

**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*

October 2, 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](mailto:caldwell.nathan@weiser-brown.com)*

Re: Permit to Drill #11-075-20037, Fallon #1-11, 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:

1. 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.

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. No surface or subsurface physical occupation by the operator is permitted on the lands of deemed leased mineral interest owners (Integration Order, Docket No. CC-2021-OGR-01-001 dated September 16, 2021, page 32).
14. If the proposed target described in the Geologic Prognosis of the submitted APD (Sand 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 (Sand D), no production may occur from this zone 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-2021-OGR-01-001, dated September 16, 2021.

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*  
*October 2, 2021*  
*Page 3*

Sincerely,

A handwritten signature in black ink that reads "M Thomas". The "M" is stylized with a large loop, and "Thomas" is written in a cursive script.

Mick Thomas  
Division Administrator  
Minerals, Public Trust, Oil & Gas  
Idaho Department of Lands

Enc.\1 Fallon 1-11 Approved APD

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

**RECEIVED**

By James Thum at 12:48 pm, Sep 24, 2021



Phone Number

870-234-3080

P.O. Box 500

Magnolia, Arkansas 71754-0500

Fax Number

870-234-3839

Friday, September 24, 2021

To: James Thum – Idaho Department of Lands - Oil & Gas Division

From: Nathan Caldwell – Snake River Oil and Gas, LLC

Regarding: Inconsistencies on Fallon 1-11 Application for Permit to Drill.

James:

Snake River notified you by E-mail on Tuesday, September 21, 2021 of typographical errors on the permit received by the IDL OGD on Sep 10, 2021.

The following pages contained errors as noted:

Page 1 "Application for Permit to Drill, Deepen or Plug Back"

- Footage from section line is corrected.
- Latitude and Longitude have been converted to Decimal Degrees.
- Proposed depth has been changed 4,500' to 5,407' (5,407' is mentioned at many other places in the application)
- Approx. date work will start is adjusted to 9-30-2021

Page 11 "Well Construction"

- Surface and Production casing descriptions are changed to available weight, grade, and connection.
- Surface and Production Cement is adjusted to actual planned volumes and slurries.

Page 12 "Cementing Program"

- Cement volumes for Surface Casing is adjusted to actual calculated volumes.
- Production casing setting depth is changed from 4,500' to 5,407' and cement volumes are adjusted to actual volumes.

Page 15 "Types of Tools to be used"

- BHA #1 is changed from Pendulum to Directional.

Page 16 "Drilling Plan"

- Depth of 8-1/2" hole is changed from 4,500' to 5407'.

Page 23 "Logging Plan"

- Depth of Mud, Open Hole logging and Run 1 are changed from 4,500' to 5407'.

Page 24 "PROPOSED WELLBORE DIAGRAM"

- Depths are changed from 4,500' to 5407'.
- Surface and Production casing descriptions are corrected to actual casing to be used.
- Surface and Production cement volumes are adjusted to actual calculated values.

Please accept these modifications to the permit.

Thank you for your consideration and patience.

Nathan Caldwell – Operations Manager – Snake River Oil and Gas, LLC.



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

**RECEIVED**

By James Thum at 12:49 pm, Sep 24, 2021



APPLICATION TO: ☒ Drill (\$2,000) ☐ Deepen (\$500) ☐ Plug Back (\$500)

NAME OF OPERATOR: Snake River Oil and Gas, LLC Date: 9/8/2021

Address: P.O. Box 500

City: Magnolia State: AR Zip Code: 71754 Telephone: 870-234 3080

Contact Name: Dave Smith Email Address: davesmith1776@outlook.com

Emergency Contact Name/Phone: Nathan Caldwell/870-904-7305

**DESCRIPTION OF WELL AND LEASE**

Name of Lease: Fallon Well Number: 1-11 Elevation (ground): 2,161

Well Location: Section: 11 Township: 8N Range: 5W (or block and survey) \_\_\_\_\_

(Give footage from Section lines): 185' FSL of Section 11 & 813' FEL of SW 1/4 Section

Latitude/Longitude (Dec Degrees NAD83 minimum requirement): N44.040310 / W116.906395

Datum: ☐ WGS84 ☒ NAD83 ☐ NAD27 ☐ Other: \_\_\_\_\_

Field and Reservoir (if wildcat, so state): Harmon County: Payette

Distance, in miles, and direction from nearest town or post office: 2.26 miles to Fruitland Post Office

Nearest distance from proposed location to property or lease line: 185 feet Nearest producing well: 3,951 feet

Type of Test/Unit: ☒ Gas / 640 acre unit ☐ Gas / 160 acre unit ☐ Oil / 40 acre unit ☐ Other/Docket No. CC-2020-OGC-01-002

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: 3,951 feet

Proposed depth: 5,407 Approx. date work will start: 9/30/2021 Number of acres in lease(s): 640

Number of wells on lease, including this well, completed in or drilling to this reservoir: 1

If lease purchased with one or more wells drilled, complete the following information:

Purchased from (Name): Snake River Oil and Gas, LLC

Address of above: P.O. Box 500, Magnolia, AR 71754

Bond Type and Number: Idaho OGCC Bond # ROG 000 1695

Surface Rights Owner (At proposed surface location): Name Larry James Phone: 208-550-7660

Does the drilling unit contain state leases? <sup>1</sup> If yes, check all that apply:

☒ IDL ☐ IDFG ☐ IDT ☐ Public Trust ☒ Other: State Water Bottoms

**Does this application include the following actions? If yes, check all that apply:**

☐ Well Treatment ☐ Pit construction ☒ Directional or Horizontal Drilling

*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) \_\_\_\_\_

## Well Construction

<u>Well Interval</u>	<u>Bit/Hole</u>	<u>CSG, Grade/Wt</u>	<u>CSG Depth</u>	<u>TOC</u>	<u>CMT Type/Volume</u>
Conductor	20"	16"/H-40/65#/ft	120'	Surface	200 SKS A/C
Surface	12.25"	9-5/8" /J55/36#/ft	1125'	Surface	Lead-240 sks TypeII-RC Econolite Plus. Tail-100sks TypeIII-RC Surface Tail Top Out-100 sks TypeIII-RC Surface Tail
Production	8.5"	5.5" /J/K-55/15.5#/ft	5407'	Surface	Lead-610sks ClassG-RC Gas Bond. Tail-410 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 LTC Casing jts to surface
- Cement basket for 9 5/8" casing approx. 80' below surface.
- Centralization -Install 1 cent /jt

### Production Casing Detail

- 5 1/2" float shoe
- 2 full length jts 5 1/2" 15.5# J-55 LTC for shoe track -centralized
- 5 1/2" float collar
- 5 1/2" 15.5# J-55 LTC csg with 1 centralizer / joint to surface (turbolizers and scratchers placement TBD).

## Cementing Program

Conductor: 200 sks Class A or C – surface to 120'

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

<u>Stage</u>	<u>Volume</u>	<u>Yield</u>	<u>Density</u>	<u>Description</u>
<u>Spacer</u>	20 bbls	N/A	8.54 ppg	20 bbls 4% KCL
<u>Lead Cement</u>	746 ft3	3.11 ft3/sk	11.0 ppg	240 sks Type III - RC Econolite
Tail Cement	136 ft3	1.36 ft3/sk	14.8 ppg	Plus 100 sks Type III - RC Surface
Displacement	80 bbls	N/A	9-10 ppg	Tail
T/O CMT	136 ft3	1.36 ft3/sk	14.8 ppg	Drilling fluids/Water
<b>*Depth: 1,125' MD Hole Size: 12 ¼" Mud weight: 8.7 ppg</b>				100 sks Type III - RC Surface Tail

### Production Casing (Excess 20%)

<u>Stage</u>	<u>Volume</u>	<u>Yield</u>	<u>Density</u>	<u>Description</u>
Spacer	20 bbls	N/A	8.34 pg	10 bbls mud flush
Spacer	35 bbls	N/A	12 ppg	40 bbls 4% KCL weighted spacer
Lead Cement	1049ft3	1.72 ft3/sk	13.0 ppg	610sks Class G - RC Gas Bond Lead
Tail Cement	541 ft3	1.32 ft3/sk	14.2 ppg	410 sks Class G - RC Gas Bond Tail
Displacement	127 bbls	N/A	8.54 ppg	127 bbls 4% KCL
<b>Depth: 5407' MD Hole Size: 8 ½" Mud weight: 11.5 ppg</b>				



**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" 15.5# 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" 15.5 #/ft XH Drill pipe

## Drilling Plan

Drilling Plan expected to include but not limited to:

1. Drill 20" hole to 120' with water well rig and run 16" casing, set same with cement 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 set same with cement back to surface.
4. Drill 8 ½" hole to 5,407' 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.

## 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 5,407' MD)
2. Open Hole Logging Program 1,125' – 5,407':

Run 1: TD to Surface Casing shoe (1,125' – 5,407')

Triple Combo on drill pipe.

Triple Combo is induction, Gamma Ray, and Neutron/Density Porosity Logs.

**SNAKE RIVER OIL AND GAS, LLC**  
**WELL NAME: FALLON #1-11**  
**LOCATION: 11-8N-5W**  
**PAYETTE COUNTY, IDAHO**  
**FIELD: HARMON**  
**PROPOSED WELLBORE DIAGRAM**

Date: 2/23/2021

GL: 2,161'

**Conductor:** 16" 65# H-40 @120'  
 Cemented to surface w/200 sks Class A or C  
 Hole Size 20"

**Surface Casing:** 9-5/8" 36# J-55 LTC @ 1,125'  
 Cemented w/440sks Type III Cmt  
 Lead: 240 sks RC Econolite Plus  
 Tail: 100 sks RC Surface Tail  
 TOC: Cement to Surface  
 Top out cement - 100 sks RC Surface Tail  
 Est Mud weight 9.5 pg Surface TD  
 Hole Size 12.25"

Hole Deviation Max Angle - 32 deg  
 \*See Directional Plan

Logging  
 Run #1 - Triple Combo or WL

**Production Casing:** 5-1/2" 15.5# J/K-55 LTC @  
 5,407' Float collar @ 5,328'  
 Cemented w/1020 sks Class G Cmt  
 Lead: 610 sks RC Gas Bond Lead  
 Tail: 410 sks RC Gas Bond  
 TOC: Cemented to Surface  
 Est Mud weight: 11.5 ppg at TD  
 Hole Size 8.5"

Wellhead:  
 A Sec: 9-5/8" SOW x 11" SM  
 B Sec: 11" SM x 7-1/16" SM Tubing Head w/dry hole flange

120'

1,125'

4% KCL

Displace cement w/4% KCL

5,407'

**Proposed TD**  
 5,407' MD 4,874'  
 TVD PBTD 5,328'

Well Name: Fallon #1-11	Field: Harmon
County: Payette	State: ID
Total Depth (MD): 5,407'	TVD: 4,874'



# IDAHO OIL AND GAS CONSERVATION COMMISSION

## Application For Permit to Drill, Deepen, or Plug Back

**RECEIVED**

By IDL OGD at 3:44 pm, Sep 10, 2021



APPLICATION TO: ☒ Drill (\$2,000) ☐ Deepen (\$500) ☐ Plug Back (\$500)

NAME OF OPERATOR: Snake River Oil and Gas, LLC Date: 9/8/2021

Address: P.O. Box 500

City: Magnolia State: AR Zip Code: 71754 Telephone: 870-234-3080

Contact Name: Dave Smith Email Address: davesmith1776@outlook.com

Emergency Contact Name/Phone: Nathan Caldwell/870-904-7305

### DESCRIPTION OF WELL AND LEASE

Name of Lease: Fallon Well Number: 1-11 Elevation (ground): 2,161

Well Location: Section: 11 Township: 8N Range: 5W (or block and survey) \_\_\_\_\_

(Give footage from Section lines): 185' FSL & 813' FWL

Latitude/Longitude (Dec Degrees NAD83 minimum requirement): N44 02'25.1171" / W116 54'23.0224"

Datum: ☐ WGS84 ☒ NAD83 ☐ NAD27 ☐ Other: \_\_\_\_\_

Field and Reservoir (if wildcat, so state): Harmon County: Payette

Distance, in miles, and direction from nearest town or post office: 2.26 miles to Fruitland Post Office

Nearest distance from proposed location to property or lease line: 185 feet Nearest producing well: 3,951 feet

Type of Test/Unit: ☒ Gas / 640 acre unit ☐ Gas / 160 acre unit ☐ Oil / 40 acre unit ☐ Other/Docket No. CC-2020-OGR-01-002

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: 3,951 feet

Proposed depth: 4,500 Approx. date work will start: 9/18/2021 Number of acres in lease(s): 640

Number of wells on lease, including this well, completed in or drilling to this reservoir: 1

If lease purchased with one or more wells drilled, complete the following information:

Purchased from (Name): Snake River Oil and Gas, LLC

Address of above: P.O. Box 500, Magnolia, AR 71754

Bond Type and Number: Idaho OGCC Bond # ROG 000 1695

Surface Rights Owner (At proposed surface location): Name Larry James Phone: 208-550-7660

Does the drilling unit contain state leases? <sup>1</sup> If yes, check all that apply:

☒ IDL ☐ IDFG ☐ IDT ☐ Public Trust ☒ Other: State Water Bottoms

Does this application include the following actions? If yes, check all that apply:

☐ Well Treatment ☐ Pit construction ☒ Directional or Horizontal Drilling

*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) \_\_\_\_\_





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, Chris Weiser the undersigned, state that I am the Managing Member of Snake River Oil & Gas, LLC (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: 9/8/2021

Signature: [Signature]

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

IDL Office Use Only:

Approval Date: 10/04/2021

Approved by:

Mike Thomas D.A.  
Signature and Title

US Well Number: 11-075-20037

Operator Number (if known): \_\_\_\_\_



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



**ADDITIONAL INFORMATION**

**State Land Ownership Explanation<sup>1</sup>**

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. 6<sup>th</sup> Street, Suite 103  
PO Box 83720  
Boise, Idaho 83702-0050

# Snake River Oil and Gas, LLC

IDL Permit Supplement

Fallon 1-11

Payette County, ID

March 23, 2021

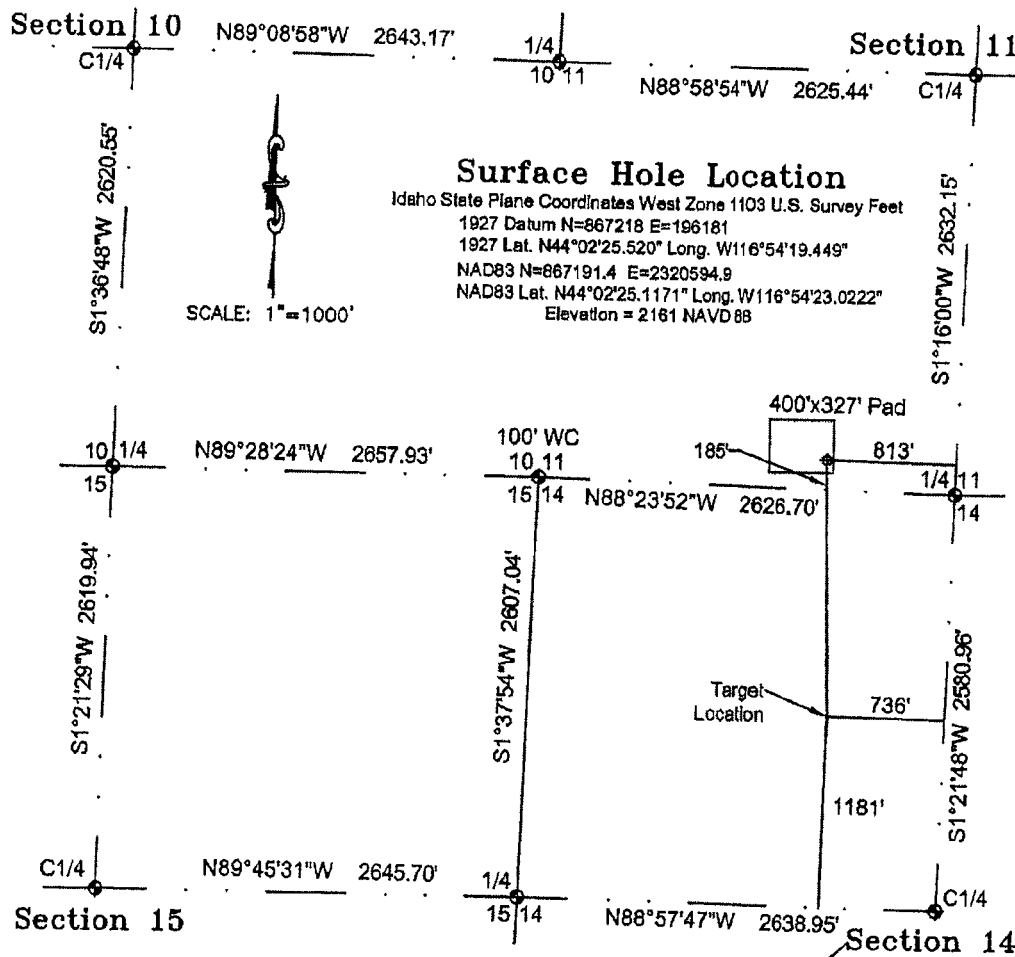


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<b>Production Tree</b>
<b>Reclamation</b>

# EXHIBIT MAP OF Fallon 1-11

LOCATED IN  
A PORTION OF THE SOUTHWEST 1/4,  
OF SECTION 11, TOWNSHIP 8 NORTH, RANGE 5 WEST, B.M.,  
PAYETTE COUNTY, IDAHO  
-2020-



## Target Location

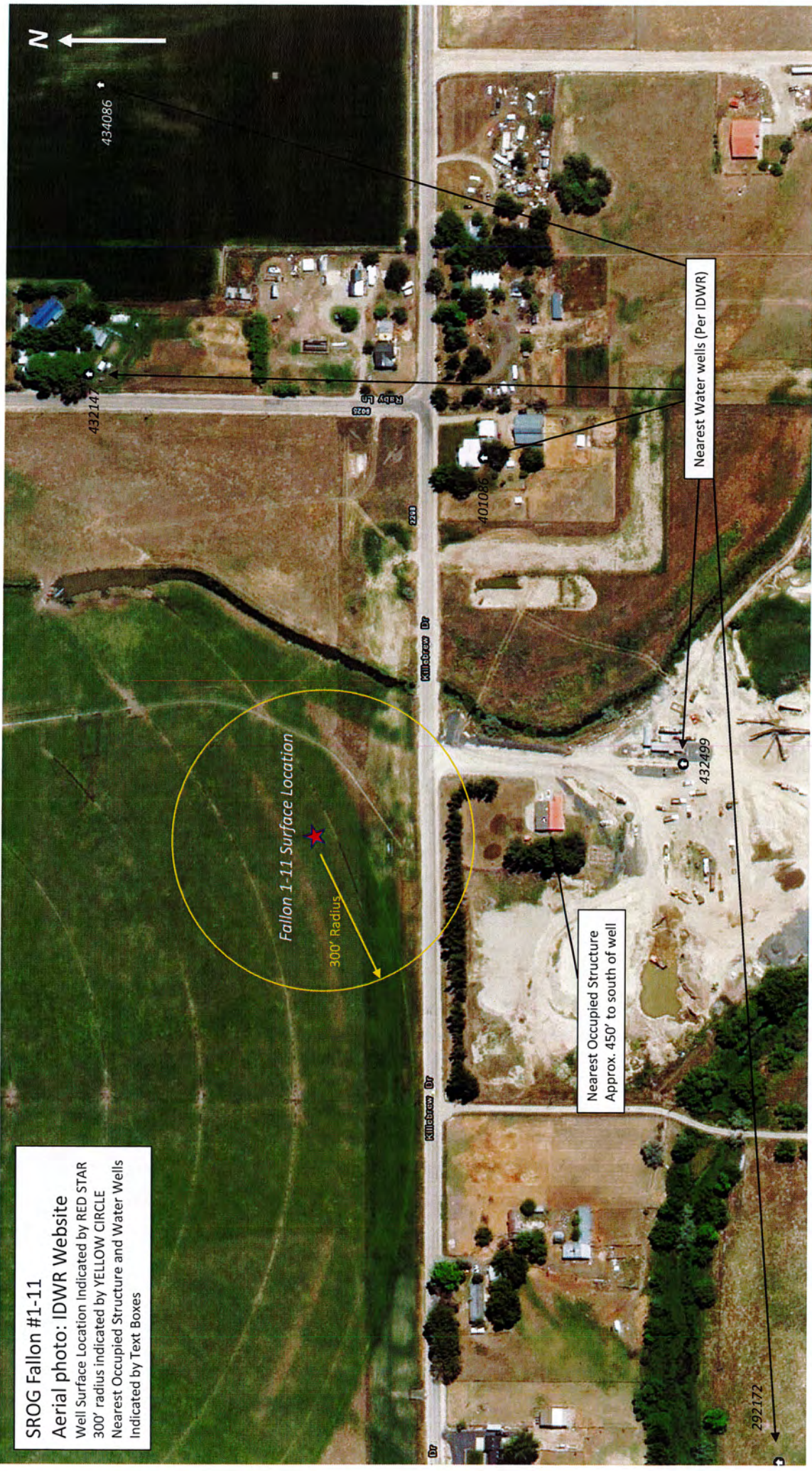
Idaho State Plane Coordinates West Zone 1103 U.S. Survey Feet  
1927 Datum N=865624 E=196220  
1927 Lat. N44°02'09.786" Long. W116°54'18.609"  
NAD83 N=865597.4 E=2320633.9  
NAD83 Lat. N44°02'09.383" Long. W116°54'22.182"



1310 Shady Lane, EMMETT IDAHO  
PHONE: 837-477-6701



SROG Fallon #1-11  
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



SROG Fallon #1-11

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

Fallon 1-11 Surface Location

300' Radius

Nearest Occupied Structure  
Approx. 450' to south of well

Nearest Water wells (Per IDWR)

N

432147

434086

401086

432499

292172



## Geologic Prognosis

### **Prospect**

The Fallon 1-11 well is designed to test Sand D, previously tested in the Barlow 1-14, in a separate fault block. It is estimated that the target sand will be encountered at +/- 3,918' MD in the prospect well.

### **Proposed Well**

The well is to be drilled as a "directional hole" to a depth of 5,407' MD/4874' TVD. The surface location is in Section 11 T8N R5W Payette County, Idaho. The surface location will be @ N44deg 2'25" by W116deg 54'19.449". The target location will be N44deg02'9.786" by W116deg54'18.609" in Section 14 T8N R5W Payette County, Idaho.

### **Estimated Geologic Formation Tops**

Zone-Harmon Sand D

Expected Depth +/-3,918' MD

<b>FALLON #1-11 EXPECTED OCCURRENCE OF GEOLOGIC MARKERS</b>	<b>EXPECTED DEPTH(ft) MD</b>	<b>EXPECTED DEPTH(ft) TVD</b>
<b>Claystone</b> - +/- 3800' of claystone expected with occ. thin Sandstones and siltstones of Glenns Ferry/ Chalk Hills Fms. Undiff. From 200' to 3918' MD	200'	200'
<b>Sands A,B &amp; C</b>	Not Present	Not Present
<b>Sand "D"</b>	3918'	3494'
<b>Sand "E"</b>	4680'	4170'
<b>Proposed Total Depth</b>	5407'	4874'
<b>Basalt</b>	Not Reached	Not Reached
<b>Payette Fm</b>	Not Reached	Not Reached

## 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

<u>Well Interval</u>	<u>Bit/Hole</u>	<u>CSG, Grade/Wt</u>	<u>CSG Depth</u>	<u>TOC</u>	<u>CMT Type/Volume</u>
Conductor	20"	16"/H-40/65#/ft	120'	Surface	200 SKS A/C
Surface	12.25"	9-5/8"/K55/40#/ft	1125'	Surface	Lead-247 sks TypeIII-RC Econolite Plus. Tail-80sks TypeIII-RC Gas Bond.
Production	8.5"	5.5"/J/K-55/17#/ft	4500'	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" 40# K-55 STC for shoe track - centralized
- 9 5/8" float collar
- 9 5/8" 40# K-55 STC Casing jts to surface
- Cement basket for 9 5/8" casing approx. 80' below surface.
- Centralization – Install 1 cent /jt

### Production Casing Detail

- 5 1/2" float shoe
- 2 full length jts 5 1/2" 17# K-55 LTC for shoe track – centralized
- 5 1/2" float collar
- 5 1/2" 17# K-55 LTC csg with 1 centralizer / joint to surface (turbolizers and scratchers placement TBD).

## Cementing Program

Conductor: 200 sks Class A or C – surface to 120'

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

<u>Stage</u>	<u>Volume</u>	<u>Yield</u>	<u>Density</u>	<u>Description</u>
<u>Spacer</u>	20 bbls	N/A	8.54 ppg	20 bbls 4% KCL
<u>Lead Cement</u>	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	Drilling fluids/Water
T/O CMT	102 ft3	1.36 ft3/sk	14.8 ppg	75 sks Type III - RC Surface Tail

**\*Depth: 1,125' MD Hole Size: 12 ¼" Mud weight: 8.7 ppg**

### Production Casing (Excess 20%)

<u>Stage</u>	<u>Volume</u>	<u>Yield</u>	<u>Density</u>	<u>Description</u>
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: 4,463' MD Hole Size: 8 ½" Mud weight: 11.5 ppg**

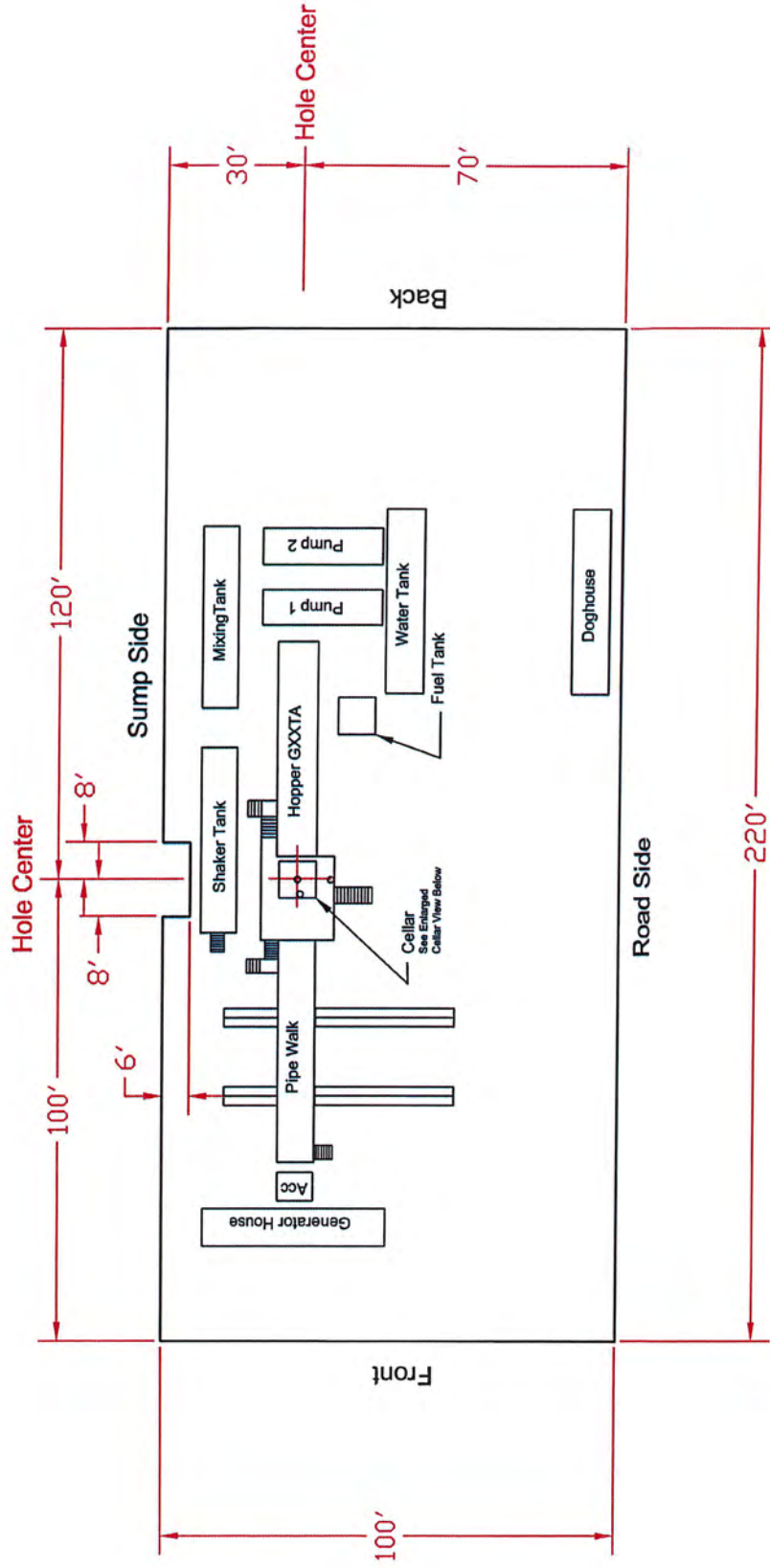


IDL Permit Supplement  
Fallon 1-11

Payette County, ID  
March 23, 2021

## Rig Location Plat

See Paul Graham Drilling Rig 4 Location Diagram.



**Paul Graham Drilling**  
**Rig 4 Location Diagram**

**Types of Tools to be Used**

**BHA #1 Pendulum Drilling Assembly**

- 12 ¼" Mill tooth bit
- Bit sub w/ float
- 1 (8") Drill Collar (DC)
- 12 ¼" Weld Blade Stabilizer (1/8" UG)
- 1 – 8" Drill Collar
- 12 ¼" Weld Blade Stabilizer (1/8" UG)
- X/O (if needed)
- 15 – 4" HWDP
- Drilling Jars
- 5 – 4" HWDP
- X/O to 4" Drill Pipe (if needed)

**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" Heavy weight drill pipe
- Drilling jar assembly
- 5 – 4" Heavy weight drill pipe
- 4" 14.00 #/ft XH Drill pipe

## Drilling Plan

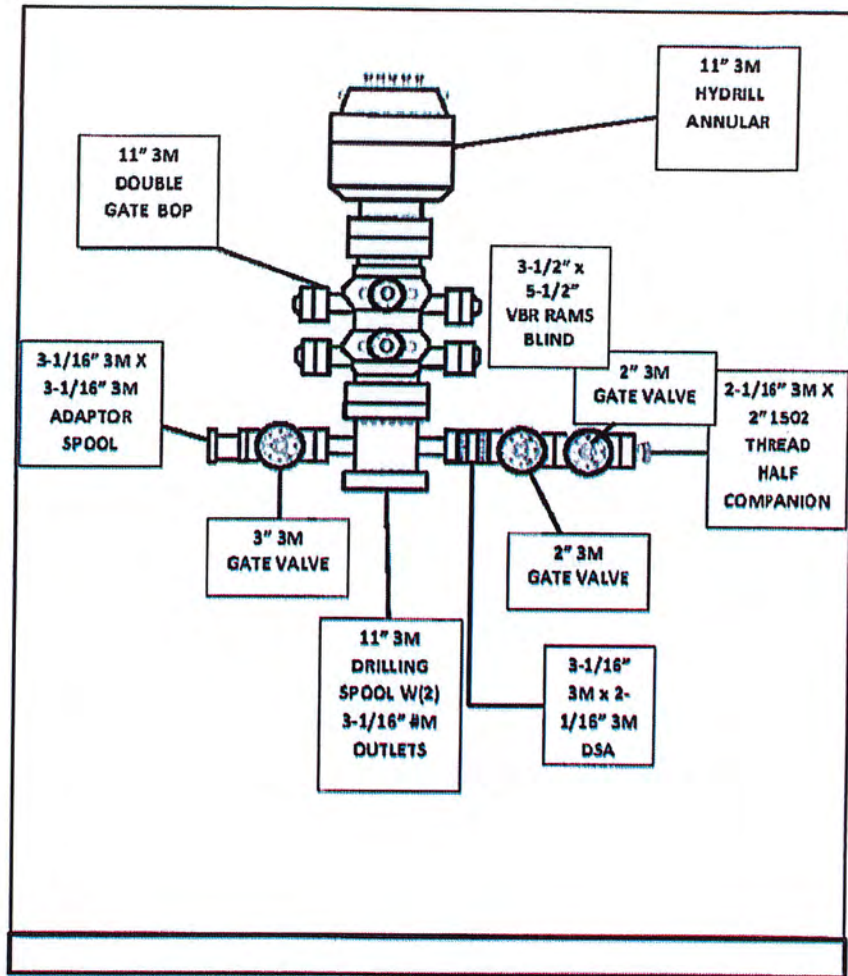
Drilling Plan expected to include but not limited to:

1. Drill 20" hole to 120' with water well rig and run 16" casing, set same with cement 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 set same with cement back to surface.
4. Drill 8 ½" hole to 4,500' 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).

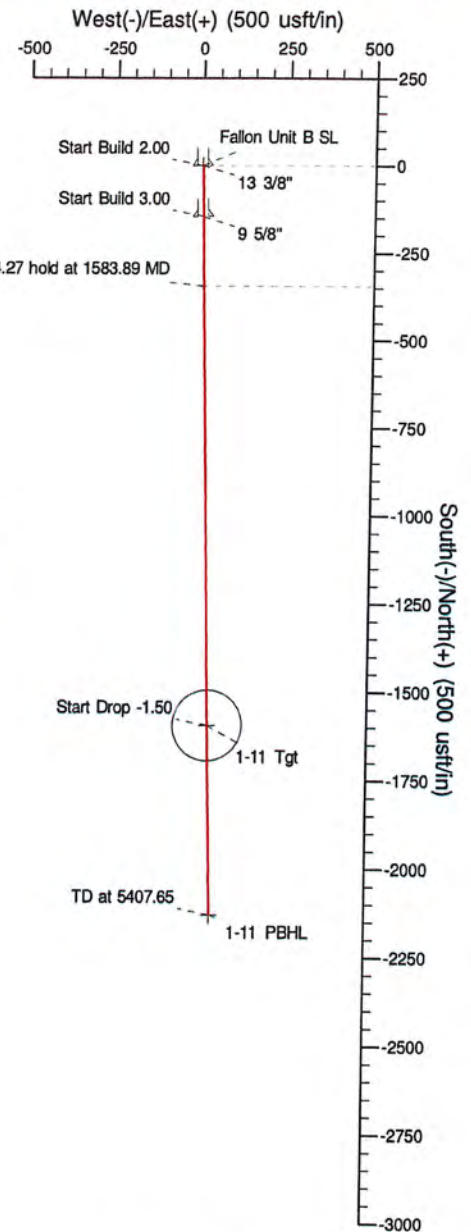
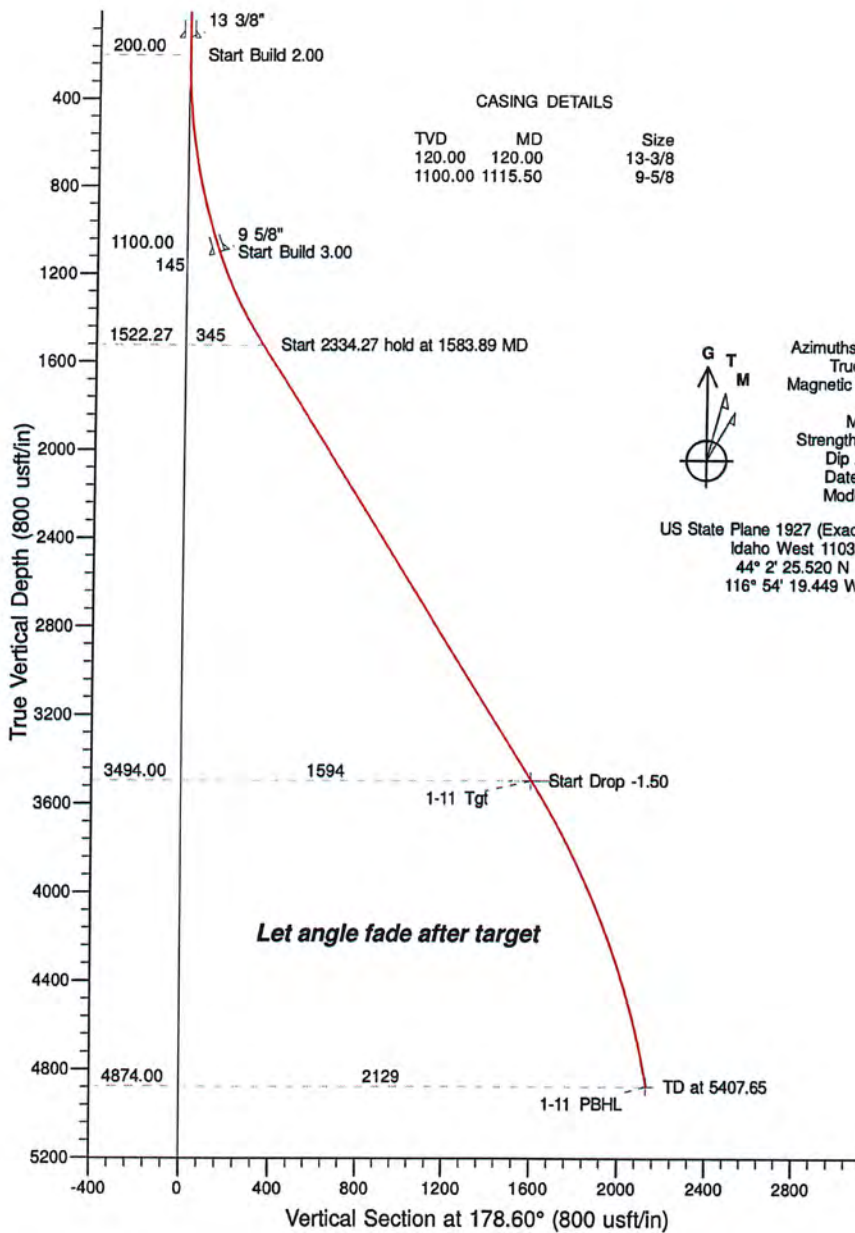
**See diagram**



BOP Diagram

# Snake River Oil and Gas

Project: Payette County, ID W'27  
Area: S11 T8N R5W  
Site: Fallon Unit B Pad  
Well: #1-11  
Wellbore: #1-11 OH  
Design: Plan #2



Digital lease data unavailable at time of print

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Fallon Unit B SL	0.00	0.00	0.00	867218.00	196181.00	44° 2' 25.520 N	116° 54' 19.449 W	Point
1-11 Tgt	3494.00	-1593.94	39.00	865624.00	196220.00	44° 2' 9.786 N	116° 54' 18.609 W	Circle (Radius: 100.00)
1-11 PBHL	4874.00	-2128.78	52.08	865089.14	196233.08	44° 2' 4.506 N	116° 54' 18.328 W	Point

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1115.50	18.31	178.60	1100.00	-145.00	3.55	2.00	178.60	145.04	
4	1583.89	32.36	178.60	1522.27	-344.87	8.44	3.00	0.00	344.97	
5	3918.16	32.36	178.60	3494.00	-1593.94	39.00	0.00	0.00	1594.42	1-11 Tgt
6	5407.65	10.02	178.60	4874.00	-2128.78	52.08	1.50	180.00	2129.41	1-11 PBHL



**Titan Directional Drilling**  
Survey Report

<b>Company:</b>	/		<b>Local Co-ordinate Reference:</b>	Well #1-11	
<b>Project:</b>	Payette County, ID W27		<b>TVD Reference:</b>	est GL+KB @ 2174.00usft (planning)	
<b>Site:</b>	Fallon Unit B Pad		<b>MD Reference:</b>	est GL+KB @ 2174.00usft (planning)	
<b>Well:</b>	#Fallon 1-11		<b>North Reference:</b>	Grid	
<b>Wellbore:</b>	#1-11 OH		<b>Survey Calculation Method:</b>	Minimum Curvature	
<b>Design:</b>	Plan #2		<b>Database:</b>	5k-14	

<b>Project</b>	Payette County, ID W27				
<b>Map System:</b>	US State Plane 1927 (Exact solution)		<b>System Datum:</b>	Mean Sea Level	
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)				
<b>Map Zone:</b>	Idaho West 1103		Using geodetic scale factor		

<b>Site</b>	Fallon Unit B Pad, Pasture 180'N Killebrew x 800'W Raby				
<b>Site Position:</b>		<b>Northing:</b>	867,218.00 usft	<b>Latitude:</b>	44° 2' 25.520 N
<b>From:</b>	Map	<b>Easting:</b>	195,181.00 usft	<b>Longitude:</b>	115° 54' 19.449 W
<b>Position Uncertainty:</b>	0.00 usft	<b>Shot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-0.80 "

<b>Well</b>	#1-11					
<b>Well Position</b>	+N-S	0.00 usft	<b>Northing:</b>	867,218.00 usft	<b>Latitude:</b>	44° 2' 25.520 N
	+E-W	0.00 usft	<b>Easting:</b>	195,181.00 usft	<b>Longitude:</b>	115° 54' 19.449 W
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	usft	<b>Ground Level:</b>	2,160.00 usft

<b>Wellbore</b>	#1-11 OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	08/21/18	13.80	87.48	82,551.67589983

<b>Design</b>	Plan #2				
<b>Audit Notes:</b>	p2 for top target adjusted north to keep "Sand E" legal				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N-S (usft)</b>	<b>+E-W (usft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	178.60	

<b>Planned Survey</b>									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00
133 3/8"									
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	2.00	178.60	299.98	-1.74	0.04	1.75	2.00	2.00	0.00
400.00	4.00	178.60	399.84	-6.99	0.17	6.99	2.00	2.00	0.00
500.00	6.00	178.60	499.45	-15.69	0.38	15.69	2.00	2.00	0.00
600.00	8.00	178.60	598.70	-27.87	0.69	27.89	2.00	2.00	0.00
700.00	10.00	178.60	697.47	-43.51	1.06	43.52	2.00	2.00	0.00
800.00	12.00	178.60	795.62	-62.58	1.53	62.60	2.00	2.00	0.00
900.00	14.00	178.60	893.06	-85.07	2.08	85.10	2.00	2.00	0.00
1,000.00	16.00	178.60	989.64	-110.94	2.71	110.98	2.00	2.00	0.00
1,100.00	18.00	178.60	1,085.27	-140.17	3.43	140.21	2.00	2.00	0.00
1,115.50	18.31	178.60	1,100.00	-145.00	3.55	145.04	2.00	2.00	0.00
9 5/8"									



**Titan Directional Drilling**  
Survey Report

Company:		Local Co-ordinate Reference:				Well #1-11			
Project:		TVD Reference:				est.GL+KB @ 2174.00usft (planning)			
Site:		MD Reference:				est.GL+KB @ 2174.00usft (planning)			
Well:		North Reference:				Grid			
Wellbore:		Survey Calculation Method:				Minimum Curvature			
Design:		Database:				5k-14			
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,200.00	20.84	179.60	1,179.61	-173.30	4.24	173.35	3.00	3.00	0.00
1,300.00	23.84	179.60	1,272.09	-211.31	5.17	211.37	3.00	3.00	0.00
1,400.00	26.84	179.60	1,362.45	-254.09	6.22	254.17	3.00	3.00	0.00
1,500.00	29.85	179.60	1,450.45	-301.55	7.33	301.64	3.00	3.00	0.00
1,583.89	32.36	179.60	1,522.27	-344.87	8.44	344.97	3.00	3.00	0.00
1,600.00	32.36	179.60	1,538.88	-353.49	8.65	353.60	0.00	0.00	0.00
1,700.00	32.36	179.60	1,620.35	-407.00	9.96	407.12	0.00	0.00	0.00
1,800.00	32.36	179.60	1,704.82	-460.51	11.27	460.65	0.00	0.00	0.00
1,900.00	32.36	179.60	1,789.29	-514.02	12.58	514.18	0.00	0.00	0.00
2,000.00	32.36	179.60	1,873.76	-567.53	13.89	567.70	0.00	0.00	0.00
2,100.00	32.36	179.60	1,958.23	-621.04	15.19	621.23	0.00	0.00	0.00
2,200.00	32.36	179.60	2,042.69	-674.55	16.50	674.75	0.00	0.00	0.00
2,300.00	32.36	179.60	2,127.16	-728.06	17.81	728.28	0.00	0.00	0.00
2,400.00	32.36	179.60	2,211.63	-781.57	19.12	781.81	0.00	0.00	0.00
2,500.00	32.36	179.60	2,296.10	-835.08	20.43	835.33	0.00	0.00	0.00
2,600.00	32.36	179.60	2,380.57	-888.59	21.74	888.86	0.00	0.00	0.00
2,700.00	32.36	179.60	2,465.04	-942.10	23.05	942.38	0.00	0.00	0.00
2,800.00	32.36	179.60	2,549.51	-995.61	24.36	995.91	0.00	0.00	0.00
2,900.00	32.36	179.60	2,633.98	-1,049.12	25.67	1,049.44	0.00	0.00	0.00
3,000.00	32.36	179.60	2,718.44	-1,102.63	26.98	1,102.96	0.00	0.00	0.00
3,100.00	32.36	179.60	2,802.91	-1,156.14	28.29	1,156.49	0.00	0.00	0.00
3,200.00	32.36	179.60	2,887.38	-1,209.65	29.60	1,210.01	0.00	0.00	0.00
3,300.00	32.36	179.60	2,971.85	-1,263.16	30.91	1,263.54	0.00	0.00	0.00
3,400.00	32.36	179.60	3,056.32	-1,316.67	32.21	1,317.07	0.00	0.00	0.00
3,500.00	32.36	179.60	3,140.79	-1,370.18	33.52	1,370.59	0.00	0.00	0.00
3,600.00	32.36	179.60	3,225.26	-1,423.69	34.83	1,424.12	0.00	0.00	0.00
3,700.00	32.36	179.60	3,309.73	-1,477.20	36.14	1,477.64	0.00	0.00	0.00
3,800.00	32.36	179.60	3,394.19	-1,530.71	37.45	1,531.17	0.00	0.00	0.00
3,900.00	32.36	179.60	3,478.66	-1,584.22	38.76	1,584.70	0.00	0.00	0.00
3,918.16	32.36	179.60	3,494.00	-1,593.94	39.00	1,594.42	0.00	0.00	0.00
4,000.00	31.13	179.60	3,563.60	-1,636.99	40.05	1,637.48	1.50	-1.50	0.00
4,100.00	29.63	179.60	3,648.86	-1,687.55	41.29	1,688.05	1.50	-1.50	0.00
4,200.00	28.13	179.60	3,737.42	-1,735.84	42.47	1,736.35	1.50	-1.50	0.00
4,300.00	26.63	179.60	3,826.21	-1,781.82	43.60	1,782.35	1.50	-1.50	0.00
4,400.00	25.13	179.60	3,916.17	-1,825.46	44.65	1,826.01	1.50	-1.50	0.00
4,500.00	23.63	179.60	4,007.25	-1,866.73	45.67	1,867.29	1.50	-1.50	0.00
4,600.00	22.13	179.60	4,099.38	-1,905.60	46.62	1,905.18	1.50	-1.50	0.00
4,700.00	20.63	179.60	4,192.49	-1,942.05	47.52	1,942.64	1.50	-1.50	0.00
4,800.00	19.13	179.60	4,286.53	-1,976.05	48.35	1,976.65	1.50	-1.50	0.00
4,900.00	17.63	179.60	4,381.42	-2,007.58	49.12	2,008.18	1.50	-1.50	0.00
5,000.00	16.13	179.60	4,477.11	-2,036.62	49.83	2,037.23	1.50	-1.50	0.00
5,100.00	14.63	179.60	4,573.52	-2,063.14	50.48	2,063.75	1.50	-1.50	0.00
5,200.00	13.13	179.60	4,670.60	-2,087.12	51.07	2,087.75	1.50	-1.50	0.00

**Titan Directional Drilling**  
Survey Report

<b>Company:</b>	/	<b>Local Co-ordinate Reference:</b>	Well #1-11
<b>Project:</b>	Payette County, ID W27	<b>TVD Reference:</b>	est.GL+KB @ 2174.00usft (planning)
<b>Site:</b>	Fallon Unit B Pad	<b>MD Reference:</b>	est.GL+KB @ 2174.00usft (planning)
<b>Well:</b>	#1-11	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	#1-11 OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Plan #2	<b>Database:</b>	SK-14

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	-N-S (usft)	-E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	11.63	179.60	4,768.27	-2,108.55	51.59	2,109.19	1.50	-1.50	0.00
5,407.65	10.62	179.60	4,874.00	-2,126.78	52.03	2,129.41	1.50	-1.50	0.00

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
120.00	120.00	13 3/8"	13-3/8	17-1/2	
1,115.50	1,100.00	9 5/8"	9-5/8	12-1/4	

## 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 4,500' MD)
2. Open Hole Logging Program 1,125' – 4,500':

Run 1: TD to Surface Casing shoe (1,100' – 4,500')

Triple Combo on drill pipe.

Triple Combo is induction, Gamma Ray, and Neutron/Density Porosity Logs.



SNAKE RIVER OIL AND GAS, LLC  
 WELL NAME: FALLON #1-11  
 LOCATION: 11-8N-5W  
 PAYETTE COUNTY, IDAHO  
 FIELD: HARMON  
**PROPOSED WELLBORE DIAGRAM**

Date: 2/23/2021

GL: 2,161'

**Conductor:** 16" 65# H-40 @120'  
 Cemented to surface w/200 sks Class A or C  
 Hole Size 20"

**Surface Casing:** 9-5/8" 40# K-55 STC @ 1,125'  
 Cemented w/402 sks Type III Cmt  
 Lead: 247 sks RC Econolite Plus  
 Tail: 80 sks RC Surface Tail  
 TOC: Cement to Surface  
 Top out cement - 75 sks RC Surface Tail  
 Est Mud weight 8.7 pg Surface TD  
 Hole Size 12.25"

Hole Deviation Max Angle - 45 deg  
 \*See Directional Plan

Logging  
 Run #1 - Triple Combo on WL

**Production Casing:** 5-1/2" 17# J/K-55 LTC @ 4,463'  
 Float collar @ 4,381'  
 Cemented w/794 sks Class G Cmt  
 Lead: 394 sks RC Gas Bond Lead  
 Tail: 400 sks RC Gas Bond  
 TOC: Cemented to Surface  
 Est Mud weight: 11.5 ppg at TD  
 Hole Size 8.5"

Wellhead:  
 A Sec: 9-5/8" SOW x 11" 5M  
 B Sec: 11" 5M x 7-1/16" 5M Tubing Head w/dry hole flange

120'

1,125'

4% KCL

Displace cement w/4% KCL

4,500'

Proposed TD

4,500' MD 3,807' TVD

PBTD 4,381'

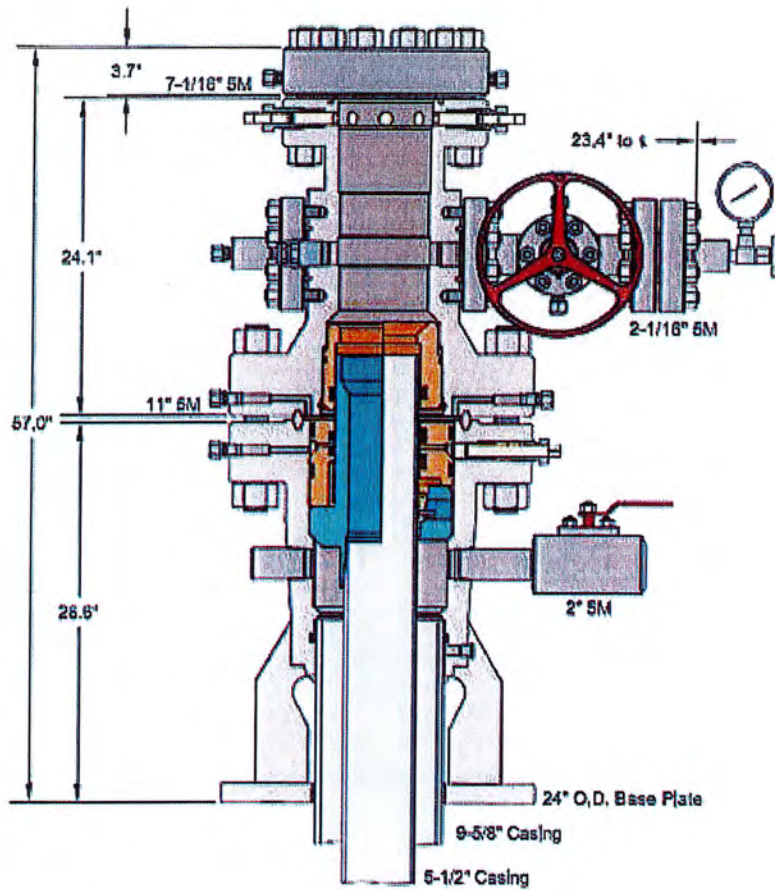
Well Name: Fallon #1-11	Field: Harmon
County: Payette	State: ID
Total Depth (MD): 4,500'	TVD: 3,807'

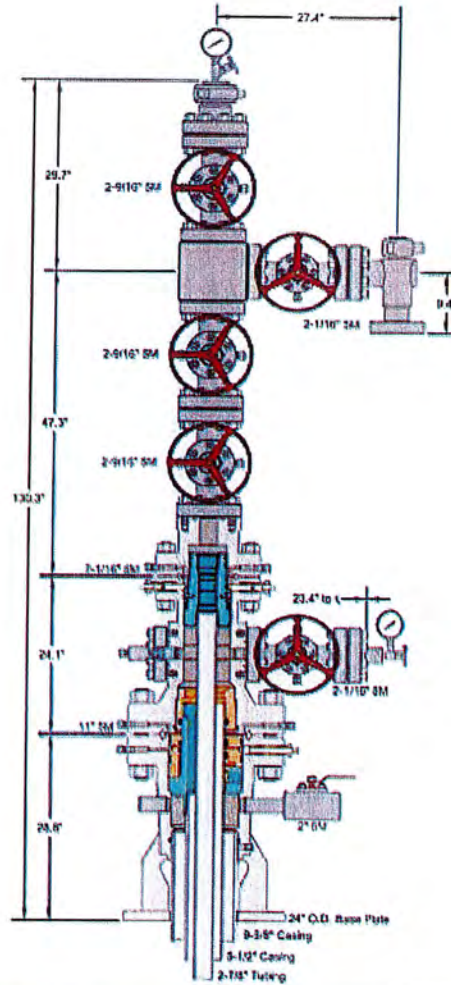
## Wellhead

See surface Wellhead System Diagram.

See surface Wellhead system with Wellhead Assembly Diagram.

### Surface Wellhead System





ALL DIMENSIONS ARE APPROXIMATE

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SNAKE RIVER OIL AND GAS, LLC  
PAYETTE COUNTY

9-5/8" x 5-1/2" x 2-7/8" 5M SH2-R Wellhead  
Assembly, With T-EBS Tubing Head,  
T-EN Tubing Hanger and A5PEN Adapter Flange

DRAWN	VJK	29APR14
APPRV	KN	29APR14
FOR REFERENCE ONLY		
DRAWING NO.		AE25547



## 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, hydro-seeding, 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.