01	10,383.31	0.00	0.00	0.00
20,700.00	90.02	179.71	10,399.32	-10,473.20	-457.50	10,483.19	0.00	0.00	0.00
20,751.61	90.02	179.71	10,399.30	-10,524.81	-457.24	10,534.73	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Corral Bluff 11_14 Fed Com 37H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3096.30ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3096.30ft
Site:	Corral Bluff 11_14	North Reference:	Grid
Well:	Corral Bluff 11_14 Fed Com 37H	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	0.00	10,399.30	-10,524.81	-457.24	408,623.93	660,234.44	32.122804	-103.949269
FTP (Corral Bluff - plan misses target center by 203.20ft at 10347.81ft MD (10255.13 TVD, -158.82 N, -484.34 E) - Point	0.00	0.00	10,403.30	-22.36	-511.09	419,125.57	660,180.59	32.151672	-103.949322

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
348.30	348.30	RUSTLER				
743.30	743.30	SALADO				
1,699.30	1,699.30	CASTILE				
3,248.30	3,248.30	BELL CANYON				
3,254.30	3,254.30	DELAWARE				
4,137.30	4,137.30	CHERRY CANYON				
5,536.30	5,536.30	BRUSHY CANYON				
7,027.30	7,027.30	BONE SPRING				
7,939.57	7,935.30	BONE SPRING 1ST				
8,806.70	8,789.30	BONE SPRING 2ND				
9,940.06	9,905.30	BONE SPRING 3RD				
10,288.18	10,213.30	WOLFCAMP				
10,542.54	10,358.30	WOLFCAMP A				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
6,995.00	6,995.00	0.00	0.00	Build 1°/100'	
7,994.89	7,989.82	5.85	-86.83	Hold 10° Tangent	
9,865.19	9,831.72	27.70	-410.83	KOP, Build & Turn 10°/100'	
10,772.61	10,403.10	-545.94	-508.40	Landing Point	
20,751.61	10,399.30	-10,524.81	-457.24	TD at 20751.61' MD	



Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Corral Bluff 11_14
 Well: Corral Bluff 11_14 Fed Com 37H
 Wellbore: Wellbore #1
 Design: Permitting Plan

PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

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 37H

+N/-S	+E/-W	Northing	3069.80 Easting	Latitude	Longitude
0.00	0.00	419147.93	660691.64	32.151728	-103.947670

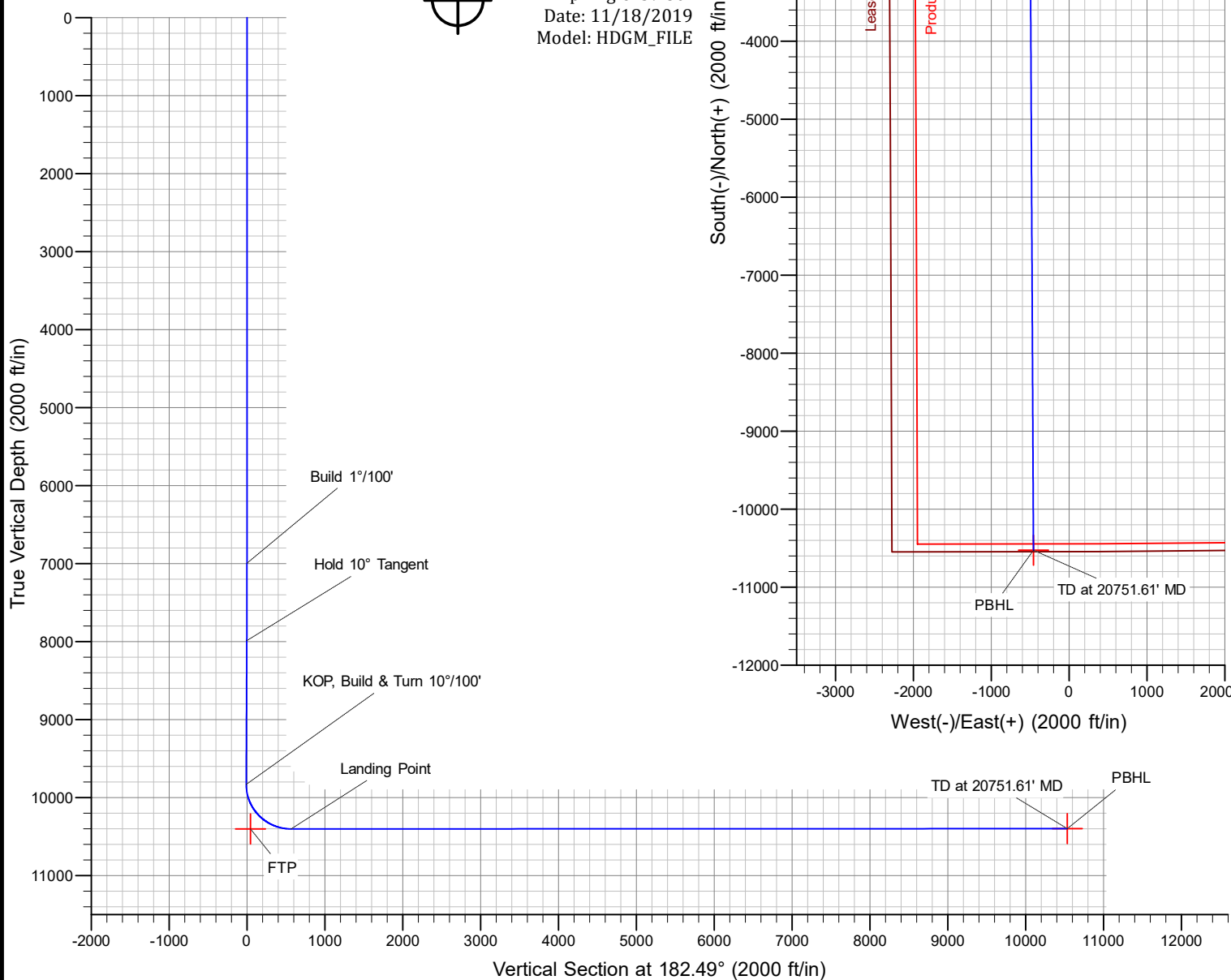
SECTION DETAILS

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	
6995.00	0.00	0.00	6995.00	0.00	0.00	0.00	0.00	0.00	Build 1°/100'
7994.89	10.00	273.86	7989.82	5.85	-86.83	1.00	273.86	-2.08	Hold 10° Tangent
9865.19	10.00	273.86	9831.72	27.70	-410.83	0.00	0.00	-9.84	KOP, Build & Turn 10°/100'
10772.61	90.02	179.71	10403.10	-545.94	-508.40	10.00	-94.08	567.49	Landing Point
20751.61	90.02	179.71	10399.30	-10524.81	-457.24	0.00	0.00	10534.73	TD at 20751.61' MD



Azimuths to Grid North
 True North: -0.21°
 Magnetic North: 6.59°

Magnetic Field
 Strength: 47826.7nT
 Dip Angle: 59.80°
 Date: 11/18/2019
 Model: HDGM_FILE



Oxy USA Inc. - Corral Bluff 11_14 Fed Com 37H

Drill Plan

1. Geologic Formations

TVD of Target (ft):	10403	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	20752	Deepest Expected Fresh Water (ft):	348

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	348	348	
Salado	743	743	Salt
Castile	1699	1699	Salt
Delaware	3254	3254	Oil/Gas/Brine
Bell Canyon	3248	3248	Oil/Gas/Brine
Cherry Canyon	4137	4137	Oil/Gas/Brine
Brushy Canyon	5536	5536	Losses
Bone Spring	7027	7027	Oil/Gas
Bone Spring 1st	7940	7935	Oil/Gas
Bone Spring 2nd	8807	8789	Oil/Gas
Bone Spring 3rd	9940	9905	Oil/Gas
Wolfcamp	10288	10213	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	683	0	683	10.75	45.5	J-55	BTC
Intermediate	9.875	0	9765	0	9732	7.625	26.4	L-80 HC	BTC
Production	6.75	0	20752	0	10403	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 3 rd 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 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	571	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	544	1.65	13.2	5%	5,786	Circulate	Class H+Accel., Disper., Salt
Int.	2	Intermediate 2S - Tail BH	894	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	867	1.38	13.2	25%	9,265	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 nipped 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 nipping 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	9732
		3M	Blind Ram	✓	250 psi / 3000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
6.75" Hole	13-5/8"	5M	Annular	✓	70% of working pressure	10403
		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	683	0	683	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	683	9765	683	9732	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	9765	20752	9732	10403	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
Yes	Mud log
No	PEX

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	6762 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	164°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 4 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: 1491 bbls

Attachments

☒ Directional Plan

☒ H2S Contingency Plan

☒ Flex III Attachments

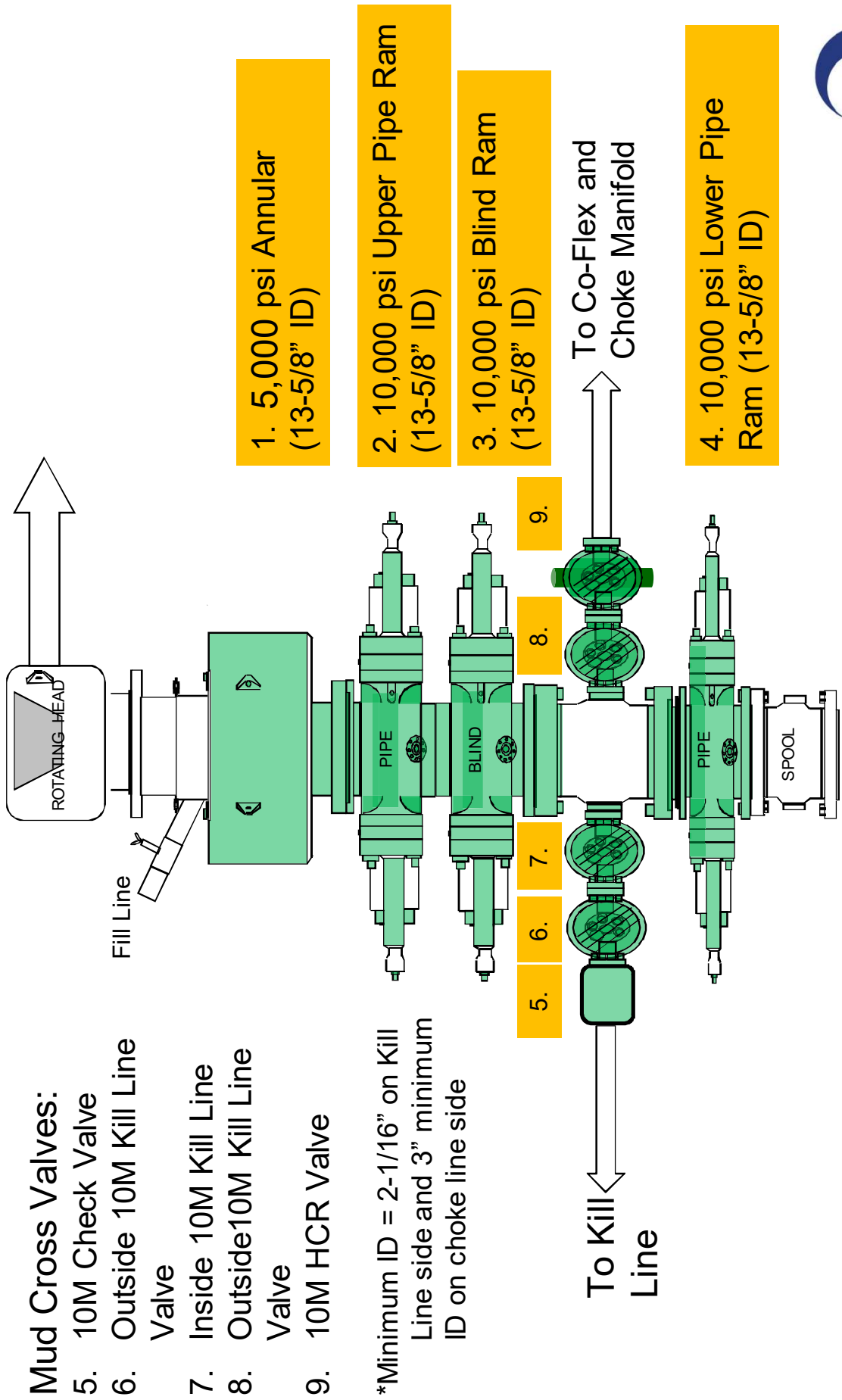
☒ Spudder Rig Attachment

☒ Premium Connection Specs

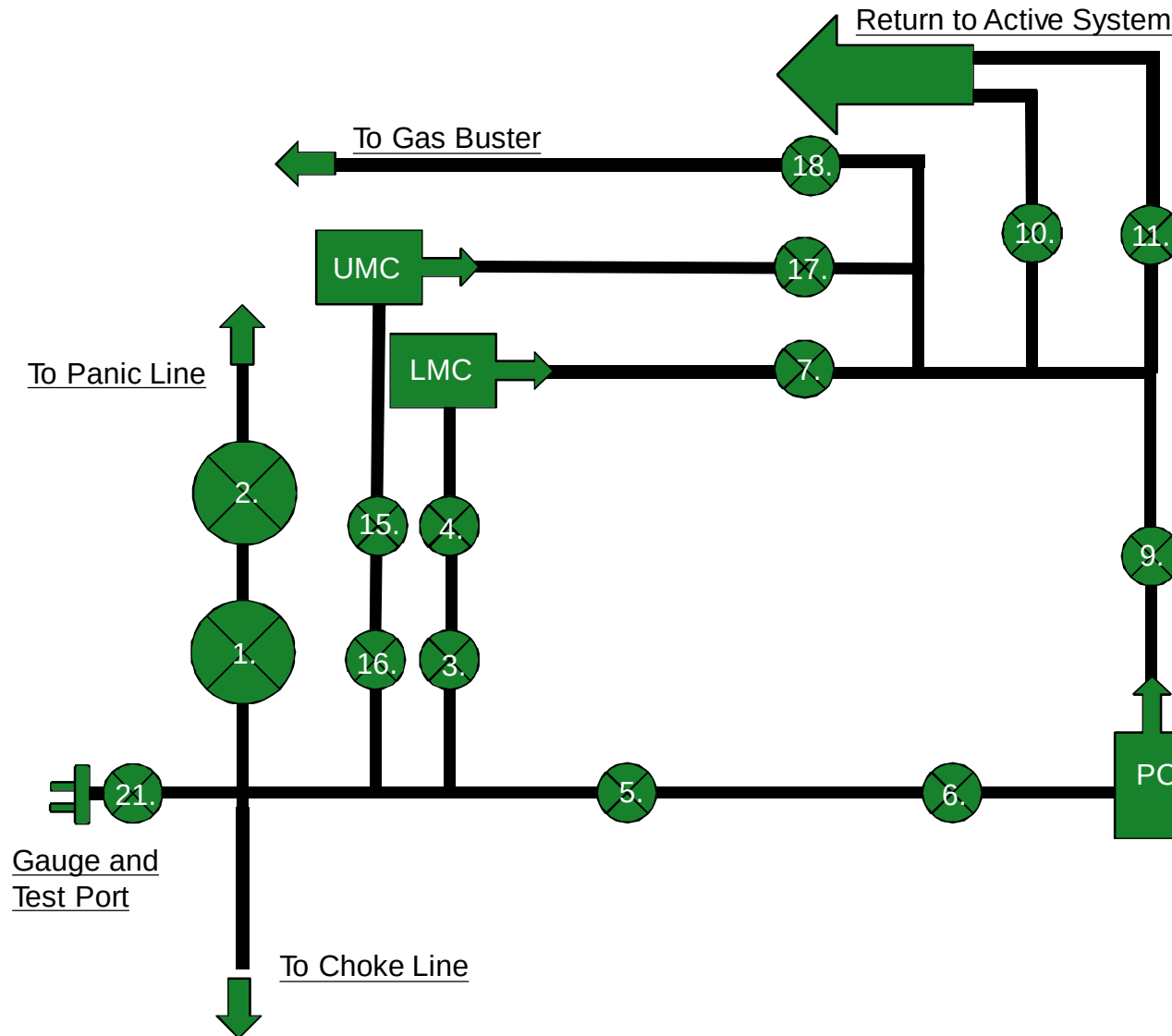
9. Company Personnel

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

5/10M BOP Stack



10M Choke Panel

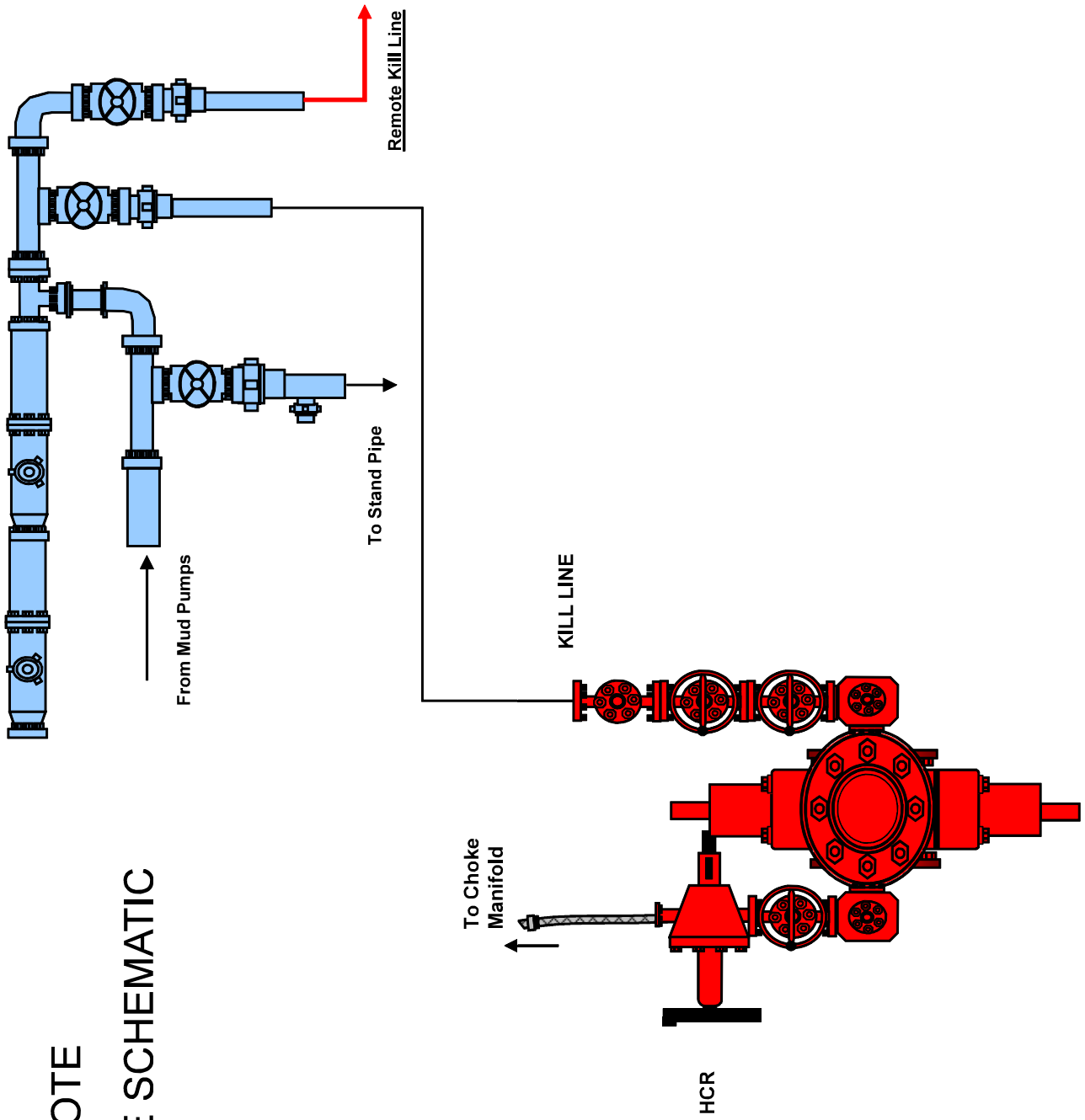


1. Choke Manifold Valve
2. Choke Manifold Valve
3. Choke Manifold Valve
4. Choke Manifold Valve
5. Choke Manifold Valve
6. Choke Manifold Valve
7. Choke Manifold Valve
8. PC – Power Choke
9. Choke Manifold Valve
10. Choke Manifold Valve
11. Choke Manifold Valve
12. LMC – Lower Manual Choke
13. UMC –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

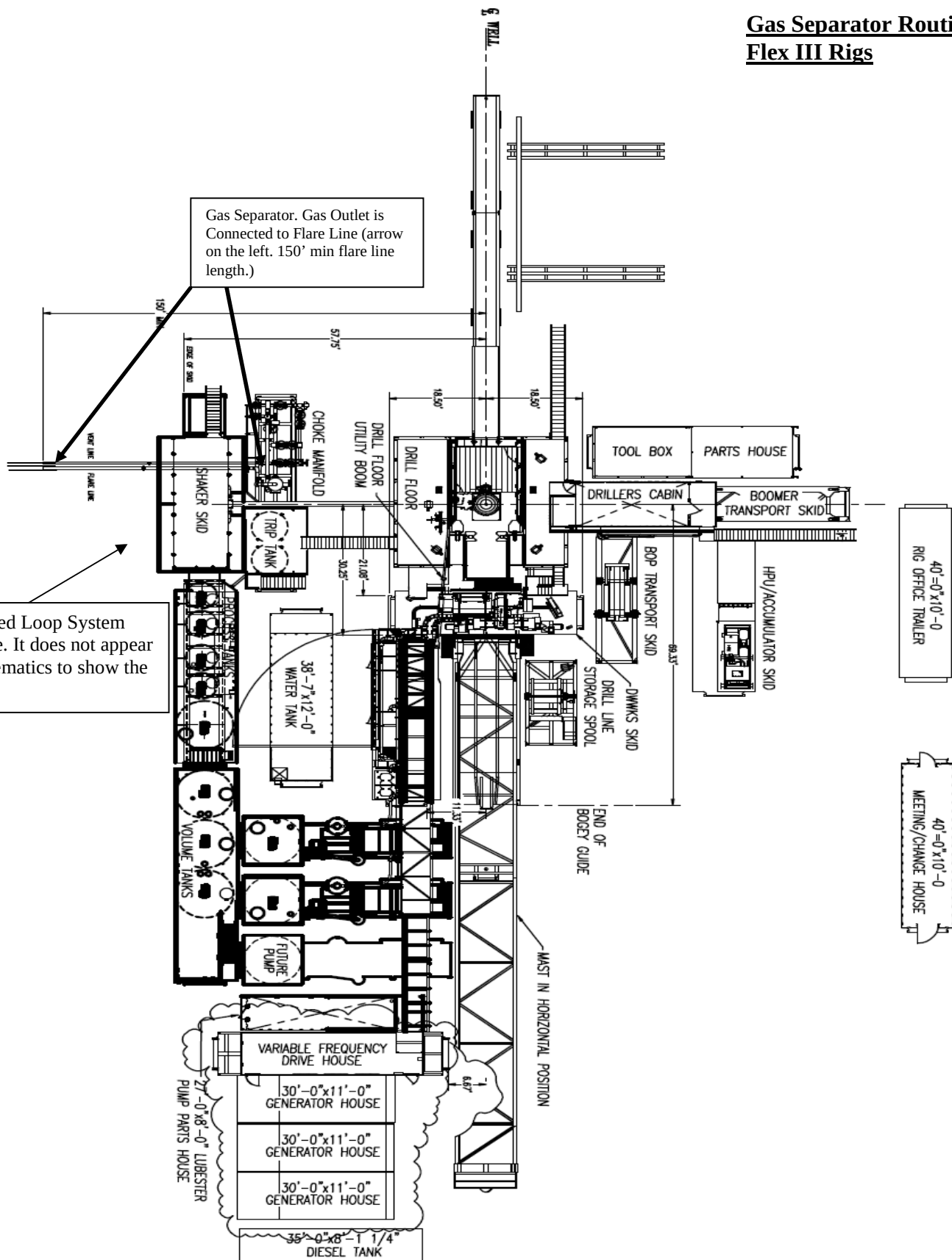
21. Vertical Choke Manifold Valve

***All Valves 3" minimum**

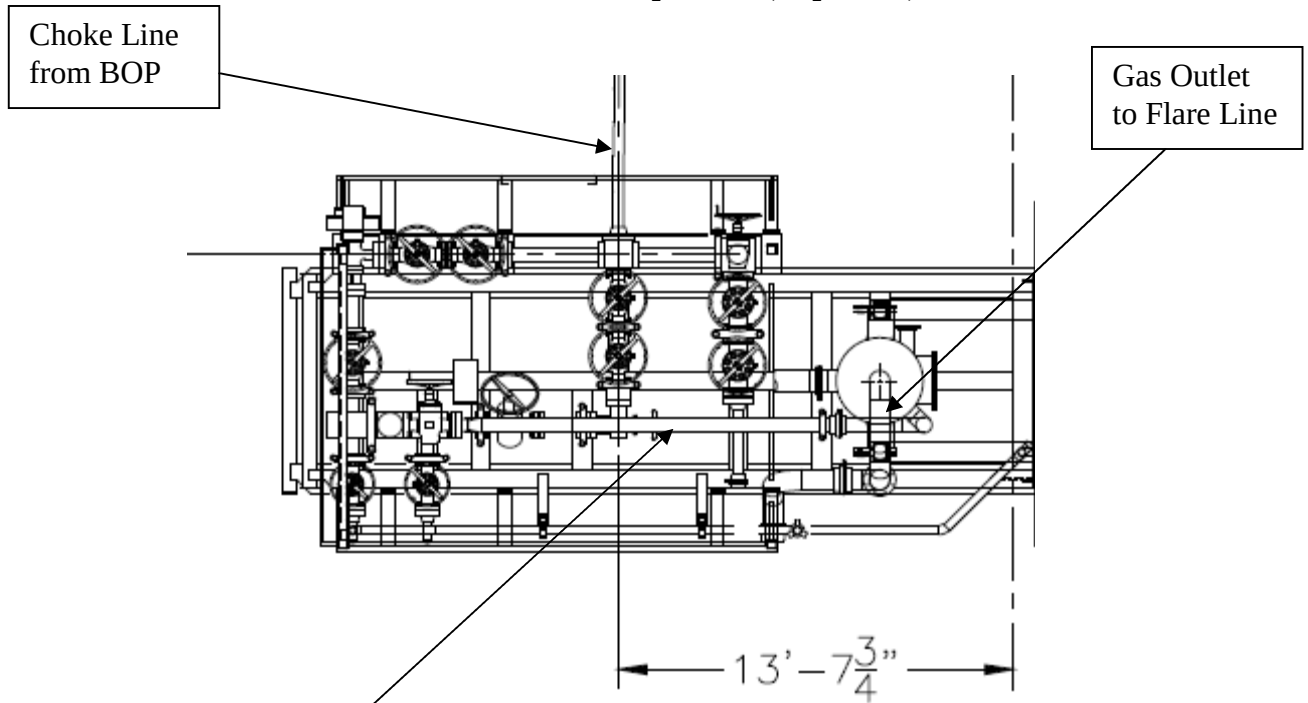
10M REMOTE KILL LINE SCHEMATIC



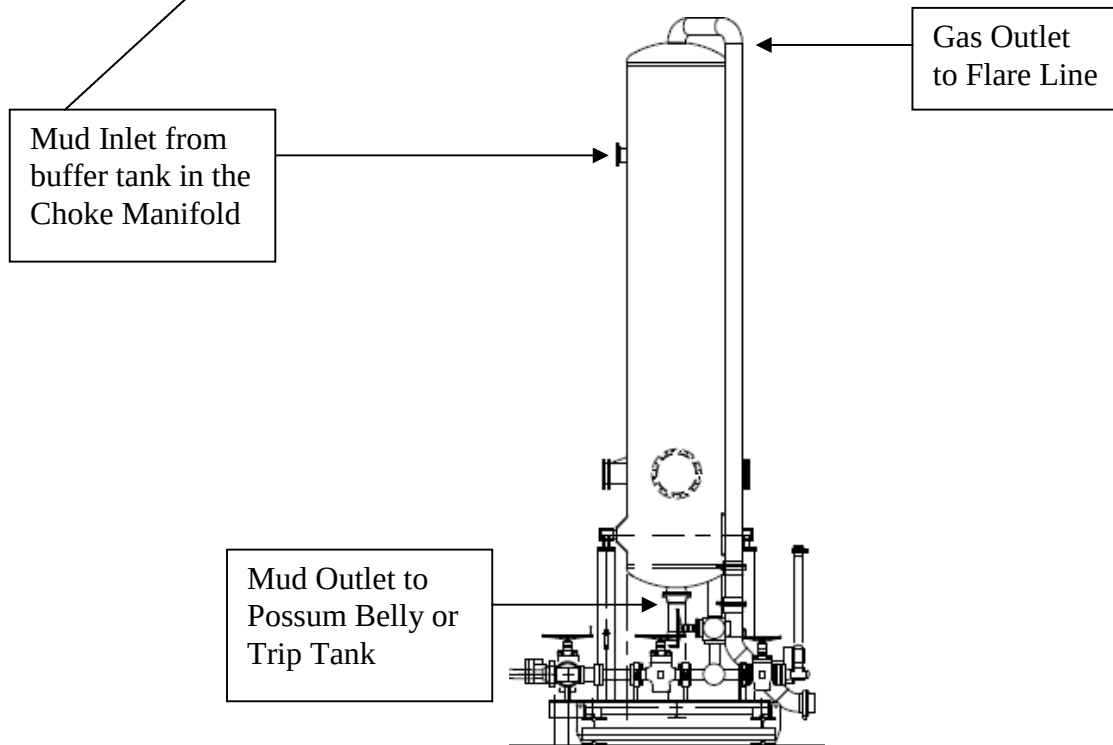
Gas Separator Routing Flex III Rigs



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 $0.02 \times \text{MD of the shoe}$ 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.



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 :

A handwritten signature in black ink, appearing to read "Jack Q. Manager".

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

Date: 04. April. 2008

Position: Q.C. Manager

Coflex Hose Certification

Page: 1/1

15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000
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Back
ContiTech Rubber
Industrial Kft.
Quality Control Dept.
(2)

Coflex Hose Certification

[illegible]

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.

05/23/08

Coflex Hose Certification

Form No 100/12

**Phoenix Beattie Corp**

11535 Brittonmoore 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...

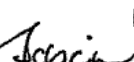
All goods remain the property of Phoenix Beattie until paid for in full. Any damage or shortage on this delivery must be advised within 5 days.
Returns may be subject to a handling charge.

Coflex Hose Certification



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 4 1/16" Flange end	917	913	AISI 4130	T7998A	
			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: 04. April. 2008	Inspector		Quality Control   ContTech Rubber Industrial Kft. Quality Control Dept. (1)		

Coflex Hose Certification

Form No 100/12

**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 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
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:

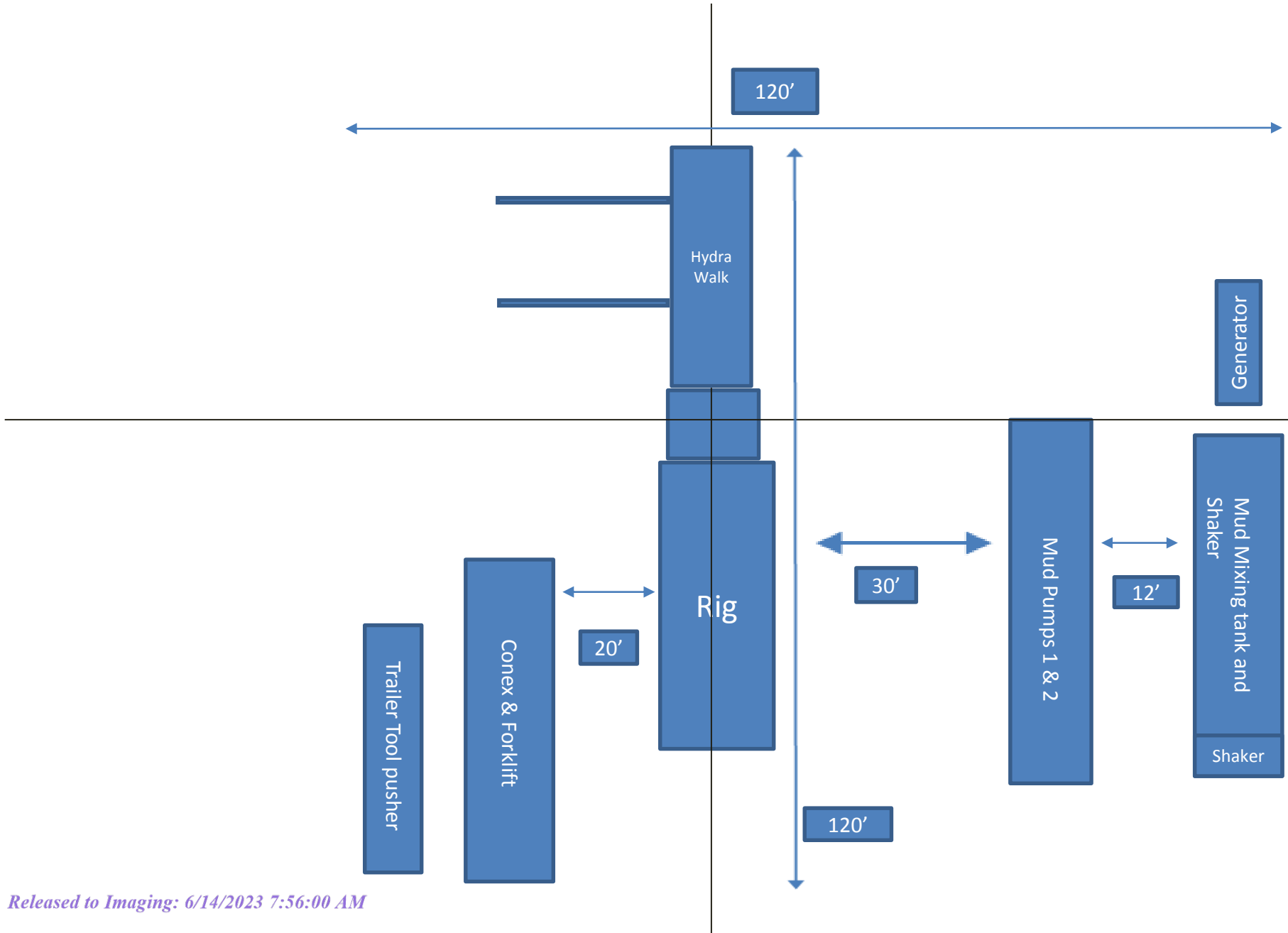
Oxy USA respectfully requests approval for the following operations for the surface hole in the drill plan:

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 nipped 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





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 %	Operation Limit Torques	
Connection OD Option	Regular	Compression Strength	577 x1000 lb	Operating Torque	29,000 ft-lb
		Max. Allowable Bending	82 °/100 ft	Yield Torque	36,000 ft-lb
		External Pressure Capacity	11,100 psi		

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 latest performance data, always visit our website: www.tenaris.com

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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 %	Operation Limit Torques	
Threads per inch	3.40	Compression Strength	522 x1000 lb	Operating Torque	32,000 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	71 °/100 ft	Yield Torque	38,000 ft-lb
		External Pressure Capacity	11,100 psi	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 latest performance data, always visit our website: www.tenaris.com

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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

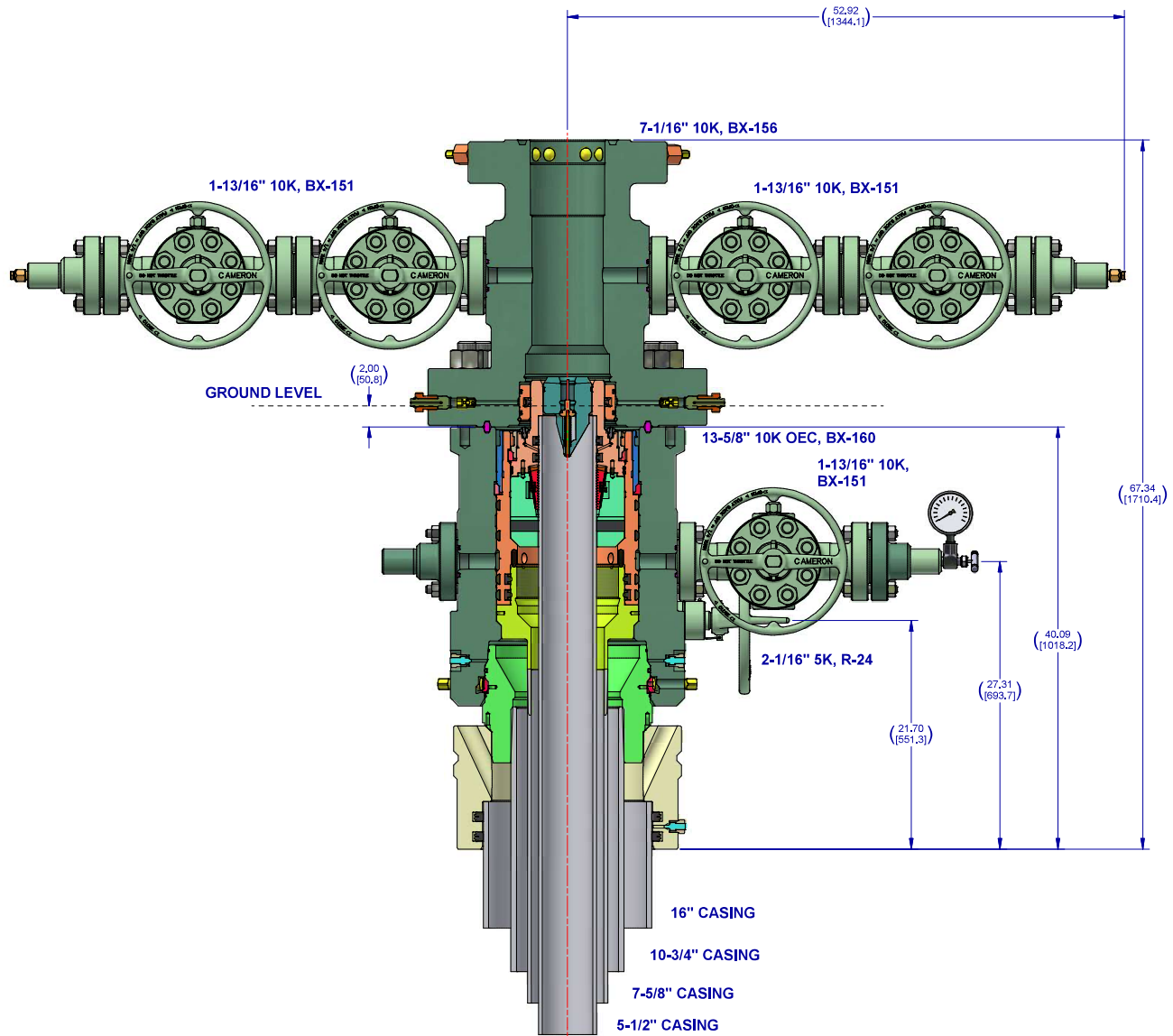
Geometry			Performance		
Nominal OD	5.500 in.	Nominal ID	4.778 in.	Body Yield Strength	641 x 1000 lbs
Nominal Weight	20.00 lbs/ft	Wall Thickness	0.361 in.	Internal Yield	12640 psi
Standard Drift Diameter	4.653 in.	Plain End Weight	19.83 lbs/ft	SMYS	110000 psi
Special Drift Diameter	N/A	OD Tolerance	API	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	 A Schlumberger Company	SURFACE SYSTEMS
DRAWN BY	DATE		
D. GOTTUNG	2 Dec 21		
CHECKED BY	DATE		
D. GOTTUNG	2 Dec 21		
APPROVED BY	DATE		
D. GOTTUNG	2 Dec 21		
ESTIMATED WEIGHT	6515.617 LBS (2955.434 KG)	INTERNAL USE ONLY	
SHEET 4 of 4		SD-053434-94-05	REV 01

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
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District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 216092

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 216092
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

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