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

Sundry Print Report

03/05/2022

Well Name: DEPTH CC 6-7 FEDERAL COM

Well Location: T23S / R29E / SEC 31 / SESE / 32.2542753 / -104.0187142

County or Parish/State: EDDY / NM

Well Number: 43H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM077018, NMNM13996

Unit or CA Name:

Unit or CA Number:

US Well Number: 3001546781

Well Status: Approved Application for Permit to Drill

Operator: OXY USA INCORPORATED

Notice of Intent

Sundry ID: 2387870

Type of Submission: Notice of Intent

Type of Action: Other

Date Sundry Submitted: 05/19/2021

Time Sundry Submitted: 09:46

Date proposed operation will begin: 08/01/2021

Procedure Description: OXY USA Inc. respectfully requests to amend the casing, cement, mud, BOP programs on the subject well approved APD. Also note the offline cementing variance, CBL variance, BOP break testing language, updated wellhead diagram, and the skid order in the revised drill plan attachments. 1/13/22- Directional Plan added to attachments.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

DepthCC6_7FdCom43H_DirectPlan_20220113090925.pdf

DepthCC6_7FederalCom43H_SFTORQ_20210519094549.pdf

DepthCC6_7FederalCom43H_DQW_20210519094534.pdf

DepthCC6_7FederalCom43H_BOP_20210519094517.pdf

DepthCC6_7FederalCom43H_BOPBreakSKID_20210519094507.pdf

DepthCC6_7FederalCom43H_DrillPlan_20210519094452.pdf

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Operator: OXY USA INCORPORATED

Conditions of Approval

Additional Reviews

Depth_CC_6_7_Federal_Com_43H_DrillingSundryCOA_2387870_20220217110411.pdf

Operator Certification

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 submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: LESLIE REEVES

Signed on: JAN 13, 2022 09:09 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

Representative Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: Cody Layton

BLM POC Title: Assistant Field Manager Lands & Minerals

BLM POC Phone: 5752345959

BLM POC Email Address: clayton@blm.gov

Disposition: Approved

Disposition Date: 03/04/2022

Signature: Chris Walls

Released to Imaging: 3/11/2022 7:54:50 AM

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INCORPORATED
LEASE NO.:	NMNM
LOCATION:	Section 6, T.24 S., R.29 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Depth CC 6-7 Federal COM / 43H
SURFACE HOLE FOOTAGE:	25'/S & 1074'/E
BOTTOM HOLE FOOTAGE	20'/S & 2260'/E

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	◉ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☑ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

ALL PREVIOUS COAs STILL APPLY.

A. CASING

Casing Design:

3. The minimum required fill of cement behind the **5-1/2 X 5** inch production casing is:

Option 1 (Single Stage):

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

B. PRESSURE CONTROL

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

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

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

C. SPECIAL REQUIREMENT (S)

BOPE Break Testing Variance

- BOPE Break Testing is ONLY permitted for 5M BOPE or less.
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required.
- The BLM is to be contacted **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at 21-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.

Oxy USA Inc. - Depth CC 6_7 Federal Com 43H
Drill Plan

1. Geologic Formations

TVD of Target (ft):	10880	Pilot Hole Depth (ft):	
Total Measured Depth (ft):	21814	Deepest Expected Fresh Water (ft):	106

Delaware Basin

Formation	MD-RKB (ft)	TVD-RKB (ft)	Expected Fluids
Rustler	106	106	
Salado	538	538	Salt
Castile	1305	1305	Salt
Delaware	2769	2769	Oil/Gas/Brine
Bell Canyon	2811	2811	Oil/Gas/Brine
Cherry Canyon	3679	3679	Oil/Gas/Brine
Brushy Canyon	4932	4914	Losses
Bone Spring	6552	6493	Oil/Gas
Bone Spring 1st	7571	7486	Oil/Gas
Bone Spring 2nd	8358	8253	Oil/Gas
Bone Spring 3rd	9488	9354	Oil/Gas
Wolfcamp	9857	9718	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	478	0	478	10.75	45.5	J-55	BTC
Intermediate	9.875	0	10426	0	10278	7.625	26.4	L-80 HC	BTC
Production	6.75	0	10976	0	10629	5.5	26	P-110 CYHP	TORQ SFW
Production	6.75	10976	21814	10629	10880	5	21.4	P-110 CYHP	TORQ DQW

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 the 7.625” Intermediate II as a contingency string to be run only if severe hole conditions dictate an additional casing string necessary.
*Oxy requests the option to run production casing with DQX, TORQ DQW and/or TORQ SFW connections to accommodate hole conditions or drilling operations.

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

Annular Clearance Variance Request

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

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

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

3. Cementing Program

Section	Stage	Slurry:	Capacities	ft^3/ft	Excess:	From	To	Sacks	Volume (ft^3)	Placement
Surface	1	Surface - Tail	OH x Csg	0.5563	100%	478	-	400	532	Circulate
Int.	1	Intermediate 1S - Tail	OH x Csg	0.2148	5%	10,426	5,182	717	1183	Circulate
Int.	2	Intermediate 2S - Tail BH	OH x Csg	0.2148	25%	5,182	478	658	1263	Bradenhead
Int.	2	Intermediate 2S - Tail BH	Csg x Csg	0.2338	0%	478	-	58	112	Bradenhead
Prod.	1	Production - Tail	OH x Csg2	0.2812	10%	21,814	10,976	2430	3353	Circulate
Prod.	1	Production - Tail	OH x Csg1	0.2526	10%	10,976	10,426	111	153	Circulate
Prod.	1	Production - Tail	Csg x Csg	0.0999	0%	10,426	9,926	36	50	Circulate

Description	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)	500psi Time (hh:mm)	Cmt. Class	Accelerator	Retarder	Dispersant	Salt
Surface - Tail	14.8	1.33	6.365	5:26	C	x			
Intermediate 1S - Tail	13.2	1.65	8.64	11:54	H	x	x	x	x
Intermediate 2S - Tail BH	12.9	1.92	10.41	23:10	C	x			
Production - Tail	13.2	1.38	6.686	3:39	H		x	x	x

Received by OCD: 3/5/2022 7:59:42 PM

Offline Cementing

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

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

The summarized operational sequence will be as follows:

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

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

Three string wells:

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

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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	10278
		3M	Blind Ram	✔	250 psi / 3000 psi	
			Pipe Ram			
			Double Ram	✔		
			Other*			
6.75" Hole	13-5/8"	5M	Annular	✔	70% of working pressure	10880
		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

	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. A separate sundry will be sent prior to spud that reflects the pad based break testing plan.

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.
- When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper.

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.

5. Mud Program

Section	Depth - MD		Depth - TVD		Type	Weight (ppg)	Viscosity	Water Loss
	From (ft)	To (ft)	From (ft)	To (ft)				
Surface	0	478	0	478	Water-Based Mud	8.6 - 8.8	40-60	N/C
Intermediate	478	10426	478	10278	Saturated Brine-Based or Oil-Based Mud	8.0 - 10.0	35-45	N/C
Production	10426	21814	10278	10880	Water-Based or Oil-Based Mud	9.5 - 13	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	
No	CBL	
Yes	Mud log	Bone Spring – TD
No	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7355 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	168°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 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 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: 1548 bbls

Attachments
_x__ Directional Plan
_x__ H2S Contingency Plan
_x__ Flex III Attachments
_x__ Spudder Rig Attachment

9. Company Personnel

Name	Title	Office Phone	Mobile Phone
Garrett Granier	Drilling Engineer	713-513-6633	832-265-0581
William Turner	Drilling Engineer Supervisor	713-350-4951	661-817-4586
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
Diego Tellez	Drilling Manager	713-350-4602	713-303-4932

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)
Depth CC 6-7
Depth CC 6_7 Federal Com 43H

Wellbore #1

Plan: Permitting Plan

Standard Planning Report

01 July, 2019

Oxy

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Depth CC 6_7 Federal Com 43H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 2984.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 2984.10ft
Site:	Depth CC 6-7	**North Reference:**	Grid
Well:	Depth CC 6_7 Federal Com 43H	**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 Depth CC 6-7

Site Position:		**Northing:**	456,207.91 usft	**Latitude:**	32° 15' 13.763924 N
From:	Map	**Easting:**	635,546.67 usft	**Longitude:**	104° 1' 42.884992 W
Position Uncertainty:	2.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.16 °

Well Depth CC 6_7 Federal Com 43H

Well Position	**+N/-S**	173.22 ft	**Northing:**	456,381.12 usft	**Latitude:**	32° 15' 15.390950 N
	+E/-W	3,049.36 ft	**Easting:**	638,595.78 usft	**Longitude:**	104° 1' 7.371055 W
Position Uncertainty		2.00 ft	**Wellhead Elevation:**	0.00 ft	**Ground Level:**	2,957.60 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/1/2019	7.03	59.98	47,900

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	186.08

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,815.00	0.00	0.00	3,815.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,465.12	13.00	295.37	4,459.55	31.47	-66.37	2.00	2.00	0.00	295.37	
9,427.94	13.00	295.37	9,295.13	509.89	-1,075.28	0.00	0.00	0.00	0.00	
10,525.71	13.00	179.72	10,378.04	438.46	-1,187.62	2.00	0.00	-10.54	-147.16	
11,292.55	89.68	179.72	10,822.10	-116.65	-1,184.87	10.00	10.00	0.00	0.00	FTP (Depth CC 6_7
21,813.86	89.68	179.72	10,880.10	-10,637.67	-1,132.60	0.00	0.00	0.00	0.00	PBHL (Depth CC

Oxy

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Depth CC 6_7 Federal Com 43H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 2984.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 2984.10ft
Site:	Depth CC 6-7	**North Reference:**	Grid
Well:	Depth CC 6_7 Federal Com 43H	**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
3,815.00	0.00	0.00	3,815.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	1.70	295.37	3,899.99	0.54	-1.14	-0.42	2.00	2.00	0.00
4,000.00	3.70	295.37	3,999.87	2.56	-5.40	-1.97	2.00	2.00	0.00
4,100.00	5.70	295.37	4,099.53	6.07	-12.80	-4.68	2.00	2.00	0.00
4,200.00	7.70	295.37	4,198.84	11.07	-23.34	-8.53	2.00	2.00	0.00
4,300.00	9.70	295.37	4,297.69	17.55	-37.01	-13.53	2.00	2.00	0.00
4,400.00	11.70	295.37	4,395.94	25.50	-53.78	-19.67	2.00	2.00	0.00
4,465.12	13.00	295.37	4,459.55	31.47	-66.37	-24.27	2.00	2.00	0.00
4,500.00	13.00	295.37	4,493.54	34.83	-73.46	-26.86	0.00	0.00	0.00
4,600.00	13.00	295.37	4,590.98	44.47	-93.79	-34.30	0.00	0.00	0.00
4,700.00	13.00	295.37	4,688.41	54.11	-114.12	-41.73	0.00	0.00	0.00
4,800.00	13.00	295.37	4,785.85	63.75	-134.45	-49.16	0.00	0.00	0.00
4,900.00	13.00	295.37	4,883.28	73.39	-154.78	-56.60	0.00	0.00	0.00
5,000.00	13.00	295.37	4,980.72	83.03	-175.11	-64.03	0.00	0.00	0.00
5,100.00	13.00	295.37	5,078.16	92.67	-195.43	-71.46	0.00	0.00	0.00

Oxy

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Depth CC 6_7 Federal Com 43H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 2984.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 2984.10ft
Site:	Depth CC 6-7	**North Reference:**	Grid
Well:	Depth CC 6_7 Federal Com 43H	**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)
5,200.00	13.00	295.37	5,175.59	102.31	-215.76	-78.90	0.00	0.00	0.00
5,300.00	13.00	295.37	5,273.03	111.95	-236.09	-86.33	0.00	0.00	0.00
5,400.00	13.00	295.37	5,370.46	121.59	-256.42	-93.77	0.00	0.00	0.00
5,500.00	13.00	295.37	5,467.90	131.23	-276.75	-101.20	0.00	0.00	0.00
5,600.00	13.00	295.37	5,565.34	140.87	-297.08	-108.63	0.00	0.00	0.00
5,700.00	13.00	295.37	5,662.77	150.51	-317.41	-116.07	0.00	0.00	0.00
5,800.00	13.00	295.37	5,760.21	160.16	-337.74	-123.50	0.00	0.00	0.00
5,900.00	13.00	295.37	5,857.64	169.80	-358.07	-130.93	0.00	0.00	0.00
6,000.00	13.00	295.37	5,955.08	179.44	-378.40	-138.37	0.00	0.00	0.00
6,100.00	13.00	295.37	6,052.52	189.08	-398.73	-145.80	0.00	0.00	0.00
6,200.00	13.00	295.37	6,149.95	198.72	-419.06	-153.24	0.00	0.00	0.00
6,300.00	13.00	295.37	6,247.39	208.36	-439.39	-160.67	0.00	0.00	0.00
6,400.00	13.00	295.37	6,344.83	218.00	-459.72	-168.10	0.00	0.00	0.00
6,500.00	13.00	295.37	6,442.26	227.64	-480.05	-175.54	0.00	0.00	0.00
6,600.00	13.00	295.37	6,539.70	237.28	-500.37	-182.97	0.00	0.00	0.00
6,700.00	13.00	295.37	6,637.13	246.92	-520.70	-190.41	0.00	0.00	0.00
6,800.00	13.00	295.37	6,734.57	256.56	-541.03	-197.84	0.00	0.00	0.00
6,900.00	13.00	295.37	6,832.01	266.20	-561.36	-205.27	0.00	0.00	0.00
7,000.00	13.00	295.37	6,929.44	275.84	-581.69	-212.71	0.00	0.00	0.00
7,100.00	13.00	295.37	7,026.88	285.48	-602.02	-220.14	0.00	0.00	0.00
7,200.00	13.00	295.37	7,124.31	295.12	-622.35	-227.57	0.00	0.00	0.00
7,300.00	13.00	295.37	7,221.75	304.76	-642.68	-235.01	0.00	0.00	0.00
7,400.00	13.00	295.37	7,319.19	314.40	-663.01	-242.44	0.00	0.00	0.00
7,500.00	13.00	295.37	7,416.62	324.04	-683.34	-249.88	0.00	0.00	0.00
7,600.00	13.00	295.37	7,514.06	333.68	-703.67	-257.31	0.00	0.00	0.00
7,700.00	13.00	295.37	7,611.49	343.32	-724.00	-264.74	0.00	0.00	0.00
7,800.00	13.00	295.37	7,708.93	352.96	-744.33	-272.18	0.00	0.00	0.00
7,900.00	13.00	295.37	7,806.37	362.60	-764.66	-279.61	0.00	0.00	0.00
8,000.00	13.00	295.37	7,903.80	372.24	-784.99	-287.04	0.00	0.00	0.00
8,100.00	13.00	295.37	8,001.24	381.88	-805.31	-294.48	0.00	0.00	0.00
8,200.00	13.00	295.37	8,098.67	391.52	-825.64	-301.91	0.00	0.00	0.00
8,300.00	13.00	295.37	8,196.11	401.16	-845.97	-309.35	0.00	0.00	0.00
8,400.00	13.00	295.37	8,293.55	410.80	-866.30	-316.78	0.00	0.00	0.00
8,500.00	13.00	295.37	8,390.98	420.44	-886.63	-324.21	0.00	0.00	0.00
8,600.00	13.00	295.37	8,488.42	430.08	-906.96	-331.65	0.00	0.00	0.00
8,700.00	13.00	295.37	8,585.85	439.72	-927.29	-339.08	0.00	0.00	0.00
8,800.00	13.00	295.37	8,683.29	449.36	-947.62	-346.51	0.00	0.00	0.00
8,900.00	13.00	295.37	8,780.73	459.00	-967.95	-353.95	0.00	0.00	0.00
9,000.00	13.00	295.37	8,878.16	468.64	-988.28	-361.38	0.00	0.00	0.00
9,100.00	13.00	295.37	8,975.60	478.28	-1,008.61	-368.82	0.00	0.00	0.00
9,200.00	13.00	295.37	9,073.04	487.92	-1,028.94	-376.25	0.00	0.00	0.00
9,300.00	13.00	295.37	9,170.47	497.56	-1,049.27	-383.68	0.00	0.00	0.00
9,400.00	13.00	295.37	9,267.91	507.20	-1,069.60	-391.12	0.00	0.00	0.00
9,427.94	13.00	295.37	9,295.13	509.89	-1,075.28	-393.19	0.00	0.00	0.00
9,500.00	11.82	291.55	9,365.51	516.08	-1,089.46	-397.84	2.00	-1.65	-5.30
9,600.00	10.28	284.86	9,463.65	522.13	-1,107.61	-401.94	2.00	-1.54	-6.69
9,700.00	8.92	276.01	9,562.26	525.23	-1,123.95	-403.29	2.00	-1.36	-8.85
9,800.00	7.85	264.41	9,661.19	525.37	-1,138.46	-401.90	2.00	-1.08	-11.60
9,900.00	7.17	249.95	9,760.34	522.57	-1,151.12	-397.77	2.00	-0.67	-14.46
10,000.00	7.02	233.76	9,859.59	516.81	-1,161.92	-390.90	2.00	-0.15	-16.19
10,100.00	7.43	218.13	9,958.80	508.11	-1,170.84	-381.31	2.00	0.40	-15.63
10,200.00	8.30	204.94	10,057.87	496.48	-1,177.88	-368.99	2.00	0.88	-13.19
10,300.00	9.52	194.67	10,156.67	481.93	-1,183.02	-353.98	2.00	1.22	-10.27
10,400.00	10.97	186.90	10,255.07	464.48	-1,186.26	-336.29	2.00	1.45	-7.77

Oxy

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Depth CC 6_7 Federal Com 43H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 2984.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 2984.10ft
Site:	Depth CC 6-7	**North Reference:**	Grid
Well:	Depth CC 6_7 Federal Com 43H	**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)
10,500.00	12.57	181.00	10,352.97	444.15	-1,187.59	-315.93	2.00	1.60	-5.90
10,525.71	13.00	179.72	10,378.04	438.46	-1,187.62	-310.27	2.00	1.67	-4.98
10,600.00	20.43	179.72	10,449.14	417.11	-1,187.52	-289.05	10.00	10.00	0.00
10,700.00	30.43	179.72	10,539.34	374.22	-1,187.31	-246.43	10.00	10.00	0.00
10,800.00	40.43	179.72	10,620.72	316.32	-1,187.02	-188.89	10.00	10.00	0.00
10,900.00	50.43	179.72	10,690.81	245.18	-1,186.66	-118.18	10.00	10.00	0.00
11,000.00	60.43	179.72	10,747.48	162.94	-1,186.26	-36.44	10.00	10.00	0.00
11,100.00	70.43	179.72	10,789.01	72.11	-1,185.80	53.83	10.00	10.00	0.00
11,200.00	80.43	179.72	10,814.13	-24.55	-1,185.32	149.89	10.00	10.00	0.00
11,292.55	89.68	179.72	10,822.10	-116.65	-1,184.87	241.43	10.00	10.00	0.00
11,300.00	89.68	179.72	10,822.14	-124.10	-1,184.83	248.84	0.00	0.00	0.00
11,400.00	89.68	179.72	10,822.69	-224.10	-1,184.33	348.22	0.00	0.00	0.00
11,500.00	89.68	179.72	10,823.24	-324.10	-1,183.84	447.60	0.00	0.00	0.00
11,600.00	89.68	179.72	10,823.80	-424.09	-1,183.34	546.98	0.00	0.00	0.00
11,700.00	89.68	179.72	10,824.35	-524.09	-1,182.84	646.37	0.00	0.00	0.00
11,800.00	89.68	179.72	10,824.90	-624.09	-1,182.35	745.75	0.00	0.00	0.00
11,900.00	89.68	179.72	10,825.45	-724.09	-1,181.85	845.13	0.00	0.00	0.00
12,000.00	89.68	179.72	10,826.00	-824.08	-1,181.35	944.51	0.00	0.00	0.00
12,100.00	89.68	179.72	10,826.55	-924.08	-1,180.86	1,043.90	0.00	0.00	0.00
12,200.00	89.68	179.72	10,827.10	-1,024.08	-1,180.36	1,143.28	0.00	0.00	0.00
12,300.00	89.68	179.72	10,827.65	-1,124.08	-1,179.86	1,242.66	0.00	0.00	0.00
12,400.00	89.68	179.72	10,828.21	-1,224.07	-1,179.37	1,342.05	0.00	0.00	0.00
12,500.00	89.68	179.72	10,828.76	-1,324.07	-1,178.87	1,441.43	0.00	0.00	0.00
12,600.00	89.68	179.72	10,829.31	-1,424.07	-1,178.37	1,540.81	0.00	0.00	0.00
12,700.00	89.68	179.72	10,829.86	-1,524.06	-1,177.88	1,640.19	0.00	0.00	0.00
12,800.00	89.68	179.72	10,830.41	-1,624.06	-1,177.38	1,739.58	0.00	0.00	0.00
12,900.00	89.68	179.72	10,830.96	-1,724.06	-1,176.88	1,838.96	0.00	0.00	0.00
13,000.00	89.68	179.72	10,831.51	-1,824.06	-1,176.39	1,938.34	0.00	0.00	0.00
13,100.00	89.68	179.72	10,832.06	-1,924.05	-1,175.89	2,037.72	0.00	0.00	0.00
13,200.00	89.68	179.72	10,832.62	-2,024.05	-1,175.39	2,137.11	0.00	0.00	0.00
13,300.00	89.68	179.72	10,833.17	-2,124.05	-1,174.90	2,236.49	0.00	0.00	0.00
13,400.00	89.68	179.72	10,833.72	-2,224.04	-1,174.40	2,335.87	0.00	0.00	0.00
13,500.00	89.68	179.72	10,834.27	-2,324.04	-1,173.90	2,435.26	0.00	0.00	0.00
13,600.00	89.68	179.72	10,834.82	-2,424.04	-1,173.41	2,534.64	0.00	0.00	0.00
13,700.00	89.68	179.72	10,835.37	-2,524.04	-1,172.91	2,634.02	0.00	0.00	0.00
13,800.00	89.68	179.72	10,835.92	-2,624.03	-1,172.41	2,733.40	0.00	0.00	0.00
13,900.00	89.68	179.72	10,836.47	-2,724.03	-1,171.91	2,832.79	0.00	0.00	0.00
14,000.00	89.68	179.72	10,837.03	-2,824.03	-1,171.42	2,932.17	0.00	0.00	0.00
14,100.00	89.68	179.72	10,837.58	-2,924.03	-1,170.92	3,031.55	0.00	0.00	0.00
14,200.00	89.68	179.72	10,838.13	-3,024.02	-1,170.42	3,130.94	0.00	0.00	0.00
14,300.00	89.68	179.72	10,838.68	-3,124.02	-1,169.93	3,230.32	0.00	0.00	0.00
14,400.00	89.68	179.72	10,839.23	-3,224.02	-1,169.43	3,329.70	0.00	0.00	0.00
14,500.00	89.68	179.72	10,839.78	-3,324.01	-1,168.93	3,429.08	0.00	0.00	0.00
14,600.00	89.68	179.72	10,840.33	-3,424.01	-1,168.44	3,528.47	0.00	0.00	0.00
14,700.00	89.68	179.72	10,840.88	-3,524.01	-1,167.94	3,627.85	0.00	0.00	0.00
14,800.00	89.68	179.72	10,841.44	-3,624.01	-1,167.44	3,727.23	0.00	0.00	0.00
14,900.00	89.68	179.72	10,841.99	-3,724.00	-1,166.95	3,826.61	0.00	0.00	0.00
15,000.00	89.68	179.72	10,842.54	-3,824.00	-1,166.45	3,926.00	0.00	0.00	0.00
15,100.00	89.68	179.72	10,843.09	-3,924.00	-1,165.95	4,025.38	0.00	0.00	0.00
15,200.00	89.68	179.72	10,843.64	-4,024.00	-1,165.46	4,124.76	0.00	0.00	0.00
15,300.00	89.68	179.72	10,844.19	-4,123.99	-1,164.96	4,224.15	0.00	0.00	0.00
15,400.00	89.68	179.72	10,844.74	-4,223.99	-1,164.46	4,323.53	0.00	0.00	0.00
15,500.00	89.68	179.72	10,845.29	-4,323.99	-1,163.97	4,422.91	0.00	0.00	0.00
15,600.00	89.68	179.72	10,845.85	-4,423.98	-1,163.47	4,522.29	0.00	0.00	0.00

Oxy

Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Depth CC 6_7 Federal Com 43H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 2984.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 2984.10ft
Site:	Depth CC 6-7	**North Reference:**	Grid
Well:	Depth CC 6_7 Federal Com 43H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15,700.00	89.68	179.72	10,846.40	-4,523.98	-1,162.97	4,621.68	0.00	0.00	0.00
15,800.00	89.68	179.72	10,846.95	-4,623.98	-1,162.48	4,721.06	0.00	0.00	0.00
15,900.00	89.68	179.72	10,847.50	-4,723.98	-1,161.98	4,820.44	0.00	0.00	0.00
16,000.00	89.68	179.72	10,848.05	-4,823.97	-1,161.48	4,919.82	0.00	0.00	0.00
16,100.00	89.68	179.72	10,848.60	-4,923.97	-1,160.99	5,019.21	0.00	0.00	0.00
16,200.00	89.68	179.72	10,849.15	-5,023.97	-1,160.49	5,118.59	0.00	0.00	0.00
16,300.00	89.68	179.72	10,849.70	-5,123.97	-1,159.99	5,217.97	0.00	0.00	0.00
16,400.00	89.68	179.72	10,850.26	-5,223.96	-1,159.50	5,317.36	0.00	0.00	0.00
16,500.00	89.68	179.72	10,850.81	-5,323.96	-1,159.00	5,416.74	0.00	0.00	0.00
16,600.00	89.68	179.72	10,851.36	-5,423.96	-1,158.50	5,516.12	0.00	0.00	0.00
16,700.00	89.68	179.72	10,851.91	-5,523.95	-1,158.01	5,615.50	0.00	0.00	0.00
16,800.00	89.68	179.72	10,852.46	-5,623.95	-1,157.51	5,714.89	0.00	0.00	0.00
16,900.00	89.68	179.72	10,853.01	-5,723.95	-1,157.01	5,814.27	0.00	0.00	0.00
17,000.00	89.68	179.72	10,853.56	-5,823.95	-1,156.52	5,913.65	0.00	0.00	0.00
17,100.00	89.68	179.72	10,854.11	-5,923.94	-1,156.02	6,013.03	0.00	0.00	0.00
17,200.00	89.68	179.72	10,854.67	-6,023.94	-1,155.52	6,112.42	0.00	0.00	0.00
17,300.00	89.68	179.72	10,855.22	-6,123.94	-1,155.03	6,211.80	0.00	0.00	0.00
17,400.00	89.68	179.72	10,855.77	-6,223.93	-1,154.53	6,311.18	0.00	0.00	0.00
17,500.00	89.68	179.72	10,856.32	-6,323.93	-1,154.03	6,410.57	0.00	0.00	0.00
17,600.00	89.68	179.72	10,856.87	-6,423.93	-1,153.54	6,509.95	0.00	0.00	0.00
17,700.00	89.68	179.72	10,857.42	-6,523.93	-1,153.04	6,609.33	0.00	0.00	0.00
17,800.00	89.68	179.72	10,857.97	-6,623.92	-1,152.54	6,708.71	0.00	0.00	0.00
17,900.00	89.68	179.72	10,858.52	-6,723.92	-1,152.04	6,808.10	0.00	0.00	0.00
18,000.00	89.68	179.72	10,859.08	-6,823.92	-1,151.55	6,907.48	0.00	0.00	0.00
18,100.00	89.68	179.72	10,859.63	-6,923.92	-1,151.05	7,006.86	0.00	0.00	0.00
18,200.00	89.68	179.72	10,860.18	-7,023.91	-1,150.55	7,106.24	0.00	0.00	0.00
18,300.00	89.68	179.72	10,860.73	-7,123.91	-1,150.06	7,205.63	0.00	0.00	0.00
18,400.00	89.68	179.72	10,861.28	-7,223.91	-1,149.56	7,305.01	0.00	0.00	0.00
18,500.00	89.68	179.72	10,861.83	-7,323.90	-1,149.06	7,404.39	0.00	0.00	0.00
18,600.00	89.68	179.72	10,862.38	-7,423.90	-1,148.57	7,503.78	0.00	0.00	0.00
18,700.00	89.68	179.72	10,862.93	-7,523.90	-1,148.07	7,603.16	0.00	0.00	0.00
18,800.00	89.68	179.72	10,863.49	-7,623.90	-1,147.57	7,702.54	0.00	0.00	0.00
18,900.00	89.68	179.72	10,864.04	-7,723.89	-1,147.08	7,801.92	0.00	0.00	0.00
19,000.00	89.68	179.72	10,864.59	-7,823.89	-1,146.58	7,901.31	0.00	0.00	0.00
19,100.00	89.68	179.72	10,865.14	-7,923.89	-1,146.08	8,000.69	0.00	0.00	0.00
19,200.00	89.68	179.72	10,865.69	-8,023.89	-1,145.59	8,100.07	0.00	0.00	0.00
19,300.00	89.68	179.72	10,866.24	-8,123.88	-1,145.09	8,199.46	0.00	0.00	0.00
19,400.00	89.68	179.72	10,866.79	-8,223.88	-1,144.59	8,298.84	0.00	0.00	0.00
19,500.00	89.68	179.72	10,867.34	-8,323.88	-1,144.10	8,398.22	0.00	0.00	0.00
19,600.00	89.68	179.72	10,867.90	-8,423.87	-1,143.60	8,497.60	0.00	0.00	0.00
19,700.00	89.68	179.72	10,868.45	-8,523.87	-1,143.10	8,596.99	0.00	0.00	0.00
19,800.00	89.68	179.72	10,869.00	-8,623.87	-1,142.61	8,696.37	0.00	0.00	0.00
19,900.00	89.68	179.72	10,869.55	-8,723.87	-1,142.11	8,795.75	0.00	0.00	0.00
20,000.00	89.68	179.72	10,870.10	-8,823.86	-1,141.61	8,895.13	0.00	0.00	0.00
20,100.00	89.68	179.72	10,870.65	-8,923.86	-1,141.12	8,994.52	0.00	0.00	0.00
20,200.00	89.68	179.72	10,871.20	-9,023.86	-1,140.62	9,093.90	0.00	0.00	0.00
20,300.00	89.68	179.72	10,871.75	-9,123.86	-1,140.12	9,193.28	0.00	0.00	0.00
20,400.00	89.68	179.72	10,872.31	-9,223.85	-1,139.63	9,292.67	0.00	0.00	0.00
20,500.00	89.68	179.72	10,872.86	-9,323.85	-1,139.13	9,392.05	0.00	0.00	0.00
20,600.00	89.68	179.72	10,873.41	-9,423.85	-1,138.63	9,491.43	0.00	0.00	0.00
20,700.00	89.68	179.72	10,873.96	-9,523.84	-1,138.14	9,590.81	0.00	0.00	0.00
20,800.00	89.68	179.72	10,874.51	-9,623.84	-1,137.64	9,690.20	0.00	0.00	0.00
20,900.00	89.68	179.72	10,875.06	-9,723.84	-1,137.14	9,789.58	0.00	0.00	0.00
21,000.00	89.68	179.72	10,875.61	-9,823.84	-1,136.65	9,888.96	0.00	0.00	0.00

Oxy
Planning Report

Database:	HOPSPP	**Local Co-ordinate Reference:**	Well Depth CC 6_7 Federal Com 43H
Company:	ENGINEERING DESIGNS	**TVD Reference:**	RKB=26.5' @ 2984.10ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	**MD Reference:**	RKB=26.5' @ 2984.10ft
Site:	Depth CC 6-7	**North Reference:**	Grid
Well:	Depth CC 6_7 Federal Com 43H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permitting Plan		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21,100.00	89.68	179.72	10,876.17	-9,923.83	-1,136.15	9,988.34	0.00	0.00	0.00
21,200.00	89.68	179.72	10,876.72	-10,023.83	-1,135.65	10,087.73	0.00	0.00	0.00
21,300.00	89.68	179.72	10,877.27	-10,123.83	-1,135.16	10,187.11	0.00	0.00	0.00
21,400.00	89.68	179.72	10,877.82	-10,223.82	-1,134.66	10,286.49	0.00	0.00	0.00
21,500.00	89.68	179.72	10,878.37	-10,323.82	-1,134.16	10,385.88	0.00	0.00	0.00
21,600.00	89.68	179.72	10,878.92	-10,423.82	-1,133.67	10,485.26	0.00	0.00	0.00
21,700.00	89.68	179.72	10,879.47	-10,523.82	-1,133.17	10,584.64	0.00	0.00	0.00
21,800.00	89.68	179.72	10,880.02	-10,623.81	-1,132.67	10,684.02	0.00	0.00	0.00
21,813.86	89.68	179.72	10,880.10	-10,637.67	-1,132.60	10,697.80	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Depth CC 6_7 - plan hits target center - Point	0.00	0.00	10,822.10	-116.65	-1,184.87	456,264.48	637,411.01	32° 15' 14.270845 N	104° 1' 21.172143
PBHL (Depth CC 6_7 - plan hits target center - Point	0.00	0.00	10,880.10	-10,637.67	-1,132.60	445,744.32	637,463.27	32° 13' 30.162953 N	104° 1' 20.918139

Plan Annotations

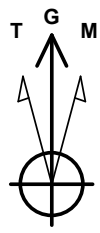
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
3,815.00	3,815.00	0.00	0.00	Build 2.00°/100'
4,465.12	4,459.55	31.47	-66.37	Hold 13.00° Tangent
9,427.94	9,295.13	509.89	-1,075.28	Turn 2.00°/100'
10,525.71	10,378.04	438.46	-1,187.62	KOP, Build 10.00°/100'
11,292.55	10,822.10	-116.65	-1,184.87	Landing Point
21,813.86	10,880.10	-10,637.67	-1,132.60	TD at 21813.86' MD

Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
Site: Depth CC 6-7
Well: Depth CC 6_7 Federal Com 43H
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



Azimuths to Grid North
True North: -0.17°
Magnetic North: 6.87°

Magnetic Field
Strength: 47900.3snT
Dip Angle: 59.98°
Date: 7/1/2019
Model: HDGM

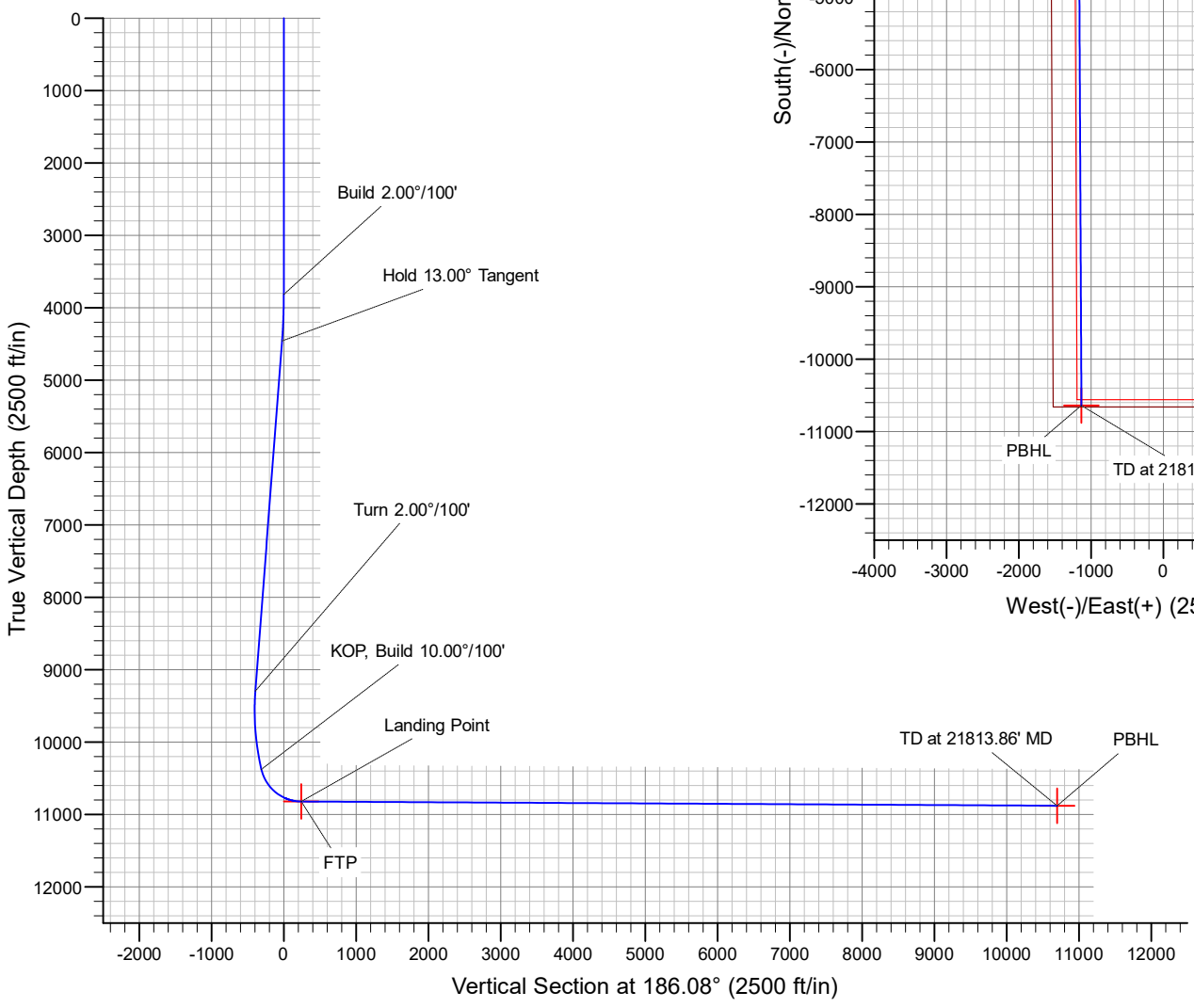
WELL DETAILS: Depth CC 6_7 Federal Com 43H

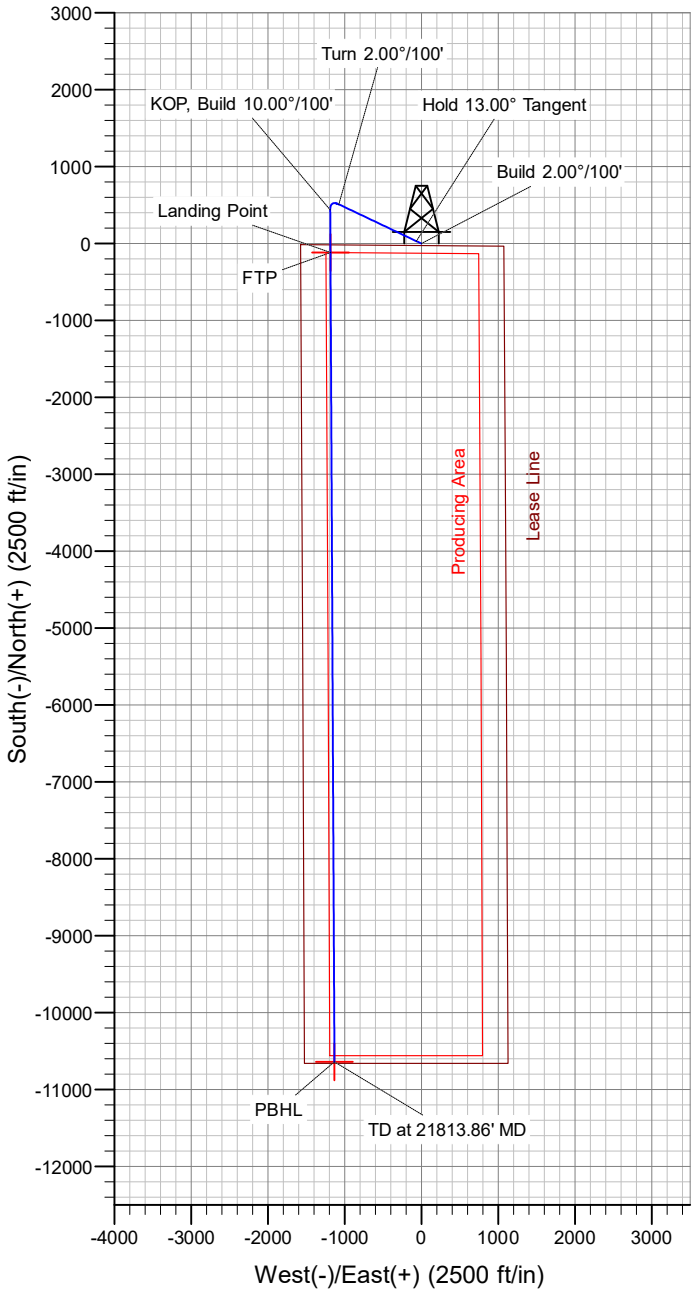
Ground Level: 2957.60

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	456381.12	638595.78	32° 15' 15.390950 N	104° 1' 7.371055 W

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	
3815.00	0.00	0.00	3815.00	0.00	0.00	0.00	0.00	0.00	Build 2.00°/100'
4465.12	13.00	295.37	4459.55	31.47	-66.37	2.00	295.37	-24.27	Hold 13.00° Tangent
9427.94	13.00	295.37	9295.13	509.89	-1075.28	0.00	0.00	-393.19	Turn 2.00°/100'
10525.71	13.00	179.72	10378.04	438.46	-1187.62	2.00	-147.16	-310.27	KOP, Build 10.00°/100'
11292.55	89.68	179.72	10822.10	-116.65	-1184.87	10.00	0.00	241.43	Landing Point
21813.86	89.68	179.72	10880.10	-10637.67	-1132.60	0.00	0.00	10697.80	TD at 21813.86' MD



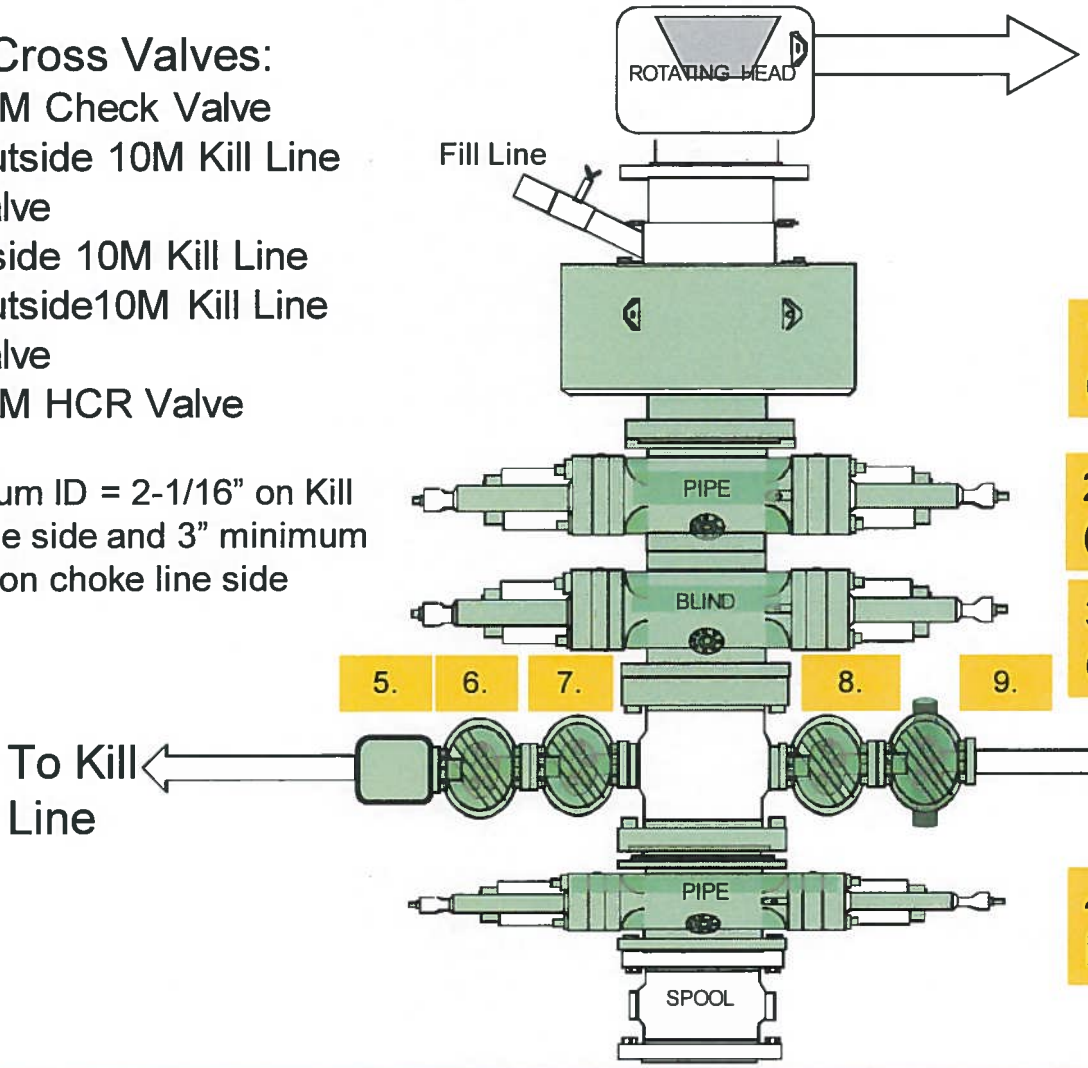


5/10M BOP Stack

Mud Cross Valves:

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

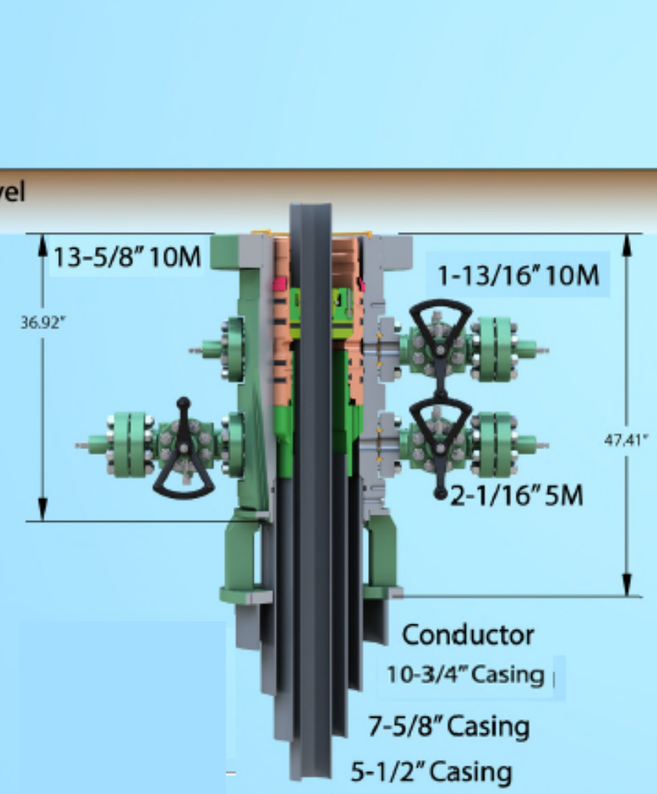
*Minimum ID = 2-1/16" on Kill Line side and 3" minimum ID on choke line side



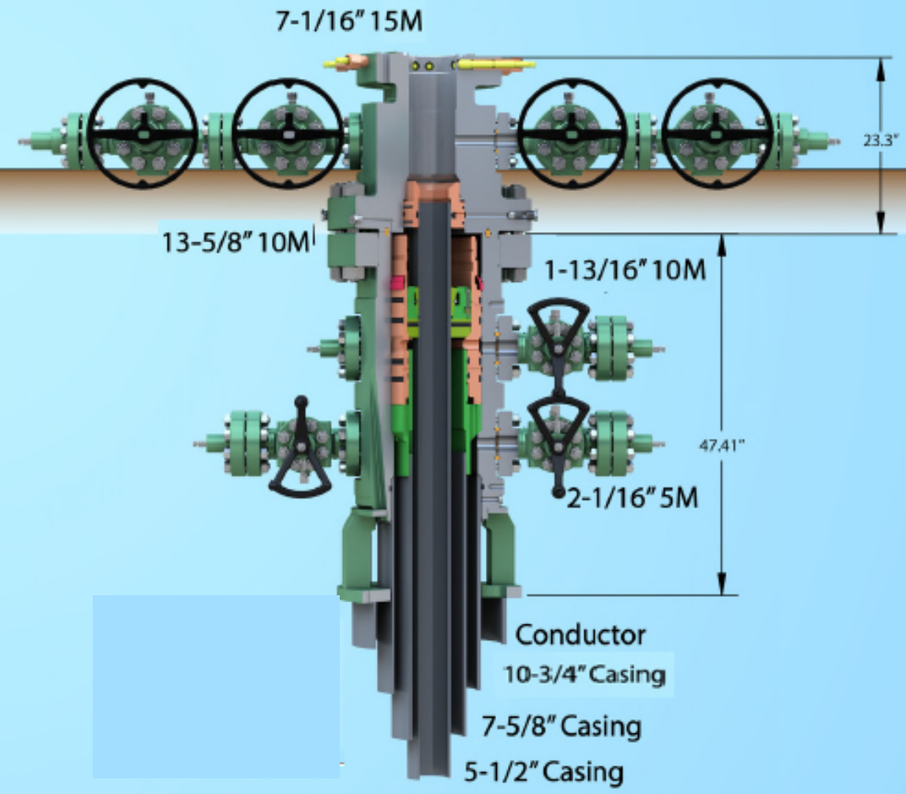
1. 5,000 psi Annular (13-5/8" ID)
2. 10,000 psi Upper Pipe Ram (13-5/8" ID)
3. 10,000 psi Blind Ram (13-5/8" ID)
4. 10,000 psi Lower Pipe Ram (13-5/8" ID)

CAMERON
A Schlumberger Company

13-5/8" 10M MN-DS Wellhead System
Slips



NOTE: All dimensions on this drawing are estimated measurements determined by master quote and may vary by components used in the field.



NOTE: All dimensions on this drawing are estimated measurements determined by master quote and may vary by components used in the field.

OXY

2017-192-01 Rev02

Oxy USA Inc. – Depth 41H/42H/43H/44H, Radius 51H/52H Break Test Sundry

Oxy requests permission to Break Test, as per the agreement reached in the OXY/BLM meeting on September 5, 2019.

API #	Well Name
30-015-46777	Depth CC 6_7 Federal Com 41H
30-015-46780	Depth CC 6_7 Federal Com 42H
30-015-46781	Depth CC 6_7 Federal Com 43H
30-015-46779	Depth CC 6_7 Federal Com 44H
30-015-46825	Radius CC 6_7 Federal Com 51H
30-015-46826	Radius CC 6_7 Federal Com 51H

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.
- When skidding to drill a production section that does not penetrate into the third Bone Spring or deeper.

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

Depth 43H/44H	
PRIMARY SKID ORDER	
Step	**Operation**
1	RU on Depth 43H
2	Full BOP Test
3	Drill 9-7/8" Deep Intermediate on Depth 43H
4	Skid to Depth 44H
5	Full BOP Test
6	Drill 9-7/8" Deep Intermediate and 6-3/4” Curve/Lateral on Depth 44H
7	Skid to Depth 43H
8	Full BOP Test
9	Drill 6-3/4" Curve/Lateral on Depth 43H
10	Rig Down on Depth 43H
	NOTE: No opportunity to Break Test per Variance Rules

Oxy USA Inc. – Depth 41H/42H/43H/44H, Radius 51H/52H Break Test Sundry

Depth 41H/42H, Radius 51H/52H	
PRIMARY SKID ORDER	
Step	**Operation**
1	RU on Radius 52H
2	Full BOP Test
3	Drill 9-7/8" Deep Intermediate on Radius 52H
4	Skid to Depth 42H
5	Full BOP Test
6	Drill 9-7/8" Deep Intermediate on Depth 42H
7	Skid to Radius 51H
8	Full BOP Test
9	Drill 9-7/8" Deep Intermediate on Radius 51H
10	Skid to Depth 41H
11	Full BOP Test
12	Drill 9-7/8" Deep Intermediate and 6-3/4” Pilot on Depth 41H
13	Plugback Pilot Hole/Full BOP Test (if needed)
14	Sidetrack/Drill 6-3/4" Curve/Lateral on Depth 41H
15	Skid to Radius 51H
16	Full BOP Test
17	Drill 6-3/4" Curve/Lateral on Radius 51H
18	Skid to Depth 42H
19	Full BOP Test
20	Drill 6-3/4" Curve/Lateral on Depth 42H
21	Skid to Radius 52H
22	Full BOP Test
23	Drill 6-3/4" Curve/Lateral on Radius 52H
24	Rig Down on Radius 52H
	NOTE: No opportunity to Break Test per Variance Rules

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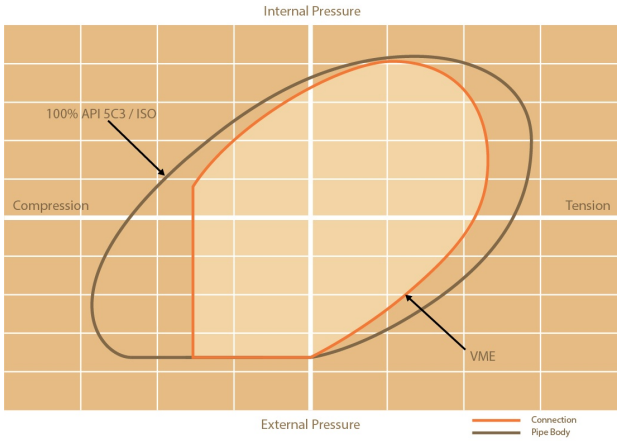
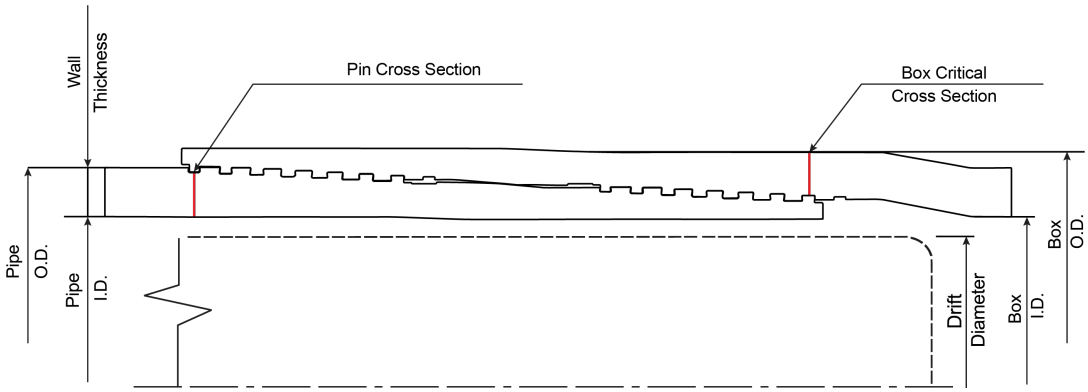
TUBULAR PARAMETERS	
Nominal OD, (inch)	5.500
Wall Thickness, (inch)	0.476
Pipe Grade	P110 CYHP
Coupling	Regular
Coupling Grade	P110 CYHP
Drift	Standard

CONNECTION PARAMETERS	
Connection OD (inch)	5.858
Connection ID, (inch)	4.504
Make-Up Loss, (inch)	5.660
Connection Critical Area, (sq inch)	6.906
Yield Strength in Tension, (klbs)	845
Yeld Strength in Compression, (klbs)	845
Tension Efficiency	90%
Compression Efficiency	90%
Min. Internal Yield Pressure, (psi)	18 930
Collapse Pressure, (psi)	20 420
Uniaxial Bending (deg/100ft)	93.8

MAKE-UP TORQUES	
Minimum Make-Up Torque, (ft-lb)	17 500
Optimum Make-Up Torque, (ft-lb)	25 000
Maximum Make-Up Torque, (ft-lb)	27 500
Operating Torque, (ft-lb)	39 000
Yield Torque, (ft-lb)	48 000

PIPE BODY PROPERTIES	
PE Weight, (lbs/ft)	25.56
Nominal Weight, (lbs/ft)	26.00
Nominal ID, (inch)	4.548
Drift Diameter, (inch)	4.423
Nominal Pipe Body Area, (sq inch)	7.513
Yield Strength in Tension, (klbs)	939
Min. Internal Yield Pressure, (psi)	18 930
Collapse Pressure, (psi)	20 420
Minimum Yield Strength, (psi)	125 000
Minimum Tensile Strength, (psi)	135 000





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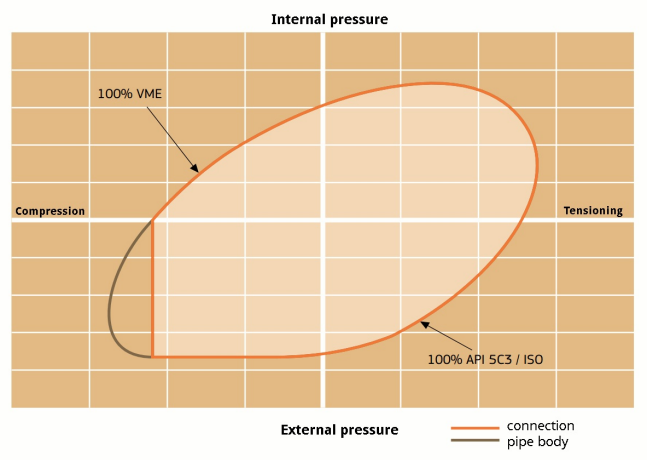
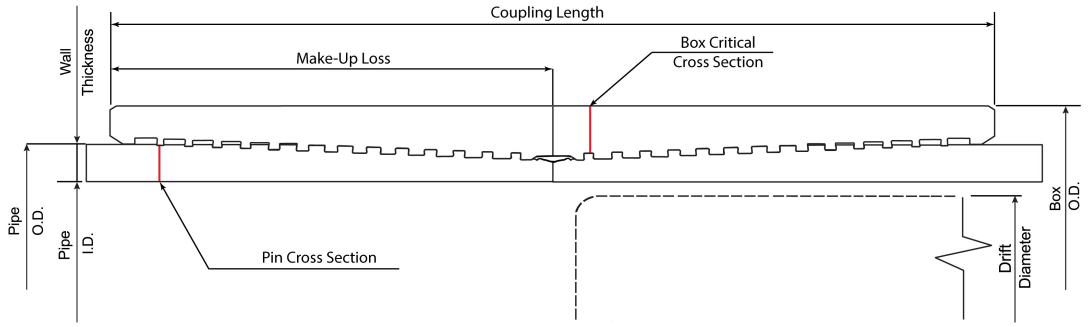
TUBULAR PARAMETERS	
Nominal OD, (inch)	5.000
Wall Thickness, (inch)	0.437
Pipe Grade	P110 CYHP
Coupling	Regular
Coupling Grade	P110 CYHP
Drift	Standard

CONNECTION PARAMETERS	
Connection OD (inch)	5.800
Connection ID, (inch)	4.126
Make-Up Loss, (inch)	4.284
Connection Critical Area, (sq inch)	8.106
Yield Strength in Tension, (klbs)	783
Yeld Strength in Compression, (klbs)	783
Tension Efficiency	100%
Compression Efficiency	100%
Min. Internal Yield Pressure, (psi)	19 120
Collapse Pressure, (psi)	19 860
Uniaxial Bending (deg/100ft)	114.7

MAKE-UP TORQUES	
Minimum Make-Up Torque, (ft-lb)	13 000
Optimum Make-Up Torque, (ft-lb)	14 500
Maximum Make-Up Torque, (ft-lb)	16 000
Operating Torque, (ft-lb)	32 000
Yield Torque, (ft-lb)	40 000

PIPE BODY PROPERTIES	
PE Weight, (lbs/ft)	21.32
Nominal Weight, (lbs/ft)	21.40
Nominal ID, (inch)	4.126
Drift Diameter, (inch)	4.001
Nominal Pipe Body Area, (sq inch)	6.264
Yield Strength in Tension, (klbs)	783
Min. Internal Yield Pressure, (psi)	19 120
Collapse Pressure, (psi)	19 860
Minimum Yield Strength, (psi)	125 000
Minimum Tensile Strength, (psi)	135 000





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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 87325

CONDITIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 87325
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
jagarcia	None	3/11/2022