IDAHO DEPARTMENT OF LANDS DIRECTOR'S OFFICE 300 N. 6th Street Suite 103 PO Box 83720 Boise, ID 83720-0050 Phone (208) 334-0200 Fax (208) 334-5342



MICK THOMAS, DIVISION ADMINISTRATOR SECRETARY TO THE COMMISSION IDAHO OIL AND GAS CONSERVATION COMMISSION Betty Coppersmith, Chairman Marc Shigeta, Vice Chairman Jim Classen Ray Hinchcliff Dustin Miller

December 24, 2021

Nathan Caldwell Snake River Oil and Gas, NWGP 117 E. Calhoun Street (Box 500) Magnolia, Arkansas 71753

via e-mail: Caldwell.nathan@weiser-brown.com

Re: Request to Amend Permit to Drill #11-075-20038, Dutch Lane #1-13, Payette Co., ID

Dear Mr. Caldwell:

The Idaho Department of Lands (IDL) has completed our review of this request to amend the permit to drill for the Dutch Lane #1-13 well, Permit/USWN 11-075-20038. Enclosed is a copy of the approved amendment. This amendment to the permit was approved with the following stipulations:

 The final location of the additional target depth and proposed total depth of the well shall not be offset more than 676.98 feet from the surface location of the well as noted in the Titan Directional Survey Report dated October 23, 2021 and included as pages 21 through 24 of the Application for Permit to Drill for the Dutch Lane #1-13, USWN 11-075-20038.

All other conditions of the permit to drill granted November 17, 2021 remain in effect. Please contact me directly at 208-334-0298 if you have any questions

Sincerely,

Mick Thomas Division Administrator Minerals, Navigable Waters, Oil & Gas Idaho Department of Lands

Enc.\1 Request to amend permit, Revised APD form Approved

Nathan Caldwell, Operations Manager – Snake River Oil & Gas LLC December 24, 2021 Page 2

ecc: Patti Nitz, Payette County Chad Hersley, IDWR Michael Christian, Smith + Malek James Thum, Idaho Dept. of Lands Richard Brown, Snake River Oil & Gas LLC

RECEIVED
By James Thum at 9:51 am, Dec 24, 2021
IDAHO OIL AND GAS CONSERVATION COMMISSION
IDAHO DEPARTMENT OF LANDS Application For Permit to Drill, Deepen, or Plug Back
APPLICATION TO: 🗌 Drill (\$2,000) 🔳 Deepen (\$500) 🗌 Plug Back (\$500)
NAME OF OPERATOR: Snake River Oil and Gas Date: 12/22/2021
Address: P.O.Box 500
City: Magnolia State: AR Zip Code: 71753 Telephone: 870 234 3050
Contact Name: Nathan Caldwell Email Address: Caldwell.nathan@weiser-brown.com Emergency Contact Name/Phone: Nathan Caldwell (cel 870 904 7305)
Emergency Contact Name/Phone: Nathan Caldwell (cel 870 904 7305) (secondary) Clint Harman - 713 822 3167
DESCRIPTION OF WELL AND LEASE
Name of Lease: Dutch Lane Well Number: 1-13 Elevation (ground): 2165
Name of Lease: Dutch Lane Well Number: 1-13 Elevation (ground): 2165 Well Location: Section: 13 Township: 8N Range: 5W (or block and survey)
(Give footage from Section lines): 2398' FNL & 1316' FWL
Latitude/Longitude (Dec Degrees NAD83 minimum requirement): N 44.03302778 / W 116.88791667
Datum: 🗍 WG S84 🔳 NAD 83 🗍 NAD 27 🗍 Other:
Field and Reservoir (if wildcat, so state): WILDCAT County: PAYETTE
Distance, in miles, and direction from nearest town or post office: 2.29 miles NE from Fruitland, ID Post Office
Nearest distance from proposed location to property or lease line: <u>1316</u> feet Nearest producing well: <u>4396</u> feet
Type of Test/Unit: Gas / 640 acre unit Gas / 160 acre unit Oil / 40 acre unit Other/Docket No. CC-2016-OGR-01-006
Is Operator requesting a well location exception? 🗌 Yes 🔳 No Confidential Well Status Request? 🗐 Yes 🗍 No
Distance from proposed location to nearest drilling, completed or applied for on the same lease: no other wells on lease feet
Proposed depth: 5575 Approx. date work will start: 11-15-2021 Number of acres in lease(s): 45.156
Number of wells on lease, including this well, completed in or drilling to this reservoir: one (1)
If lease purchased with one or more wells drilled, complete the following information:
Purchased from (Name): AM Idaho
Address of above: 15021 Katy Fwy, Suite 400, Houston, TX 77094
Bond Type and Number: Idaho OGCC Bond # ROG 000 1695
Surface Rights Owner (At proposed surface location): Name Blaine May Phone: 208 230 8029
Does the drilling unit contain state leases? ¹ If yes, check all that apply:
□ IDL □ IDFG □ IDT □ Public Trust ■ Other: State of Idaho
Does this application include the following actions? If yes, check all that apply:
Well Treatment
Applications that include well treatments, pit construction, and directional drilling must provide attachments with the information required
from the respective sections of IDAPA 20.07.02 and Idaho Code § 47-3. If these activities are not included in this application, then a
separate application and approval will be required prior to commencement of any of these activities,
Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone
and expected new producing zone) The Dutch Lane 1-13 is currently drilling. n unknown sand was observed in the
previously drilled Fallon 1-10. Snake River would like to deepen Dutch Lane 1-13 from 4575' to 5575' to
determine if this sand is present. Snake River expects to reach 4575 before 12-27-2021. Attached is a wellbore diagram indicating the deepening depth. Other previously submitted documents are unchanged.

IDAHO OIL AND GAS CONSERVATION COMMISSION



Application For Permit to Drill, Deepen, or Plug Back



Applicant(s) should be familiar with and adhere to IDAPA 20.07.02, Rules Governing Conservation of Oil and Natural Gas in the State of Idaho, and Idaho Code § 47-3, Oil and Gas Wells--Geologic Information and Prevention of Waste.

Please check the boxes below to indicate that you have supplied the required information.

Maps Required

- Attach a survey plat or map, preferably on a scale of one (1) inch equals one thousand (1,000) feet, prepared by a licensed surveyor or engineer. All maps and plats should include a bar scale for reference.
- The plat must show:
 - Distance of the proposed surface location to the nearest occupied structure and the nearest highway.
 - The proposed well location. For directional wells, both surface and bottom hole locations should be marked. The location of the well with reference to the nearest lines of an established public survey.
 - All leased tracts held by the applicant within the drilling unit. Distances of the proposed well from the two nearest unit boundary lines, if applicable, and from the nearest oil or gas wells on the same unit. completed in or being drilled to the same reservoir. If the well location requested is not in conformance with the applicable well-spacing rules, show all off-setting wells to the proposed well, and the names and addresses of all adjoining lease or property owners.
 - The location of the nearest structure with a water supply, or the nearest water well as shown on the IDWR registry of water rights or well log database. The location of the nearest canal, ditch, or ordinary high-water mark of surface waters (§47-319(1)).

Other Required Information

- Estimated depth to the top of the important geologic markers.
- Estimated depth to the top of the target formations.
- Information on the type of tools to be used.
- Proposed logging program.
- E Proposed casing program, including size and weight of casing and the depth at which each casing type is to be set.
- Type and amount of cement to be used, and the intervals cemented.
- Information on the drilling plan (drill pad and rig set up, etc).
- Schematic diagram of the BOP and well head assemblies, including the minimum size and pressure rating of all components of the BOP and well head assemblies.
- Best management practices to be used for erosion and sediment control.
- I Plan for interim reclamation of the drill site after the well is completed, and a plan for final reclamation of the drill site following plugging and abandonment of the well. These plans must contain the information needed to implement reclamation as described in IDAPA 20.07.02 subsection 310.16 and section 510.

 CERTIFICATION:
 I, Nathan Caldwell
 the undersigned, state that I am the Operations Manager

 of
 Snake River Oil and Gas
 (company) and that I am authorized by said company to make this

application, and that this application was prepared under my supervision and direction, and that the facts stated herein are

true, correct and complete to the best of my knowledge.

Date: 12/22/2021 Signature:



NOTICE: Before submitting this form, be sure that you have given all information requested.

IDL Office Use Only:	12/27/2021	Mhowe
Approval Date:		Approved by: Signature and Title

US Well Number:

11-075-20038

Operator Number (if known):

IDLOGD001.01 (08/20)



IDAHO OIL AND GAS CONSERVATION COMMISSION

Application For Permit to Drill, Deepen, or Plug Back



ADDITIONAL INFORMATION

State Land Ownership Explanation¹

IDL	Idaho Department of Lands
IDFG	Idaho Department of Fish and Game
IDT	Idaho Department of Transportation
Public Trust	State owned beds and banks of navigable rivers and lakes
Other	Other state agencies not named above. Includes, but is not limited to; Idaho Department of Parks and
	Recreation, Idaho Military Division, etc.

Fees: IDAPA 20.07.02.200.02

An application fee must accompany each application for permit to drill, deepen, or plug back. No service fee is required for a permit to deepen or plug back in a well for which the fee has been paid for permit to drill unless the drilling permit has expired.

Permit Denial: IDAPA 20.07.02.200.05

Applications may be denied for the following reasons:

- a. Application fee was not submitted.
- b. Application is incomplete.
- c. Failure to post required bonds.
- d. Proposed well will result in a waste of oil or gas, a violation of correlative rights, or the pollution of fresh water supplies.

Well Completion/Recompletion Report: IDAPA 20.07.02.340

Within thirty (30) days after the completion of a well drilled for oil or gas, or the recompletion of a well into a different source of supply, or where the producing interval is changed, a completion report shall be filed with the Department, on a form prescribed by the department.

Log Submittals: IDAPA 20.07.02.341

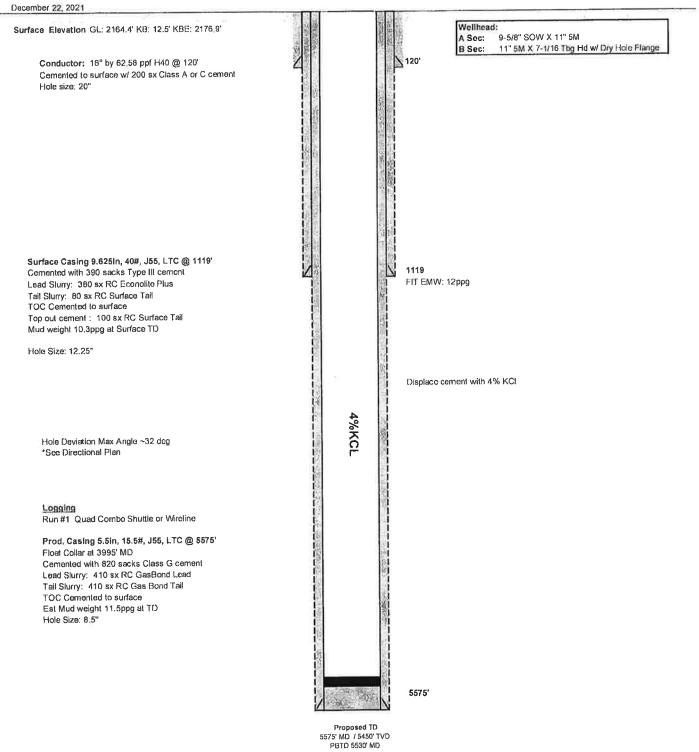
All wells shall have:

- 1. A lithologic log from the bottom of the hole to the top, to the extent practicable.
- 2. A bottomhole location survey log.
- 3. A cement bond log.
- 4. If other logs were run, including, but not limited to, resistivity, gamma-neutron log, sonic log, etc., then the owner or operator shall retain a copy regardless of results.
- 5. All logs shall be submitted to the Department in paper and digital formats within thirty (30) days of the log being run. If logs were run in color, then the submitted copies shall also be in color. Digital formats must be Tiff and LAS 2.0 or higher. Logs submitted to the department must have a scale of one (1) inch for correlation logs and five (5) inches for detail logs.

Please submit Application to Drill, Deepen, or Plug Back to:

Idaho Department of Lands Oil and Gas Program 300 N. 6th Street, Suite 103 PO Box 83720 Boise, Idaho 83702-0050

Snake River Oil and Gas Well Name: Dutch Lane 1-13 Location: Section 13 T8N R5W County: Payette Field: Wildcat Rig: Paul Graham Drilling Co. 4 PROPOSED WELLBORE DIAGRAM



Well Name: Dutch Lane 1-13	Field: Wildcat
County, Payotte	State: Idaho
Total Depth (MD)5575	TVD 5450

IDAHO DEPARTMENT OF LANDS DIRECTOR'S OFFICE 300 N. 6th Street Suite 103 PO Box 83720 Boise, ID 83720-0050 Phone (208) 334-0200 Fax (208) 334-5342



MICK THOMAS, DIVISION ADMINISTRATOR SECRETARY TO THE COMMISSION IDAHO OIL AND GAS CONSERVATION COMMISSION Betty Coppersmith, Chair Ray Hinchcliff, Vice Chair Jim Classen Dustin Miller Marc Shigeta

November 17, 2021

Nathan Caldwell Snake River Oil and Gas /NWGP Weiser Brown Operating 117 E. Calhoun St. (Box 500) Magnolia, Arkansas 71753 via e-mail: caldwell.nathan@weiser-brown.com

Re: Permit to Drill #11-075-20038, Dutch Lane #1-13, Payette Co., ID

Dear Mr. Caldwell:

The Idaho Department of Lands (IDL) has completed our review of this permit to drill for oil and gas. Enclosed is a copy of the approved permit. This permit was approved with the following stipulations:

- The conductor pipe shall be cemented to the surface as required by IDAPA 20.07.02.310.04. Permittee shall use ready mix cement unless water is encountered, in which case an appropriate slurry mix will be used.
- 2. During drilling and logging of the hole for the production casing, the permittee shall identify any water bearing zones and isolate those zones in the annular space during cementing or completion activities.
- 3. The permittee shall be required to submit an affidavit covering the initial BOP pressure test after installation signed by the operator or contractor attesting to the satisfactory pressure test.
- 4. The permittee shall ensure tanks are adequately sized, designed and constructed for the reception and confinement of mud and cuttings and to prevent contamination of streams and potable water.
- 5. Drilled holes cannot be used for any other purposes unless they are constructed according to the applicable well construction standards administered by the Idaho Department of Water Resources.
- 6. Applicant will obtain any needed water rights from Idaho Department of Water Resources if nearby wells will be used to supply water for the drilling operations.

Nathan Caldwell November 17, 2021 Page 2

- 7. This permit allows for an additional one hundred fifty (150) feet of drill hole below the permitted depth of the well for purposes of logging and casing, but no well completion nor production will be allowed to occur below the permitted depth without authorization from the Department.
- 8. All well information required by Idaho Code § 47-324(4), IDAPA 20.07.02.340 and 341 will be submitted to IDL within 30 days of the logs being run.
- 9. Well Log information shall be submitted in paper and electronic formats as required by IDAPA 20.07.07.340.05. Paper copies shall be submitted on a minimum of 24 lb. Premium Pre-Fold Bond Paper. All log copies shall be the final processed logs as provided by the service company. No field / preliminary copies shall be accepted.
- 10. Idaho Department of Lands inspectors shall have 24-hour, unencumbered access for compliance and regulatory purposes.
- 11. All cementing operations shall be in accordance with IDAPA 20.07.02.310. Cement will be returned to surface on the surface casing via the pump and plug method or other method as approved by the Department.
- 12. This permit does not grant the right for ingress or egress nor does this application grant the right to production from unleased lands.
- 13. Operations will follow all guidelines and stipulations as set forth in Spacing and Integration Order, Docket No. CC-2016-OGR-01-006 dated January 17, 2017.
- 14. If the proposed target described in the Geologic Prognosis of the submitted APD (Sands C and/or D) is hydrocarbon-bearing, no production may occur without a final processed angular deviation and directional survey being submitted to the Department.
- 15. If potential hydrocarbon-bearing zones are encountered other than the proposed target described in the Geologic Prognosis of the submitted APD (Sands C and/or D), no production may occur from these zones without authorization from the Department. Any production that occurs in the target sand is subject to the limitations set forth in the Integration Order for Docket CC-2016-OGR-01-006, dated January 17, 2017.

Please ensure that all operations are conducted in accordance with the requirements of IDAPA 20.07.02 (Rules Governing Conservation of Oil and Natural Gas in the State of Idaho).

This permit will be administered by IDL staff and possibly a contractor hired by IDL. We will be inspecting the drilling operation. Please contact me at 208-334-0298 if you have any questions.

Nathan Caldwell November 17, 2021 Page 3

Sincerely,

Tick Chountes

Mick Thomas Division Administrator Minerals, Navigable Waters, Oil & Gas Idaho Department of Lands

Enc.\1 Dutch Lane 1-13 Approved APD

ecc: Patti Nitz, Payette County Chad Hersley, IDWR Michael Christian, Smith + Malek James Thum, Idaho Dept. of Lands

IDAHO OIL AND GAS CONSERVATION COMMISSION
IDAHO DEPARTMENT OF LANDS Application For Permit to Drill, Deepen, or Plug Back
RECEIVED By James Thum at 11:18 am, Oct 29, 2021
APPLICATION TO: 🔳 Drill (\$2,000) 🗌 Deepen (\$500) 🗌 Plug Back (\$500)
NAME OF OPERATOR: Snake River Oil and Gas Date: 10-27-2021
Address: P.O. Box 500
City: <u>Magnolia</u> State: <u>AR</u> Zip Code: <u>71753</u> Telephone: <u>870 234 3050</u>
Contact Name: <u>Nathan Caldwell</u> Email Address: <u>caldwell.nathan@weiser-brown.com</u>
Emergency Contact Name/Phone: <u>Nathan Caldwell cell (870) 904-7305</u> (secondary) Clint Harman - 713-822-3167 - clint.harman.cons@outlook.com
DESCRIPTION OF WELL AND LEASE
Name of Lease: Dutch Lane Well Number: Elevation (ground):2165
Well Location: Section: <u>13</u> Township: <u>8N</u> Range: <u>5W</u> (or block and survey)
(Give footage from Section lines): 2 398' FNL & 1 316 FWL
Latitude/Longitude (Dec Degrees NAD83 minimum requirement): N 44.03302778 / W 116.8879166
Datum: 🗌 WGS84 🔳 NAD83 🔲 NAD27 🗍 Other:
Field and Reservoir (if wildcat, so state): WildcatCounty: Payette
Distance, in miles, and direction from nearest town or post office: 2.29 miles NE from Fruitland, ID Post office
Nearest distance from proposed location to property or lease line: <u>1316</u> feet Nearest producing well: <u>4396</u> feet
Type of Test/Unit: Gas / 640 acre unit Gas / 160 acre unit Oil / 40 acre unit Other/Docket No. <u>CC-2016-OGR-01-006</u>
Is Operator requesting a well location exception? Yes INo Confidential Well Status Request? Yes No
Distance from proposed location to nearest drilling, completed or applied for on the same lease: no other wells on lease feet
Proposed depth: <u>4575</u> Approx. date work will start: <u>11/15/2021</u> Number of acres in lease(s): <u>485.156</u>
Number of wells on lease, including this well, completed in or drilling to this reservoir: <u>one (1)</u>
If lease purchased with one or more wells drilled, complete the following information:
Purchased from (Name): <u>AM Idaho</u>
Address of above: 15021 Katy Fwy, Suite 400, Houston, TX 77094
Bond Type and Number: Idaho OGCC Bond # ROG 0001695
Surface Rights Owner (At proposed surface location): Name Blaine May Phone: 208-230-8029
Does the drilling unit contain state leases? ¹ If yes, check all that apply:
□ IDL □ IDFG □ IDT □ Public Trust ■ Other: State of Idaho
Does this application include the following actions? If yes, check all that apply:
Well Treatment
Applications that include well treatments, pit construction, and directional drilling must provide attachments with the information required
from the respective sections of IDAPA 20.07.02 and Idaho Code § 47-3. If these activities are not included in this application, then a
separate application and approval will be required prior to commencement of any of these activities.
Remarks: (If this is an application to deepen or plug back, briefly describe work to be done, giving present producing zone
and expected new producing zone)
We affirm that we have written permission from the owner of the ditch located approximately 150' west of the proposed well to drill in this location.
We affirm that we have leased 100% of the tracts within this unit per Order # CC-2016-OGR-01-006

IDAHO OIL AND GAS CONSERVATION COMMISSION



Application For Permit to Drill, Deepen, or Plug Back



Applicant(s) should be familiar with and adhere to IDAPA 20.07.02, Rules Governing Conservation of Oil and Natural Gas in the State of Idaho, and Idaho Code § 47-3, Oil and Gas Wells--Geologic Information and Prevention of Waste.

Please check the boxes below to indicate that you have supplied the required information.

Maps Required

- Attach a survey plat or map, preferably on a scale of one (1) inch equals one thousand (1,000) feet, prepared by a licensed surveyor or engineer. All maps and plats should include a bar scale for reference.
- The plat must show:

Distance of the proposed surface location to the nearest occupied structure and the nearest highway.
 The proposed well location. For directional wells, both surface and bottom hole locations should be marked.
 The location of the well with reference to the nearest lines of an established public survey.

- All leased tracts held by the applicant within the drilling unit. Distances of the proposed well from the two nearest unit boundary lines, if applicable, and from the nearest oil or gas wells on the same unit. completed in or being drilled to the same reservoir. If the well location requested is not in conformance with the applicable well-spacing rules, show all off-setting wells to the proposed well, and the names and addresses of all adjoining lease or property owners.
- The location of the nearest structure with a water supply, or the nearest water well as shown on the IDWR registry of water rights or well log database. The location of the nearest canal, ditch, or ordinary high-water mark of surface waters (§47-319(1)).

Other Required Information

- Estimated depth to the top of the important geologic markers.
- Estimated depth to the top of the target formations.
- Information on the type of tools to be used.
- Proposed logging program.
- Proposed casing program, including size and weight of casing and the depth at which each casing type is to be set.
- Type and amount of cement to be used, and the intervals cemented.
- Information on the drilling plan (drill pad and rig set up, etc).
- Schematic diagram of the BOP and well head assemblies, including the minimum size and pressure rating of all components of the BOP and well head assemblies.
- Best management practices to be used for erosion and sediment control.
- Plan for interim reclamation of the drill site after the well is completed, and a plan for final reclamation of the drill site following plugging and abandonment of the well. These plans must contain the information needed to implement reclamation as described in IDAPA 20.07.02 subsection 310.16 and section 510.

CERTIFICATION: I,	Ante bulnul	Mill CALD would be undersigned, state that I am the _	OPERATEOMS MANALER
of SMAYLU FIVER USL	12 645	(company) and that I am authorized	by said company to make this

application, and that this application was prepared under my supervision and direction, and that the facts stated herein are

true, correct and complete to the best of my knowledge.

Date:	10	28	2021	
	2			

NOTICE: Before submitting this form, be sure that you have given all information requested.

____ Signature: ____

IDL Office Use Only:	14 M
Approval Date: 11/17/2021	_ Approved by:
US Well Number: 11-075-20038	Operator Number (if known):



IDAHO OIL AND GAS CONSERVATION COMMISSION Application For Permit to Drill, Deepen, or Plug Back



ADDITIONAL INFORMATION

State Land Ownership Explanation¹

IDLIdaho Department of LandsIDFGIdaho Department of Fish and GameIDTIdaho Department of TransportationPublic TrustState owned beds and banks of navigable rivers and lakesOtherOther state agencies not named above. Includes, but is not limited to; Idaho Department of Parks and
Recreation, Idaho Military Division, etc.

Fees: IDAPA 20.07.02.200.02

An application fee must accompany each application for permit to drill, deepen, or plug back. No service fee is required for a permit to deepen or plug back in a well for which the fee has been paid for permit to drill unless the drilling permit has expired.

Permit Denial: IDAPA 20.07.02.200.05

Applications may be denied for the following reasons:

- a. Application fee was not submitted.
- b. Application is incomplete.
- c. Failure to post required bonds.
- d. Proposed well will result in a waste of oil or gas, a violation of correlative rights, or the pollution of fresh water supplies.

Well Completion/Recompletion Report: IDAPA 20.07.02.340

Within thirty (30) days after the completion of a well drilled for oil or gas, or the recompletion of a well into a different source of supply, or where the producing interval is changed, a completion report shall be filed with the Department, on a form prescribed by the department.

Log Submittals: IDAPA 20.07.02.341

All wells shall have:

- 1. A lithologic log from the bottom of the hole to the top, to the extent practicable.
- 2. A bottomhole location survey log.
- 3. A cement bond log.
- 4. If other logs were run, including, but not limited to, resistivity, gamma-neutron log, sonic log, etc., then the owner or operator shall retain a copy regardless of results.
- 5. All logs shall be submitted to the Department in paper and digital formats within thirty (30) days of the log being run. If logs were run in color, then the submitted copies shall also be in color. Digital formats must be Tiff and LAS 2.0 or higher. Logs submitted to the department must have a scale of one (1) inch for correlation logs and five (5) inches for detail logs.

Please submit Application to Drill, Deepen, or Plug Back to:

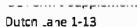
Idaho Department of Lands Oil and Gas Program 300 N. 6th Street, Suite 103 PO Box 83720 Boise, Idaho 83702-0050

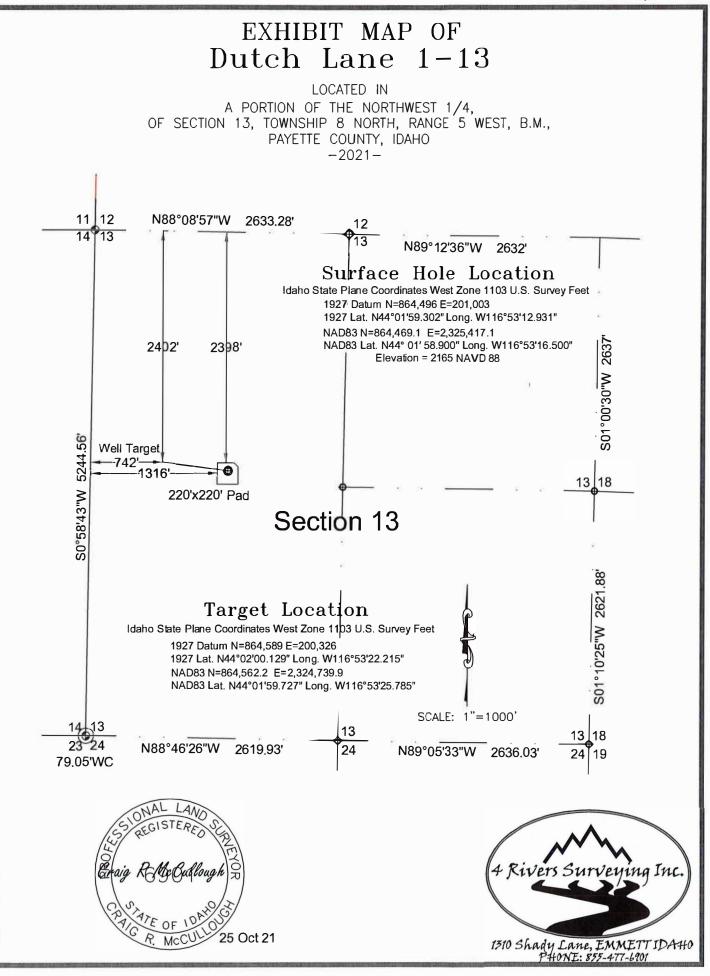
Snake River Oil and Gas, LLC

IDL Permit Supplement Dutch Lane 1-13 Payette County, ID October 23, 2021 DL Perm i Supplement Dutch lane 1-13 Payette Sounty, D October 23, 2021

Table of Contents

Surveyors Well Plat and Aerial Photo Geologic Prognosis Site Preparation Well Construction Cementing Program Rig Location Plat Drilling Tools Drilling Plan BOP's Directional Drilling Plan Logging Plan Wellbore Diagram Wellhead Production Tree Reclamation





SROG Dutch Lane #1-13 Aerial photo: IDWR Website Well Surface Location Indicated by RED STAR 300' radius indicated by YELLOW CIRCLE Nearest Occupied Structure and Water Wells Indicated by Text Boxes

300' Radius /

utch Lane 1-13 Surface Location

Distances of Well Surface Location: 1200' west of Dutch Lane 2500' south of Killebrew Rd 4800' southwest of Hwy 52 150' east of ditch

Nearest Occupied Structure Approx. 1070' to east-southeast of well Nearest Water wells (Per IDWR)

0 290551

380859

N

IDL Permit Supplement Dutch Lane 1-13

Geologic Prognosis

Prospect

The Dutch Lane 1-13 well is designed to test Sands C and D. Sand C is inferred from seismic data and has not been encountered in a well previously. Sand D is found productive in the Barlow 1-14 well about 3/4ths of a mile to the southwest.

Proposed Well

The well is to be drilled as a "directional hole" to a depth of 4575' MD/4450' TVD to accommodate surface farming operations. The surface and bottomhole locations are in section 13, T8N R5W in Payette County, Idaho. The surface location will be @ N 44 deg 01'59.304" by W 116 deg 53' 12.932". The target and bottomhole locations are approximately 650' west of the surface location, @ N 44 deg 2' 0.130" by W 116 deg 53' 22.215".

Estimated Geologic Formation Tops

Claystone +/- 3500' of claystone expected with occasional thin sandstones and siltstones of Glenns Ferry/Chalk Hills Formations Undifferentiated from 200' to 3473' MD/3349' TVD.

Sands A & B Not Present

Sand C 3473' MD/3349' TVD

Sand D 3777' MD/3652' TVD

Proposed Total Depth 4575' MD/4450' TVD

Basalt Not Reached

Payette Fm. Not Reached

IDL Permit Supplemental Dutch Lane 1-13

Payette County, ID October 23, 2021

Site Preparation

Erosion Control

Appropriate grading, mechanical stabilization (rip-rap or hay bales), chemical stabilization (soil cement) and silt fencing will be used to prevent soil erosion. All cut and fill slopes are designed with a minimum 2:1 grade to minimize runoff erosion and ensure mechanical stability.

Sump

The location will have a 2' deep trench on downhill sides where the spoil from that trench will be used to construct an earthen berm around the location. The trench will act as a sump to collect rain and wash water for controlled release or appropriate disposal as required.

Well Construction

Well Interval	Bit/Hole	CSG, Grade/Wt	CSG Depth	<u>TOC</u>	CMT Type/Volume
Conductor	20"	16"/H-40/65#/ft	120'	Surface	351 Cuft concrete
Surface	12.25"	9-5/8"/J55/36#/ft	1125'	Surface	Lead-247 sks TypeIII-RC Econolite Plus. Tail-80sks TypeIII-RC Gas Bond.
Production	8.5″	5.5 ″/J- 55/15.5#/ft	4575	Surface	Lead-394 sks ClassG-RC Gas Bond. Tail-400 sks ClassG-RC Gas Bond.

Surface Casing Detail

- -9 5/8" float shoe
- -1 full length joint 9 5/8" 36 J-55 LTC for shoe track centralized
- -9 5/8" float collar
- -9 5/8" 36# J-55 STC Casing its to surface
- -Cement basket for 9 5/8" casing approx. 120' below surface.
- -Centralization Install 1 cent /jt

Production Casing Detail

- -5 ½" float shoe
- -1 full length jts 5 $\ensuremath{\ensuremath{\mathcal{S}}}$ 15.5# J-55 LTC for shoe track centralized
- -5 ½" float collar
- -5 ½ 17# K-55 LTC csg with 1 centralizer / joint to surface (turbolizers, stage collar and basket placement TBD).

Cementing Program

Conductor: 351 cuft concrete - surface to 120'

Surface Casing: 9 5/8" (Excess 150%)

Stage	<u>Volume</u>	Yield	Density	Description
Spacer	20 bbls	N/A	8.54 ppg	20 bbls 4% KCL
Lead Cement	768 ft3	3.11 ft3/sk	11.0 ppg	247 sks Type III - RC Econolite Plus
Tail Cement	100 ft3	1.36 ft3/sk	14.8 ppg	80 sks Type III - RC Surface Tail
Displacement	80 bbls	N/A	9-10 ppg	84 bbl Drilling fluids/Water
Т/О СМТ	102 ft3	1.36 ft3/sk	14.8 ppg	80 sks Type III - RC Surface Tail
*Depth: 1,125' (MD Hole Size	e: 12 %" Mud we	ight: 8.7 ppg	

Production Casing (Excess 15% over open hole caliper)

Stage	Volume	Yield	Density	Description
Spacer	20 bbls	N/A	8.34 pg	10 bbls mud flush
Spacer	40 bbls	N/A	12 ppg	40 bbls 4% KCL weighted spacer
Lead Cement	677 ft3	1.72 ft3/sk	13.0 ppg	394 sks Class G - RC Gas Bond Lead
Tail Cement	528 ft3	1.32 ft3/sk	14.2 ppg	400 sks Class G - RC Gas Bond Tail
Displacement	102 bbls	N/A	8.54 ppg	102 bbls 4% KCL

Depth: 4,575 MD Hole Size: 8 ½" Mud weight: 11.5 ppg

IDL Permit Supplement Dutch Lane 1-13

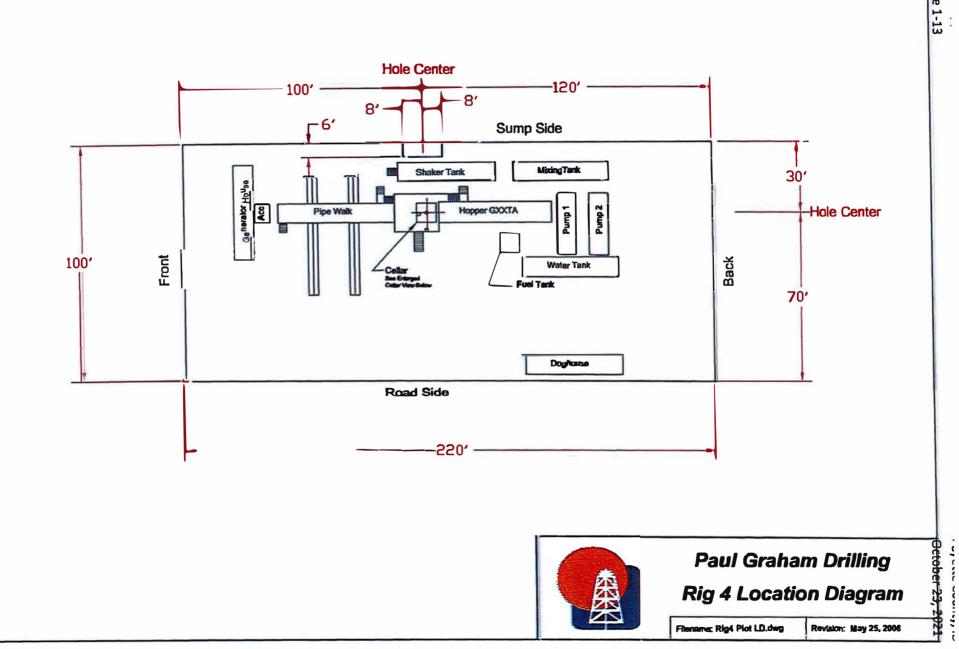
Payette County, ID October 23, 2021

Rig Location Plat

See Paul Graham Drilling Rig 4 Location Diagram.

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Dutch Lane 1-13



10 of 25

IDL Permit Supplemental Dutch Lane 1-13 Payette County, ID October 23, 2021

Drilling Tools

Types of Tools to be Used

BHA #1 Directional Drilling Assembly

- 12 ¼" Mill tooth bit

- Bit sub w/ float

- 1 (8") Spiral Integral Blade Stabilizer

- -1 (8") Mule shoe sub
- -1 (8") non-mag drill collar (MWD)
- -1 (8") non-mag drill collar

- 1 Crossover

- -15 4-1/2" Heavy Weight Drill Pipe
- -1 Drilling Jar Assembly
- -5-4-1/2" HWDP
- -4-1/2" 16.6# XH Drill Pipe

BHA #2 Directional Drilling Assembly

-8 ½" Smith FDS bit or equivalent, with 6 ¾"directional motor assembly
-1 - 6 ¾" float sub
-8" Spiral integral blade stabilizer
-6 ¾" mule shoe sub
-6 ¾" non-mag drill collar (MWD)
-6 ¾" non-mag drill collar
-X/O (if needed)
-15 - 4-1/2" Heavy weight drill pipe
-Drilling jar assembly
-5 - 4-1/2" Heavy weight drill pipe
-4-1/2" 16.6#/ft XH Drill pipe

IDL Permit Supplemental Dutch Lane 1-13

Payette County, ID October 23, 2021

Drilling Plan

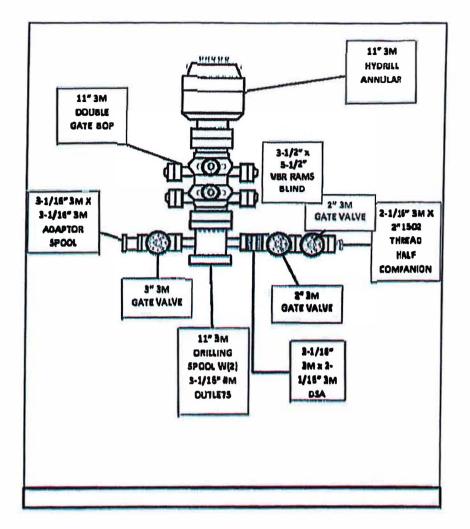
Drilling Plan expected to include but not limited to:

- 1. Auger 20" hole to 120' with water well rig and run 16" casing, set same with concrete back to surface.
- 2. Move in drilling rig.
- 3. Drill 12 ¼" hole with drilling rig to 1,125' and run 9 5/8" casing setsame with cement back to surface.
- 4. Drill 8 ½" hole to 4,575' and run open hole logs. If logs look good, run 5 ½" casing to TD and cement back to surface.
- 5. Move out drilling rig.

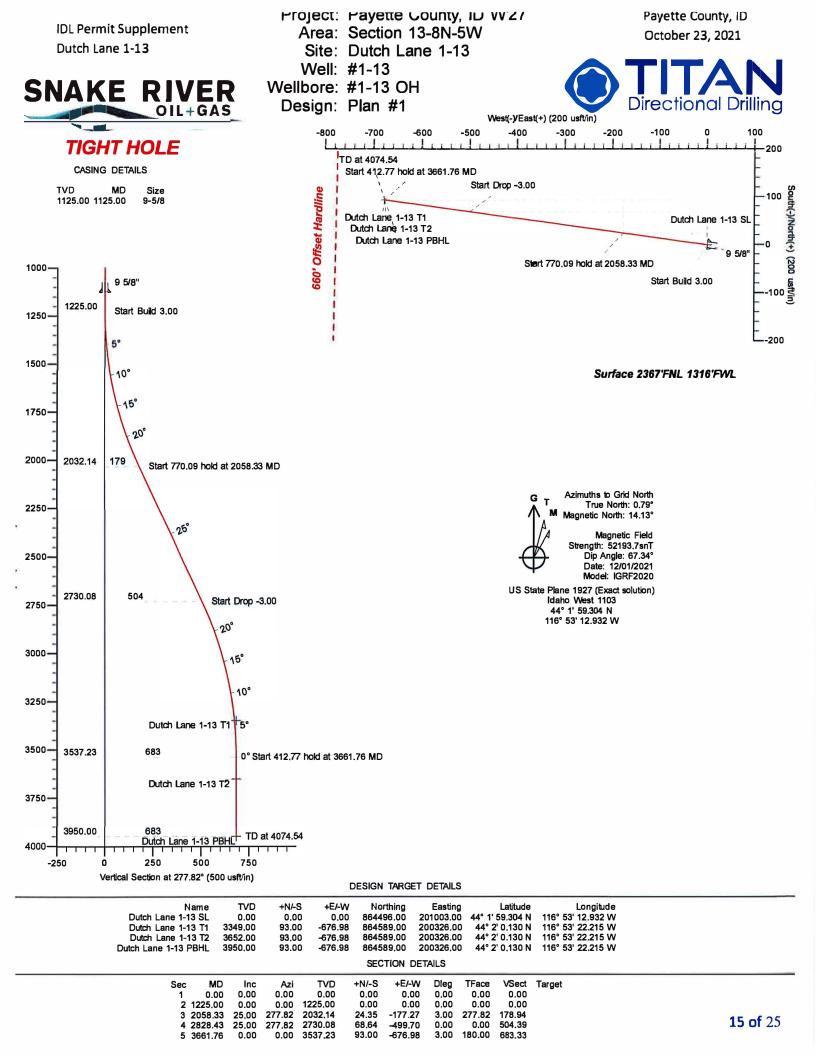
Blowout Preventer (BOP) Schematic

Stack from bottom up; pipe rams, mud cross, blind rams and annular. Pressure control equipment to include upper Kelly cock, Kelly, lower Kelly valve, stand-by full opening drill string valve (TIW), stand-by drill string inside BOP (Gray).

See diagram



BOP Dlagram



IDL Permit Sup Dutch Lane 1-1			Tita	an Directio Survey R		ng			ayette County, Dctober 23, 202	
Company: Si	nake River Oil and	d Gas	ani, eğ ennə azərbəyi, bətər tanına yarına sırşığı a nəbələ mi, eğ ennə azərbəyi, bətər tanına yarına sırşığı a nəbələ	Local Co-o	rdinate Refer	ence:	Well #1-13		n se kan se	1943-4342-43 1943-4342-43
Contracting and the second	ayette County, ID	W27		TVD Refere	ence:		GL+KB @ 217	9.00usft (Paul G	raham 4)	
	utch Lane 1-13			MD Referen	nce:			9.00usft (Paul G		
	I-13			North Refe	rence:		Grid			
Wellbore: #1	I-13 OH			Survey Cal	culation Meth	od:	Minimum Curv	ature		
Design: Pi	an #1			Database:			EDM 5k-14			
Project	Payette Count	y, ID W27			486 6 -					
Map System: Geo Datum: Map Zone:	US State Plane NAD 1927 (NAD Idaho West 1103	CON CONUS)	ution)	System D)atum:		Mean Sea Lev Using geodetic			
Site	Dutch Lane 1-	13			and also be	an American Jan				
Site Position:			Northing:	864	4.496.00 usft	Latitude:			44° 1' 59.30	04 N
Site Position: From:	Мар		Easting:		1,003.00 usit				44 1 59.30 116° 53' 12.93	
Position Uncertainty	•		Slot Radius:	20	13-3/16 "	Grid Conv			-0.79	
Well	#1-13									-
Well Position	+N/-S	0.00 usft	Northing:		864,496.	00 usft L	atitude:		44° 1' 59.30	04 N
	+E/-W	0.00 usft	Easting:		201,003.	00 usft L	.ongitude:		116° 53' 12.93	32 W
Position Uncertainty	,	0.00 usft	Wellhead Elev	vation:		usft (Ground Level:		2,165.00	usf
					and the second		281/	sources and a second state		
Wellbore Magnetics	#1-13 OH Model Nan	ne S	Sample Date	Decilir		DI	p Angle		Strength	
	Model Nan	ne S F2020	Sample Date 12/01/2021	Deciir ('		Di	p Angle (°) 67.34		Strength (nT) 2,193.67580486	
	Model Nan			A CALL STORE STORE	•)	Di	(°)		(nT)	
Magnetics	Model Nan IGR	F2020		A CALL STORE STORE	•)	Di	(°)		(nT)	
Magnetics Design Audit Notes:	Model Nan IGR Plan #1	F2020 review		A CALL STORE STORE	°) 13.34	Di Tie On Depth:	(°)		(nT) 2,193.67580486	.00
Magnetics Design Audit Notes: Version:	Model Nan IGR Plan #1	F2020 review Depth Fro	12/01/2021 Phase: om (TVD)	(" PLAN +N/-S	°) 13.34 	∏e On Depth: +E/-₩	(°)	4 52 Direction	(nT) 2,193.67580486	.00
Magnetics Design Audit Notes: Version:	Model Nan IGR Plan #1	F2020	12/01/2021 Phase: om (TVD)	(* PLAN	°) 13.34 7	Tie On Depth:	(°)	4 52 Direction (°)	(nT) 2,193.67580486	.00
Magnetics Design Audit Notes: Version: Vertical Section:	Model Nan IGR Plan #1	F2020 review Depth Fro	12/01/2021 Phase: om (TVD) ft)	(" PLAN +N/-S (usft)	°) 13.34 7	∏e On Depth: +E/-₩ (usft)	(°)	4 52 Direction (°)	(nT) 2,193.67580486 0.	.00
Magnetics Design Audit Notes: Version: Vertical Section:	Model Nan IGR Plan #1	F2020 review Depth Fro	12/01/2021 Phase: om (TVD) ft)	(" PLAN +N/-S (usft)	°) 13.34 7	∏e On Depth: +E/-₩ (usft)	(°)	4 52 Direction (°)	(nT) 2,193.67580486 0.	.00
Magnetics Design Audit Notes: /ertical Section: Planned Survey	Model Nan IGR Plan #1	F2020 review Depth Fro	12/01/2021 Phase: om (TVD) ft)	(" PLAN +N/-S (usft)	°) 13.34 7	∏e On Depth: +E/-₩ (usft)	(¹) 67.3-	4 52 Direction (°) 27	(nT) 2,193.67580486 0.	.00
Magnetics Design Audit Notes: /ersion: /ertical Section: Planned Survey Measured Depth	Model Nan IGR Plan #1 prelim for target	F2020 review Depth Fro (us Azimuth	12/01/2021 Phase: om (TVD) ft) 0.00 Vertical Depth	(* PLAN +N/-S (usft) 0.0	*) 13.34 10 ••E/-W	Te On Depth: +E/-W (usft) 0.00 Vertical Section	(*) 67.34 Dogleg Rate	4 52 Direction (°) 27 Build Rate	(nT) 2,193.67580486 0. 77.82 Turn Rate	.00
Magnetics Design Audit Notes: Vertical Section: Planned Survey Measured	Model Nan IGR Plan #1 prelim for target	F2020 review Depth Fro (us	12/01/2021 Phase: om (TVD) ft) 0.00 Vertical	(* PLAN +N/-S (usft) 0.0	°) 13.34	Te On Depth: +E/-W (usft) 0.00 Vertical	(*) 67.34 Dogleg	4 52 Direction (°) 27 Build	(nT) 2,193.67580486 0. 77.82 Tum	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth	Model Nan IGR Plan #1 prelim for target Inclination (*)	F2020 review Depth Fro (us Azimuth	12/01/2021 Phase: om (TVD) ft) 0.00 Vertical Depth	(* PLAN +N/-S (usft) 0.0	*) 13.34 10 ••E/-W	Te On Depth: +E/-W (usft) 0.00 Vertical Section	(*) 67.34 Dogleg Rate	4 52 Direction (°) 27 Build Rate	(nT) 2,193.67580486 0. 77.82 Turn Rate	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane	Model Nan IGR Plan #1 prelim for target inclination (*) 0.00 0 1-13 SL	F2020 review Depth Fro (us Azimuth (°) 0.00	12/01/2021 Phase: m (TVD) ft) 0.00 Vertical Depth (usft) 0.00	(* PLAN +N/-S (usft) 0.0 +N/-S (usft) 0.00	*) 13.34 10 10 +E/-W (usft) 0.00	Fie On Depth: +E/-W (usft) 0.00 Vertical Section (usft) 0.00	(*) 67.3- Dogleg Rate (*/100usft) 0.00	4 52 Direction (°) 27 Build Rate (°/100usft) 0.00	(nT) 2,193.67580486 0. 77.82 Turn Rate (*/100usft) 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00	Model Nan IGR Plan #1 prelim for target Inclination (*) 0.00	F2020 review Depth Fro (us Azimuth (°)	12/01/2021 Phase: pm (TVD) ft) 0.00 Vertical Depth (usft)	(* PLAN +N/-S (usft) 0.0	*) 13.34 7 7 90 ••••••••••••••••••••••••••••••••	Fie On Depth: +E/-W (usft) 0.00 Vertical Section (usft)	(°) 67.3- Dogleg Rate (°/100usft)	4 52 Direction (°) 27 Build Rate (°/100usft)	(nT) 2,193.67580486 0. 7.82 Turn Rate (°/100usft)	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8"	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00	F2020 review Depth Fro (us Azimuth (*) 0.00 0.00	12/01/2021 Phase: (TVD) (t) 0.00 Vertical Depth (usft) 0.00 1,125.00	(* PLAN +N/-S (usft) 0.00 0.00	*) 13.34 13.34 10 10 +E/-W (usft) 0.00 0.00	Fie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00	(*) 67.3- Dogleg Rate (*/100usft) 0.00 0.00	4 52 Direction (°) 27 Builid Rate (°/100usft) 0.00 0.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 0.00	F2020 review Depth Fro (us Azimuth (*) 0.00 0.00 0.00	12/01/2021 Phase: (TVD) (0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00	(* PLAN +N/-S (usft) 0.00 0.00 0.00	*) 13.34 13.34 10 10 +E/-W (usft) 0.00 0.00 0.00	Tie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00	(*) 67.3- Dogleg Rate (*/100usft) 0.00 0.00 0.00	4 52 Direction (°) 27 Build Rate (°/100usft) 0.00 0.00 0.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00 1,300.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 2.25	F2020 review Depth Fro (us Azimuth (°) 0.00 0.00 0.00 277.82	12/01/2021 Phase: (TVD) (0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00 1,299.98	(* PLAN +N/-S (usft) 0.00 0.00 0.00 0.20	*) 13.34 13.34 10 10 +E/-W (usft) 0.00 0.00 0.00 0.00 -1.46	Tie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00 1.47	(*) 67.3- 67.3- Dogleg Rate (*/100usft) 0.00 0.00 0.00 3.00	4 52 Direction (°) 27 Builid Rate (°/100usft) 0.00 0.00 0.00 3.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00 0.00	.00
Magnetics Design Audit Notes: /ersion: /ertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 0.00	F2020 review Depth Fro (us Azimuth (*) 0.00 0.00 0.00	12/01/2021 Phase: (TVD) (0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00	(* PLAN +N/-S (usft) 0.00 0.00 0.00	*) 13.34 13.34 10 10 +E/-W (usft) 0.00 0.00 0.00	Tie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00	(*) 67.3- Dogleg Rate (*/100usft) 0.00 0.00 0.00	4 52 Direction (°) 27 Build Rate (°/100usft) 0.00 0.00 0.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00 1,300.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 2.25 5.25	F2020 review Depth Fro (us Azimuth (°) 0.00 0.00 0.00 277.82	12/01/2021 Phase: (TVD) (0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00 1,299.98	(* PLAN +N/-S (usft) 0.00 0.00 0.00 0.20	*) 13.34 13.34 10 10 +E/-W (usft) 0.00 0.00 0.00 0.00 -1.46	Tie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00 1.47	(*) 67.3- 67.3- Dogleg Rate (*/100usft) 0.00 0.00 0.00 3.00	4 52 Direction (°) 27 Builid Rate (°/100usft) 0.00 0.00 0.00 3.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00 1,300.00 1,400.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 2.25	F2020 review Depth Fro (us Azimuth (*) 0.00 0.00 0.00 277.82 277.82	12/01/2021 Phase: (TVD) (TVD) (0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00 1,299.98 1,399.76	(* PLAN +N/-S (usft) 0.00 0.00 0.00 0.00 0.20 1.09	°) 13.34 13.34 10 10 +E/-₩ (usft) 0.00 0.00 0.00 0.00 -1.46 -7.94	Fie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00 1.47 8.01	(*) 67.3- 67.3- Cogleg Rate (*/100usft) 0.00 0.00 0.00 0.00 3.00 3.00 3.00	4 52 Direction (°) 27 Build Rate (°/100usft) 0.00 0.00 0.00 3.00 3.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00 0.00 0.00 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00 1,300.00 1,400.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 2.25 5.25 8.25	F2020 review Depth Fro (us Azimuth (°) 0.00 0.00 0.00 277.82 277.82 277.82	12/01/2021 Phase: m (TVD) ft) 0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00 1,299.98 1,399.76 1,499.05	(* PLAN +N/-S (usft) 0.00 +N/-S (usft) 0.00 0.00 0.00 0.00 0.20 1.09 2.69	*) 13.34 13.34 10 *E/-W (usft) 0.00 0.00 0.00 0.00 0.00 -1.46 -7.94 -19.58	Fie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00 1.47 8.01 19.76	(*) 67.3- 67.3- (*/100 8 (*/10) (*/100 8 (*/100 8 (*/100 8 (*/100 8 (*/100 8 (*/100 8 (*/100 8 (*/10)	4 52 Direction (°) 27 Build Rate (°/100usft) 0.00 0.00 0.00 0.00 3.00 3.00 3.00	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00	.00
Magnetics Design Audit Notes: Version: Vertical Section: Planned Survey Measured Depth (usft) 0.00 Dutch Lane 1,125.00 9 5/8" 1,225.00 1,300.00 1,500.00 1,600.00	Model Nam IGR Plan #1 prelim for target inclination (*) 0.00 1-13 SL 0.00 2.25 5.25 8.25 8.25 11.25	F2020 review Depth Fro (us Azimuth (*) 0.00 0.00 0.00 277.82 277.82 277.82 277.82	12/01/2021 Phase: m (TVD) ft) 0.00 Vertical Depth (usft) 0.00 1,125.00 1,225.00 1,299.98 1,399.76 1,499.05 1,597.60	(* PLAN +N/-S (usft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.20 1.09 2.69 4.99	°) 13.34 13.34 10 10 +E/-₩ (usft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 -1.46 -7.94 -19.58 -36.36	Tie On Depth: *E/-W (usft) 0.00 Vertical Section (usft) 0.00 0.00 0.00 1.47 8.01 19.76 36.70	(*) 67.3- 67.3- (*/100usft) 0.00 0.00 0.00 0.00 0.00 3.00 3.00 3.0	4 52 Direction (°) 27 Build Rate (°/100usft) 0.00 0.00 0.00 0.00 3.00 3.00 3.00 3.0	(nT) 2,193.67580486 0. 77.82 Turm Rate (*/100usft) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	.00

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-153.65

-177.27

-194.72

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IDL Permit Supplement Dutch Lane 1-13

Titan Directional Drilling

Survey Report

Payette County, ID October 23, 2021

Company:	Snake River Oil and Gas	Local Co-ordinate Reference:	Well #1-13	
Project:	Payette County, ID W27	TVD Reference:	GL+KB @ 2179.00usft (Paul Graham 4)	
Site:	Dutch Lane 1-13	MD Reference:	GL+KB @ 2179.00usft (Paul Graham 4)	
Well:	#1-13	North Reference:	Grid	
Wellbore:	#1-13 OH	Survey Calculation Method:	Minimum Curvature	
Dealon:	Plan #1	Database:	EDM 5k-14	

Planned Survey

Measured Depth (uaft)	Inclination (°)	Azimuth (°)	Vertical Depth (uaft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (uaft)	Dogleg Rate (°/100uaft)	Bulld Rate (°/100uaft)	Turn Rate (°/100uaft)
2,300.00	25.00	277.82	2,251.17	38.25	-278.46	281.07	0.00	0.00	0.00
2,400.00	25.00	277.82	2,341.80	44.00	-320.33	323.33	0.00	0.00	0.00
2,500.00	25.00	277.82	2,432.43	49.75	-362.19	365.60	0.00	0.00	0.00
2,600.00	25.00	277.82	2,523.06	55.51	-404.06	407.86	0.00	0.00	0.00
2,700.00	25.00	277.82	2,613.69	61.26	-445.93	450.12	0.00	0.00	0.00
2,800.00	25.00	277.82	2,704.32	67.01	-487.80	492.38	0.00	0.00	0.00
2,828.43	25.00	277.82	2,730.08	68.64	-499.70	504.39	0.00	0.00	0.00
2,900.00	22.85	277.82	2,795.50	72.59	-528.46	533.42	3.00	-3.00	0.00
3,000.00	19.85	277.82	2,888.63	77.55	-564.53	569.83	3.00	-3.00	0.00
3,100.00	16.85	277.82	2,983.53	81.83	-595.72	601.31	3.00	-3.00	0.00
3,200.00	13.85	277.82	3,079.95	85.44	-621.94	627.78	3.00	-3.00	0.00
3,300.00	10.85	277.82	3,177.62	88.35	-643.13	649.17	3.00	-3.00	0.00
3,400.00	7.85	277.82	3,276.28	90.56	-659.23	665.42	3.00	-3.00	0.00
3,474.26	5.63	277.82	3,350.03	91.75	-667.87	674.14	3.00	-3.00	0.00
Dutch Lane	1-13 T1								
3,500.00	4.85	277.82	3,375.66	92.06	-670.19	676.49	3.00	-3.00	0.00
3,600.00	1.85	277.82	3,475.48	92.86	-675.99	682.34	3.00	-3.00	0.00
3,661.76	0.00	0.00	3,537.23	93.00	-676.98	683.33	3.00	-3.00	0.00
3,700.00	0.00	0.00	3,575.46	93.00	-676.98	683.33	0.00	0.00	0.00
3,776.54	0.00	0.00	3,652.00	93.00	-676.98	683.33	0.00	0.00	0.00
Dutch Lane	1-13 T2								
3,800.00	0.00	0.00	3,675.46	93.00	-676.98	683.33	0.00	0.00	0.00
3,900.00	0.00	0.00	3,775.46	93.00	-676.98	683.33	0.00	0.00	0.00
4,000.00	0.00	0.00	3,875.46	93.00	-676.98	683.33	0.00	0.00	0.00
4,074.54	0.00	0.00	3,950.00	93.00	-676.98	683.33	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (uaft)	Easting (usft)	Latitude	Longitude
Dutch Lane 1-13 SL - plan hits target cer - Point	0.00 Iter	0.00	0.00	0.00	0.00	864,496.00	201,003.00	44° 1' 59.304 N	116° 53' 12.932 W
Dutch Lane 1-13 T1 - plan misses target - Point	0.00 center by 9.25	360.00 jusft at 3474	3,349.00 .26usft MD (3	93.00 3350.03 TVD,	-676.98 91.75 N, -667	864,589.00 .87 E)	200,326.00	44° 2' 0.130 N	116° 53' 22.215 W
Dutch Lane 1-13 T2 - plan hits target cer - Point	0.00 Iter	360.00	3,652.00	93.00	-676.98	864,589.00	200,326.00	44° 2' 0.130 N	116° 53' 22.215 W
Dutch Lane 1-13 PBHL - plan hits target cer - Point	0.00 Iter	360.00	3,950.00	93.00	-676.98	864,589.00	200,326.00	44° 2' 0.130 N	116° 53' 22.215 W

:	Titan Directional Drilling Survey Report	Payette County, ID October 23, 2021		
ill and Gas y, ID W27 13	Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:	Well #1-13 GL+KB @ 2179.00usft (Paul Graham 4) GL+KB @ 2179.00usft (Paul Graham 4) Grid Minimum Curvature EDM 5k-14		
Vertical Depth (usft)	Name	Casing Hole Diameter Diameter (") (") 9-5/8 12-1/4		
		(usft) Name		

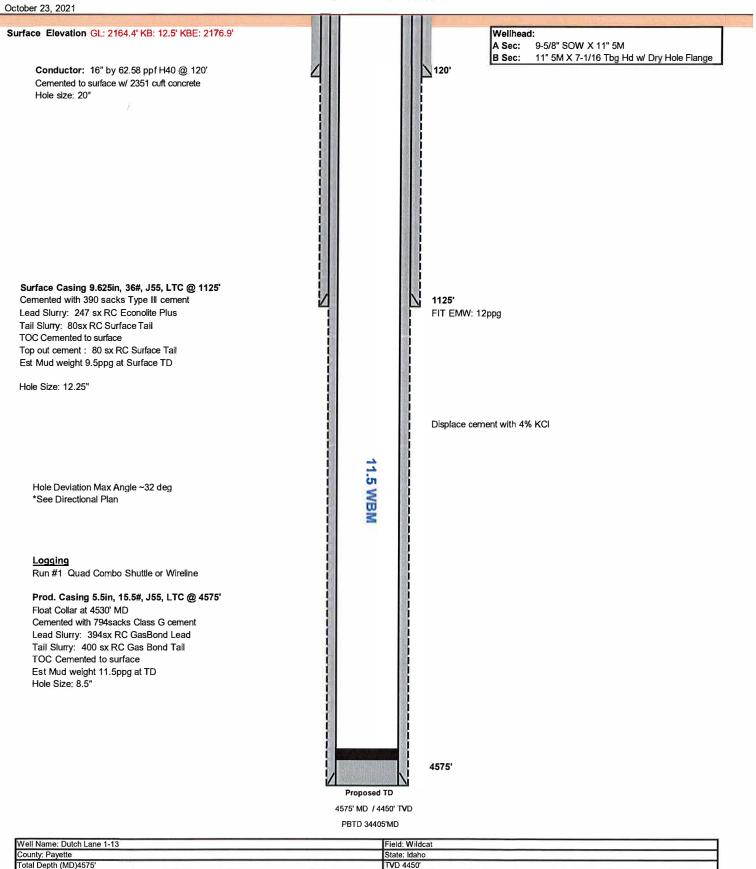
Payette County, ID October 23, 2021

4

Logging Plan

- 1. Mud loggers collect/analyze the lithology of drill cuttings and mud gas values from conductor casing shoe to total depth (120' to 4,575' MD)
- 2. Open Hole Logging Program 1,125' 4,575:
 - Run 1: TD to Surface Casing shoe (1,125' 4,575') Quad Combo on Memory Tools. Quad Combo is Induction, Gamma Ray, Sonic, and Neutron/Density Porosity Tools

Snake River Oll and Gas Well Name: Dutch Lane 1-13 Location: Section 13 T8N R5W County: Payette Field: Wildcat Rig: Paul Graham Drilling Co. 4 PROPOSED WELLBORE DIAGRAM

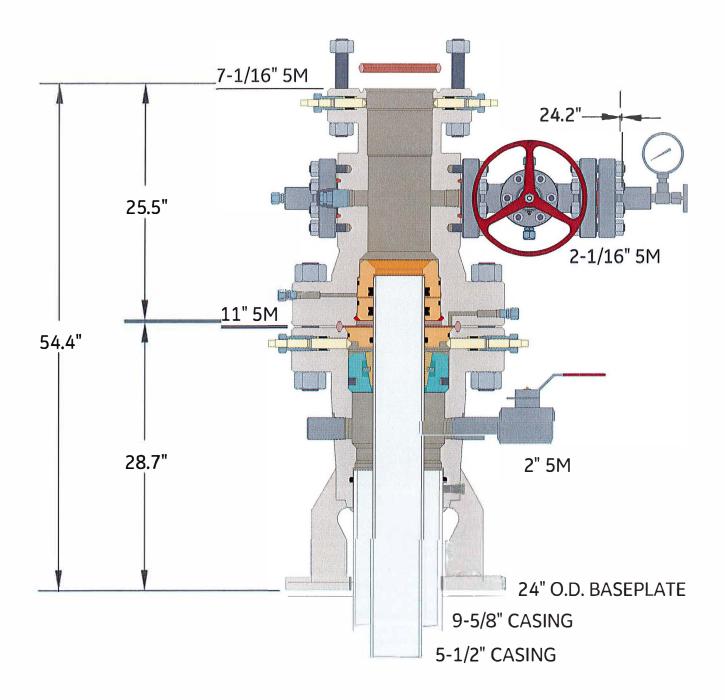


IDL Permit Supplement Dutch Lane 1-13 Payette County, ID October 23, 2021

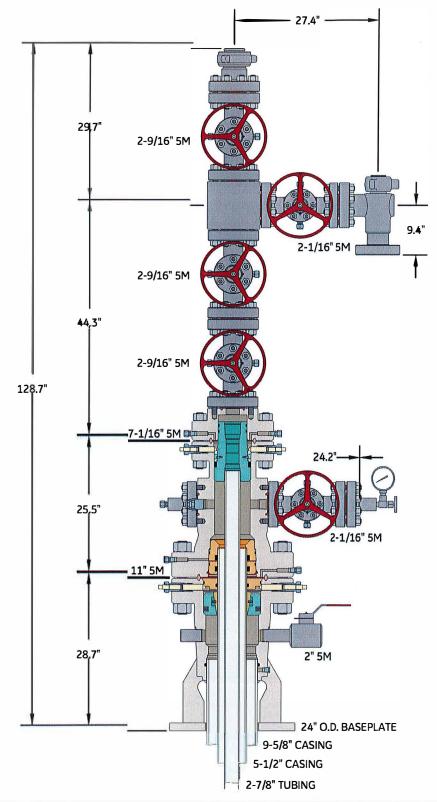
Wellhead and Production tree

See surface Wellhead System Diagram.

See surface Wellhead system with Wellhead Assembly Diagram.



	1 CONVENTIONAL WELLI ITH T-EBS-F TUBING HEA	,
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9-5/8" X 5-1/2" X 2-7/8" 5M CONVENTIONAL WELLHEAD ASSEMBLY, WITH T-EBS-F TUBING HEAD, T-EN TUBING HANGER

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Reclamation

Reclamation will be conducted in accordance with IDAPA 20.07.02.310.16;.510. To achieve those requirements, Snake River Oil and Gas, LLC proposes to address reclamation through a multistep process which is outlined below. As provided for in IDAPA 20.07.02.510.08, Snake River Oil and Gas, LLC may enter

into a Surface Use Agreement with the landowner the terms of which will ensure that the site is left in stable,

non-eroding condition as required.

1. Interim drill site clean-up: Debris and waste materials including, but not limited to, concrete, sack bentonite and other drilling mud additives, sand, plastic, pipe, and cable associated with the drilling, re-entry, or completion operations shall be removed and disposed of properly.

2. Re-establish slope stability, surface stability, and desired topographic diversity.

a. Reconstruct the landscape to the approximate original contour unless otherwise provided for in the Surface Use Agreement.

- b. Maximize geomorphic stability and topographic diversity of the reclaimed topography.
- c. Eliminate high walls, cut slopes, and/or topographic depressions on site, unless otherwise approved.

d. Minimize sheet and rill erosion on the reclaimed area. Eliminate mass wasting, head cutting, large rills or gullies, down cutting in drainages, or overall slope instability on the reclaimed area.

3. Maintain the integrity of the topsoil and subsoil (where appropriate and not otherwise dictated by the Surface Use Agreement).

- a. Identify salvaged topsoil and subsoil.
- b. Segregation of salvaged soils to protect those materials from erosion, degradation, and contamination.
- c. Incorporate stored soil material into the disturbed landscape to the extent practicable.

d. Stockpiled soils to be stored beyond one growing season shall be stabilized with appropriate vegetation.

- e. Record location and approximate volumes of stockpiles.
- 4. Prepare site for revegetation upon completion of well activities -- plugging/abandonment.
 - a. Redistribute soil materials in a manner similar to the original vertical profile.
 - b. Reduce compaction to an appropriate depth (generally below the root zone) prior to redistribution of topsoil, to accommodate appropriate site-specific plant species.

c. Provide suitable conditions to support the long-term establishment and viability of the desired plant community.

d. Protect seed and seedling establishment (e.g. erosion control matting, mulching, hydroseeding, surface roughening, fencing, etc.) to be determined based upon site specific conditions.

5. Establish a desired self-perpetuating native plant community based upon region specific guidance available from NRCS.

a. Establish species composition, diversity, structure, and total ground cover appropriate for the desired plant community.

- b. Select genetically appropriate and locally adapted native plant materials based on the site characteristic and setting
 - i. Seed mixtures shall be selected based on soil type, site conditions and intended final

use.

ii. Seed shall not be used later than one year after the test date that appears on the

label.

iii. The bags of seed shall be clearly labeled indicating test date, weed percentage or % Pure Live Seed (PLS), viability or germination percentage, and inert material.

c. Select non-native plants only as a short term and non-persistent alternative to native plant materials. Ensure the non-natives are designed to aid in the re-establishment of native plant

communities. Revegetate in accordance with best practices described below:

- i. Re-spread topsoil to a minimum depth of 4 inches.
- ii. Prepare a friable but firm and weed free seedbed that is not compacted by prior construction work.
- iii. Appropriate firmness can be estimated when a person leaves about a ¼ inch deep footprint.
- iv. Remove rocks, twigs, concrete, foreign material and clods over 2 inches that can't be broken down.

v. Soil moisture content shall be at least 30% soil capacity (estimated). Do not seed into undesirable moisture conditions (e.g. "dust" or "mud").

d. Plant communities shall be evaluated annually for two years to ensure revegetation success as determined by IDAPA 20.07.02.510.07.

i. Repair and reseed areas that have erosion damage as necessary.

ii. If a stand has less than 70% ground cover after two years, re-evaluate the choice of plant materials, methods and available light and moisture. Re-establish the stand with modifications based the evaluation.

6. Reestablish initial visual composition.

a. Ensure the reclaimed landscape features conform to the prior conditions of the site.

1 message

Mrs. Josie <mrsjosie38@gmail.com> To: Mrs. Josie <mrsjosie38@gmail.com> Thu, Oct 28, 2021 at 5:29 PM

NOV 0 3 2021

October 28, 2021

Snake River Oil and Gas PO Box 500 Magnolia, Arkansas 71754-0500

To Whom It May Concern:

RE: SROG Dutch Lane #1-13

The pending application sites the well outside of the boundaries of our property and 150 feet east of our ditch. We hereby waive the 300 ft setback required and agree to the reduction to the 150 ft setback described in the application for a single well to be located on the May property.

10-28-21 10-28-2021

L. Mac and JoAnn Higby Date