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 and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
SIMCOE LLC 1199 MAIN AVE., STE #101, DURANGO, CO 81301	329736
	3. API Number

4. Property Code	5. Property Name	6. Well No.
	NORTHEAST BLANCO UNIT 604 COM	006H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
E	13	31N	7W		1900	N	534	W	SAN JUAN

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
E	16	31N	7W		2637	N	279	W	SAN JUAN

9. Pool Information

Pool Name	Pool Code
BASIN MANCOS	97232

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
N	O	R	FED	6500.6
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
NO	7,001ft TVD	MANCOS SHALE	TBD	TBD

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water
300'	0.7 miles	1.6 miles

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
SURFACE	17-1/2"	13-3/8"	54.50	0-3643' MD	2130	0'
INTERMEDIATE	12-1/4"	9-5/8"	40.00	0-6407' MD	1368	0'
PRODUCTION	8-3/4"	5-1/2"	20.00	0-22,222' MD	5,690	5407'

Casing/Cement Program: Additional Comments

CONDUCTOR, 26" HOLE, 20" CASING, 94.00 CASING WEIGHT,160' MD, 404 SX, 0' TOC

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
13-5/8" CLASS 3ARR 5M BOP	1500 PSI	250 psi (Low) - 5000 psi (High)	CAMERON

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:	OIL CONSERVATION DIVISION Approved By:
Printed name: Cale Redpath	Title:
Title: REGULATORY ANALYST	Approved Date: / Expiration Date:
E-mail Address: Cale.Redpath@ikavenergy.com	
Date:07/01/2024 Phone: 970-852-5154	Conditions of Approval Attached

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-045-38357

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date

Title

Approved by *(Signature)*	Name *(Printed/Typed)*	Date

Title	Office

Application approval 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.
Conditions of approval, if any, are attached.

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 06/26/2024

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws 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, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: 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 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., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. 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 of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 06/26/2024

Additional Operator Remarks

Location of Well

0. SHL: SWNW / 1900 FNL / 534 FWL / TWSP: 31N / RANGE: 7W / SECTION: 13 / LAT: 36.9015589 / LONG: -107.529453 (TVD: 0 feet, MD: 0 feet)

PPP: NESE / 2628 FSL / 0 FEL / TWSP: 31N / RANGE: 7W / SECTION: 16 / LAT: 36.8995101 / LONG: -107.5673618 (TVD: 7014 feet, MD: 17230 feet)

PPP: NESE / 2627 FSL / 0 FEL / TWSP: 31N / RANGE: 7W / SECTION: 15 / LAT: 36.899494 / LONG: -107.549398 (TVD: 7029 feet, MD: 11960 feet)

PPP: NWSW / 2627 FSL / 1318 FWL / TWSP: 31N / RANGE: 7W / SECTION: 14 / LAT: 36.8994757 / LONG: -107.5448254 (TVD: 7032 feet, MD: 10640 feet)

PPP: NESE / 2621 FSL / 738 FEL / TWSP: 31N / RANGE: 7W / SECTION: 14 / LAT: 36.8994572 / LONG: -107.5337878 (TVD: 7041 feet, MD: 7413 feet)

BHL: SWNW / 2637 FNL / 279 FEL / TWSP: 31N / RANGE: 7W / SECTION: 16 / LAT: 36.8995334 / LONG: -107.5844357 (TVD: 7041 feet, MD: 22222 feet)

BLM Point of Contact

Name: CHRISTOPHER P WENMAN

Title: Natural Resource Specialist

Phone: (505) 564-7727

Email: cwenman@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

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1220 S. St. Francis Dr., Santa Fe, N.M. 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, N.M. 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
30-045-38357	97232	BASIN MANCOS

[4] Property Code	[5] Property Name	[6] Well Number
327851	NORTHEAST BLANCO UNIT 604 COM	6H

[7] OGRID No.	[8] Operator Name	[9] Elevation
329736	SIMCOE LLC	6500.6

[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
E	13	31 N	7 W		1900	NORTH	534	WEST	SAN JUAN

[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
E	16	31 N	7 W		2637	NORTH	279	WEST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
1920 - ALL OF SEC 14 SEC 15 AND SEC 16			R-107

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

[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.

Cale Redpath 8/25/23
Signature Date

Cale Redpath
Printed Name

cale.redpath@ikavenergy.com
E-mail Address

[18] SURVEYOR CERTIFICATION

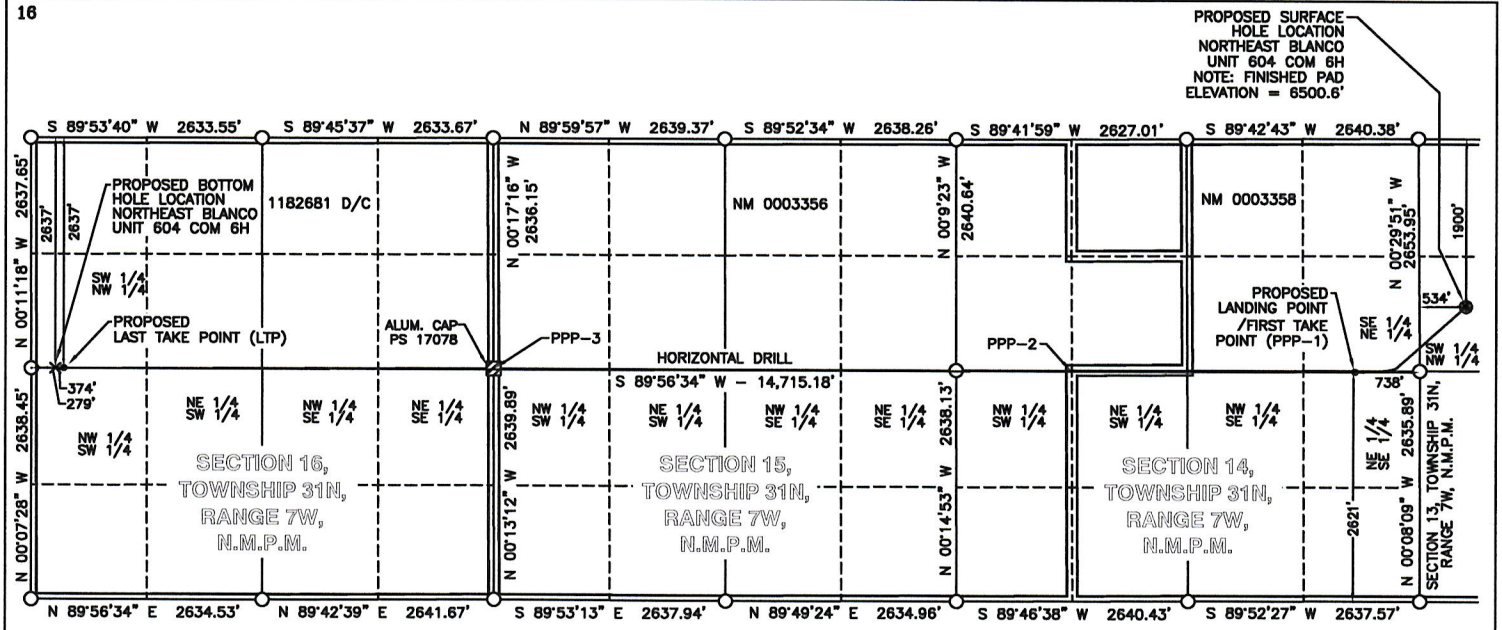
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

4/27/23
Date of Survey
Plat Revised: 8/22/23
Signature and Seal of Professional Surveyor:

JOHN A. VUKONICH NEW MEXICO 14831 PROFESSIONAL SURVEYOR 8/25/2023

14831
Certificate Number

16



NORTHEAST BLANCO UNIT 604 COM 6H	NMWZ NAD'83	NAD'83	TIES
PROPOSED SURFACE HOLE LOCATION (SHL)	N (Y) = 2,147,635.30' E (X) = 2,811,941.57'	LAT. = 36.9015589°N LON.= 107.5294530°W	FNL = 1900' FWL = 534'
PROPOSED LANDING POINT / FIRST TAKE POINT (PPP-1)	N (Y) = 2,146,866.15' E (X) = 2,810,676.55'	LAT. = 36.8994572°N LON.= 107.5337878°W	FSL = 2621' FEL = 738'
PPP-2	N (Y) = 2,146,862.92' E (X) = 2,807,449.20'	LAT. = 36.8994757°N LON.= 107.5448254°W	FSL = 2627 FWL = 1318'
PPP-3	N (Y) = 2,146,856.34' E (X) = 2,800,859.68'	LAT. = 36.8995101°N LON.= 107.5673618°W	FSL = 2628' FEL = 0'
PROPOSED LAST TAKE POINT (LTP)	N (Y) = 2,146,851.44' E (X) = 2,795,961.38'	LAT. = 36.8995330°N LON.= 107.5841142°W	FNL = 2637' FWL = 374'
PROPOSED BOTTOM HOLE LOCATION (BHL)	N (Y) = 2,146,851.35' E (X) = 2,795,867.38'	LAT. = 36.8995334°N LON.= 107.5844357°W	FNL = 2637' FWL = 279'

NOTE:
DOWNHOLE INFORMATION TAKEN FROM A REPORT FURNISHED BY IKAV ENERGY DATED 5/25/23

LEGEND
FOUND 1914 U.S.G.L.O. BRASS CAP ○
PROPOSED SURFACE HOLE LOCATION ✱
PROPOSED BOTTOM HOLE LOCATION ×

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: __SIMCOE, LLC_____ **OGRID:** __329739_____ **Date:** _07_/_18_/_2024_

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
NEBU 604 COM 4H	TBA	E-13-31N-7W	1853 FNL-551 FWL	0	20,000	600
NEBU 604 COM 5H	TBA	E-13-31N-7W	1877 FNL-542 FWL	0	20,000	600
NEBU 604 COM 6H	TBA	E-13-31N-7W	1900 FNL-534 FWL	0	20,000	600
NEBU 604 COM 7H	TBA	E-13-31N-7W	1925 FNL-525 FWL	0	20,000	600
NEBU 604 COM 8H	TBA	E-13-31N-7W	1947 FNL-517 FWL	0	20,000	600
NEBU 604 COM 9H	TBA	E-13-31N-7W	1971 FNL-508 FWL	0	15,000	600

IV. Central Delivery Point Name: ____ Harvest Midstream _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
NEBU 604 COM 4H	TBA	TBD	TBD	TBD	TBD	TBD
NEBU 604 COM 5H	TBA	TBD	TBD	TBD	TBD	TBD
NEBU 604 COM 6H	TBA	TBD	TBD	TBD	TBD	TBD
NEBU 604 COM 7H	TBA	TBD	TBD	TBD	TBD	TBD
NEBU 604 COM 8H	TBA	TBD	TBD	TBD	TBD	TBD
NEBU 604 COM 9H	TBA	TBD	TBD	TBD	TBD	TBD

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Scott LW
Printed Name:	Scott LACKEY
Title:	VP SIMCOE LLC
E-mail Address:	SCOTT.LACKEY@IVANENERGY.COM
Date:	7/18/24
Phone:	970-880-1165

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment

- SIMCOE production locations include separation equipment designed to separate gas from liquid phases. Equipment sizing is based on estimated volumes and pressures, as well as historical basin knowledge. Flowback separation equipment and production separation equipment will be utilized. Both of which are built and maintained to industry standards. Following the completion, gas will be sent to sales, depending on the gas composition. Since SIMCOE is performing work at an existing location, the well will be tied into an existing gas line. Therefore, once the well is shown to meet pipeline specification, it will go to sales.

VII. Operational Practices

1. **Subsection (A) Venting and Flaring of Natural Gas**
   - SIMCOE understands the requirements of NMAC 19.15.27.8 which outlines that the venting or flaring of natural gas during drilling, completion, or production operations that constitutes waste as defined in 19.15.2 NMAC is prohibited. SIMCOE does not plan to flare.
2. **Subsection (B) Venting and flaring during drilling operations**
   - If technically feasible SIMCOE will capture or combust natural gas using best industry practices and control technologies.
   - A properly-sized flare stack shall be located at a minimum of 100 feet from the nearest surface hole location unless otherwise approved by the division.
   - Should an emergency or malfunction occur, natural gas may be vented to avoid a risk of an immediate and substantial adverse impact on safety, public health, or the environment. The appropriate reporting will be made to the division pursuant to Paragraph (1) of Subsection G of 19.15.27.8 NMAC.
3. **Subsection (C) Venting and flaring during completion or recompletion operations.**
   - During initial flowback, SIMCOE will route flowback fluids into a completion or storage tank and, if technically feasible under the applicable well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.
   - During separation flowback, SIMCOE will capture and route natural gas from the separation equipment to a gas flowline or collection system or use on-site as a fuel source or other purpose that a purchased fuel or raw material would serve.
   - Should natural gas not meet gathering pipeline quality specifications, rule 19.15.27.8.C.3 will be met.
4. **Subsection (D) Venting and flaring during production operations.**
   - For liquids unloading by manual purging, an operator will remain present on-site or remain within 30 minutes' drive time of location. Will take reasonable action to not vent after the well achieves a stabilized rate and pressure.
   - Plunger lift system will be optimized to minimize the venting of natural gas.
   - During downhole well maintenance, venting of natural gas will be minimized.
5. **Subsection (E) Performance Standards**
   - Completion and production separation equipment and storage tanks will be designed appropriately for anticipated throughput and pressure to minimize waste.
   - No flare stacks will be installed or operating at a production location.
   - AVO inspections will be conducted in accordance with 19.15.27.8.E.5
6. **Subsection (F) Measurement or estimation of vented and flared natural gas**
   - The estimation of vented natural gas will be completed in accordance with 19.15.27.8.F.5-6

VIII. Best Management Practices

1. During drilling operations, a Managed Pressure Drilling system will be utilized to control the surface pressure while drilling which minimizes the amount of vented natural gas.
2. For completion and recompletion activities, production facilities will be in place and the gathering system will be tied in so once the gas is sellable it will be sent down the line.
3. Non-emitting pneumatic devices will be installed at the production location.
4. The well will be shut in in the event of an emergency situation, or other operations where venting or flaring may occur due to equipment failures.

Attachment to Application for Permit to Drill

Drilling Program

SIMCOE LLC.
1199 Main Avenue
Suite 101
Durango, CO 81301

NEBU 604 Com #6H
Mancos Horizontal Development Well
Surface Location: 1900' FNL & 534' FWL
Section 13, T31N, R07W
GL Elevation = 6500'
Lat. = 36.9015589°N Long. = 107.5294530°W
NAD83
San Juan County, New Mexico

Proposed Bottom Hole Location Lateral: 2637' FNL – 279' FWL
Section 16, T31N, R07W
San Juan County, New Mexico

Drilling program written in compliance with onshore Oil and Gas Order No. 1

(III.D.3, effective May 2007) and Onshore Order No. 2 Dated November 18, 1988

SECTION 1: GEOLOGIC FORMATIONS AND CONTENTS

MARKER	TVD	MD	COMMENTS	BHP (PSI/FT)
Animas	25	25	Wet/aquifer	0.43
Ojo Alamo SS	2,386	2,411	Wet/aquifer	0.43
Kirtland (Top/Cretaceous)	2,505	2,532	Gas & water-bearing	0.43
Fruitland Coal	2,998	3,033	Gas & water-bearing	0.07
Pictured Cliffs SS	3,333	3,374	Wet	0.12
Lewis Shale	3,573	3,618	Gas & water-bearing	0.35
Cliffhouse SS	5,090	5,160	Gas & water-bearing	0.35
Menefee	5,435	5,510	Gas & water-bearing	0.30
Point Lookout SS	5,747	5,827	Gas & water-bearing	0.30
Mancos Shale	6,170	6,257	Gas-bearing	0.43
LP (Mancos Lateral)	7,041	7,413	Gas-bearing	0.43
TD (Mancos Lateral)	7,001	22,222	Gas-bearing	0.43

Possible Aquifers: San Jose and Ojo Alamo

Oil Shale: None Expected

Oil & Gas: Primary objective is the Mancos formation from 7,041' TVD (landing point) to 7,001' TVD (toe)

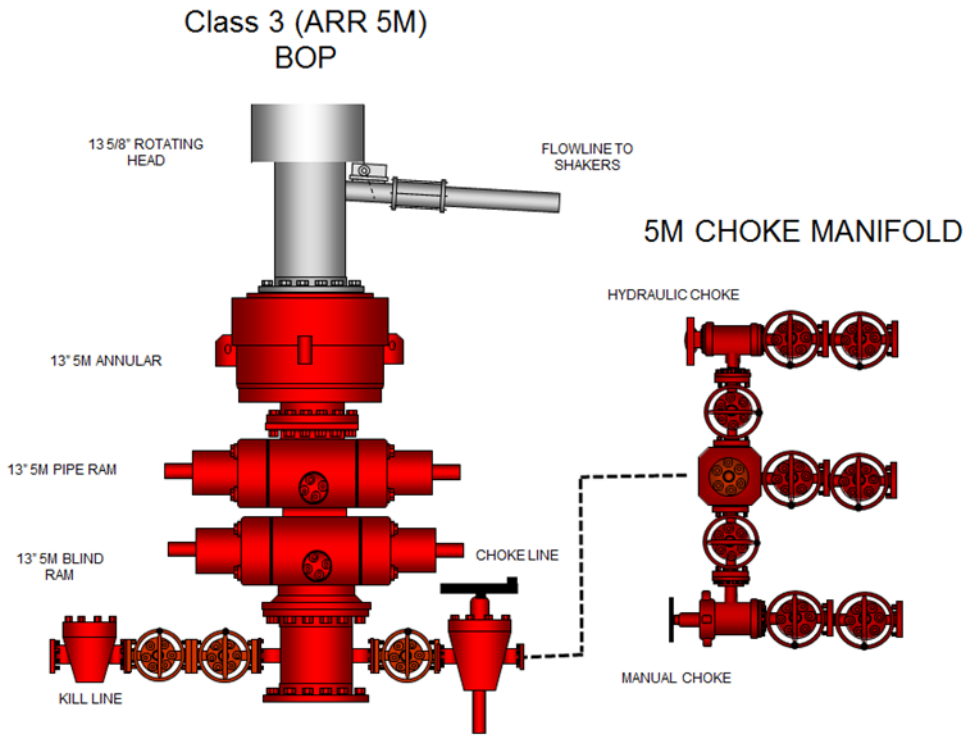
Protection of oil, gas, water, or other mineral-bearing formations: Protection shall be accomplished by setting surface casing below base of possible aquifer(s) and cementing casing to surface.

SECTION 2: BOPE

BOP equipment and accessories will meet or exceed BLM requirements outlined in 43 CFR Part 3160.

A 13-5/8" 5M BOPE will be utilized to drill this well. Maximum anticipated surface pressure for 13-5/8" 5M BOPE is 1,500 psi. The 13-5/8" BOPE will be tested 250 psi (Low) for 5 minutes and 5000 psi (High) for 10 minutes if isolated by test plug or 70 percent of internal yield pressure of casing if BOP stack is not isolated from casing. Pressure test conductor, surface, and intermediate casing(s) to 1500 psi for 30 minutes. All preventers and surface casing will be tested before drilling out of surface casing. BOP equipment will be tested every 30 days, after any repairs are made to the BOP equipment, and after the BOP equipment is subjected to pressure. Annular preventers will be functionally operated at least once per week. Pipe rams will be activated daily and blind rams shall be activated each trip or at least weekly. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of BOPE.

		BHP	MASP
13-5/8" 5M BOPE	7,041' TVD	3049	1,345



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	0-160	New casing. May be pre-set. Cement circulated to surface.
Surface	17-1/2	13-3/8	54.50	J55	BT&C	0-3643	New casing. May be pre-set. Cement circulated to surface.
Intermediate	12-1/4	9-5/8	40.00	P110HC	BT&C	0-6407	New casing. Two-stage cement job, circulated to surface.
Production	8-3/4	5-1/2	20.00	P110HC	GBCD	0-22,222	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	160	0	8.33	0	69	7.50	
Burst	160	8.33	0	1500	0	1.34	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	160	9.00	15,040	12,973	112,973	13.10	100K lbs overpull
Tension (Connection)	160	9.00	15,040	12,973	112,973	12.41	

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	3598	9.00	9.00	842	1684	1.34	50% Casing volume with 9.0 ppg mud system
Burst	3598	9.00	9.00	3184	1684	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)	3598	9.00	196,091	169,147	269,147	3.16	100K lbs overpull
Tension (Connection)	3598	9.00	196,091	169,147	269,147	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	6317	0	10.00	0	3285	1.29	Full evacuation with 10.0 ppg mud in annulus
Burst	6317	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)	6317	10.00	252,680	214,103	314,103	4.01	100K lbs overpull
Tension (Connection)	6317	10.00	252,680	214,103	314,103	4.03	

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	7001	0	13.30	0	4842	2.51	Full evacuation with 13.3 ppg mud in annulus
Burst	7001	13.30	0	1500	0	1.99	1500 psi casing test

	Casing Depth, TVD (ft)	Mud Wt (ppg)	Air Wt (lbs)	Bouyant Wt (lbs)	Bouyant Wt + 100K (lbs)		
Tension (Pipe Body)	7001	13.30	140,020	111,588	211,588	3.03	100K lbs overpull
Tension (Connection)	7001	13.30	140,020	111,588	211,588	3.03	

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.

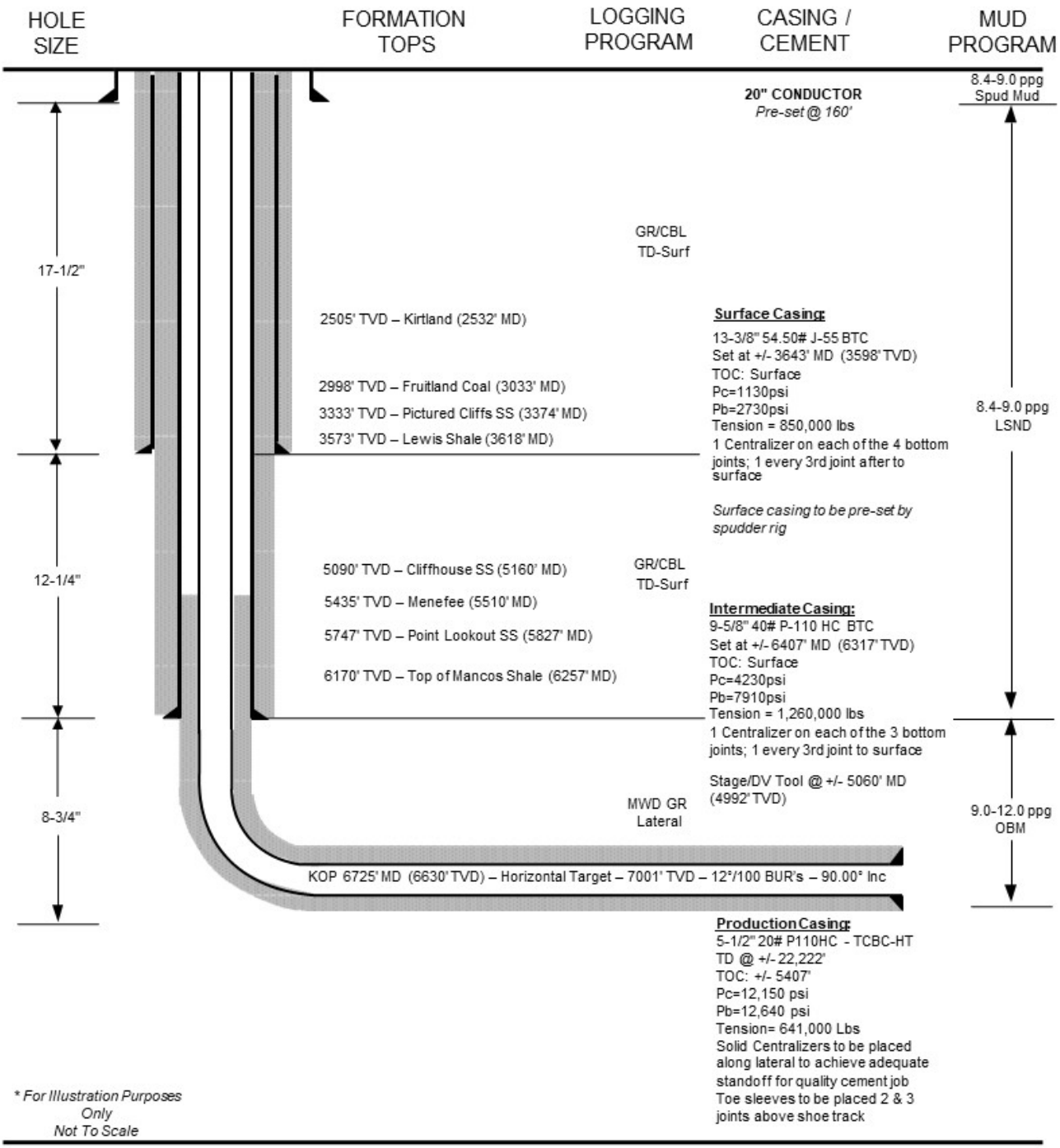
Intermediate Casing – Centralizers to be placed on bottom 3 joints of casing (1 per joint) and 1 every 3rd joint thereafter to surface. A DV tool and external casing packer (ECP) may be placed at roughly 5060' MD, if necessary. *

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 tools and ECP's 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 604 COM 6H
PROSPECT: San Juan Basin – Mancos Shale (S2/Black)
CATEGORY: Horizontal Well
COUNTY: San Juan County
STATE: New Mexico
API #: TBD
DATE: 06/28/2023



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'-160' MD) – 26" Hole x 20" Casing, 100% XS

Cement to be circulated to surface with approximately 404 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 and approximate volume of 562 ft3.

Surface Casing: Single Stage (0'-3643' MD) – 17-1/2" Hole x 13-3/8" Casing, 50% XS

Cement to be circulated to surface. Lead Slurry will consist of approximately 1671 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 3831 ft3.

Intermediate Casing: Two Stages (0'-6407' MD) – 12-1/4" Hole x 9-5/8" Casing, DV tool at ±5060', 30% XS

Cement to be circulated to surface. Stage 1 Lead Slurry will consist of approximately 219 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 584 ft3.

Stage 2 Lead Slurry will consist of approximately 912 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 1901 ft3.

Total approximate volume of all slurries 2485 ft3.

Production Casing: Single Stage (0'-22,222' MD) – 8-3/4" Hole x 5-1/2" Casing, 50% XS

Cement to be circulated into Intermediate Casing (estimated TOC at 5407') with approximately 5690 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 6259 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.

SECTION 5: CIRCULATING MEDIUM (MUD PROGRAM)

CLOSED-LOOP SYSTEM DESIGN PLAN

The closed-loop system will consist of a series of temporary, above-ground storage tanks and/or haul-off bins suitable for holding the cuttings and fluid from drilling operations. The closed-loop system will not utilize temporary earthen pits, below-grade storage tanks, below-grade sumps, or drying pads.

Design considerations include:

- The closed-loop system will be signed in accordance with 19.15.17.11 NMAC.
- The storage tanks of the closed-loop system will be of adequate volume to ensure confinement of all fluids and provide sufficient freeboard to prevent uncontrolled releases.
- Topsoil will be salvaged and stored for use in reclamation activities.

CLOSED-LOOP SYSTEM OPERATING & MAINTENANCE PLAN

The closed-loop system will be operated and maintained to contain liquids and solids, minimize the amount of drilling fluids and cuttings requiring disposal, maximize the amount of drilling fluid recycled and reused in the drilling process, isolate drilling wastes from the environment, prevent contamination of fresh water, and protect public health and the environment.

Operation and maintenance considerations include:

- Fluid levels will be maintained to provide sufficient freeboard to prevent over-topping.
- Visual inspections will be conducted daily to identify any potential leaks and to ensure that the closed-loop system storage tanks have sufficient freeboard to prevent over-topping.
- Only drilling fluids or cuttings intrinsic to, used by, or generated from, drilling operations will be stored in the closed-loop system storage tanks. Hazardous waste, miscellaneous solid waste, and/or debris will not be stored in the storage tanks.
- The OCD District Office will be notified within 48 hours of discovery of a leak in the closed-loop drilling system. If a leak is discovered, all liquid will be removed within 48 hours and the damage repaired.

CLOSED-LOOP SYSTEM CLOSURE PLAN

The closed-loop system will be closed in accordance with 19.15.17.13 NMAC.

Closure considerations include:

- Drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical.
- Residual fluids will be pulled from the storage tanks, mixed with saw dust or similar absorbent material, and disposed of at Industrial Envirotech, Inc. waste disposal facilities.
- Remaining cuttings or sludges will be vacuumed from the storage tanks and disposed of at an EPA-approved waste disposal facility.
- Storage tanks will be removed from the well location during the rig move.
- The well pad will be reclaimed and seeded in accordance with subsections G, Hand I of 19.15.17.13 NMAC.

MUD PROGRAM

Interval (MD-ft)	Hole Section	Hole Size	Type	Mud Wt (ppg)	FL	PV	YP	Ph	Remarks
0-160	Conductor	26"	FW/Gel	8.4-9.0	NC	8	12	9.0	Spud Mud
0-3643	Surface	17-1/2"	LSND	8.4-9.0	<8	4-6	12-15	10.0	Fresh Water
0-6407	Intermediate	12-1/4"	LSND	8.6-9.0	<8	4-6	12-15	10.0	Fresh Water
0-22,222	Production	8-3/4"	OBM	9.0-12.0	<8	14-20	8-14	11.0	OBM

NOTES: Sufficient weighting material will be on hand to weight mud up to 1 ppg over design, if required.
A Pason Pit Volume Totalizer (PVT) or equivalent equipment will be installed on each pit to monitor pit levels.
A trip tank equipped with a Pason PVT will be used to monitor trip volumes.

SECTION 6: TESTING, LOGGING, & CORING

Testing: None planned

Open-hole Logging: Azimuthal & Radial GR – Drilling curve and lateral

Mud Logging: Geologist and manned mud-logging unit on location from ±3643' (base of surface casing) to TD. Gas-detecting equipment will be installed in the mud return system and hydrocarbon gas shall be monitored for pore pressure changes from base of surface casing to TD.

Coring: None

Cased-hole Logging: A Cement Bond Log (CBL) will be run if cement returns are not observed on surface during surface casing and intermediate casing cementing operations. The CBL will confirm both the quality and actual top of the cement column behind pipe.

SECTION 7: ANTICIPATED RESERVOIR CONDITIONS

- Normal to subnormal pressure gradient expected to TD.
- Maximum anticipated surface pressure and casing design parameters determined using 0.433 psi/ft.
- Maximum anticipated BHP @ 7041' TVD (Landing Point): 3049 psi.
- Maximum anticipated BHT @ 7041' TVD (Landing Point): 202° F.
- Possible lost circulation in the Fruitland Coal through the Mesa Verde formations (3,053' to 6,309'). Lost circulation has been successfully mitigated with lost circulation materials in concentrations of up to 30% by volume. Intermediate casing will be set through this interval to ±6,459'.
- No hydrogen sulfide gas is anticipated. However if H2S is encountered the guidelines in Onshore Order No. 6 will be followed.

SECTION 8: OTHER

- **Directional Plans:** Horizontal well, directional drilling plan attached. Lateral KOP subject to mud log evaluation.
- **Completion:**
    - **Pressure test**
        - Pressure test production casing to allowable frac pressure or as per BLM requirements.
    - **Stimulation**
        - Well will be stimulated with approximately 37,000,000 pounds of proppant in 1,150,000 bbls of water.
        - Number of stages and the amount of proppant will be adjusted based on the petrophysical properties of the target zone.
        - Stages will be isolated with composite bridge plugs.
        - Plugs will be drilled out using coiled tubing.
        - Flow back well according to proprietary IKAV flowback procedure.
    - **Turn well to production**
        - It is intended to produce the well up the casing (without installing tubing) for at least 60 days or until tubing is needed to unload the well.
    - **Timing**
        - Drilling scheduled to begin April 2025.
        - Expected drilling time is roughly 35 days for the well and 210 days for the 6-well pad
        - If possible, completion operations will commence immediately upon drilling of all wells on the pad and moving the drilling rig off location, dependent on service company availability. Otherwise completion operations will take place in 2026.

IKAV

Company: IKAV Energy
Project: San Juan County, NM NAD83
Site: NEBU 604 Pad
Well: NEBU 604 6H
Wellbore: OH
Design: Plan #1

PROJECT DETAILS: San Juan County, NM NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: Grid

Scientific Drilling

WELL DETAILS: NEBU 604 6H

GL 6500' & RKB 25' @ 6525.00ft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	2147635.30	2811941.57	36.9015589	-107.5294530

Plan: Plan #1 (NEBU 604 6H/OH)

Created By: Janie Collins Date: 15:49, November 02 2023

Azimuths to Grid North
True North: -0.
Magnetic North: 8.
Magnetic F
Strength: 49453.
Dip Angle: 63.
Date: 5/15/2
Model: HDGM2023

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
NEBU 604 6H LP	7041.00	-769.15	-1265.02	2146866.15	2810676.55	36.8994572	-107.5337878
NEBU 604 6H BHL	7001.00	-783.96	-16074.22	2146851.34	2795867.38	36.8995334	-107.5844357

SECTION DETAILS

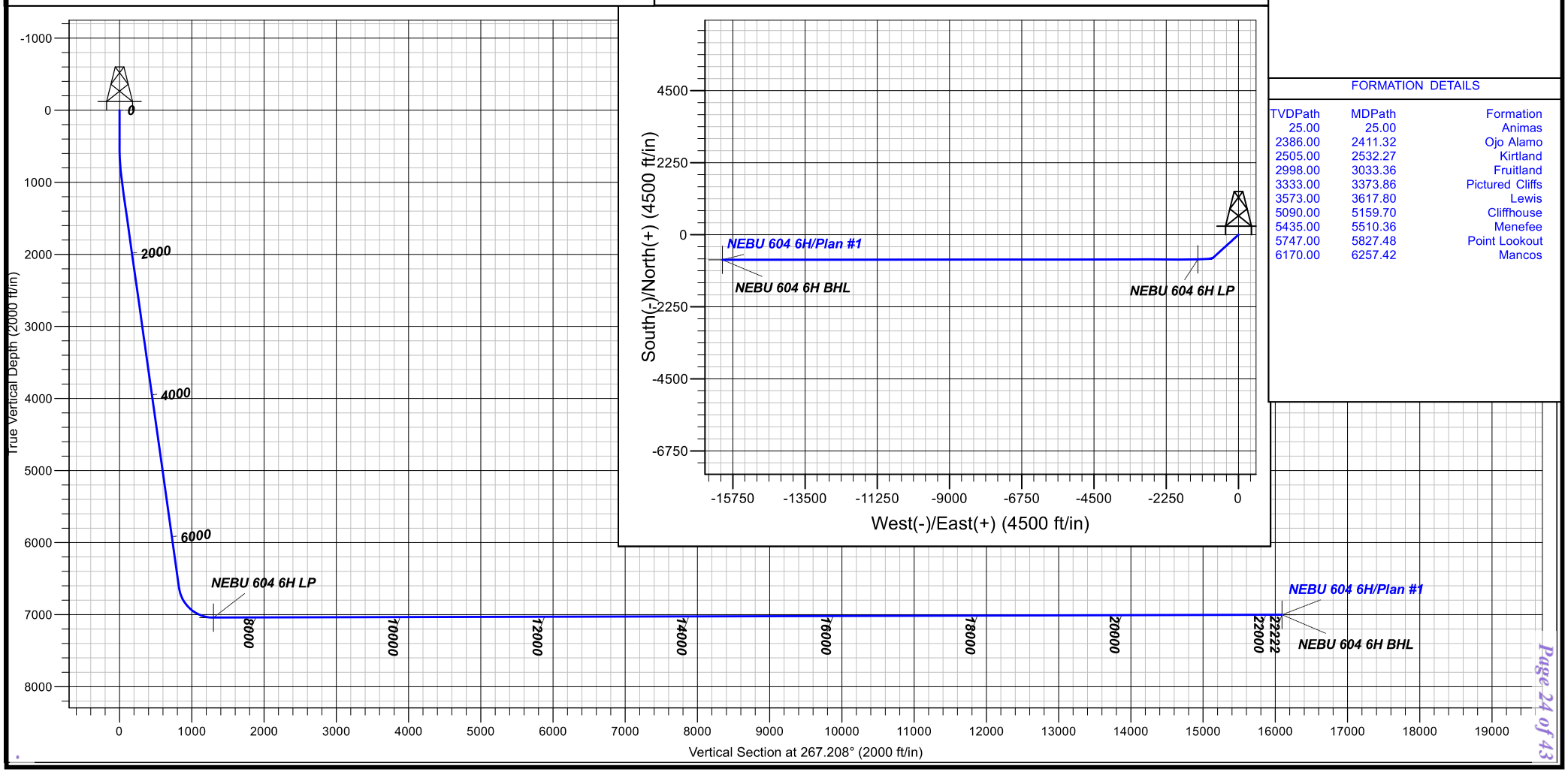
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00
1015.53	10.31	227.741	1012.75	-31.11	-34.24	2.00	227.74	35.71
6724.89	10.31	227.741	6629.92	-718.31	-790.54	0.00	0.00	824.60
7412.68	90.15	269.943	7041.00	-769.15	-1265.02	12.00	42.65	1300.99
22221.94	90.15	269.943	7001.00	-783.96	-16074.22	0.00	0.00	16093.33

CASING DETAILS

No casing data is available

FORMATION DETAILS

TVDPath	MDPath	Formation
25.00	25.00	Animas
2386.00	2411.32	Ojo Alamo
2505.00	2532.27	Kirtland
2998.00	3033.36	Fruitland
3333.00	3373.86	Pictured Cliffs
3573.00	3617.80	Lewis
5090.00	5159.70	Cliffhouse
5435.00	5510.36	Menefee
5747.00	5827.48	Point Lookout
6170.00	6257.42	Mancos



IKAV Energy

San Juan County, NM NAD83
NEBU 604 Pad
NEBU 604 6H

OH

Plan: Plan #1

Standard Planning Report

02 November, 2023

Scientific Drilling

www.scientificdrilling.com

IKAV

Scientific Drilling

Planning Report

Scientific Drilling

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well NEBU 604 6H
Company:	IKAV Energy	**TVD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Project:	San Juan County, NM NAD83	**MD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Site:	NEBU 604 Pad	**North Reference:**	Grid
Well:	NEBU 604 6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project San Juan County, NM NAD83

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site NEBU 604 Pad

Site Position:		**Northing:**	2,147,663.38 usft	**Latitude:**	36.9016354
From:	Map	**Easting:**	2,812,008.74 usft	**Longitude:**	-107.5292230
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.20 in	**Grid Convergence:**	0.18 °

Well NEBU 604 6H

Well Position	**+N/-S**	-28.08 ft	**Northing:**	2,147,635.30 usft	**Latitude:**	36.9015588
	+E/-W	-67.17 ft	**Easting:**	2,811,941.58 usft	**Longitude:**	-107.5294530
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	6,500.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2023	5/15/2023	8.63	63.30	49,453.20000000

Design Plan #1

Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	267.208	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,015.53	10.31	227.741	1,012.75	-31.11	-34.24	2.00	2.00	0.00	227.74	
6,724.89	10.31	227.741	6,629.92	-718.31	-790.54	0.00	0.00	0.00	0.00	
7,412.68	90.15	269.943	7,041.00	-769.15	-1,265.02	12.00	11.61	6.14	42.65	NEBU 604 6H LP
22,221.94	90.15	269.943	7,001.00	-783.96	-16,074.22	0.00	0.00	0.00	0.00	NEBU 604 6H BHL

IKAV

Scientific Drilling

Planning Report

Scientific Drilling

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well NEBU 604 6H
Company:	IKAV Energy	**TVD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Project:	San Juan County, NM NAD83	**MD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Site:	NEBU 604 Pad	**North Reference:**	Grid
Well:	NEBU 604 6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	2.00	227.741	599.98	-1.17	-1.29	1.35	2.00	2.00	0.00
700.00	4.00	227.741	699.84	-4.69	-5.16	5.39	2.00	2.00	0.00
800.00	6.00	227.741	799.45	-10.55	-11.62	12.12	2.00	2.00	0.00
900.00	8.00	227.741	898.70	-18.75	-20.63	21.52	2.00	2.00	0.00
1,000.00	10.00	227.741	997.47	-29.27	-32.21	33.60	2.00	2.00	0.00
1,015.53	10.31	227.741	1,012.75	-31.11	-34.24	35.71	2.00	2.00	0.00
1,100.00	10.31	227.741	1,095.86	-41.28	-45.43	47.38	0.00	0.00	0.00
1,200.00	10.31	227.741	1,194.24	-53.31	-58.67	61.20	0.00	0.00	0.00
1,300.00	10.31	227.741	1,292.63	-65.35	-71.92	75.02	0.00	0.00	0.00
1,400.00	10.31	227.741	1,391.01	-77.39	-85.17	88.84	0.00	0.00	0.00
1,500.00	10.31	227.741	1,489.40	-89.42	-98.41	102.65	0.00	0.00	0.00
1,600.00	10.31	227.741	1,587.78	-101.46	-111.66	116.47	0.00	0.00	0.00
1,700.00	10.31	227.741	1,686.17	-113.49	-124.91	130.29	0.00	0.00	0.00
1,800.00	10.31	227.741	1,784.55	-125.53	-138.16	144.11	0.00	0.00	0.00
1,900.00	10.31	227.741	1,882.94	-137.57	-151.40	157.92	0.00	0.00	0.00
2,000.00	10.31	227.741	1,981.33	-149.60	-164.65	171.74	0.00	0.00	0.00
2,100.00	10.31	227.741	2,079.71	-161.64	-177.90	185.56	0.00	0.00	0.00
2,200.00	10.31	227.741	2,178.10	-173.68	-191.14	199.38	0.00	0.00	0.00
2,300.00	10.31	227.741	2,276.48	-185.71	-204.39	213.19	0.00	0.00	0.00
2,400.00	10.31	227.741	2,374.87	-197.75	-217.64	227.01	0.00	0.00	0.00
2,500.00	10.31	227.741	2,473.25	-209.78	-230.88	240.83	0.00	0.00	0.00
2,600.00	10.31	227.741	2,571.64	-221.82	-244.13	254.65	0.00	0.00	0.00
2,700.00	10.31	227.741	2,670.02	-233.86	-257.38	268.46	0.00	0.00	0.00
2,800.00	10.31	227.741	2,768.41	-245.89	-270.62	282.28	0.00	0.00	0.00
2,900.00	10.31	227.741	2,866.79	-257.93	-283.87	296.10	0.00	0.00	0.00
3,000.00	10.31	227.741	2,965.18	-269.97	-297.12	309.91	0.00	0.00	0.00
3,100.00	10.31	227.741	3,063.56	-282.00	-310.36	323.73	0.00	0.00	0.00
3,200.00	10.31	227.741	3,161.95	-294.04	-323.61	337.55	0.00	0.00	0.00
3,300.00	10.31	227.741	3,260.33	-306.08	-336.86	351.37	0.00	0.00	0.00
3,400.00	10.31	227.741	3,358.72	-318.11	-350.10	365.18	0.00	0.00	0.00
3,500.00	10.31	227.741	3,457.10	-330.15	-363.35	379.00	0.00	0.00	0.00
3,600.00	10.31	227.741	3,555.49	-342.18	-376.60	392.82	0.00	0.00	0.00
3,700.00	10.31	227.741	3,653.87	-354.22	-389.84	406.64	0.00	0.00	0.00
3,800.00	10.31	227.741	3,752.26	-366.26	-403.09	420.45	0.00	0.00	0.00
3,900.00	10.31	227.741	3,850.64	-378.29	-416.34	434.27	0.00	0.00	0.00
4,000.00	10.31	227.741	3,949.03	-390.33	-429.58	448.09	0.00	0.00	0.00
4,100.00	10.31	227.741	4,047.41	-402.37	-442.83	461.91	0.00	0.00	0.00
4,200.00	10.31	227.741	4,145.80	-414.40	-456.08	475.72	0.00	0.00	0.00
4,300.00	10.31	227.741	4,244.18	-426.44	-469.32	489.54	0.00	0.00	0.00
4,400.00	10.31	227.741	4,342.57	-438.47	-482.57	503.36	0.00	0.00	0.00
4,500.00	10.31	227.741	4,440.96	-450.51	-495.82	517.18	0.00	0.00	0.00
4,600.00	10.31	227.741	4,539.34	-462.55	-509.07	530.99	0.00	0.00	0.00
4,700.00	10.31	227.741	4,637.73	-474.58	-522.31	544.81	0.00	0.00	0.00
4,800.00	10.31	227.741	4,736.11	-486.62	-535.56	558.63	0.00	0.00	0.00
4,900.00	10.31	227.741	4,834.50	-498.66	-548.81	572.45	0.00	0.00	0.00
5,000.00	10.31	227.741	4,932.88	-510.69	-562.05	586.26	0.00	0.00	0.00
5,100.00	10.31	227.741	5,031.27	-522.73	-575.30	600.08	0.00	0.00	0.00
5,200.00	10.31	227.741	5,129.65	-534.76	-588.55	613.90	0.00	0.00	0.00

IKAV

Scientific Drilling

Planning Report

Scientific Drilling

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well NEBU 604 6H
Company:	IKAV Energy	**TVD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Project:	San Juan County, NM NAD83	**MD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Site:	NEBU 604 Pad	**North Reference:**	Grid
Well:	NEBU 604 6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	10.31	227.741	5,228.04	-546.80	-601.79	627.71	0.00	0.00	0.00
5,400.00	10.31	227.741	5,326.42	-558.84	-615.04	641.53	0.00	0.00	0.00
5,500.00	10.31	227.741	5,424.81	-570.87	-628.29	655.35	0.00	0.00	0.00
5,600.00	10.31	227.741	5,523.19	-582.91	-641.53	669.17	0.00	0.00	0.00
5,700.00	10.31	227.741	5,621.58	-594.95	-654.78	682.98	0.00	0.00	0.00
5,800.00	10.31	227.741	5,719.96	-606.98	-668.03	696.80	0.00	0.00	0.00
5,900.00	10.31	227.741	5,818.35	-619.02	-681.27	710.62	0.00	0.00	0.00
6,000.00	10.31	227.741	5,916.73	-631.06	-694.52	724.44	0.00	0.00	0.00
6,100.00	10.31	227.741	6,015.12	-643.09	-707.77	738.25	0.00	0.00	0.00
6,200.00	10.31	227.741	6,113.50	-655.13	-721.01	752.07	0.00	0.00	0.00
6,300.00	10.31	227.741	6,211.89	-667.16	-734.26	765.89	0.00	0.00	0.00
6,400.00	10.31	227.741	6,310.27	-679.20	-747.51	779.71	0.00	0.00	0.00
6,500.00	10.31	227.741	6,408.66	-691.24	-760.75	793.52	0.00	0.00	0.00
6,600.00	10.31	227.741	6,507.04	-703.27	-774.00	807.34	0.00	0.00	0.00
6,700.00	10.31	227.741	6,605.43	-715.31	-787.25	821.16	0.00	0.00	0.00
6,724.89	10.31	227.741	6,629.92	-718.31	-790.54	824.60	0.00	0.00	0.00
6,800.00	18.00	247.834	6,702.73	-727.22	-806.30	840.77	12.00	10.23	26.75
6,900.00	29.40	257.403	6,794.18	-738.44	-844.70	879.67	12.00	11.40	9.57
7,000.00	41.12	261.881	6,875.71	-748.48	-901.41	936.81	12.00	11.73	4.48
7,100.00	52.96	264.634	6,943.74	-756.89	-973.97	1,009.68	12.00	11.83	2.75
7,200.00	64.83	266.634	6,995.31	-763.30	-1,059.19	1,095.12	12.00	11.88	2.00
7,300.00	76.74	268.274	7,028.17	-767.44	-1,153.36	1,189.37	12.00	11.90	1.64
7,400.00	88.64	269.758	7,040.87	-769.12	-1,252.35	1,288.33	12.00	11.91	1.48
7,412.68	90.15	269.943	7,041.00	-769.15	-1,265.02	1,300.99	12.00	11.91	1.46
7,500.00	90.15	269.943	7,040.76	-769.24	-1,352.35	1,388.21	0.00	0.00	0.00
7,600.00	90.15	269.943	7,040.49	-769.34	-1,452.35	1,488.10	0.00	0.00	0.00
7,700.00	90.15	269.943	7,040.22	-769.44	-1,552.35	1,587.98	0.00	0.00	0.00
7,800.00	90.15	269.943	7,039.95	-769.54	-1,652.35	1,687.87	0.00	0.00	0.00
7,900.00	90.15	269.943	7,039.68	-769.64	-1,752.34	1,787.76	0.00	0.00	0.00
8,000.00	90.15	269.943	7,039.41	-769.74	-1,852.34	1,887.64	0.00	0.00	0.00
8,100.00	90.15	269.943	7,039.14	-769.84	-1,952.34	1,987.53	0.00	0.00	0.00
8,200.00	90.15	269.943	7,038.87	-769.94	-2,052.34	2,087.41	0.00	0.00	0.00
8,300.00	90.15	269.943	7,038.60	-770.04	-2,152.34	2,187.30	0.00	0.00	0.00
8,400.00	90.15	269.943	7,038.33	-770.14	-2,252.34	2,287.19	0.00	0.00	0.00
8,500.00	90.15	269.943	7,038.06	-770.24	-2,352.34	2,387.07	0.00	0.00	0.00
8,600.00	90.15	269.943	7,037.79	-770.34	-2,452.34	2,486.96	0.00	0.00	0.00
8,700.00	90.15	269.943	7,037.52	-770.44	-2,552.34	2,586.84	0.00	0.00	0.00
8,800.00	90.15	269.943	7,037.25	-770.54	-2,652.34	2,686.73	0.00	0.00	0.00
8,900.00	90.15	269.943	7,036.98	-770.64	-2,752.34	2,786.61	0.00	0.00	0.00
9,000.00	90.15	269.943	7,036.71	-770.74	-2,852.34	2,886.50	0.00	0.00	0.00
9,100.00	90.15	269.943	7,036.44	-770.84	-2,952.34	2,986.39	0.00	0.00	0.00
9,200.00	90.15	269.943	7,036.17	-770.94	-3,052.34	3,086.27	0.00	0.00	0.00
9,300.00	90.15	269.943	7,035.90	-771.04	-3,152.34	3,186.16	0.00	0.00	0.00
9,400.00	90.15	269.943	7,035.63	-771.14	-3,252.34	3,286.04	0.00	0.00	0.00
9,500.00	90.15	269.943	7,035.36	-771.24	-3,352.34	3,385.93	0.00	0.00	0.00
9,600.00	90.15	269.943	7,035.09	-771.34	-3,452.34	3,485.81	0.00	0.00	0.00
9,700.00	90.15	269.943	7,034.82	-771.44	-3,552.34	3,585.70	0.00	0.00	0.00
9,800.00	90.15	269.943	7,034.55	-771.54	-3,652.34	3,685.59	0.00	0.00	0.00
9,900.00	90.15	269.943	7,034.28	-771.64	-3,752.34	3,785.47	0.00	0.00	0.00
10,000.00	90.15	269.943	7,034.01	-771.74	-3,852.34	3,885.36	0.00	0.00	0.00
10,100.00	90.15	269.943	7,033.74	-771.84	-3,952.34	3,985.24	0.00	0.00	0.00
10,200.00	90.15	269.943	7,033.47	-771.94	-4,052.34	4,085.13	0.00	0.00	0.00
10,300.00	90.15	269.943	7,033.20	-772.04	-4,152.34	4,185.01	0.00	0.00	0.00
10,400.00	90.15	269.943	7,032.93	-772.14	-4,252.33	4,284.90	0.00	0.00	0.00

IKAV

Scientific Drilling

Planning Report

Scientific Drilling

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well NEBU 604 6H
Company:	IKAV Energy	**TVD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Project:	San Juan County, NM NAD83	**MD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Site:	NEBU 604 Pad	**North Reference:**	Grid
Well:	NEBU 604 6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.00	90.15	269.943	7,032.66	-772.24	-4,352.33	4,384.79	0.00	0.00	0.00
10,600.00	90.15	269.943	7,032.39	-772.34	-4,452.33	4,484.67	0.00	0.00	0.00
10,700.00	90.15	269.943	7,032.12	-772.44	-4,552.33	4,584.56	0.00	0.00	0.00
10,800.00	90.15	269.943	7,031.85	-772.54	-4,652.33	4,684.44	0.00	0.00	0.00
10,900.00	90.15	269.943	7,031.58	-772.64	-4,752.33	4,784.33	0.00	0.00	0.00
11,000.00	90.15	269.943	7,031.31	-772.74	-4,852.33	4,884.21	0.00	0.00	0.00
11,100.00	90.15	269.943	7,031.04	-772.84	-4,952.33	4,984.10	0.00	0.00	0.00
11,200.00	90.15	269.943	7,030.77	-772.94	-5,052.33	5,083.99	0.00	0.00	0.00
11,300.00	90.15	269.943	7,030.50	-773.04	-5,152.33	5,183.87	0.00	0.00	0.00
11,400.00	90.15	269.943	7,030.23	-773.14	-5,252.33	5,283.76	0.00	0.00	0.00
11,500.00	90.15	269.943	7,029.96	-773.24	-5,352.33	5,383.64	0.00	0.00	0.00
11,600.00	90.15	269.943	7,029.69	-773.34	-5,452.33	5,483.53	0.00	0.00	0.00
11,700.00	90.15	269.943	7,029.42	-773.44	-5,552.33	5,583.41	0.00	0.00	0.00
11,800.00	90.15	269.943	7,029.15	-773.54	-5,652.33	5,683.30	0.00	0.00	0.00
11,900.00	90.15	269.943	7,028.88	-773.64	-5,752.33	5,783.19	0.00	0.00	0.00
12,000.00	90.15	269.943	7,028.61	-773.74	-5,852.33	5,883.07	0.00	0.00	0.00
12,100.00	90.15	269.943	7,028.34	-773.84	-5,952.33	5,982.96	0.00	0.00	0.00
12,200.00	90.15	269.943	7,028.07	-773.94	-6,052.33	6,082.84	0.00	0.00	0.00
12,300.00	90.15	269.943	7,027.80	-774.04	-6,152.33	6,182.73	0.00	0.00	0.00
12,400.00	90.15	269.943	7,027.53	-774.14	-6,252.33	6,282.61	0.00	0.00	0.00
12,500.00	90.15	269.943	7,027.26	-774.24	-6,352.33	6,382.50	0.00	0.00	0.00
12,600.00	90.15	269.943	7,026.99	-774.34	-6,452.33	6,482.39	0.00	0.00	0.00
12,700.00	90.15	269.943	7,026.72	-774.44	-6,552.33	6,582.27	0.00	0.00	0.00
12,800.00	90.15	269.943	7,026.45	-774.54	-6,652.32	6,682.16	0.00	0.00	0.00
12,900.00	90.15	269.943	7,026.18	-774.64	-6,752.32	6,782.04	0.00	0.00	0.00
13,000.00	90.15	269.943	7,025.91	-774.74	-6,852.32	6,881.93	0.00	0.00	0.00
13,100.00	90.15	269.943	7,025.64	-774.84	-6,952.32	6,981.81	0.00	0.00	0.00
13,200.00	90.15	269.943	7,025.37	-774.94	-7,052.32	7,081.70	0.00	0.00	0.00
13,300.00	90.15	269.943	7,025.10	-775.04	-7,152.32	7,181.59	0.00	0.00	0.00
13,400.00	90.15	269.943	7,024.83	-775.14	-7,252.32	7,281.47	0.00	0.00	0.00
13,500.00	90.15	269.943	7,024.56	-775.24	-7,352.32	7,381.36	0.00	0.00	0.00
13,600.00	90.15	269.943	7,024.29	-775.34	-7,452.32	7,481.24	0.00	0.00	0.00
13,700.00	90.15	269.943	7,024.02	-775.44	-7,552.32	7,581.13	0.00	0.00	0.00
13,800.00	90.15	269.943	7,023.75	-775.54	-7,652.32	7,681.01	0.00	0.00	0.00
13,900.00	90.15	269.943	7,023.48	-775.64	-7,752.32	7,780.90	0.00	0.00	0.00
14,000.00	90.15	269.943	7,023.21	-775.74	-7,852.32	7,880.79	0.00	0.00	0.00
14,100.00	90.15	269.943	7,022.94	-775.84	-7,952.32	7,980.67	0.00	0.00	0.00
14,200.00	90.15	269.943	7,022.67	-775.94	-8,052.32	8,080.56	0.00	0.00	0.00
14,300.00	90.15	269.943	7,022.40	-776.04	-8,152.32	8,180.44	0.00	0.00	0.00
14,400.00	90.15	269.943	7,022.13	-776.14	-8,252.32	8,280.33	0.00	0.00	0.00
14,500.00	90.15	269.943	7,021.86	-776.24	-8,352.32	8,380.22	0.00	0.00	0.00
14,600.00	90.15	269.943	7,021.59	-776.34	-8,452.32	8,480.10	0.00	0.00	0.00
14,700.00	90.15	269.943	7,021.32	-776.44	-8,552.32	8,579.99	0.00	0.00	0.00
14,800.00	90.15	269.943	7,021.05	-776.54	-8,652.32	8,679.87	0.00	0.00	0.00
14,900.00	90.15	269.943	7,020.78	-776.64	-8,752.32	8,779.76	0.00	0.00	0.00
15,000.00	90.15	269.943	7,020.51	-776.74	-8,852.32	8,879.64	0.00	0.00	0.00
15,100.00	90.15	269.943	7,020.24	-776.84	-8,952.32	8,979.53	0.00	0.00	0.00
15,200.00	90.15	269.943	7,019.97	-776.94	-9,052.31	9,079.42	0.00	0.00	0.00
15,300.00	90.15	269.943	7,019.70	-777.04	-9,152.31	9,179.30	0.00	0.00	0.00
15,400.00	90.15	269.943	7,019.43	-777.14	-9,252.31	9,279.19	0.00	0.00	0.00
15,500.00	90.15	269.943	7,019.16	-777.24	-9,352.31	9,379.07	0.00	0.00	0.00
15,600.00	90.15	269.943	7,018.89	-777.34	-9,452.31	9,478.96	0.00	0.00	0.00
15,700.00	90.15	269.943	7,018.62	-777.44	-9,552.31	9,578.84	0.00	0.00	0.00
15,800.00	90.15	269.943	7,018.35	-777.54	-9,652.31	9,678.73	0.00	0.00	0.00

IKAV

Scientific Drilling

Planning Report

Scientific Drilling

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well NEBU 604 6H
Company:	IKAV Energy	**TVD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Project:	San Juan County, NM NAD83	**MD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Site:	NEBU 604 Pad	**North Reference:**	Grid
Well:	NEBU 604 6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,900.00	90.15	269.943	7,018.08	-777.64	-9,752.31	9,778.62	0.00	0.00	0.00
16,000.00	90.15	269.943	7,017.81	-777.74	-9,852.31	9,878.50	0.00	0.00	0.00
16,100.00	90.15	269.943	7,017.54	-777.84	-9,952.31	9,978.39	0.00	0.00	0.00
16,200.00	90.15	269.943	7,017.27	-777.94	-10,052.31	10,078.27	0.00	0.00	0.00
16,300.00	90.15	269.943	7,017.00	-778.04	-10,152.31	10,178.16	0.00	0.00	0.00
16,400.00	90.15	269.943	7,016.73	-778.14	-10,252.31	10,278.04	0.00	0.00	0.00
16,500.00	90.15	269.943	7,016.46	-778.24	-10,352.31	10,377.93	0.00	0.00	0.00
16,600.00	90.15	269.943	7,016.19	-778.34	-10,452.31	10,477.82	0.00	0.00	0.00
16,700.00	90.15	269.943	7,015.91	-778.44	-10,552.31	10,577.70	0.00	0.00	0.00
16,800.00	90.15	269.943	7,015.64	-778.54	-10,652.31	10,677.59	0.00	0.00	0.00
16,900.00	90.15	269.943	7,015.37	-778.64	-10,752.31	10,777.47	0.00	0.00	0.00
17,000.00	90.15	269.943	7,015.10	-778.74	-10,852.31	10,877.36	0.00	0.00	0.00
17,100.00	90.15	269.943	7,014.83	-778.84	-10,952.31	10,977.24	0.00	0.00	0.00
17,200.00	90.15	269.943	7,014.56	-778.94	-11,052.31	11,077.13	0.00	0.00	0.00
17,300.00	90.15	269.943	7,014.29	-779.04	-11,152.31	11,177.02	0.00	0.00	0.00
17,400.00	90.15	269.943	7,014.02	-779.14	-11,252.31	11,276.90	0.00	0.00	0.00
17,500.00	90.15	269.943	7,013.75	-779.24	-11,352.31	11,376.79	0.00	0.00	0.00
17,600.00	90.15	269.943	7,013.48	-779.34	-11,452.30	11,476.67	0.00	0.00	0.00
17,700.00	90.15	269.943	7,013.21	-779.44	-11,552.30	11,576.56	0.00	0.00	0.00
17,800.00	90.15	269.943	7,012.94	-779.54	-11,652.30	11,676.44	0.00	0.00	0.00
17,900.00	90.15	269.943	7,012.67	-779.64	-11,752.30	11,776.33	0.00	0.00	0.00
18,000.00	90.15	269.943	7,012.40	-779.74	-11,852.30	11,876.22	0.00	0.00	0.00
18,100.00	90.15	269.943	7,012.13	-779.84	-11,952.30	11,976.10	0.00	0.00	0.00
18,200.00	90.15	269.943	7,011.86	-779.94	-12,052.30	12,075.99	0.00	0.00	0.00
18,300.00	90.15	269.943	7,011.59	-780.04	-12,152.30	12,175.87	0.00	0.00	0.00
18,400.00	90.15	269.943	7,011.32	-780.14	-12,252.30	12,275.76	0.00	0.00	0.00
18,500.00	90.15	269.943	7,011.05	-780.24	-12,352.30	12,375.64	0.00	0.00	0.00
18,600.00	90.15	269.943	7,010.78	-780.34	-12,452.30	12,475.53	0.00	0.00	0.00
18,700.00	90.15	269.943	7,010.51	-780.44	-12,552.30	12,575.42	0.00	0.00	0.00
18,800.00	90.15	269.943	7,010.24	-780.54	-12,652.30	12,675.30	0.00	0.00	0.00
18,900.00	90.15	269.943	7,009.97	-780.64	-12,752.30	12,775.19	0.00	0.00	0.00
19,000.00	90.15	269.943	7,009.70	-780.74	-12,852.30	12,875.07	0.00	0.00	0.00
19,100.00	90.15	269.943	7,009.43	-780.84	-12,952.30	12,974.96	0.00	0.00	0.00
19,200.00	90.15	269.943	7,009.16	-780.94	-13,052.30	13,074.84	0.00	0.00	0.00
19,300.00	90.15	269.943	7,008.89	-781.04	-13,152.30	13,174.73	0.00	0.00	0.00
19,400.00	90.15	269.943	7,008.62	-781.14	-13,252.30	13,274.62	0.00	0.00	0.00
19,500.00	90.15	269.943	7,008.35	-781.24	-13,352.30	13,374.50	0.00	0.00	0.00
19,600.00	90.15	269.943	7,008.08	-781.34	-13,452.30	13,474.39	0.00	0.00	0.00
19,700.00	90.15	269.943	7,007.81	-781.44	-13,552.30	13,574.27	0.00	0.00	0.00
19,800.00	90.15	269.943	7,007.54	-781.54	-13,652.30	13,674.16	0.00	0.00	0.00
19,900.00	90.15	269.943	7,007.27	-781.64	-13,752.30	13,774.04	0.00	0.00	0.00
20,000.00	90.15	269.943	7,007.00	-781.74	-13,852.30	13,873.93	0.00	0.00	0.00
20,100.00	90.15	269.943	7,006.73	-781.84	-13,952.29	13,973.82	0.00	0.00	0.00
20,200.00	90.15	269.943	7,006.46	-781.94	-14,052.29	14,073.70	0.00	0.00	0.00
20,300.00	90.15	269.943	7,006.19	-782.04	-14,152.29	14,173.59	0.00	0.00	0.00
20,400.00	90.15	269.943	7,005.92	-782.14	-14,252.29	14,273.47	0.00	0.00	0.00
20,500.00	90.15	269.943	7,005.65	-782.24	-14,352.29	14,373.36	0.00	0.00	0.00
20,600.00	90.15	269.943	7,005.38	-782.34	-14,452.29	14,473.25	0.00	0.00	0.00
20,700.00	90.15	269.943	7,005.11	-782.44	-14,552.29	14,573.13	0.00	0.00	0.00
20,800.00	90.15	269.943	7,004.84	-782.54	-14,652.29	14,673.02	0.00	0.00	0.00
20,900.00	90.15	269.943	7,004.57	-782.64	-14,752.29	14,772.90	0.00	0.00	0.00
21,000.00	90.15	269.943	7,004.30	-782.74	-14,852.29	14,872.79	0.00	0.00	0.00
21,100.00	90.15	269.943	7,004.03	-782.84	-14,952.29	14,972.67	0.00	0.00	0.00
21,200.00	90.15	269.943	7,003.76	-782.94	-15,052.29	15,072.56	0.00	0.00	0.00

IKAV

Scientific Drilling
Planning Report

Scientific Drilling

Database:	Grand Junction	**Local Co-ordinate Reference:**	Well NEBU 604 6H
Company:	IKAV Energy	**TVD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Project:	San Juan County, NM NAD83	**MD Reference:**	GL 6500' & RKB 25' @ 6525.00ft
Site:	NEBU 604 Pad	**North Reference:**	Grid
Well:	NEBU 604 6H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
21,300.00	90.15	269.943	7,003.49	-783.04	-15,152.29	15,172.45	0.00	0.00	0.00
21,400.00	90.15	269.943	7,003.22	-783.14	-15,252.29	15,272.33	0.00	0.00	0.00
21,500.00	90.15	269.943	7,002.95	-783.24	-15,352.29	15,372.22	0.00	0.00	0.00
21,600.00	90.15	269.943	7,002.68	-783.34	-15,452.29	15,472.10	0.00	0.00	0.00
21,700.00	90.15	269.943	7,002.41	-783.44	-15,552.29	15,571.99	0.00	0.00	0.00
21,800.00	90.15	269.943	7,002.14	-783.54	-15,652.29	15,671.87	0.00	0.00	0.00
21,900.00	90.15	269.943	7,001.87	-783.64	-15,752.29	15,771.76	0.00	0.00	0.00
22,000.00	90.15	269.943	7,001.60	-783.74	-15,852.29	15,871.65	0.00	0.00	0.00
22,100.00	90.15	269.943	7,001.33	-783.84	-15,952.29	15,971.53	0.00	0.00	0.00
22,200.00	90.15	269.943	7,001.06	-783.94	-16,052.29	16,071.42	0.00	0.00	0.00
22,221.94	90.15	269.943	7,001.00	-783.96	-16,074.22	16,093.33	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
NEBU 604 6H BHL - plan hits target center - Point	0.00	0.000	7,001.00	-783.96	-16,074.22	2,146,851.34	2,795,867.38	36.8995334	-107.5844357
NEBU 604 6H LP - plan hits target center - Point	0.00	0.000	7,041.00	-769.15	-1,265.02	2,146,866.15	2,810,676.55	36.8994572	-107.5337878

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
25.00	25.00	Animas		0.00	0.000
2,411.32	2,386.00	Ojo Alamo		0.00	0.000
2,532.27	2,505.00	Kirtland		0.00	0.000
3,033.36	2,998.00	Fruitland		0.00	0.000
3,373.86	3,333.00	Pictured Cliffs		0.00	0.000
3,617.80	3,573.00	Lewis		0.00	0.000
5,159.70	5,090.00	Cliffhouse		0.00	0.000
5,510.36	5,435.00	Menefee		0.00	0.000
5,827.48	5,747.00	Point Lookout		0.00	0.000
6,257.42	6,170.00	Mancos		0.00	0.000

Conditions of Approval

Operator:	Simcoe, LLC
Well Names:	NEBU 604 Com (4H, 5H, 6H, 7H, 8H & 9H) Oil and Natural Gas Wells Project
Legal Location:	Sec13, Twn 31N, R 7W, San Juan County, NM
NEPA Log Number:	DOI-BLM-NM-F010-2024-0008-EA
Lease Number:	NMNM003358 & NMNM078402X

The following conditions of approval will apply to Simcoe, LLC's Northeast Blanco Unit (NEBU) 604 Com Project, and other associated facilities, unless a particular Surface Managing Agency or private surface owner has supplied to Bureau of Land Management and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in an assessment or civil penalties pursuant to 43 CFR 3163.1 or 3163.2.

Disclaimers: BLM's approval of the APD does not relieve the lessee and operator from obtaining any other authorizations that may be required by the BIA, Navajo Tribe, State, or other jurisdictional entities.

Copy of Plans: A complete copy of the APD package, including Surface Use Plan of Operations, Bare Soil Reclamation Plan, Plan of Development (if required), Conditions of Approval, Cultural Resource Record of Review, Cultural Resources Compliance Form (if required), and Project Stipulations (if required) shall be at the project area at all times and available to all persons.

Review of NEPA documents: It is the responsibility of the operator to follow all the design features, best management practices, and mitigation measures as contained in the Environmental Assessment DOI-BLM-NM-F010-2024-0008-EA, which contains additional design features and best management practices that must be followed. Copies of the EA, Decision Record, and Finding of No Significant Impact may be obtained from the BLM FFO public room, or online at: EplanningUi (blm.gov).

Best Management Practices (BMPs): Farmington Field Office established environmental Best Management Practices (BMP's) will be followed during construction and reclamation of well site pads, access roads, pipeline ties, facility placement or any other surface disturbing activity associated with this project. Bureau wide standard BMP's are found in the Gold Book, Fourth Edition-Revised 2007 and at http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices.html. Farmington Field Office BMPs are integrated into the Environmental Assessment, Surface Use Plan of Operations, Bare Soil Reclamation Plan, and COAs.

Construction, Production, Facilities, Reclamation & Maintenance

Construction & Reclamation Notification: The operator or their contractor will contact the Bureau of Land Management, Farmington Field Office Environmental Protection Staff (505) 564-7600 or by email, at least 48 hours prior to any construction or reclamation on this project.

Production Facilities: Design and layout of facilities will be deferred until an onsite with BLM-FFO surface protection staff is conducted to determine the best location. Logos or their contractor will contact the Bureau of Land Management, Farmington Field Office, Surface, and Environmental Protection Staff (505) 564-7600 to schedule a facility layout onsite.

Staking: The holder shall place slope stakes, culvert location and grade stakes, and other construction control stakes as deemed necessary by the authorized officer to ensure construction in accordance with the plan of development. If stakes are disturbed, they shall be replaced before proceeding with construction.

Weather: No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts more than 6 inches deep, the soil shall be deemed too wet.

Stockpile of Soil: The top 6 inches of soil material will be stripped and stockpiled in the construction zones around the pad [construction zones may be restricted or deleted to provide resource avoidance]. The stockpiled soil will be free of brush and tree limbs, trunks, and roots. The stockpiled soil material will be spread on the reclaimed portions of the pad [including the reserve pit, cut and fill slopes] prior to re-seeding. Spreading shall not be done when the ground or topsoil is frozen or wet.

Storage Tanks: All open top permanent production or storage tanks regardless of diameter made of fiberglass, steel, or other material used for the containment of oil, condensate, produced water and or other production waste shall be screened, netted, or otherwise covered to protect migratory birds and other wildlife from access.

Compressors: Compressor units on this well location not equipped with a drip pan for containment of fluids shall be lined with an impervious material at least 8 mils thick and a 12-inch berm. The compressor will be painted to match the well facilities. Any variance to this will be approved by the Authorized Officer (AO). Noise mitigation may be required at the time of compressor installation.

Culverts: Silt Traps/Bell Holes will be built upstream of all culvert locations.

Driving Surface Area: All activities associated within the construction, operation, maintenance, and abandonment of the well location is limited to areas approved in the APD or ROW permit. During the production of the well, vehicular traffic is limited to the daily driving surface area established during interim reclamation construction operations. This area typically forms a keyhole or teardrop driving surface from which all production facilities may be serviced or inspected. A

v-type ditch will be constructed on the outside of the driving surface to further define the driving surface and to deter vehicular traffic from entering onto the interim reclamation areas.

Contouring of Cut and Fill Slopes: The interim cut and fill slope grade shall be as close to the original contour as possible. To obtain this ratio, pits and slopes shall be back sloped into the pad during interim reclamation. Only subsurface soil and material shall be utilized in the contouring of the cut and fill slopes. Under no circumstances shall topsoil be utilized as substrate material for contouring of cut and fill slopes.

Maintenance: In order to perform subsequent well operations, right-of-way (ROW) operations, or install new/additional equipment, it may be necessary to drive, park, and operate on restored, interim vegetation within the previously disturbed area. This is generally acceptable provided damage is promptly repaired and reclaimed following use. Where vehicular travel has occurred as a "convenience" and interim reclamation/vegetation has been compromised, immediate remediation of the affected areas is required. Additionally, where erosion has occurred and compromised the reclamation of the well location, the affected area must be promptly remediated so that future erosion is prevented, and the landform is stabilized.

Layflat Lines: Layflat lines used for development of the wells may be on the ground for a maximum of 6 months and shall be retrieved immediately following completion operations. If the layflat lines are needed for longer than 6 months a Sundry NOI shall be submitted to the BLM FFO for review and decision that includes a rationale for the time extension.

Noxious Weeds

Inventory the proposed site for the presence of noxious and invasive weeds. Noxious weeds are those listed on the New Mexico Noxious Weed List and USDA's Federal Noxious Weed List. The New Mexico Noxious Weed List or USDA's Noxious Weed List can be updated at any time and should be regularly check for any changes. Invasive species may or may not be listed as a noxious weed but have been identified to likely cause economic or environmental harm or harm to human health. The following noxious weeds have been identified as occurring on lands within the boundaries of the Farmington Field Office (FFO). There are numerous invasive species on the FFO such as Russian thistle (*Salsola spp.)* and field bindweed (*Convolvulus arvensis*).

Russian Knapweed (*Centaurea repens*)	Musk Thistle (*Carduss nutans*)
Bull Thistle (*Cirsium vulgare*)	Canada Thistle (*Cirsium arvense*)
Scotch Thistle (*Onopordum acanthium)*	Hoary Cress (*Cardaria draba*)
Perennial Pepperweed (*Lepdium latiofolfium*)	Halogeton (*Halogeton glomeratus*)
Spotted Knapweed (*Centaurea maculosa*)	Dalmation Toadflax (*Linaria genistifolia*)
Yellow Toadflax (*Linaria vulgaris*)	Camelthorn (*Alhagi pseudalhagi*)
African Rue (*Penganum harmala*)	Salt Cedar (*Tamarix spp*.)
Diffuse Knapweed (*Centaurea diffusa*)	Leafy Spurge (*Euphorbia esula*)

a. Identified weeds will be treated prior to new surface disturbance if determined by the FFO Noxious Weed Coordinator. A Pesticide Use Proposal (PUP) must be submitted to and approved by the FFO Noxious Weed Coordinator prior to application of pesticide. The FFO Noxious Weeds Coordinator (505-564-7600) can provide assistance in the development of the PUP.

b. Vehicles and equipment should be inspected and cleaned prior to coming onto the work site. This is especially important on vehicles from out of state or if coming from a weed-infested site.

c. Fill dirt or gravel may be needed for excavation, road construction/repair, or for spill remediation. If fill dirt or gravel will be required, the source shall be noxious weed free and approved by the FFO Noxious Weed Coordinator.

d. The site shall be monitored for the life of the project for the presence of noxious weeds (includes maintenance and construction activities). If weeds are found the FFO Coordinator shall be notified at (505) 564-7600 and provided with a Weed Management Plan and if necessary, a Pesticide Use Proposal (PUP). The FFO Coordinator can provide assistance developing the Weed Management Plan and/or the Pesticide Use Proposal.

e. Only pesticides authorized for use on BLM lands would be used and applied by a licensed pesticide applicator. The use of pesticides would comply with federal and state laws and used only in accordance with their registered use and limitations. Logos's weed-control contractor would contact the BLM-FFO prior to using these chemicals.

f. Noxious/invasive weed treatments must be reported to the FFO Noxious Weed Coordinator. A Pesticide Use Report (PUR) is required to report any mechanical, chemical, biological, or cultural treatments used to eradicate, and/or control noxious or invasive species. Reporting will be required quarterly and annually or per request from the FFO Noxious Weed Coordinator.

Bare ground vegetation trim-out: If bare ground vegetation treatment (trim-out) is desired around facility structures, the operator will submit a bare ground/trim-out design included in their Surface Use Plan of Operations (SUPO). The design will address vegetation safety concerns of the operator and BLM while minimizing impacts to interim reclamation efforts. The design must include what structures to be treated and buffer distances of trim-out. Pesticide use for vegetation control around anchor structures is not approved. If pesticides are used for bare ground trim-out, the trim-out will not exceed three feet from the edge of any eligible permanent structure (i.e., well heads, fences, tanks). Additional distance/areas may be requested and must be approved by the FFO authorized officer. The additional information below must also be provided to the FFO:

a. Pesticide use for trim out will require a Pesticide Use Proposal (PUP). A PUP is required ***prior*** to any treatment and must be approved by the FFO Noxious Weed Coordinator. Only pesticides authorized for use on BLM lands would be used and applied by a licensed pesticide applicator. The use of pesticides would comply with federal and state laws and used only in accordance with their registered use and limitations. Logos's weed-control contractor would contact the BLM-FFO prior to using these chemicals and provide Pesticide Use Reports (PURs) post treatment.

b. A Pesticide Use Report (PUR) or a Biological Use Report (BUR) is required to report any chemical, or biological treatments used to eradicate, or control vegetation on site. Reporting will be required quarterly and annually or per request from the FFO Noxious Weed Coordinator.

Paleontology

Any paleontological resource discovered by the Operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the Holder.

Visual Resources

Dark Sky COAs need to be applied to existing lighting, which is not dark sky friendly and to any additional lights added as part of pad expansion. All permanent lighting will use full cutoff luminaires, which are fully shielded (i.e., not emitting direct or indirect light above an imaginary horizontal plane passing through the lowest part of the light source). All permanent lighting will be pointed straight down at the ground in order to prevent light spill to the sides. All permanent lighting will be 4000° Kelvin or less with 3000° Kelvin preferred. Warmer light colors are less noticeable by humans and cause less impact to wildlife. All permanent lighting will be controlled by a switch and/or timer which allows the lights to be turned on when workers are on location during dark periods but will keep the lights off the majority of the time.

Wildlife Resources

Wildlife: F-4 Timing Limitation Stipulation-Important Seasonal Wildlife Habitat Rosa Mesa Wildlife SDA. No surface use is allowed during the following time period: December 1 - March 31.

Hazards: Wildlife hazards associated with the proposed project would be fenced, covered, and/or contained in storage tanks, as necessary.

Migratory Bird: Migratory nest survey stipulations. Once drilling and completion activities are complete, any open water that could be harmful to birds and wildlife. must be covered, screened, or netted to prevent entry.

Threatened, Endangered or Sensitive Species: If, in operations the operator/holder discovers any Threatened, Endangered, or Sensitive species, work in the vicinity of the discovery will be suspended and the discovery promptly reported to the BLM-FFO T&E specialist at (505) 564-7600. The BLM-FFO will then specify what action is to be taken. Failure to notify the BLM-FFO about a discovery may result in civil or criminal penalties in accordance with The Endangered Species Act (as amended).

Noise: This well is located within a designated Noise Sensitive Area (NSA). Noise standards of 48.6 dB(A) Leq will be achieved at established agency receptor points. Receptors may vary in size from a single point source to several acres based on the features and resource components that are being managed. The agency will work with the operator to establish the applicable receptor points. If a compressor or pump-jack will be placed on site, a 48.6 dB[A] Leq, or lower, noise level will be enforced at designated receptor points. The operator is required to file a sundry notice within 5 days of prior to setting a compressor or pump-jack on location, if the noise source exceeds the noise standard.

Nesting: If a bird nest containing eggs or young is encountered in the path of construction the operator will cease construction and consult with BLM to determine appropriate actions.

Livestock Grazing: Cattle are in allotment between 5/1 and 10/31. Industry may need to coordinate with permittee if concerns of livestock in area during construction.

Soil, Air, Water

Land Farming: No excavation, remediation or closure activities will be authorized without prior approval, on any federal or Indian mineral estate, federal surface, or federal ROW. A Sundry Notice (DOI, BLM Form 3160-5) must be submitted with an explanation of the remediation or closure plan for on-lease actions.

Emission Control Standard: Compressor engines 300 horsepower or less used during well production must be rated by the manufacturer as emitting NOx at 2 grams per horsepower hour or less to comply with the New Mexico Environmental Department, Air Quality Bureau's guidance.

Waste Disposal: All fluids (i.e., scrubber cleaners) used during washing of production equipment, including compressors, will be properly disposed of to avoid ground contamination, or hazard to livestock or wildlife.

Cultural Resources

Non-Permitted Disturbance: Construction, construction maintenance or any other activity outside the areas permitted by the APD will require additional approval and may require a new cultural survey and clearance.

Employee Education: All employees of the project, including the Project Sponsor and its contractors and sub-contractors will be informed that cultural sites are to be avoided by all personnel, personal vehicles, and company equipment. They will also be notified that it is illegal to collect, damage, or disturb cultural resources, and that such activities are punishable by criminal and or administrative penalties under the provisions of the Archaeological Resources Protection Act (16 U.S.C. 470aa-mm) when on federal land and the New Mexico Cultural Properties Act NMSA 1978 when on state land.

Discovery of Cultural Resources in the Absence of Monitoring: Discovery of Cultural Resources in the Absence of Monitoring: If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery in accordance with 36 CFR Section 800.13, in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property, **or in accordance with an approved program alternative.** Minor recordation, stabilization, or data recovery may be performed by BLM or a third party acting on its behalf, such as a permitted cultural resources consultant. If warranted, more extensive **archaeological or alternative mitigation,** likely implemented by a permitted cultural resources consultant, may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any **mitigations determined appropriate through the agency's Section 106 consultation are completed**. Failure to notify the BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act (ARPA) of 1979, as amended, **the Native American Graves Protection and Repatriation Act (NAGRPA) of 1990, as amended, and other applicable laws**.

Discovery of Cultural Resources during Monitoring: If monitoring confirms the presence of previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the monitor will promptly report the discovery to the BLM Field Manager. BLM will then specify what action is to be taken. **If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery in accordance with 36 CFR Section 800.13, in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property, or in accordance with an approved program**

alternative. Minor recordation, stabilization, or data recovery may be performed by BLM or a third party acting on its behalf, such as a permitted cultural resources consultant. If warranted, more extensive archaeological or alternative mitigation, likely implemented by a permitted cultural resources consultant, may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any mitigations determined appropriate through the agency's Section 106 consultation are completed.

Damage to Sites: If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare a BLM approved damage assessment and/or data recovery plan. The operator/holder agrees at his/her expense to implement a **mitigation** that the agency finds appropriate given the significance of the site, which the agency determines in consultation with the appropriate State or Tribal Historic Preservation Officer(s) and Indian tribe(s) that might attach religious and cultural significance to the affected property. **This mitigation may entail execution of the data recovery plan by a permitted cultural resources consultant and/or alternative mitigations.** Damage to cultural resources may result in **civil or criminal penalties in accordance with the Archeological Resources Protection Act (ARPA) of 1979, as amended, the Native American Graves Protection and Repatriation Act (NAGRPA) of 1990, as amended, and other applicable laws.**

See below additional cultural stipulations.

SECTION 5: CIRCULATING MEDIUM (MUD PROGRAM)

CLOSED-LOOP SYSTEM DESIGN PLAN

The closed-loop system will consist of a series of temporary, above-ground storage tanks and/or haul-off bins suitable for holding the cuttings and fluid from drilling operations. The closed-loop system will not utilize temporary earthen pits, below-grade storage tanks, below-grade sumps, or drying pads.

Design considerations include:

- The closed-loop system will be signed in accordance with 19.15.17.11 NMAC.
- The storage tanks of the closed-loop system will be of adequate volume to ensure confinement of all fluids and provide sufficient freeboard to prevent uncontrolled releases.
- Topsoil will be salvaged and stored for use in reclamation activities.

CLOSED-LOOP SYSTEM OPERATING & MAINTENANCE PLAN

The closed-loop system will be operated and maintained to contain liquids and solids, minimize the amount of drilling fluids and cuttings requiring disposal, maximize the amount of drilling fluid recycled and reused in the drilling process, isolate drilling wastes from the environment, prevent contamination of fresh water, and protect public health and the environment.

Operation and maintenance considerations include:

- Fluid levels will be maintained to provide sufficient freeboard to prevent over-topping.
- Visual inspections will be conducted daily to identify any potential leaks and to ensure that the closed-loop system storage tanks have sufficient freeboard to prevent over-topping.
- Only drilling fluids or cuttings intrinsic to, used by, or generated from, drilling operations will be stored in the closed-loop system storage tanks. Hazardous waste, miscellaneous solid waste, and/or debris will not be stored in the storage tanks.
- The OCD District Office will be notified within 48 hours of discovery of a leak in the closed-loop drilling system. If a leak is discovered, all liquid will be removed within 48 hours and the damage repaired.

CLOSED-LOOP SYSTEM CLOSURE PLAN

The closed-loop system will be closed in accordance with 19.15.17.13 NMAC.

Closure considerations include:

- Drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical.
- Residual fluids will be pulled from the storage tanks, mixed with saw dust or similar absorbent material, and disposed of at Industrial Envirotech, Inc. waste disposal facilities.
- Remaining cuttings or sludges will be vacuumed from the storage tanks and disposed of at an EPA-approved waste disposal facility.
- Storage tanks will be removed from the well location during the rig move.
- The well pad will be reclaimed and seeded in accordance with subsections G, Hand I of 19.15.17.13 NMAC.

SECTION 1: GEOLOGIC FORMATIONS AND CONTENTS

MARKER	TVD	MD	COMMENTS	BHP (PSI/FT)
Animas	25	25	Wet/aquifer	0.43
Ojo Alamo SS	2,386	2,411	Wet/aquifer	0.43
Kirtland (Top/Cretaceous)	2,505	2,532	Gas & water-bearing	0.43
Fruitland Coal	2,998	3,033	Gas & water-bearing	0.07
Pictured Cliffs SS	3,333	3,374	Wet	0.12
Lewis Shale	3,573	3,618	Gas & water-bearing	0.35
Cliffhouse SS	5,090	5,160	Gas & water-bearing	0.35
Menefee	5,435	5,510	Gas & water-bearing	0.30
Point Lookout SS	5,747	5,827	Gas & water-bearing	0.30
Mancos Shale	6,170	6,257	Gas-bearing	0.43
LP (Mancos Lateral)	7,041	7,413	Gas-bearing	0.43
TD (Mancos Lateral)	7,001	22,222	Gas-bearing	0.43

Possible Aquifers: San Jose and Ojo Alamo

Oil Shale: None Expected

Oil & Gas: Primary objective is the Mancos formation from 7,041' TVD (landing point) to 7,001' TVD (toe)

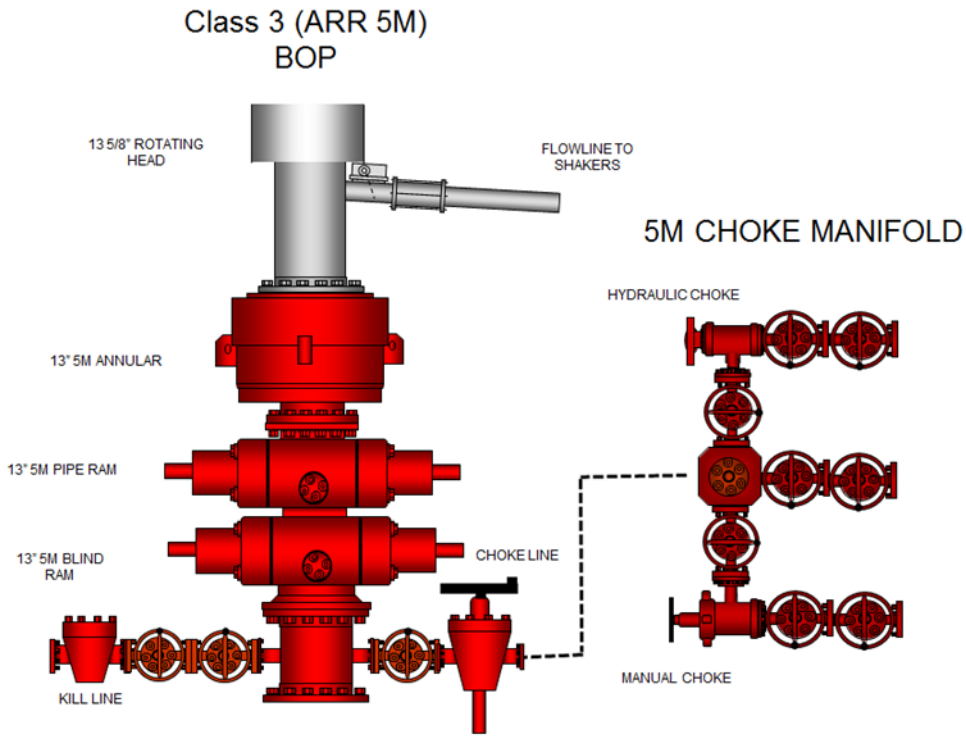
Protection of oil, gas, water, or other mineral-bearing formations: Protection shall be accomplished by setting surface casing below base of possible aquifer(s) and cementing casing to surface.

SECTION 2: BOPE

BOP equipment and accessories will meet or exceed BLM requirements outlined in 43 CFR Part 3160.

A 13-5/8" 5M BOPE will be utilized to drill this well. Maximum anticipated surface pressure for 13-5/8" 5M BOPE is 1,500 psi. The 13-5/8" BOPE will be tested 250 psi (Low) for 5 minutes and 5000 psi (High) for 10 minutes if isolated by test plug or 70 percent of internal yield pressure of casing if BOP stack is not isolated from casing. Pressure test conductor, surface, and intermediate casing(s) to 1500 psi for 30 minutes. All preventers and surface casing will be tested before drilling out of surface casing. BOP equipment will be tested every 30 days, after any repairs are made to the BOP equipment, and after the BOP equipment is subjected to pressure. Annular preventers will be functionally operated at least once per week. Pipe rams will be activated daily and blind rams shall be activated each trip or at least weekly. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of BOPE.

		BHP	MASP
13-5/8" 5M BOPE	7,041' TVD	3049	1,345



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 365368

CONDITIONS

Operator: SIMCOE LLC 1199 Main Ave., Suite 101 Durango, CO 81301	OGRID: 329736
	Action Number: 365368
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	8/8/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/8/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	8/8/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/8/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	8/8/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	8/8/2024
ward.rikala	This well can not be produced until the operator is in compliance with Rule 4.9.	8/8/2024