Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO. 30-045-38325
5. Indicate Type of Lease STATE ☐ FEE ☐
6. State Oil & Gas Lease No. NMNM03358

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name: NORTHEAST BLANCO UNIT
1. Type of Well: Oil Well ☐ Gas Well ☑ Other
8. Well Number 002H
2. Name of Operator: SIMCOE LLC
9. OGRID Number 329736
3. Address of Operator: 1199 MAIN AVE., STE #101, DURANGO, CO 81301
10. Pool name or Wildcat: BASIN MANCOS
4. Well Location
Unit Letter D : 768 feet from the NORTH line and 702 feet from the WEST line
Section 12 Township 31N Range 7W NMPM County SAN JUAN
11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 6522'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☑
TEMPORARILY ABANDON	☐	CHANGE PLANS	☑	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:	☐			OTHER:			☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

SIMCOE LLC is requesting to extend the Surface Casing to 3,600' TVD.

Current Surface Casing Program (as approved in the APD):
Casing size 13-3/8" set at ±1100' TVD; conventional cement job (1 stage), circulated to surface.

Revised Surface Casing Program:
Casing size 13-3/8" set at ±3600' TVD (roughly 25' into the Lewis Shale); conventional cement job (1 stage), circulated to surface.

No change to the Conductor, Intermediate and Production casing from the original approved casing program.
Please see attached NEBU 602-2H Updated Casing Safety Cement Program for details.

Spud Date: | Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Cale Redpath TITLE REGULATORY ANALYST DATE 9/18/2023

Type or print name Cale Redpath E-mail address: cale.redpath@ikavenergy.com PHONE: 970-852-5154

For State Use Only

APPROVED BY: TITLE DATE
Conditions of Approval (if any):

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

Sundry Print Report

10/06/2023

Well Name: NORTHEAST BLANCO UNIT 602 COM	**Well Location:** T31N / R7W / SEC 12 / NWNW /	**County or Parish/State:**
Well Number: 002H	**Type of Well:** CONVENTIONAL GAS WELL	**Allottee or Tribe Name:**
Lease Number: NMNM03358	**Unit or CA Name:** NORTHEAST BLANCO UNIT--ST	**Unit or CA Number:** NMNM78402X
US Well Number:	**Well Status:** Approved Application for Permit to Drill	**Operator:** SIMCOE LLC

Notice of Intent

Sundry ID: 2750082

Type of Submission: Notice of Intent

Type of Action: Casing

Date Sundry Submitted: 09/07/2023

Time Sundry Submitted: 02:22

Date proposed operation will begin: 09/07/2023

Procedure Description: SIMCOE LLC is requesting to extend the Surface Casing to 3,600' TVD. Current Casing Program (as approved in the APD) Conductor – 20” set at 150’; conventional cement job, circulated to surface Surface – 13-3/8” set at ±1100’ TVD; conventional cement job (1 stage), circulated to surface Intermediate – 9-5/8” set at ±6350’ TVD (roughly 150’ into the Mancos Shale); conventional cement job (2 stage), circulated to surface Revised Casing Program Conductor – 20” set at 150’; conventional cement job, circulated to surface (no change from the original approved casing program) Surface – 13-3/8” set at ±3600’ TVD (roughly 25’ into the Lewis Shale); conventional cement job (1 stage), circulated to surface Intermediate – 9-5/8” set at ±6350’ TVD (roughly 150’ into the Mancos Shale); conventional cement job (2 stage), circulated to surface (no change from the original approved casing program) Reasons for setting deeper surface casing…. - to mitigate expected lost circulation problems in previously designed long (±5500’ MD), deviated intermediate casing section - extreme lost circulation encountered both in offset operator’s wells in addition to historic BP NEBU wells - will allow depleted intervals in Kirtland, Fruitland Coal, & Pictured Cliffs to be isolated behind pipe (surface casing) before drilling into the known depleted intervals in the Mesa Verde section - setting surface casing deeper (into the Lewis) allows for improved drilling efficiency & also increases the safety of drilling operations through these depleted sections Please see attached NEBU 602-2H Updated Casing Safety Cement Program for details.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Well Name: NORTHEAST BLANCO UNIT 602 COM	**Well Location:** T31N / R7W / SEC 12 / NWNW /	**County or Parish/State:**
Well Number: 002H	**Type of Well:** CONVENTIONAL GAS WELL	**Allottee or Tribe Name:**
Lease Number: NMNM03358	**Unit or CA Name:** NORTHEAST BLANCO UNIT--ST	**Unit or CA Number:** NMNM78402X
US Well Number:	**Well Status:** Approved Application for Permit to Drill	**Operator:** SIMCOE LLC

NEBU_602_2H_Updated_Casing_Safety_Cement_Program_20230908104745.pdf

Conditions of Approval

Specialist Review

2750082_APD_2H_KR_09112023_20230911095801.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: CALE REDPATH **Signed on:** SEP 08, 2023 10:47 AM

Name: SIMCOE LLC

Title: NOT RECORDED

Street Address: 1199 MAIN AVE SUITE 101

City: DURANGO **State:** CO

Phone: (970) 852-0082

Email address: CALE.REDPATH@IKAVENERGY.COM

Field

Representative Name:

Street Address:

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

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK **BLM POC Title:** Petroleum Engineer

BLM POC Phone: 5055647742 **BLM POC Email Address:** krennick@blm.gov

Disposition: Approved **Disposition Date:** 09/11/2023

Signature: Kenneth Rennick

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*

Title

Signature

Date

THE SPACE FOR FEDERAL OR STATE OFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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.

(Instructions on page 2)

GENERAL INSTRUCTIONS

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.
PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.
ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.
EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.
Response to this request is mandatory.
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect ofthis form to U.S. Department ofthe Interior, Bureau ofLand Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

Additional Information

Additional Remarks

casing program)

Reasons for setting deeper surface casing.

- to mitigate expected lost circulation problems in previously designed long (5500 MD), deviated intermediate casing section
- extreme lost circulation encountered both in offset operators wells in addition to historic BP NEBU wells
- will allow depleted intervals in Kirtland, Fruitland Coal, & Pictured Cliffs to be isolated behind pipe (surface casing) before drilling into the known depleted intervals in the Mesa Verde section
- setting surface casing deeper (into the Lewis) allows for improved drilling efficiency & also increases the safety of drilling operations through these depleted sections

Please see attached NEBU 602-2H Updated Casing Safety Cement Program for details.

Location of Well

0. SHL: NWNW / 768 FNL / 702 FWL / TWSP: 31N / RANGE: 7W / SECTION: 12 / LAT: 36.9191689 / LONG: -107.5288929 (TVD: 0 feet, MD: 0 feet)
PPP: SWSW / 1061 FSL / 611 FWL / TWSP: 31N / RANGE: 7W / SECTION: 1 / LAT: 36.9241925 / LONG: -107.5291979 (TVD: 7106 feet, MD: 7733 feet)
PPP: SESE / 957 FSL / 1316 FEL / TWSP: 31N / RANGE: 7W / SECTION: 1 / LAT: 36.9238905 / LONG: -107.5177824 (TVD: 7107 feet, MD: 11071 feet)
PPP: SWSW / 916 FSL / 5263 FEL / TWSP: 31N / RANGE: 6W / SECTION: 6 / LAT: 36.9237711 / LONG: -107.5132799 (TVD: 7108 feet, MD: 12388 feet)
BHL: SESE / 808 FSL / 287 FEL / TWSP: 31N / RANGE: 6W / SECTION: 6 / LAT: 36.9234909 / LONG: -107.4962553 (TVD: 7110 feet, MD: 17366 feet)

SECTION 3: CASING

BIT & CASING PROGRAM (all new casing strings)

TYPE	HOLE SIZE (IN)	CASING (IN)	WEIGHT (LBS/FT)	GRADE	COUPLING	SETTING DEPTH (MD FT)	COMMENTS
Conductor	26	20	94.00	J55	BT&C	0-150	New casing. May be pre-set. Cement circulated to surface.
Surface	17-1/2	13-3/8	54.50	J55	BT&C	0-3728	New casing. May be pre-set. Cement circulated to surface.
Intermediate	12-1/4	9-5/8	40.00	P110HC	BT&C	0-6615	New casing. Two-stage cement job, circulated to surface.
Production	8-3/4	5-1/2	20.00	P110HC	TCBC-HT	0-17,366	New casing. Single-stage cement job to overlap previous casing shoe.

Design Factor Tables

Conductor Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Conductor	20	94	J55	BTC	520	2,110	1,480,000	1,402,000
					80% of Burst =	***1,688***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	150	0	8.33	0	65	8.00	
Burst	150	8.33	0	1500	0	1.35	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	150	9.00	14,100	12,163	112,163	13.20	100K lbs overpull
Tension (Connection)	150	9.00	14,100	12,163	112,163	12.50	

NOTE: BF = 1-((MW)/65.5)

Surface Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Surface	13.375	54.50	J55	BTC	1,130	2,730	850,000	909,000
					80% of Burst =	***2,184***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	3600	9.00	9.00	842	1685	1.34	50% Casing volume with 9.0 ppg mud system
Burst	3600	9.00	9.00	3185	1685	1.82	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	3600	9.00	196,200	169,241	269,241	3.16	100K lbs overpull
Tension (Connection)	3600	9.00	196,200	169,241	269,241	3.38	

NOTE: BF = 1-((MW)/65.5)

Intermediate Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Intermediate	9.625	40.00	**P110HC**	BTC	4,230	7,910	1,260,000	1,265,000
					80% of Burst =	***6,328***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	6348	0	10.00	0	3301	1.28	Full evacuation with 10.0 ppg mud in annulus
Burst	6348	10.00	0	1500	0	1.65	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	6348	10.00	253,920	215,154	315,154	4.00	100K lbs overpull
Tension (Connection)	6348	10.00	253,920	215,154	315,154	4.01	

NOTE: BF = 1-((MW)/65.5)

Production Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Production	5.5	20.00	P110HC	TCBC-HT	12,150	12,640	641,000	641,000
					80% of Burst =	***10,112***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	7110	0	13.30	0	4917	2.47	Full evacuation with 13.3 ppg mud in annulus
Burst	7110	13.30	0	1500	0	1.97	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	7110	13.30	142,200	113,326	213,326	3.00	100K lbs overpull
Tension (Connection)	7110	13.30	142,200	113,326	213,326	3.00	

NOTE: BF = 1-((MW)/65.5)

All casing strings (including conductor) will be tested to 0.22 psi/ft of string length or 1500 psi (whichever is greater), but not to exceed 70% of minimum internal yield.

Minimum casing design safety factors:

Collapse – 1.125
Burst – 1.100
Tension – 1.400

Casing centralization:

Surface Casing – Centralizers to be placed on bottom 4 joints of casing (1 per joint) and 1 every 3rd joint thereafter to surface.

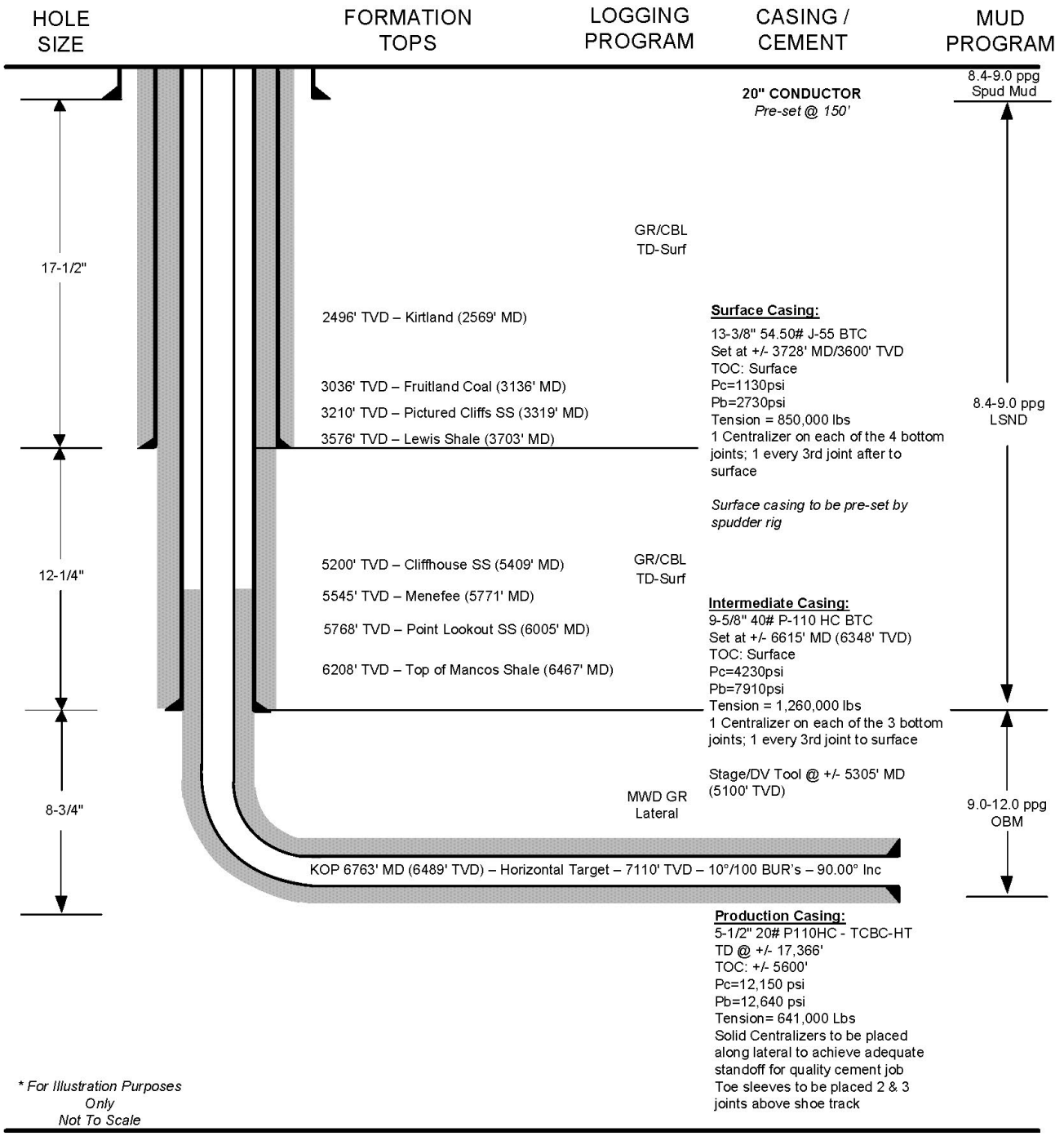
Intermediate Casing – Centralizers to be placed on bottom 3 joints of casing (1 per joint) and 1 every 3rd joint thereafter to surface. A DV tool and external casing packer (ECP) may be placed at roughly 5305' MD, if necessary. *

Production Casing – Centralizers to be placed along lateral to achieve adequate standoff for quality cement job. Toe sleeves (2) will be placed 2 and 3 joints above the shoe track.

**NOTE: Use of the DV tool and ECP will be based on the magnitude of drilling fluid losses encountered while drilling the Intermediate section and concerns about cement possibly not being circulated to surface. Should heavy losses not be encountered, the DV tool and ECP will not be used.*

Wellbore Schematic

WELL: Northeast Blanco Unit 602 COM 2H
PROSPECT: San Juan Basin – Mancos Shale (S2/Black)
CATEGORY: Horizontal Well
COUNTY: San Juan County
STATE: New Mexico
API #: TBD
REVISED 06/05/2023



SECTION 4: CEMENT

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potential productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium utilized (other than cement) shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat in a competent formation which will contain the maximum pressure to which it will be exposed during the drilling process. All indications of usable water shall be reported.

- Pea gravel or other material shall not be used to fill around the conductor or surface casing in the event cement is not circulated to surface or if cement fallback occurs.

- The conductor and surface casing strings shall be cemented back to surface. If cement is not circulated for the surface casing, or if the cement column falls back after circulation, remedial cementing will be performed to cement the casing to surface using 1" tubing. No more than 100' will be remediated without prior approval. Although cement circulation to surface of the intermediate casing string is desired, it is not required. If the top of cement (TOC) is found to be within the surface casing, no remedial work will be performed.

- Top plugs will be used to reduce possible contamination of the cement slurry by the displacement fluid. A bottom plug (or other acceptable technique such as a pre-flush fluid, inner string, etc.) will be used to isolate the cement slurry from the drilling fluid being displaced ahead of the cement.

- All cement volumes will be based on actual hole conditions.

Conductor Casing: Single Stage (0'-150' MD) – 26" Hole x 20" Casing, 100% XS

Cement to be circulated to surface with approximately 383 sx Class G cement (94 lb/sk) with 2% CaCl and 0.125 lb/sk poly flake mixed at 14.6 ppg using 6.69 gal/sk fresh water with yield of 1.39 ft3/sk. Approximate volume of 532 ft3.

Surface Casing: Single Stage (0'-3728' MD) – 17-1/2" Hole x 13-3/8" Casing, 50% XS

Cement to be circulated to surface. Lead Slurry will consist of approximately 1716 sx 65/35 Class G/Poz (87 lb/sk) with 5% D-CSE 1 + 0.25 lb/sk Cello Flake + 0.5% D-R 1 + 1.2% D-MPA-2 + 0.3% D-SA 1 + 0.3% D-CD 2 + 0.5% D-FP 1 + 0.25 lb/sk D-Phenoseal and 0.125 lb/sk D-Plexfiber mixed at 12.5 ppg using 10.71 gal/sk fresh water with yield of 1.96 ft3/sk. Tail Slurry will consist of approximately 459 sx Class G cement (94 lb/sk) with 5% D-CSE 1 + 0.25 lb/sk Cello Flake + 0.5% D-R 1 + 1.2% D-MPA-2 + 0.5% D-FP 1 + 0.25 lb/sk D-Phenoseal and 0.125 lb/sk D-Plexfiber mixed at 15.8 ppg using 5.17 gal/sk fresh water with yield of 1.21 ft3/sk. Total approximate volume of both slurries is 3919 ft3.

Intermediate Casing: Two Stages (0'-6615' MD) – 12-1/4" Hole x 9-5/8" Casing, DV tool at ±5305', 30% XS

Cement to be circulated to surface. Stage 1 Lead Slurry will consist of approximately 211 sx 65/35 Class G/Poz (87 lb/sk) with 5% D-CSE 1 + 0.6% D-R 1 + 0.6% D-MPA-2 + 0.6% D-SA 1 + 0.6% D-CD 2 and 0.6% D-FP 1 mixed at 12.5 ppg using 10.72 gal/sk fresh water with yield of 1.95 ft3/sk. Stage 1 Tail Slurry will consist of approximately 133 sx Class G cement (94 lb/sk) with 0.4% D-CD2 + 0.2% D-R 1 + 0.3% D-MPA-2 mixed at 15.6 ppg using 5.20 gal/sk fresh water with yield of 1.18 ft3/sk. Total approximate volume of both slurries is 568 ft3.

Stage 2 Lead Slurry will consist of approximately 961 sx 65/35 Class G/Poz (87 lb/sk) with 5% D-CSE 1 + 0.6% D-R 1 + 0.6% D-MPA-2 + 0.6% D-SA 1 + 0.6% D-CD 2 and 0.6% D-FP 1 mixed at 12.5 ppg using 10.72 gal/sk fresh water with yield of 1.95 ft3/sk. Stage 2 Tail Slurry will consist of approximately 104 sx Class G cement (94 lb/sk) with 0.4% D-CD2 + 0.2% D-R 1 + 0.3% D-MPA-2 mixed at 15.6 ppg using 5.20 gal/sk fresh water with yield of 1.18 ft3/sk. Total approximate volume of both slurries is 1997 ft3.

Total approximate volume of all slurries is 2565 ft3.

Production Casing: Single Stage (0'-17,366' MD) – 8-3/4" Hole x 5-1/2" Casing, 50% XS

Cement to be circulated into Intermediate Casing (estimated TOC at 5600') with approximately 3946 sx 80/20 Class G/Poz (91 lb/sk) with 0.25 lb/sk Cello Flake + 1.0% D-R 1 + 1.2% D-MPA-2 and 0.2% D-CD mixed at 15.8 ppg using 4.40 gal/sk fresh water with yield of 1.10 ft3/sk. Approximate volume of 4341 ft3.

All cement slurries will meet or exceed minimum BLM and NMOCD requirements. Slurries used will be the slurries listed above or equivalent slurries, depending on service provider selected. Cement yields may change based on actual slurries selected.

All "waiting on cement" (WOC) times shall be either a minimum of 8 hours or the time required to achieve a minimum of 500 psi compressive strength at the casing shoe.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
FARMINGTON DISTRICT OFFICE
6251 COLLEGE BLVD.
FARMINGTON, NEW MEXICO 87402

APD Changes

Sundry ID 2750082

Well: Northeast Blanco Unit 602 Com 002H

SIMCOE LLC

CONDITIONS OF APPROVAL

1. Surface casing must be always at a minimum half fluid fill.

K. Rennick 09/11/2023

SECTION 3: CASING

BIT & CASING PROGRAM (all new casing strings)

TYPE	HOLE SIZE (IN)	CASING (IN)	WEIGHT (LBS/FT)	GRADE	COUPLING	SETTING DEPTH (MD FT)	COMMENTS
Conductor	26	20	94.00	J55	BT&C	0-150	New casing. May be pre-set. Cement circulated to surface.
Surface	17-1/2	13-3/8	54.50	J55	BT&C	0-3728	New casing. May be pre-set. Cement circulated to surface.
Intermediate	12-1/4	9-5/8	40.00	P110HC	BT&C	0-6615	New casing. Two-stage cement job, circulated to surface.
Production	8-3/4	5-1/2	20.00	P110HC	TCBC-HT	0-17,366	New casing. Single-stage cement job to overlap previous casing shoe.

Design Factor Tables

Conductor Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Conductor	20	94	J55	BTC	520	2,110	1,480,000	1,402,000
					80% of Burst =	***1,688***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	150	0	8.33	0	65	8.00	
Burst	150	8.33	0	1500	0	1.35	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	150	9.00	14,100	12,163	112,163	13.20	100K lbs overpull
Tension (Connection)	150	9.00	14,100	12,163	112,163	12.50	

NOTE: BF = 1-((MW)/65.5)

Surface Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Surface	13.375	54.50	J55	BTC	1,130	2,730	850,000	909,000
					80% of Burst =	***2,184***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	3600	9.00	9.00	842	1685	1.34	50% Casing volume with 9.0 ppg mud system
Burst	3600	9.00	9.00	3185	1685	1.82	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	3600	9.00	196,200	169,241	269,241	3.16	100K lbs overpull
Tension (Connection)	3600	9.00	196,200	169,241	269,241	3.38	

NOTE: BF = 1-((MW)/65.5)

Intermediate Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Intermediate	9.625	40.00	**P110HC**	BTC	4,230	7,910	1,260,000	1,265,000
					80% of Burst =	***6,328***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	6348	0	10.00	0	3301	1.28	Full evacuation with 10.0 ppg mud in annulus
Burst	6348	10.00	0	1500	0	1.65	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	6348	10.00	253,920	215,154	315,154	4.00	100K lbs overpull
Tension (Connection)	6348	10.00	253,920	215,154	315,154	4.01	

NOTE: BF = 1-((MW)/65.5)

Production Casing Design - Evacuation/Casing Test (collapse & burst), 100K overpull (tension)

					Collapse (psi)	Burst (psi)	Tension (lbs)	
				Minimum Safety Factors	1.125	1.100	1.400	
	Size (in.)	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Yield - Body (lbs)	Yield - Connection (lbs)
Production	5.5	20.00	P110HC	TCBC-HT	12,150	12,640	641,000	641,000
					80% of Burst =	***10,112***		

	Casing Depth, TVD (ft)	Mud Wt In (ppg)	Mud Wt Out (ppg)	Pressure Inside (psi)	Pressure Outside (psi)	Safety Factor	
Collapse	7110	0	13.30	0	4917	2.47	Full evacuation with 13.3 ppg mud in annulus
Burst	7110	13.30	0	1500	0	1.97	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	7110	13.30	142,200	113,326	213,326	3.00	100K lbs overpull
Tension (Connection)	7110	13.30	142,200	113,326	213,326	3.00	

NOTE: BF = 1-((MW)/65.5)

All casing strings (including conductor) will be tested to 0.22 psi/ft of string length or 1500 psi (whichever is greater), but not to exceed 70% of minimum internal yield.

Minimum casing design safety factors:

Collapse – 1.125
Burst – 1.100
Tension – 1.400

Casing centralization:

Surface Casing – Centralizers to be placed on bottom 4 joints of casing (1 per joint) and 1 every 3rd joint thereafter to surface.

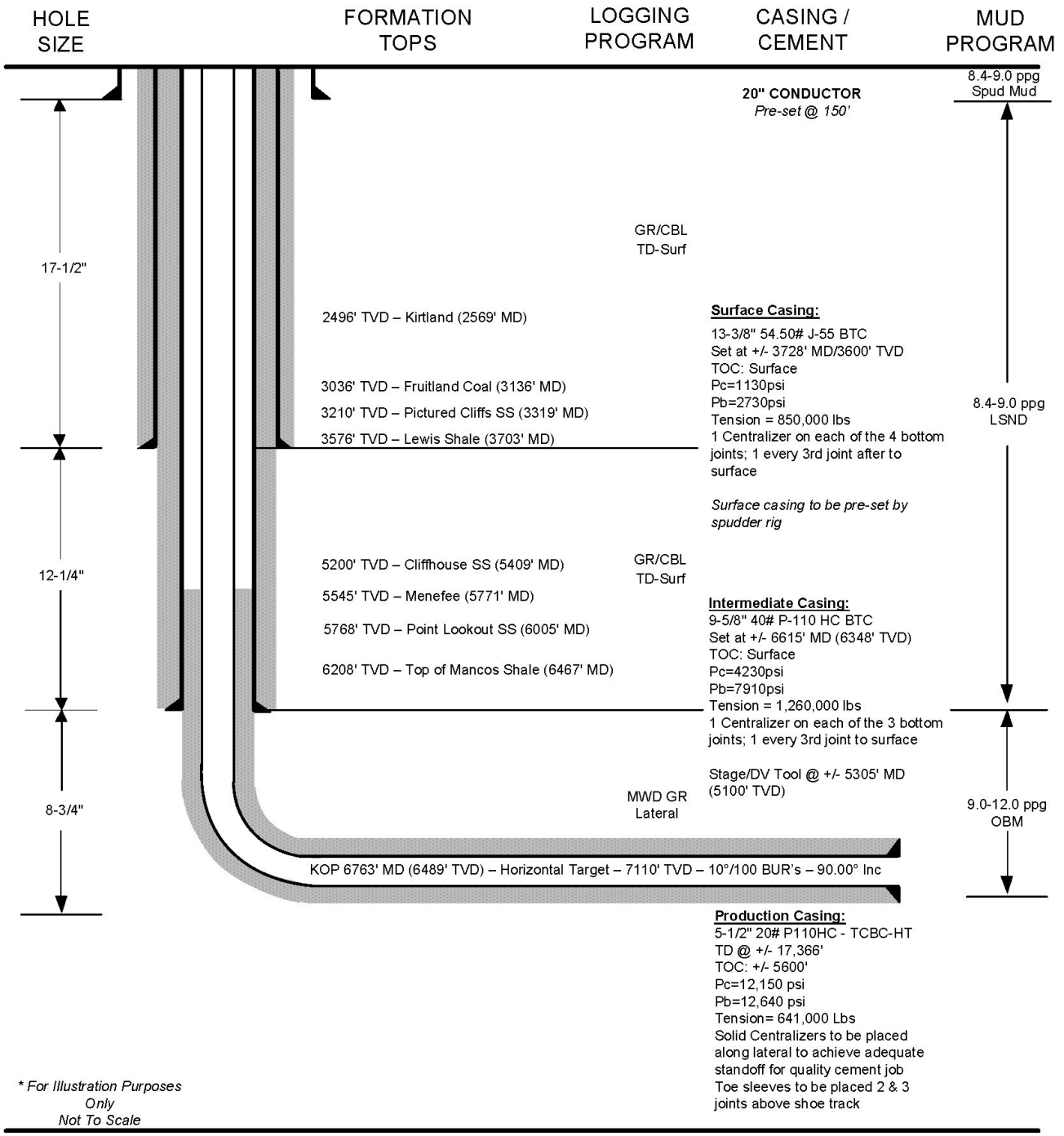
Intermediate Casing – Centralizers to be placed on bottom 3 joints of casing (1 per joint) and 1 every 3rd joint thereafter to surface. A DV tool and external casing packer (ECP) may be placed at roughly 5305' MD, if necessary. *

Production Casing – Centralizers to be placed along lateral to achieve adequate standoff for quality cement job. Toe sleeves (2) will be placed 2 and 3 joints above the shoe track.

**NOTE: Use of the DV tool and ECP will be based on the magnitude of drilling fluid losses encountered while drilling the Intermediate section and concerns about cement possibly not being circulated to surface. Should heavy losses not be encountered, the DV tool and ECP will not be used.*

Wellbore Schematic

WELL: Northeast Blanco Unit 602 COM 2H
PROSPECT: San Juan Basin – Mancos Shale (S2/Black)
CATEGORY: Horizontal Well
COUNTY: San Juan County **STATE: New Mexico**
API #: TBD ***REVISED 06/05/2023***



SECTION 4: CEMENT

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potential productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium utilized (other than cement) shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat in a competent formation which will contain the maximum pressure to which it will be exposed during the drilling process. All indications of usable water shall be reported.

- Pea gravel or other material shall not be used to fill around the conductor or surface casing in the event cement is not circulated to surface or if cement fallback occurs.

- The conductor and surface casing strings shall be cemented back to surface. If cement is not circulated for the surface casing, or if the cement column falls back after circulation, remedial cementing will be performed to cement the casing to surface using 1" tubing. No more than 100' will be remediated without prior approval. Although cement circulation to surface of the intermediate casing string is desired, it is not required. If the top of cement (TOC) is found to be within the surface casing, no remedial work will be performed.

- Top plugs will be used to reduce possible contamination of the cement slurry by the displacement fluid. A bottom plug (or other acceptable technique such as a pre-flush fluid, inner string, etc.) will be used to isolate the cement slurry from the drilling fluid being displaced ahead of the cement.

- All cement volumes will be based on actual hole conditions.

Conductor Casing: Single Stage (0'-150' MD) – 26" Hole x 20" Casing, 100% XS

Cement to be circulated to surface with approximately 383 sx Class G cement (94 lb/sk) with 2% CaCl and 0.125 lb/sk poly flake mixed at 14.6 ppg using 6.69 gal/sk fresh water with yield of 1.39 ft3/sk. Approximate volume of 532 ft3.

Surface Casing: Single Stage (0'-3728' MD) – 17-1/2" Hole x 13-3/8" Casing, 50% XS

Cement to be circulated to surface. Lead Slurry will consist of approximately 1716 sx 65/35 Class G/Poz (87 lb/sk) with 5% D-CSE 1 + 0.25 lb/sk Cello Flake + 0.5% D-R 1 + 1.2% D-MPA-2 + 0.3% D-SA 1 + 0.3% D-CD 2 + 0.5% D-FP 1 + 0.25 lb/sk D-Phenoseal and 0.125 lb/sk D-Plexfiber mixed at 12.5 ppg using 10.71 gal/sk fresh water with yield of 1.96 ft3/sk. Tail Slurry will consist of approximately 459 sx Class G cement (94 lb/sk) with 5% D-CSE 1 + 0.25 lb/sk Cello Flake + 0.5% D-R 1 + 1.2% D-MPA-2 + 0.5% D-FP 1 + 0.25 lb/sk D-Phenoseal and 0.125 lb/sk D-Plexfiber mixed at 15.8 ppg using 5.17 gal/sk fresh water with yield of 1.21 ft3/sk. Total approximate volume of both slurries is 3919 ft3.

Intermediate Casing: Two Stages (0'-6615' MD) – 12-1/4" Hole x 9-5/8" Casing, DV tool at ±5305', 30% XS

Cement to be circulated to surface. Stage 1 Lead Slurry will consist of approximately 211 sx 65/35 Class G/Poz (87 lb/sk) with 5% D-CSE 1 + 0.6% D-R 1 + 0.6% D-MPA-2 + 0.6% D-SA 1 + 0.6% D-CD 2 and 0.6% D-FP 1 mixed at 12.5 ppg using 10.72 gal/sk fresh water with yield of 1.95 ft3/sk. Stage 1 Tail Slurry will consist of approximately 133 sx Class G cement (94 lb/sk) with 0.4% D-CD2 + 0.2% D-R 1 + 0.3% D-MPA-2 mixed at 15.6 ppg using 5.20 gal/sk fresh water with yield of 1.18 ft3/sk. Total approximate volume of both slurries is 568 ft3.

Stage 2 Lead Slurry will consist of approximately 961 sx 65/35 Class G/Poz (87 lb/sk) with 5% D-CSE 1 + 0.6% D-R 1 + 0.6% D-MPA-2 + 0.6% D-SA 1 + 0.6% D-CD 2 and 0.6% D-FP 1 mixed at 12.5 ppg using 10.72 gal/sk fresh water with yield of 1.95 ft3/sk. Stage 2 Tail Slurry will consist of approximately 104 sx Class G cement (94 lb/sk) with 0.4% D-CD2 + 0.2% D-R 1 + 0.3% D-MPA-2 mixed at 15.6 ppg using 5.20 gal/sk fresh water with yield of 1.18 ft3/sk. Total approximate volume of both slurries is 1997 ft3.

Total approximate volume of all slurries is 2565 ft3.

Production Casing: Single Stage (0'-17,366' MD) – 8-3/4" Hole x 5-1/2" Casing, 50% XS

Cement to be circulated into Intermediate Casing (estimated TOC at 5600') with approximately 3946 sx 80/20 Class G/Poz (91 lb/sk) with 0.25 lb/sk Cello Flake + 1.0% D-R 1 + 1.2% D-MPA-2 and 0.2% D-CD mixed at 15.8 ppg using 4.40 gal/sk fresh water with yield of 1.10 ft3/sk. Approximate volume of 4341 ft3.

All cement slurries will meet or exceed minimum BLM and NMOCD requirements. Slurries used will be the slurries listed above or equivalent slurries, depending on service provider selected. Cement yields may change based on actual slurries selected.

All "waiting on cement" (WOC) times shall be either a minimum of 8 hours or the time required to achieve a minimum of 500 psi compressive strength at the casing shoe.

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APD Changes

Sundry ID 2750082

Well: Northeast Blanco Unit 602 Com 002H

SIMCOE LLC

CONDITIONS OF APPROVAL

1. Surface casing must be always at a minimum half fluid fill.

K. Rennick 09/11/2023

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

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

CONDITIONS

Action 273229

CONDITIONS

Operator: SIMCOE LLC 1199 Main Ave., Suite 101 Durango, CO 81301	OGRID: 329736
	Action Number: 273229
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
dmcclure	Fresh water-based mud shall be used when drilling the hole for the surface casing.	10/11/2023
dmcclure	If cement does not circulate for the surface casing, Simcoe shall do the following; (a) contact the Division's Northern Compliance Officer Supervisor and coordinate the remediation of the cement; (b) provide the Division a CBL demonstrating competent cement after the remediation of the cement; and (c) not proceed with drilling the well until approved to do so by the Division.	10/11/2023