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

Sundry Print Report

04/26/2024

Well Name: OXBOW CC 17-8 FEDERAL COM

Well Location: T24S / R29E / SEC 20 / NWNW / 32.2089771 / -104.0120809

County or Parish/State: EDDY / NM

Well Number: 41H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM17224

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001548241

Operator: OXY USA INCORPORATED

Notice of Intent

Sundry ID: 2782763

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 04/01/2024

Time Sundry Submitted: 11:36

Date proposed operation will begin: 06/01/2024

Procedure Description: OXY respectfully requests approval to amend the subject well AAPD to change the SHL, the BHL, the pool from Purple Sage (Wolfcamp) Gas to Bone Spring and also amend the casing string to the 2 strings with a 5.5" production liner. See the attached APD sundry change overview worksheet along with the updated well plat and drilling documents. The surface hole location is staying on the same pad and is moving 77' to the south and 112' to the west.

NOI Attachments

Procedure Description

OXBOWCC17_8FEDCOM41H_3SFalconSL1ContingencyTiebackDetails_20240401113608.pdf

OXBOWCC17_8FEDCOM41H_OfflineCementVariance_20240401113557.pdf

OXBOWCC17_8FEDCOM41H_FalconSL1AnnClearanceVariance_20240401113549.pdf

OXBOWCC17_8FEDCOM41H_CasingSpecSheet_20240401113543.pdf

OXBOWCC17_8FEDCOM41H_13inADAPT_10.75in_7.625in_10x10_20240401113532.pdf

OxbowCC17_8FedCom41H_DirectPlan_20240401113418.pdf

OXBOWCC17_8FEDCOM41H_DrillPlan_20240401113407.pdf

I12386WEL00NM_OXBOW_CC_17_08_FED_COM_41H_C102_20240401113321.pdf

OXY_APD_CHANGE_SUNDRY_LIST_20240401113310.pdf

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Operator: OXY USA INCORPORATED

Conditions of Approval

Additional

FALCON_DESIGN___OXBOW_CC_17_8_FEDERAL_COM_41H___SUNDRY_COA_20240424132801.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: LESLIE REEVES

Signed on: APR 01, 2024 11:36 AM

Name: OXY USA INCORPORATED

Title: Advisor Regulatory

Street Address: 5 GREENWAY PLAZA, SUITE 110

City: HOUSTON **State:** TX

Phone: (713) 497-2492

Email address: LESLIE_REEVES@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: 04/25/2024

Signature: Chris Walls

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INCORPORATED
WELL NAME & NO.:	OXBOW CC 17 8 FEDERAL COM / 41H
SURFACE HOLE FOOTAGE:	575'/S & 826'/W
BOTTOM HOLE FOOTAGE	20'/N & 430'/W
LOCATION:	Section 20, T.24 S., R.29 E.
COUNTY:	Eddy County, New Mexico

ALL PREVIOUS COAs STILL APPLY

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

COA

A. CASING

COA for the proposed Falcon Design (2-string + production liner):

- Tie Back of the liner should be a minimum of 200' into the previous casing
- Surface and Intermediate cement to surface should be verified visually. If cement fallback is suspected, an Echo-meter can be run to verify cement top in the intermediate and a temp log may be run in the surface interval. CBL should be run if confidence is lacking in the surface or intermediate cement job. The proposed falcon design (2-string + production liner) is only approved when surface and intermediate sections are cemented to surface. Operator to revert to 3-string design when surface or intermediate cementing is of poor quality or not verified to surface
- Region 2 NACE certified intermediate casing must be used

- A third-party verification (such as thread rep or torque turn) must be conducted to ensure the connection makeups are to spec for the intermediate casing string exposed to frac pressures
- Corrosion inhibitors must be used in areas with corrosive production fluids
- Operator should actively monitor annulus during the completion phase. Wells should be monitored in a manner capable of identifying a casing leak or liner top packer leak, within an acceptable time frame while on production. Remedial work may be required to restore intermediate casing integrity or liner top packer integrity in a failure event
- BLM should be notified if cement is not verified to the liner top
- Surface location must NOT be located within SOPA, KPLA, Capitan Reef or High Cave Karst

Alternate Casing Design A:

1. The **10-3/4** inch surface casing shall be set at approximately **527** feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The **7.827** inch intermediate casing shall be set at approximately **9,353** feet. Operator has requested for the option to change hole size from 12.25" to 9.875" after trip at Brushy Top and is OK. The minimum required fill of cement behind the **7.827** inch intermediate casing is:

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

Operator has proposed to pump down 7.827" X 13-3/8" annulus. Operator must top out cement after the bradenhead squeeze and verify cement to surface. Operator can also check TOC with Echo-meter. CBL must be run from TD of the 7.827" casing to surface if confidence is lacking on the quality of the bradenhead squeeze cement job. Submit results to BLM.

3. The **5-1/2** inch production liner shall be set at approximately **19,678** feet. **A minimum 200' tie back of production liner into the intermediate casing is required. Successful liner top pressure test critical for zonal isolation check. If ICP in Bone Spring Pool and lateral landed in Wolfcamp Pool, a CBL will be ran.** The minimum required fill of cement behind the **5-1/2** inch production liner is:

    - Cement should tie-back **200 feet** into the previous casing. Operator shall provide method of verification.
    - Operator has proposed 10% excess instead of 25% excess recommendation for the liner design and this is acceptable. Losses may need to be cured and pump rates may need to be modified to achieve cement tieback when losses occur or are anticipated in the production interval

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

    a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
    b. When the operator proposes to set surface casing with Spudder Rig
        - Notify the BLM when moving in and removing the Spudder Rig.
        - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.

- BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

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

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

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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

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

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

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

KPI – 01/25/2024

OXY APD CHANGE SUNDRY LIST

DATE	4/1/2024
WELL NAME	OXBOW CC 17-8 FEDERAL COM #041H
API NUMBER	30-015-48241

ITEM	PREVIOUS	UPDATE
NAME	NA	
NSL	NA	
SHL	498' FNL 938' FWL	575' FNL 826' FWL
PAD	NA	
BHL	20' FNL, 380' FWL	20' FNL 430' FWL
HSU SIZE, ACRES	640	
POOL	PURPLE SAGE (WOLFCAMP)GAS	BONE SPRING
TARGET FORMATION	WOLFCAMP	2ND BS
TVD	10950'	8986'
SURFACE CASING	10.75" 40.5 LBS	10.75" 45.5#
INTERMEDIATE CASING	7.625" L-80 HC, BTC	7.827" 39.3# P-110S WDG 463
INTERMEDIATE 2 CASING	NA	
PRODUCTION CASING	5.5" 20# P-110 DQX	
LINER OR TIE BACK	NONE	5.5" 20# P-110 WDG 461 LINER
CEMENT	2STG INT CMT - PROD CMT TO 9925'	
FACILITIES		
OTHER		

OTHER COMMENTS
THE SHL, BHL, POOL, TVD, SURFACE CSG, INT CSG, PROD CSG (LINER), INT & PROD CMT ARE CHANGING.
UPDATED VARIANCE REQUESTS FOR BOP BREAK TESTING, BRADENHEAD CBL, AND OFFLINE CEMENT ARE ATTACHED.

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
30-015-48241	321633	CEDAR CANYON; BS 11520/PIERCE CROSSING; BS,EAST 96473/PIERCE CROSSING; BS 50371

[4] Property Code	[5] Property Name	[6] Well Number
321633	OXBOW CC 17_08 FED COM	41H

[7] OGRID No.	[8] Operator Name	[9] Elevation
16696	OXY USA INC.	2966.7'

[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
D	20	24S	29E		575	NORTH	826	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
D	8	24S	29E		20	NORTH	430	WEST	EDDY

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

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]

HSU COORDINATES	NAD 27 N.M. STATE PLANE, EAST ZONE		NAD 83 N.M. STATE PLANE, EAST ZONE	
POINT	NORTHING	EASTING	NORTHING	EASTING
A	450976.72'	598517.66'	451035.73'	639701.29'
B	450962.29'	601165.63'	451021.33'	642349.31'
C	445650.64'	601186.74'	445709.57'	642370.55'
D	440342.21'	601224.45'	440401.04'	642408.38'
E	440351.85'	598579.01'	440410.64'	639762.90'
F	443009.60'	598557.69'	443068.45'	639741.51'
G	445665.12'	598539.49'	445724.02'	639723.24'
H	448321.17'	598528.58'	448380.13'	639712.27'

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N54°49'31"W	482.37'
L2	N00°17'00"E	300.00'
L3	N00°17'00"E	100.00'
L4	N00°05'31"W	1229.04'
L5	N00°05'31"W	2656.88'

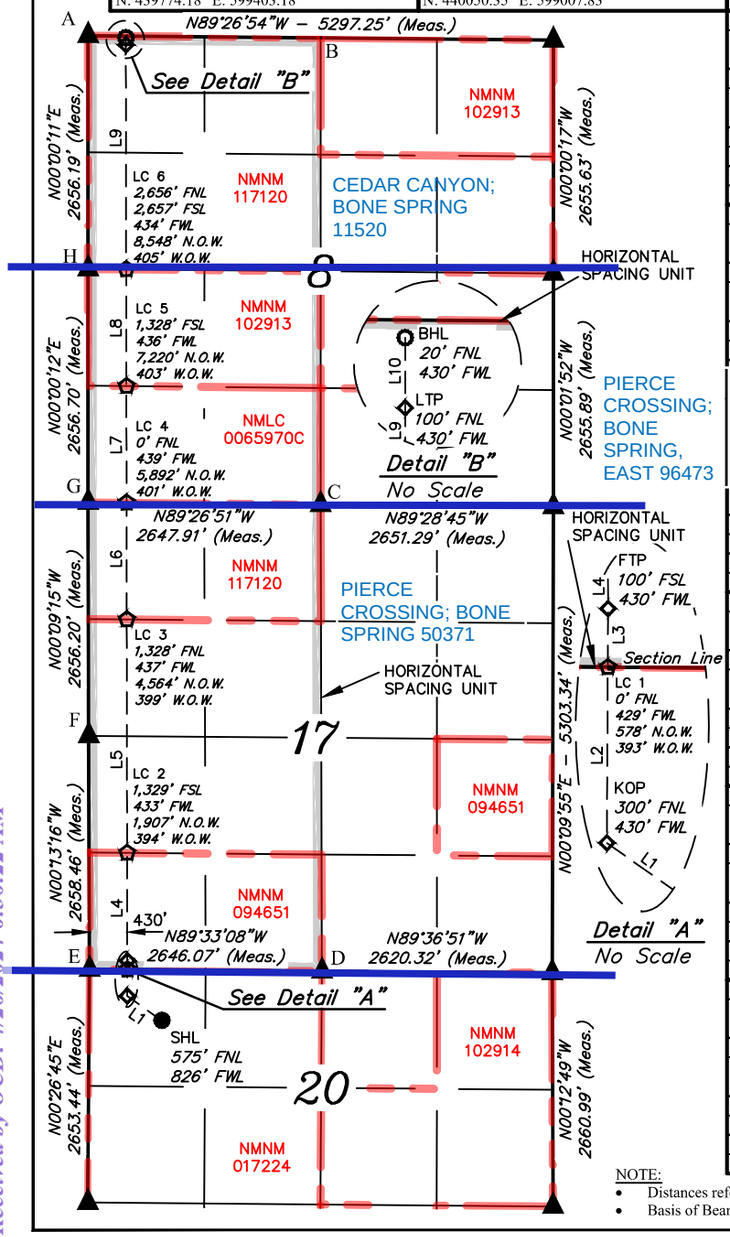
LINE TABLE		
LINE	DIRECTION	LENGTH
L6	N00°05'31"W	1327.84'
L7	N00°05'31"W	1328.40'
L8	N00°05'31"W	1328.40'
L9	N00°05'31"W	2556.19'
L10	N00°00'11"E	80.00'

NAD 83 (SURFACE HOLE LOCATION)	NAD 83 (KICK OFF POINT)	NAD 83 (LEASE CROSSING 1)
LATITUDE = 32°12'31.57" (32.208771°)	LATITUDE = 32°12'34.32" (32.209533°)	LATITUDE = 32°12'37.29" (32.210357°)
LONGITUDE = -104°00'44.76" (-104.012433°)	LONGITUDE = -104°00'49.35" (-104.013708°)	LONGITUDE = -104°00'49.34" (-104.013705°)
NAD 27 (SURFACE HOLE LOCATION)	**NAD 27 (KICK OFF POINT)**	**NAD 27 (LEASE CROSSING 1)**
LATITUDE = 32°12'31.13" (32.208648°)	LATITUDE = 32°12'33.88" (32.209410°)	LATITUDE = 32°12'36.85" (32.210235°)
LONGITUDE = -104°00'43.00" (-104.011943°)	LONGITUDE = -104°00'47.59" (-104.013219°)	LONGITUDE = -104°00'47.57" (-104.013215°)
STATE PLANE NAD 83 (N.M. EAST)	**STATE PLANE NAD 83 (N.M. EAST)**	**STATE PLANE NAD 83 (N.M. EAST)**
N: 439832.98' E: 640587.09'	N: 440109.15' E: 640191.72'	N: 440409.08' E: 640191.95'
STATE PLANE NAD 27 (N.M. EAST)	**STATE PLANE NAD 27 (N.M. EAST)**	**STATE PLANE NAD 27 (N.M. EAST)**
N: 439774.18' E: 599403.18'	N: 440050.35' E: 599007.83'	N: 440350.28' E: 599008.06'

NAD 83 (FIRST TAKE POINT)
LATITUDE = 32°12'38.28" (32.210632°)
LONGITUDE = -104°00'49.33" (-104.013703°)
NAD 27 (FIRST TAKE POINT)
LATITUDE = 32°12'37.83" (32.210510°)
LONGITUDE = -104°00'47.57" (-104.013214°)
STATE PLANE NAD 83 (N.M. EAST)
N: 440509.06' E: 640192.03'
STATE PLANE NAD 27 (N.M. EAST)
N: 440450.26' E: 599008.14'
NAD 83 (LEASE CROSSING 2)
LATITUDE = 32°12'50.44" (32.214010°)
LONGITUDE = -104°00'49.37" (-104.013715°)
NAD 27 (LEASE CROSSING 2)
LATITUDE = 32°12'49.99" (32.213887°)
LONGITUDE = -104°00'47.61" (-104.013225°)
STATE PLANE NAD 83 (N.M. EAST)
N: 441737.82' E: 640184.91'
STATE PLANE NAD 27 (N.M. EAST)
N: 441678.99' E: 599001.05'
NAD 83 (LEASE CROSSING 3)
LATITUDE = 32°13'16.72" (32.221312°)
LONGITUDE = -104°00'49.46" (-104.013739°)
NAD 27 (LEASE CROSSING 3)
LATITUDE = 32°13'16.28" (32.221189°)
LONGITUDE = -104°00'47.70" (-104.013249°)
STATE PLANE NAD 83 (N.M. EAST)
N: 444394.09' E: 640169.52'
STATE PLANE NAD 27 (N.M. EAST)
N: 444335.21' E: 598985.72'

NAD 83 (LEASE CROSSING 4)	NAD 83 (LEASE CROSSING 5)
LATITUDE = 32°13'29.86" (32.224961°)	LATITUDE = 32°13'43.00" (32.228612°)
LONGITUDE = -104°00'49.50" (-104.013751°)	LONGITUDE = -104°00'49.55" (-104.013763°)
NAD 27 (LEASE CROSSING 4)	**NAD 27 (LEASE CROSSING 5)**
LATITUDE = 32°13'29.42" (32.224839°)	LATITUDE = 32°13'42.56" (32.228489°)
LONGITUDE = -104°00'47.74" (-104.013261°)	LONGITUDE = -104°00'47.78" (-104.013273°)
STATE PLANE NAD 83 (N.M. EAST)	**STATE PLANE NAD 83 (N.M. EAST)**
N: 445721.62' E: 640161.83'	N: 447049.72' E: 640154.13'
STATE PLANE NAD 27 (N.M. EAST)	**STATE PLANE NAD 27 (N.M. EAST)**
N: 445662.72' E: 598978.06'	N: 446990.79' E: 598970.40'
NAD 83 (LEASE CROSSING 6)	**NAD 83 (LAST TAKE POINT)**
LATITUDE = 32°13'56.15" (32.232263°)	LATITUDE = 32°14'21.44" (32.239288°)
LONGITUDE = -104°00'49.59" (-104.013775°)	LONGITUDE = -104°00'49.67" (-104.013798°)
NAD 27 (LEASE CROSSING 6)	**NAD 27 (LAST TAKE POINT)**
LATITUDE = 32°13'55.71" (32.232140°)	LATITUDE = 32°14'21.00" (32.239166°)
LONGITUDE = -104°00'47.83" (-104.013285°)	LONGITUDE = -104°00'47.91" (-104.013308°)
STATE PLANE NAD 83 (N.M. EAST)	**STATE PLANE NAD 83 (N.M. EAST)**
N: 448377.81' E: 640146.43'	N: 450933.41' E: 640131.62'
STATE PLANE NAD 27 (N.M. EAST)	**STATE PLANE NAD 27 (N.M. EAST)**
N: 448318.85' E: 598962.73'	N: 450874.40' E: 598947.98'

NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°14'22.23" (32.239508°)
LONGITUDE = -104°00'49.68" (-104.013799°)
NAD 27 (BOTTOM HOLE LOCATION)
LATITUDE = 32°14'21.79" (32.239385°)
LONGITUDE = -104°00'47.91" (-104.013308°)
STATE PLANE NAD 83 (N.M. EAST)
N: 451013.39' E: 640131.29'
STATE PLANE NAD 27 (N.M. EAST)
N: 450954.38' E: 598947.65'



NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

● = SURFACE HOLE LOCATION
◇ = KICK OFF POINT/TAKE POINTS
⬠ = LEASE CROSSING
○ = BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
N.O.W. = NORTH OF WELL
W.O.W. = WEST OF WELL
= LEASE LINE

SCALE: 1" = 2000'

[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.

Leslie T. Reeves 4/1/2024
Signature Date

LESLIE REEVES
Printed Name

LESLIE_REEVES@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.

March 03, 2023
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 03-08-24

Certificate Number:

DRAWN BY: D.J.S. 03-15-23
REV: 2 L.T.T. 03-08-24

Oxy USA Inc. - OXBOW CC 17_8 FED COM 41H
Drill Plan

1. Geologic Formations

TVD of Target (ft):	8986	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	19678	Deepest Expected Fresh Water (ft):	294

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	294	294	
Salado	587	587	Salt
Castile	1244	1244	Salt
Delaware	2799	2799	Oil/Gas/Brine
Bell Canyon	2842	2842	Oil/Gas/Brine
Cherry Canyon	3729	3729	Oil/Gas/Brine
Brushy Canyon	4973	4973	Losses
Bone Spring	6570	6564	Oil/Gas
Bone Spring 1st	7540	7520	Oil/Gas
Bone Spring 2nd	8377	8344	Oil/Gas
Bone Spring 3rd			Oil/Gas
Wolfcamp			Oil/Gas
Penn			Oil/Gas
Strawn			Oil/Gas

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

2. Casing Program

		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	527	0	527	10.75	45.5	J-55	BTC
Intermediate	9.875	0	9353	0	8986	7.827	39.3	P110S	Wedge 463
Production	6.75	9153	19678	8786	8986	5.5	20	P-110	Wedge 461

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

All Casing SF Values will meet or exceed those below			
SF Collapse	**SF Burst**	**Body SF Tension**	**Joint SF Tension**
1.00	1.100	1.4	1.4

*If Production Casing Connection OD does not meet 0.422" annular clearance inside casing:

- Cement excess will be circulated from Top of Liner to surface (Cement Confirmation)
- Liner Top will be tested to confirm seal
- If ICP in Bone Spring Pool and lateral landed in Wolfcamp Pool, a CBL will be ran.

	Y or N
Is casing new? If used, attach certification as required in 43 CFR 3160	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-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	441	1.33	14.8	100%	-	Circulate	Class C+Accel.
Int.	1	Intermediate 1S - Tail	520	1.65	13.2	5%	5,223	Circulate	Class H+Accel., Disper., Salt
Int.	2	Intermediate 2S - Tail BH	746	1.71	13.3	25%	-	Bradenhead	Class C+Accel.
Prod.	1	Production - Tail	596	1.84	13.3	25%	9,153	Circulate	Class C+Ret.

Offline Cementing Request

Oxy requests a variance to cement the 9.625” and/or 7.625” intermediate casing strings offline in accordance to the approved variance, EC Tran 461365. Please see Offline Cementing Variance attachment for further details.

Bradenhead CBL Request

Oxy requests permission to adjust the CBL requirement after bradenhead cement jobs, on 7-5/8” intermediate casings, as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see Bradenhead CBL Variance attachment for further details.

Cement Top and Liner Overlap

- Oxy is requesting permission to have minimum fill of cement behind the 5-1/2” production liner to be 200 ft into previous casing string
  - The reason for this is so that we can come back and develop shallower benches from the same 7.625”/7.827" mainbore in the future
- Cement will be brought to the top of this liner hanger

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:	Deepest TVD Depth (ft) per Section:
9.875" Hole	13-5/8”	5M	Annular	✓	70% of working pressure	8986
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			
6.75" Hole	13-5/8”	5M	Annular	✓	70% of working pressure	8986
		5M	Blind Ram	✓	250 psi / 5000 psi	
			Pipe Ram			
			Double Ram	✓		
			Other*			

*Specify if additional ram is utilized

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per 43 CFR part 3170 Subpart 3172 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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

	Formation integrity test will be performed per 43 CFR part 3170 Subpart 3172.
	On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with 43 CFR part 3170 Subpart 3172.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	Y Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per 43 CFR part 3170 Subpart 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.

BOP Break Testing Request

Oxy requests permission to adjust the BOP break testing requirements as per the agreement reached in the OXY/BLM meeting on September 5, 2019. Please see BOP Break Testing Variance attachment for further details.

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

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	527	0	527	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	527	9353	527	8986	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	9353	19678	8986	8986	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,

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	5841 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	152°F

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

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR part 3170 Subpart 3172. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the 2 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: 1405 bbls

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PRD NM DIRECTIONAL PLANS (NAD 1983)
Oxbow CC 17-08 Federal Com
Oxbow CC 17_8 Fed Com 41H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

21 March, 2024

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Oxbow CC 17_8 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 2991.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 2991.70ft
Site:	Oxbow CC 17-08 Federal Com	**North Reference:**	Grid
Well:	Oxbow CC 17_8 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Project PRD NM DIRECTIONAL PLANS (NAD 1983)

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

Site Oxbow CC 17-08 Federal Com

Site Position:		**Northing:**	440,994.67 usft	**Latitude:**	32.211937
From:	Map	**Easting:**	643,785.93 usft	**Longitude:**	-104.002079
Position Uncertainty:	44.72 ft	**Slot Radius:**	13.200 in		

Well Oxbow CC 17_8 Fed Com 41H

Well Position	**+N/-S**	0.00 ft	**Northing:**	439,832.98 usf	**Latitude:**	32.208771
	+E/-W	0.00 ft	**Easting:**	640,587.09 usf	**Longitude:**	-104.012433
Position Uncertainty		0.89 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	2,966.70 ft
Grid Convergence:		0.17 °				

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	12/4/2019	6.92	59.92	47,853.20000000

Design Permitting Plan

Audit Notes:

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

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	357.67

Plan Survey Tool Program **Date** 3/21/2024

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,677.78	Permitting Plan (Wellbore #1)	B001Mc_MWD+HRGM_R5 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	
5,515.00	0.00	0.00	5,515.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,515.00	10.00	311.33	6,509.94	57.49	-65.36	1.00	1.00	0.00	311.33	
8,518.59	10.00	311.33	8,483.08	287.28	-326.60	0.00	0.00	0.00	0.00	
9,352.78	90.05	359.67	8,985.55	856.50	-396.14	10.00	9.60	5.79	48.76	
19,677.78	90.05	359.67	8,976.70	11,181.32	-455.84	0.00	0.00	0.00	0.00	PBHL (Oxbow CC

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Oxbow CC 17_8 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 2991.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 2991.70ft
Site:	Oxbow CC 17-08 Federal Com	**North Reference:**	Grid
Well:	Oxbow CC 17_8 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

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

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Planning Report

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Site:	Oxbow CC 17-08 Federal Com	**North Reference:**	Grid
Well:	Oxbow CC 17_8 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,515.00	0.00	0.00	5,515.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.85	311.33	5,600.00	0.42	-0.47	0.44	1.00	1.00	0.00
5,700.00	1.85	311.33	5,699.97	1.97	-2.24	2.06	1.00	1.00	0.00
5,800.00	2.85	311.33	5,799.88	4.68	-5.32	4.89	1.00	1.00	0.00
5,900.00	3.85	311.33	5,899.71	8.54	-9.71	8.93	1.00	1.00	0.00
6,000.00	4.85	311.33	5,999.42	13.55	-15.40	14.17	1.00	1.00	0.00
6,100.00	5.85	311.33	6,098.98	19.71	-22.40	20.60	1.00	1.00	0.00
6,200.00	6.85	311.33	6,198.37	27.01	-30.71	28.24	1.00	1.00	0.00
6,300.00	7.85	311.33	6,297.55	35.46	-40.32	37.07	1.00	1.00	0.00
6,400.00	8.85	311.33	6,396.49	45.05	-51.22	47.10	1.00	1.00	0.00
6,500.00	9.85	311.33	6,495.16	55.78	-63.42	58.32	1.00	1.00	0.00
6,515.00	10.00	311.33	6,509.94	57.49	-65.36	60.11	1.00	1.00	0.00
6,600.00	10.00	311.33	6,593.64	67.24	-76.44	70.30	0.00	0.00	0.00
6,700.00	10.00	311.33	6,692.12	78.71	-89.48	82.29	0.00	0.00	0.00
6,800.00	10.00	311.33	6,790.60	90.18	-102.52	94.28	0.00	0.00	0.00
6,900.00	10.00	311.33	6,889.08	101.64	-115.56	106.27	0.00	0.00	0.00
7,000.00	10.00	311.33	6,987.56	113.11	-128.60	118.26	0.00	0.00	0.00
7,100.00	10.00	311.33	7,086.04	124.58	-141.63	130.25	0.00	0.00	0.00
7,200.00	10.00	311.33	7,184.52	136.05	-154.67	142.24	0.00	0.00	0.00
7,300.00	10.00	311.33	7,283.00	147.52	-167.71	154.23	0.00	0.00	0.00
7,400.00	10.00	311.33	7,381.49	158.99	-180.75	166.22	0.00	0.00	0.00
7,500.00	10.00	311.33	7,479.97	170.46	-193.79	178.21	0.00	0.00	0.00
7,600.00	10.00	311.33	7,578.45	181.93	-206.83	190.20	0.00	0.00	0.00
7,700.00	10.00	311.33	7,676.93	193.40	-219.87	202.19	0.00	0.00	0.00
7,800.00	10.00	311.33	7,775.41	204.86	-232.91	214.18	0.00	0.00	0.00
7,900.00	10.00	311.33	7,873.89	216.33	-245.94	226.17	0.00	0.00	0.00
8,000.00	10.00	311.33	7,972.37	227.80	-258.98	238.16	0.00	0.00	0.00
8,100.00	10.00	311.33	8,070.85	239.27	-272.02	250.15	0.00	0.00	0.00
8,200.00	10.00	311.33	8,169.33	250.74	-285.06	262.14	0.00	0.00	0.00
8,300.00	10.00	311.33	8,267.81	262.21	-298.10	274.13	0.00	0.00	0.00
8,400.00	10.00	311.33	8,366.29	273.68	-311.14	286.12	0.00	0.00	0.00
8,500.00	10.00	311.33	8,464.77	285.15	-324.18	298.11	0.00	0.00	0.00
8,518.59	10.00	311.33	8,483.08	287.28	-326.60	300.34	0.00	0.00	0.00
8,600.00	16.53	333.32	8,562.32	302.32	-337.13	315.80	10.00	8.02	27.00
8,700.00	25.81	343.86	8,655.51	336.03	-349.60	349.99	10.00	9.28	10.55
8,800.00	35.47	349.01	8,741.45	385.55	-361.21	399.95	10.00	9.66	5.15
8,900.00	45.26	352.16	8,817.56	449.38	-371.61	464.15	10.00	9.79	3.15
9,000.00	55.12	354.39	8,881.51	525.58	-380.48	540.65	10.00	9.85	2.23
9,100.00	65.00	356.14	8,931.36	611.84	-387.56	627.12	10.00	9.89	1.75
9,200.00	74.90	357.63	8,965.60	705.52	-392.62	720.93	10.00	9.90	1.48
9,300.00	84.82	358.98	8,983.18	803.79	-395.51	819.24	10.00	9.91	1.35
9,352.78	90.05	359.67	8,985.55	856.50	-396.14	871.92	10.00	9.91	1.31
9,400.00	90.05	359.67	8,985.51	903.72	-396.41	919.11	0.00	0.00	0.00
9,500.00	90.05	359.67	8,985.42	1,003.71	-396.99	1,019.05	0.00	0.00	0.00
9,600.00	90.05	359.67	8,985.33	1,103.71	-397.56	1,118.99	0.00	0.00	0.00
9,700.00	90.05	359.67	8,985.25	1,203.71	-398.14	1,218.93	0.00	0.00	0.00
9,800.00	90.05	359.67	8,985.16	1,303.71	-398.72	1,318.87	0.00	0.00	0.00
9,900.00	90.05	359.67	8,985.08	1,403.71	-399.30	1,418.81	0.00	0.00	0.00
10,000.00	90.05	359.67	8,984.99	1,503.71	-399.88	1,518.75	0.00	0.00	0.00
10,100.00	90.05	359.67	8,984.91	1,603.70	-400.46	1,618.68	0.00	0.00	0.00
10,200.00	90.05	359.67	8,984.82	1,703.70	-401.03	1,718.62	0.00	0.00	0.00
10,300.00	90.05	359.67	8,984.73	1,803.70	-401.61	1,818.56	0.00	0.00	0.00
10,400.00	90.05	359.67	8,984.65	1,903.70	-402.19	1,918.50	0.00	0.00	0.00
10,500.00	90.05	359.67	8,984.56	2,003.70	-402.77	2,018.44	0.00	0.00	0.00

OXY

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Oxbow CC 17_8 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 2991.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 2991.70ft
Site:	Oxbow CC 17-08 Federal Com	**North Reference:**	Grid
Well:	Oxbow CC 17_8 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,600.00	90.05	359.67	8,984.48	2,103.69	-403.35	2,118.38	0.00	0.00	0.00
10,700.00	90.05	359.67	8,984.39	2,203.69	-403.93	2,218.32	0.00	0.00	0.00
10,800.00	90.05	359.67	8,984.31	2,303.69	-404.50	2,318.26	0.00	0.00	0.00
10,900.00	90.05	359.67	8,984.22	2,403.69	-405.08	2,418.20	0.00	0.00	0.00
11,000.00	90.05	359.67	8,984.13	2,503.69	-405.66	2,518.13	0.00	0.00	0.00
11,100.00	90.05	359.67	8,984.05	2,603.69	-406.24	2,618.07	0.00	0.00	0.00
11,200.00	90.05	359.67	8,983.96	2,703.68	-406.82	2,718.01	0.00	0.00	0.00
11,300.00	90.05	359.67	8,983.88	2,803.68	-407.39	2,817.95	0.00	0.00	0.00
11,400.00	90.05	359.67	8,983.79	2,903.68	-407.97	2,917.89	0.00	0.00	0.00
11,500.00	90.05	359.67	8,983.71	3,003.68	-408.55	3,017.83	0.00	0.00	0.00
11,600.00	90.05	359.67	8,983.62	3,103.68	-409.13	3,117.77	0.00	0.00	0.00
11,700.00	90.05	359.67	8,983.53	3,203.68	-409.71	3,217.71	0.00	0.00	0.00
11,800.00	90.05	359.67	8,983.45	3,303.67	-410.29	3,317.64	0.00	0.00	0.00
11,900.00	90.05	359.67	8,983.36	3,403.67	-410.86	3,417.58	0.00	0.00	0.00
12,000.00	90.05	359.67	8,983.28	3,503.67	-411.44	3,517.52	0.00	0.00	0.00
12,100.00	90.05	359.67	8,983.19	3,603.67	-412.02	3,617.46	0.00	0.00	0.00
12,200.00	90.05	359.67	8,983.11	3,703.67	-412.60	3,717.40	0.00	0.00	0.00
12,300.00	90.05	359.67	8,983.02	3,803.67	-413.18	3,817.34	0.00	0.00	0.00
12,400.00	90.05	359.67	8,982.94	3,903.66	-413.76	3,917.28	0.00	0.00	0.00
12,500.00	90.05	359.67	8,982.85	4,003.66	-414.33	4,017.22	0.00	0.00	0.00
12,600.00	90.05	359.67	8,982.76	4,103.66	-414.91	4,117.16	0.00	0.00	0.00
12,700.00	90.05	359.67	8,982.68	4,203.66	-415.49	4,217.09	0.00	0.00	0.00
12,800.00	90.05	359.67	8,982.59	4,303.66	-416.07	4,317.03	0.00	0.00	0.00
12,900.00	90.05	359.67	8,982.51	4,403.66	-416.65	4,416.97	0.00	0.00	0.00
13,000.00	90.05	359.67	8,982.42	4,503.65	-417.22	4,516.91	0.00	0.00	0.00
13,100.00	90.05	359.67	8,982.34	4,603.65	-417.80	4,616.85	0.00	0.00	0.00
13,200.00	90.05	359.67	8,982.25	4,703.65	-418.38	4,716.79	0.00	0.00	0.00
13,300.00	90.05	359.67	8,982.16	4,803.65	-418.96	4,816.73	0.00	0.00	0.00
13,400.00	90.05	359.67	8,982.08	4,903.65	-419.54	4,916.67	0.00	0.00	0.00
13,500.00	90.05	359.67	8,981.99	5,003.65	-420.12	5,016.61	0.00	0.00	0.00
13,600.00	90.05	359.67	8,981.91	5,103.64	-420.69	5,116.54	0.00	0.00	0.00
13,700.00	90.05	359.67	8,981.82	5,203.64	-421.27	5,216.48	0.00	0.00	0.00
13,800.00	90.05	359.67	8,981.74	5,303.64	-421.85	5,316.42	0.00	0.00	0.00
13,900.00	90.05	359.67	8,981.65	5,403.64	-422.43	5,416.36	0.00	0.00	0.00
14,000.00	90.05	359.67	8,981.56	5,503.64	-423.01	5,516.30	0.00	0.00	0.00
14,100.00	90.05	359.67	8,981.48	5,603.64	-423.58	5,616.24	0.00	0.00	0.00
14,200.00	90.05	359.67	8,981.39	5,703.63	-424.16	5,716.18	0.00	0.00	0.00
14,300.00	90.05	359.67	8,981.31	5,803.63	-424.74	5,816.12	0.00	0.00	0.00
14,400.00	90.05	359.67	8,981.22	5,903.63	-425.32	5,916.06	0.00	0.00	0.00
14,500.00	90.05	359.67	8,981.14	6,003.63	-425.90	6,015.99	0.00	0.00	0.00
14,600.00	90.05	359.67	8,981.05	6,103.63	-426.48	6,115.93	0.00	0.00	0.00
14,700.00	90.05	359.67	8,980.96	6,203.62	-427.05	6,215.87	0.00	0.00	0.00
14,800.00	90.05	359.67	8,980.88	6,303.62	-427.63	6,315.81	0.00	0.00	0.00
14,900.00	90.05	359.67	8,980.79	6,403.62	-428.21	6,415.75	0.00	0.00	0.00
15,000.00	90.05	359.67	8,980.71	6,503.62	-428.79	6,515.69	0.00	0.00	0.00
15,100.00	90.05	359.67	8,980.62	6,603.62	-429.37	6,615.63	0.00	0.00	0.00
15,200.00	90.05	359.67	8,980.54	6,703.62	-429.95	6,715.57	0.00	0.00	0.00
15,300.00	90.05	359.67	8,980.45	6,803.61	-430.52	6,815.50	0.00	0.00	0.00
15,400.00	90.05	359.67	8,980.36	6,903.61	-431.10	6,915.44	0.00	0.00	0.00
15,500.00	90.05	359.67	8,980.28	7,003.61	-431.68	7,015.38	0.00	0.00	0.00
15,600.00	90.05	359.67	8,980.19	7,103.61	-432.26	7,115.32	0.00	0.00	0.00
15,700.00	90.05	359.67	8,980.11	7,203.61	-432.84	7,215.26	0.00	0.00	0.00
15,800.00	90.05	359.67	8,980.02	7,303.61	-433.41	7,315.20	0.00	0.00	0.00
15,900.00	90.05	359.67	8,979.94	7,403.60	-433.99	7,415.14	0.00	0.00	0.00
16,000.00	90.05	359.67	8,979.85	7,503.60	-434.57	7,515.08	0.00	0.00	0.00

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Oxbow CC 17_8 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 2991.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 2991.70ft
Site:	Oxbow CC 17-08 Federal Com	**North Reference:**	Grid
Well:	Oxbow CC 17_8 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,100.00	90.05	359.67	8,979.77	7,603.60	-435.15	7,615.02	0.00	0.00	0.00
16,200.00	90.05	359.67	8,979.68	7,703.60	-435.73	7,714.95	0.00	0.00	0.00
16,300.00	90.05	359.67	8,979.59	7,803.60	-436.31	7,814.89	0.00	0.00	0.00
16,400.00	90.05	359.67	8,979.51	7,903.60	-436.88	7,914.83	0.00	0.00	0.00
16,500.00	90.05	359.67	8,979.42	8,003.59	-437.46	8,014.77	0.00	0.00	0.00
16,600.00	90.05	359.67	8,979.34	8,103.59	-438.04	8,114.71	0.00	0.00	0.00
16,700.00	90.05	359.67	8,979.25	8,203.59	-438.62	8,214.65	0.00	0.00	0.00
16,800.00	90.05	359.67	8,979.17	8,303.59	-439.20	8,314.59	0.00	0.00	0.00
16,900.00	90.05	359.67	8,979.08	8,403.59	-439.78	8,414.53	0.00	0.00	0.00
17,000.00	90.05	359.67	8,978.99	8,503.59	-440.35	8,514.47	0.00	0.00	0.00
17,100.00	90.05	359.67	8,978.91	8,603.58	-440.93	8,614.40	0.00	0.00	0.00
17,200.00	90.05	359.67	8,978.82	8,703.58	-441.51	8,714.34	0.00	0.00	0.00
17,300.00	90.05	359.67	8,978.74	8,803.58	-442.09	8,814.28	0.00	0.00	0.00
17,400.00	90.05	359.67	8,978.65	8,903.58	-442.67	8,914.22	0.00	0.00	0.00
17,500.00	90.05	359.67	8,978.57	9,003.58	-443.24	9,014.16	0.00	0.00	0.00
17,600.00	90.05	359.67	8,978.48	9,103.58	-443.82	9,114.10	0.00	0.00	0.00
17,700.00	90.05	359.67	8,978.39	9,203.57	-444.40	9,214.04	0.00	0.00	0.00
17,800.00	90.05	359.67	8,978.31	9,303.57	-444.98	9,313.98	0.00	0.00	0.00
17,900.00	90.05	359.67	8,978.22	9,403.57	-445.56	9,413.91	0.00	0.00	0.00
18,000.00	90.05	359.67	8,978.14	9,503.57	-446.14	9,513.85	0.00	0.00	0.00
18,100.00	90.05	359.67	8,978.05	9,603.57	-446.71	9,613.79	0.00	0.00	0.00
18,200.00	90.05	359.67	8,977.97	9,703.57	-447.29	9,713.73	0.00	0.00	0.00
18,300.00	90.05	359.67	8,977.88	9,803.56	-447.87	9,813.67	0.00	0.00	0.00
18,400.00	90.05	359.67	8,977.79	9,903.56	-448.45	9,913.61	0.00	0.00	0.00
18,500.00	90.05	359.67	8,977.71	10,003.56	-449.03	10,013.55	0.00	0.00	0.00
18,600.00	90.05	359.67	8,977.62	10,103.56	-449.61	10,113.49	0.00	0.00	0.00
18,700.00	90.05	359.67	8,977.54	10,203.56	-450.18	10,213.43	0.00	0.00	0.00
18,800.00	90.05	359.67	8,977.45	10,303.55	-450.76	10,313.36	0.00	0.00	0.00
18,900.00	90.05	359.67	8,977.37	10,403.55	-451.34	10,413.30	0.00	0.00	0.00
19,000.00	90.05	359.67	8,977.28	10,503.55	-451.92	10,513.24	0.00	0.00	0.00
19,100.00	90.05	359.67	8,977.20	10,603.55	-452.50	10,613.18	0.00	0.00	0.00
19,200.00	90.05	359.67	8,977.11	10,703.55	-453.07	10,713.12	0.00	0.00	0.00
19,300.00	90.05	359.67	8,977.02	10,803.55	-453.65	10,813.06	0.00	0.00	0.00
19,400.00	90.05	359.67	8,976.94	10,903.54	-454.23	10,913.00	0.00	0.00	0.00
19,500.00	90.05	359.67	8,976.85	11,003.54	-454.81	11,012.94	0.00	0.00	0.00
19,600.00	90.05	359.67	8,976.77	11,103.54	-455.39	11,112.88	0.00	0.00	0.00
19,677.78	90.05	359.67	8,976.70	11,181.32	-455.84	11,190.61	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP (Oxbow CC 17_8	0.00	0.00	0.00	276.19	-395.40	440,109.15	640,191.72	32.209533	-104.013708
- plan misses target center by 482.31ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL (Oxbow CC	0.00	0.00	8,976.70	11,181.32	-455.84	451,013.39	640,131.29	32.239508	-104.013799
- plan hits target center									
- Point									
FTP (Oxbow CC 17_8	0.00	0.00	8,985.70	676.14	-395.09	440,509.06	640,192.03	32.210632	-104.013704
- plan misses target center by 27.76ft at 9179.43ft MD (8959.89 TVD, 685.77 N, -391.75 E)									
- Point									

OXY
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Oxbow CC 17_8 Fed Com 41H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=25' @ 2991.70ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=25' @ 2991.70ft
Site:	Oxbow CC 17-08 Federal Com	**North Reference:**	Grid
Well:	Oxbow CC 17_8 Fed Com 41H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
293.70	293.70	RUSTLER			
586.70	586.70	SALADO			
1,243.70	1,243.70	CASTILE			
2,798.70	2,798.70	DELAWARE			
2,841.70	2,841.70	BELL CANYON			
3,728.70	3,728.70	CHERRY CANYON			
4,972.70	4,972.70	BRUSHY CANYON			
6,569.60	6,563.70	BONE SPRING			
7,540.35	7,519.70	BONE SPRING 1ST			
8,377.06	8,343.70	BONE SPRING 2ND			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
5,515.00	5,515.00	0.00	0.00	Build 1°/100'
6,515.00	6,509.94	57.49	-65.36	Hold 10° Tangent
8,518.59	8,483.08	287.28	-326.60	KOP, Build & Turn 10°/100'
9,352.78	8,985.55	856.50	-396.14	Landing Point
19,677.78	8,976.70	11,181.32	-455.84	TD at 19677.78' MD

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

Tenaris

TenarisHydril Wedge 463®

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

Outside Diameter	7.827 in.	**Wall Thickness**	0.500 in.	**Grade**	P110-S
Min. Wall Thickness	87.50 %	**Pipe Body Drift**	Special Drift	**Type**	Casing
Connection OD Option	REGULAR				

Pipe Body Data

Geometry				Performance	
Nominal OD	7.827 in.	**Wall Thickness**	0.500 in.	**Body Yield Strength**	1266 x1000 lb
Nominal Weight	39.30 lb/ft	**Plain End Weight**	39.16 lb/ft	**Min. Internal Yield Pressure**	12,300 psi
Drift	6.750 in.	**OD Tolerance**	API	**SMYS**	110,000 psi
Nominal ID	6.827 in.			**Collapse Pressure**	10,490 psi

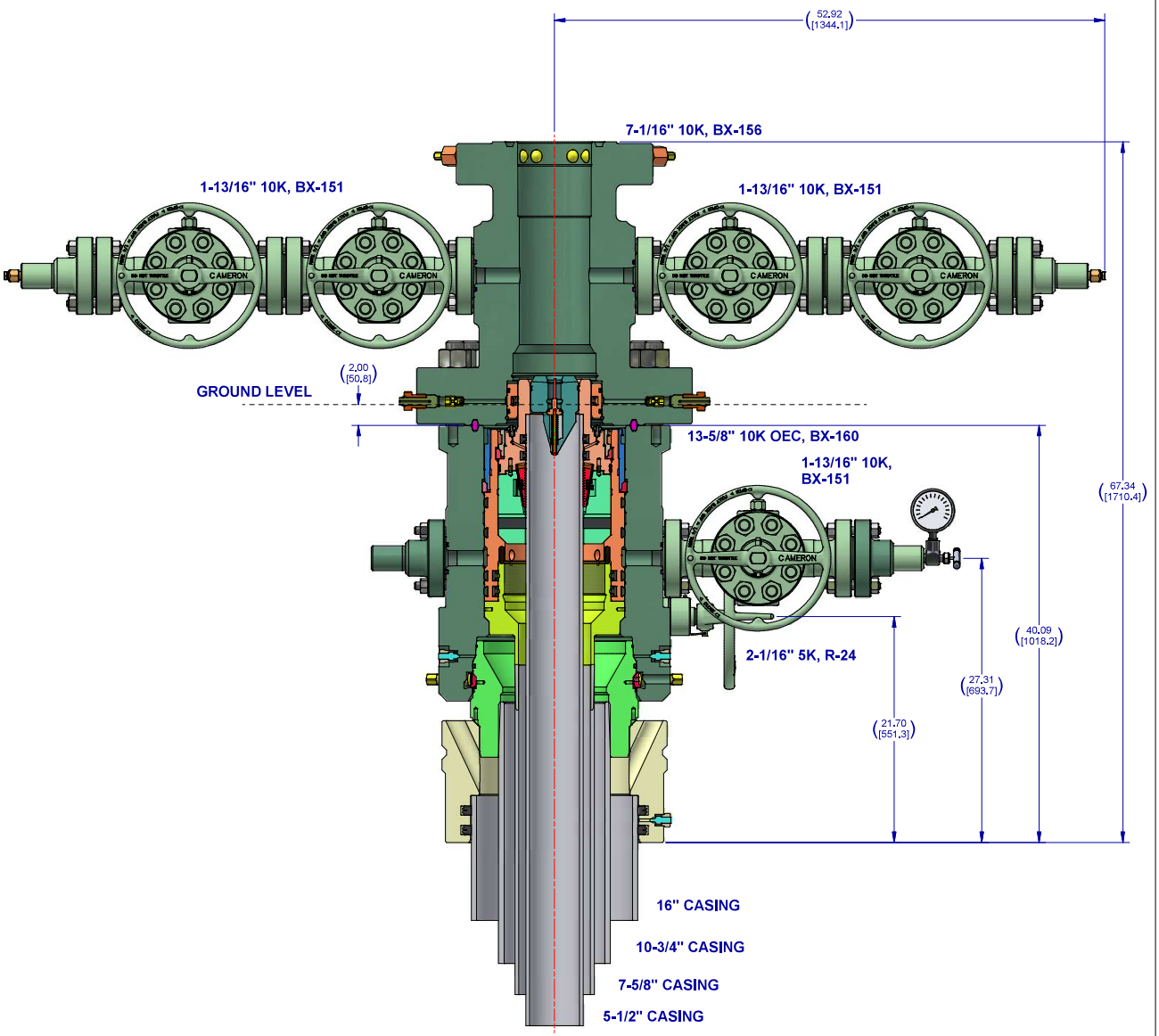
Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	8.500 in.	**Tension Efficiency**	100 %	**Minimum**	22,000 ft-lb
Coupling Length	10.950 in.	**Joint Yield Strength**	1266 x1000 lb	**Optimum**	23,000 ft-lb
Connection ID	6.814 in.	**Internal Pressure Capacity**	12,300 psi	**Maximum**	27,000 ft-lb
Make-up Loss	4.520 in.	**Compression Efficiency**	100 %		
Threads per inch	3.25	**Compression Strength**	1266 x1000 lb	**Operation Limit Torques**	
Connection OD Option	Regular	**Max. Allowable Bending**	64.42 °/100 ft	**Operating Torque**	61,000 ft-lb
		External Pressure Capacity	10,490 psi	**Yield Torque**	70,000 ft-lb
		Coupling Face Load	414,177 lb	**Buck-On**	
				Minimum	26,000 ft-lb
				Maximum	29,000 ft-lb

Notes

For the lastest performance data, always visit our website: www.tenaris.com
For further information on concepts indicated in this datasheet, download the Datasheet Manual from www.tenaris.com

PII/CII



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

Falcon SL1 Production Casing Annular Clearance Variance Request

If Production Casing Connection OD does not meet 0.422" annular clearance inside casing:

- Cement excess will be circulated from Top of Liner to surface (Cement Confirmation)
- Liner Top will be tested to confirm seal.
- If ICP in Bone Spring Pool and lateral landed in Wolfcamp Pool, a CBL will be ran.

OXY USA WTP LP

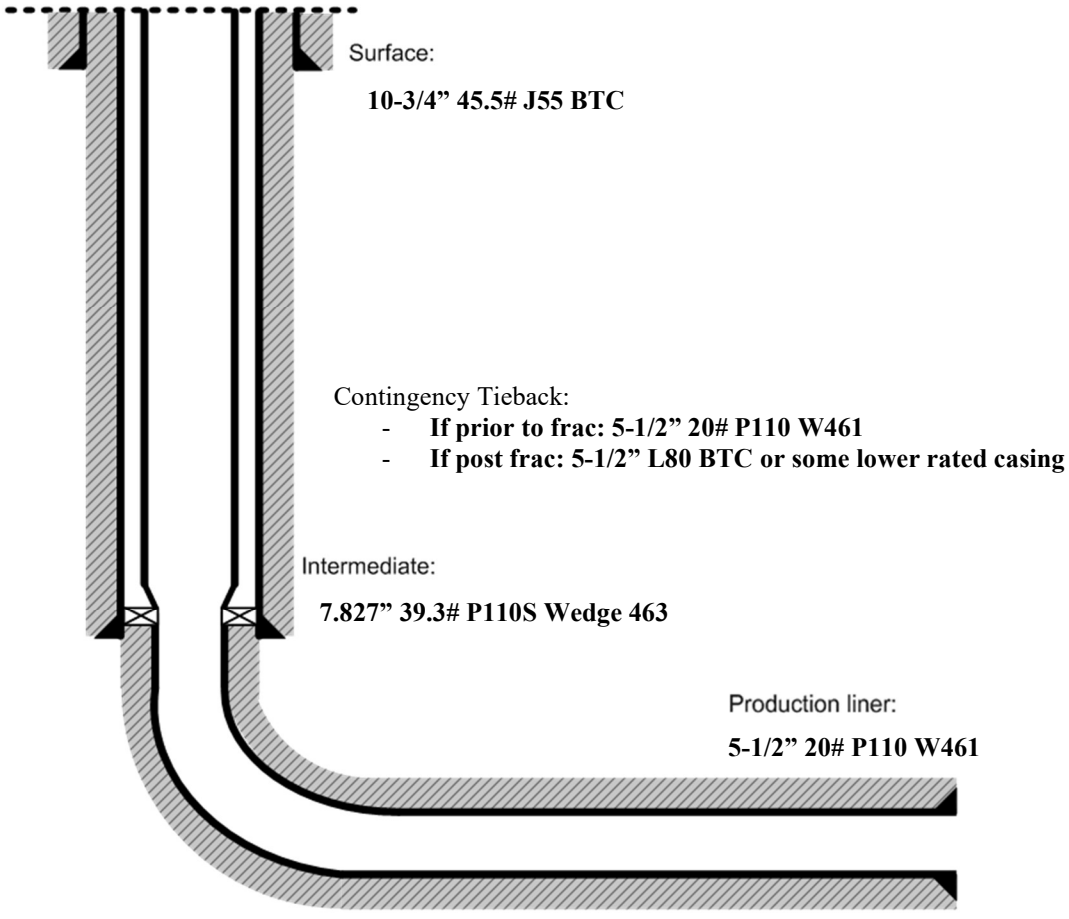
Falcon SL1 Contingnecy Tieback Details

Below is a summary that describes the general operational steps to drill and complete the well.

- Drill 14-3/4” hole x 10-3/4” casing for surface section. Cement to surface.
- Drill 9-7/8” hole x 7.827” casing for intermediate section. Cement to surface.
- Drill 6-3/4” hole x 5-1/2” liner for production section. Cement to top of liner, 100’ inside 7.827” shoe.
- Release drilling rig from location.

- If contingency tieback required pre-frac:
    - Move in workover rig and run a 5-1/2” 20# P110 Wedge 461 tie-back frac string and seal assembly. Tie into liner hanger Polished Bore Receptacle (PBR) with seal assembly.
    - Pump hydraulic fracture job.
    - Flowback and produce well.
- If contingency tieback required post-frac:
    - Move in workover rig and run a 5-1/2” L80 BTC or lesser rated tie-back string and seal assembly. Tie into liner hanger Polished Bore Receptacle (PBR) with seal assembly.
    - Return well to production.

General well schematic:



Offline Cementing Variance Request

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

1. Cement Program

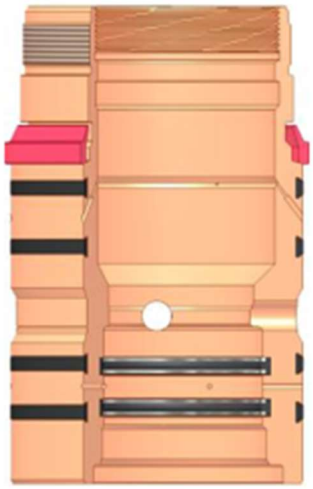
No changes to the cement program will take place for offline cementing.

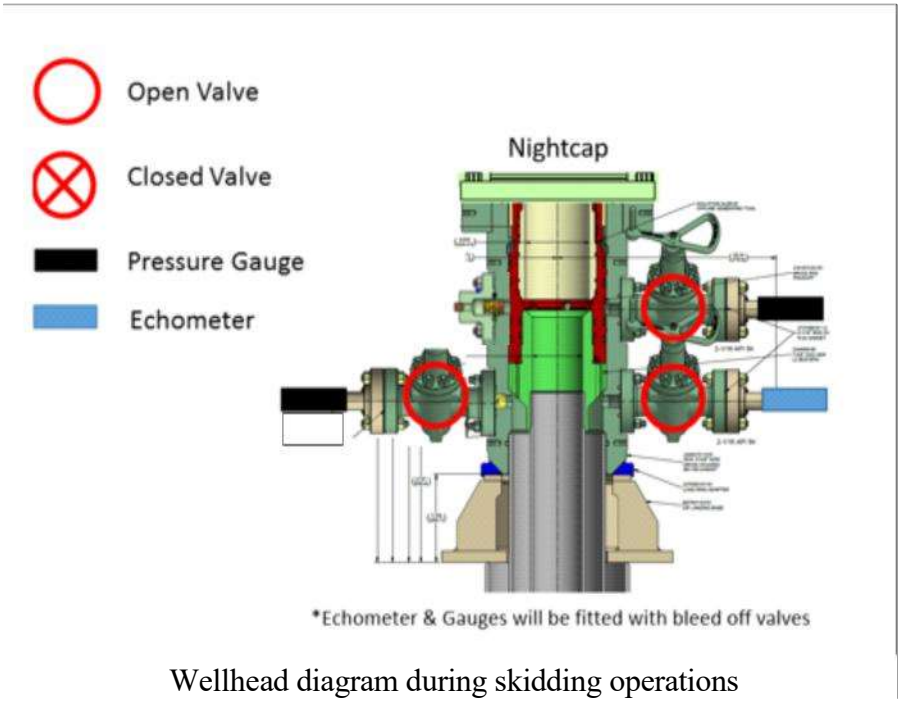
2. Offline Cementing Procedure

The operational sequence will be as follows:

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

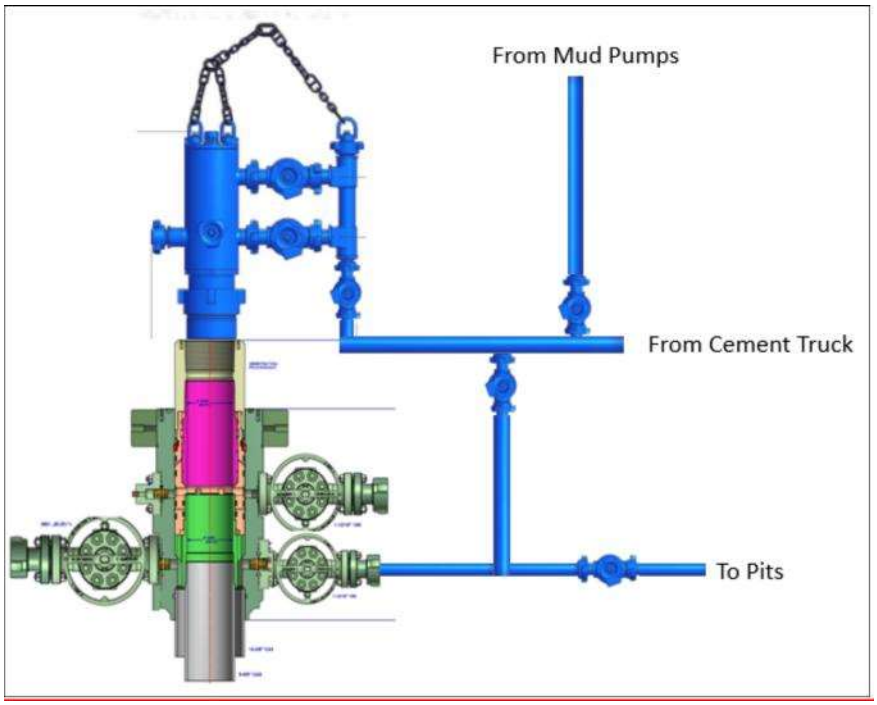
Annular packoff with both external and internal seals





Wellhead diagram during skidding operations

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



Wellhead diagram during offline cementing operations

10. Circulate bottoms up with cement truck
    a. If gas is present on bottoms up, well will be shut in and returns rerouted through gas buster to handle entrained gas
    b. Max anticipated time before circulating with cement truck is 6 hrs
11. Perform cement job taking returns from the annulus wellhead valve
12. Confirm well is static and floats are holding after cement job
13. Remove cement equipment, offline cement tools and install night cap with pressure gauge for monitoring.

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

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

CONDITIONS

Action 337868

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 337868
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing operations, then a CBL is required.	4/30/2024