

IDAHO OIL AND GAS CONSERVATION COMMISSION
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, LLC Date: April 10, 2020

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: Barlow Well Number: 2-14 Elevation (ground): 2164.4'

Well Location: Section: 14 Township: 8N Range: 5W (or block and survey)

(Give footage from Section lines): 1612' from S line / 2453' from W line

Latitude/Longitude (Dec Degrees NAD83 minimum requirement): /

Datum: WGS84 NAD83 NAD27 Other: N44° 01'47.5987" / W116° 54'14.9551"

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

Distance, in miles, and direction from nearest town or post office: 1.61 miles from Fruitland Post Office

Nearest distance from proposed location to property or lease line: 1612 feet Nearest producing well: 20 feet

Type of Test/Unit: Gas / 640 acre unit Gas / 160 acre unit Oil / 40 acre unit Other/Docket No.

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: 20 feet

Proposed depth: 4463' Approx. date work will start: 9-1-2020 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): AM Idaho

Address of above: 15021 Katy Freeway, Suite 400, Houston TX 77094

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

Surface Rights Owner (At proposed surface location): Name Brad,Angela Barlow Phone: 208-452-3630

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

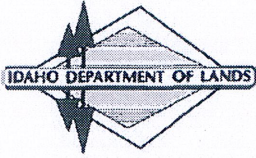
IDL IDFG IDT Public Trust Other: State Water Bottoms

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

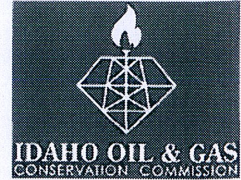
Well Treatment Pit construction Directional or Horizontal Drilling

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)



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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.
- 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 and 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, and complete to the best of my knowledge.

Date June 26, 2020 Signature: _____

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

IDL Office Use Only:

Approval Date: _____ Approved by: _____
 Signature and Title

US Well Number: _____ Operator Number (if known): _____



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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 Division
 300 N. 6th Street, Suite 103
 PO Box 83720
 Boise, Idaho 83702-0050

Snake River Oil & Gas, LLC

IDL Permit Supplement
Barlow 2-14
Payette County, ID
April 10, 2020

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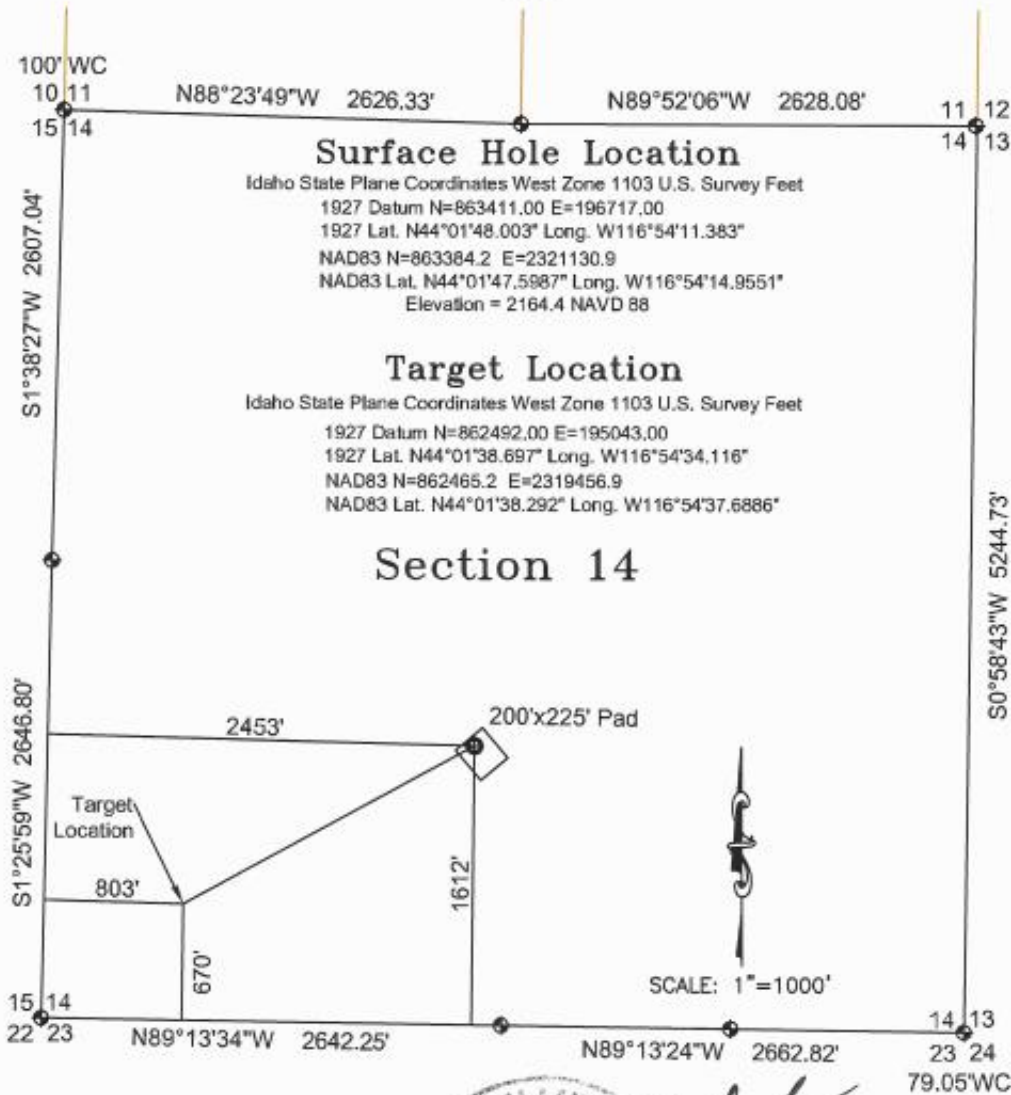
Surveyors Well Plat and Aerial Photo Well Plat

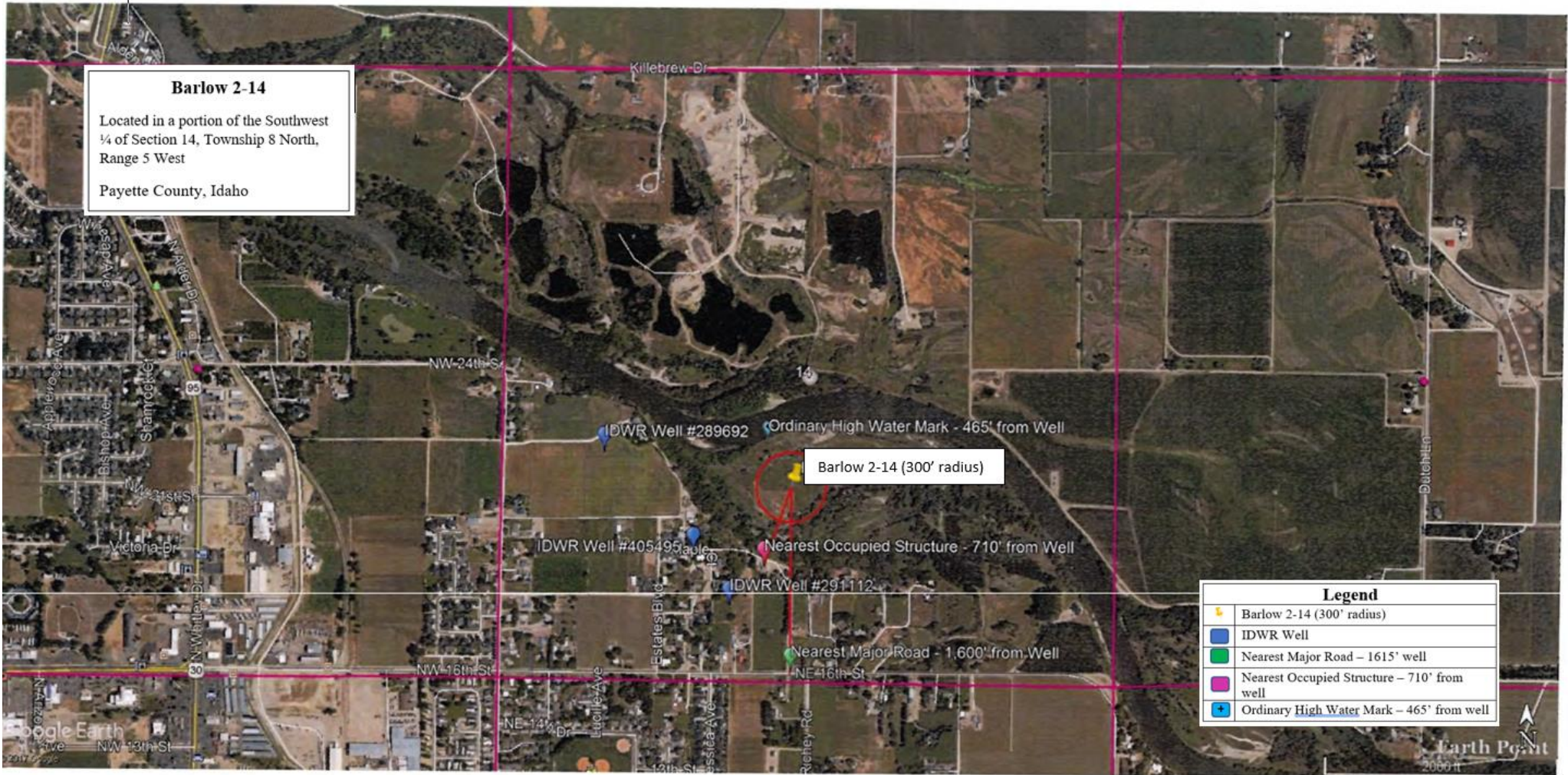
All tracts (100 %) within the unit are leased. The Barlow 2-14 well is proposed to be drilled from the existing Barlow 1-14 drilling pad to minimize surface disturbance in the community. The Barlow 2-14 surface location is 20' northwest of the Barlow 1-14. The Barlow 2-14 is a Sand "B" test, the Barlow 1-14 is completed in Sand "D", a separate source of supply.

See Surveyors Well Plat on Page 4 and Aerial Photo on Page 5.

EXHIBIT MAP OF Barlow 2-14

LOCATED IN
A PORTION OF THE SOUTHWEST 1/4,
OF SECTION 14, TOWNSHIP 8 NORTH, RANGE 5 WEST, B.M.,
PAYETTE COUNTY, IDAHO
-2020-





Geologic Prognosis

Prospect:

The Barlow 2-14 well is designed to test Sand “B”. It is estimated that the target Sand “B” will be encountered at +/- 3894’ Measured Depth in the Proposed Well. The nearby Barlow #1-14 well is an existing well which produces from a separate source of supply in Sand “D”.

Proposed Well

The well is to be drilled as a directional well to a depth of 4,463’ MD/ 3,777’ TVD. The surface and bottom hole location will be in Section 14-Township 8N-Range 5W (Payette County, Idaho).

Estimated Geological Formation Tops

Zone	Expected Depth
Shallow Sand	1,320”
Sand “B”	3,894’
Sand “D”	4,228’

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

Site Preparation

Erosion Control

The well will be drilled from an existing drilling pad (Barlow 1-14), therefore minimal new surface disturbance will occur.

Appropriate grading, mechanical stabilization (rip-rap or hay bales), chemical stabilization (soil cement), and silt fencing will be used to prevent soil erosion. All the 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

Casing Program

Well Interval	Bit Size / Holes Size	Casing Size, Grade and Weight	Casing Setting Depth (MD)	Top of Cement	Cement Type and Volume
Conductor	20"	16" / H-40 / 65#/ft	120'	Surface	200 sks Class A or C
Surface	12 ¼"	9 5/8" / K-55 / 40#/ft	1,125	Surface	Lead: 247 sks Type III - RC Econolite Plus Tail: 80 sks Type III - RC Surface
Production	8 ½"	5 ½" / J/K-55 / 17#/ft	4,463	Surface	Lead: 394 sks Class G - RC Gas Bond Tail: 400 sks Class G - 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 ½" float shoe
2 full length jts 5 ½" 17# K-55 LTC for shoe track – centralized
5 ½" float collar
5 ½" 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%)

Stage	Volume	Yield	Density	Description
Spacer	20 bbls		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		9-10 ppg	Drilling fluids/Water
Top out Cement	102 ft3	1.36 ft3 / sk	14.8 pg	75 sks Type III - RC Surface Tail

Depth: 1,125’ MD Hole Size: 12 ¼” Mud weight: 8.7 ppg

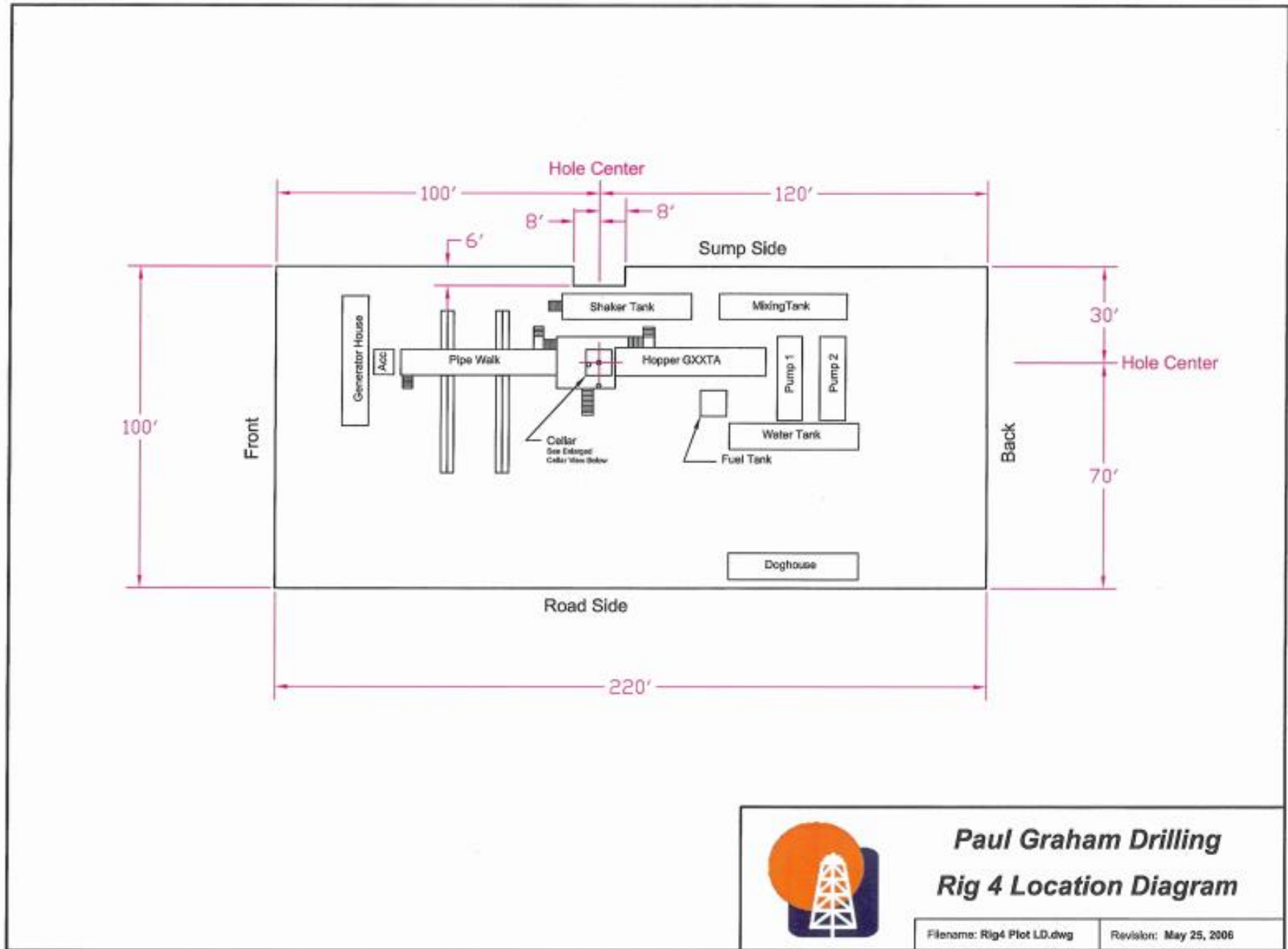
Production Casing (Excess 20%)

Stage	Volume	Yield	Density	Description
Spacer	20 bbls		8.34 pg	10 bbls mud flush
Spacer	40 bbls		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		8.54 ppg	102 bbls 4% KCL

Depth: 4,463’ MD Hole Size: 8 ½” Mud weight: 11.5 ppg

[Rig Location Plat](#)

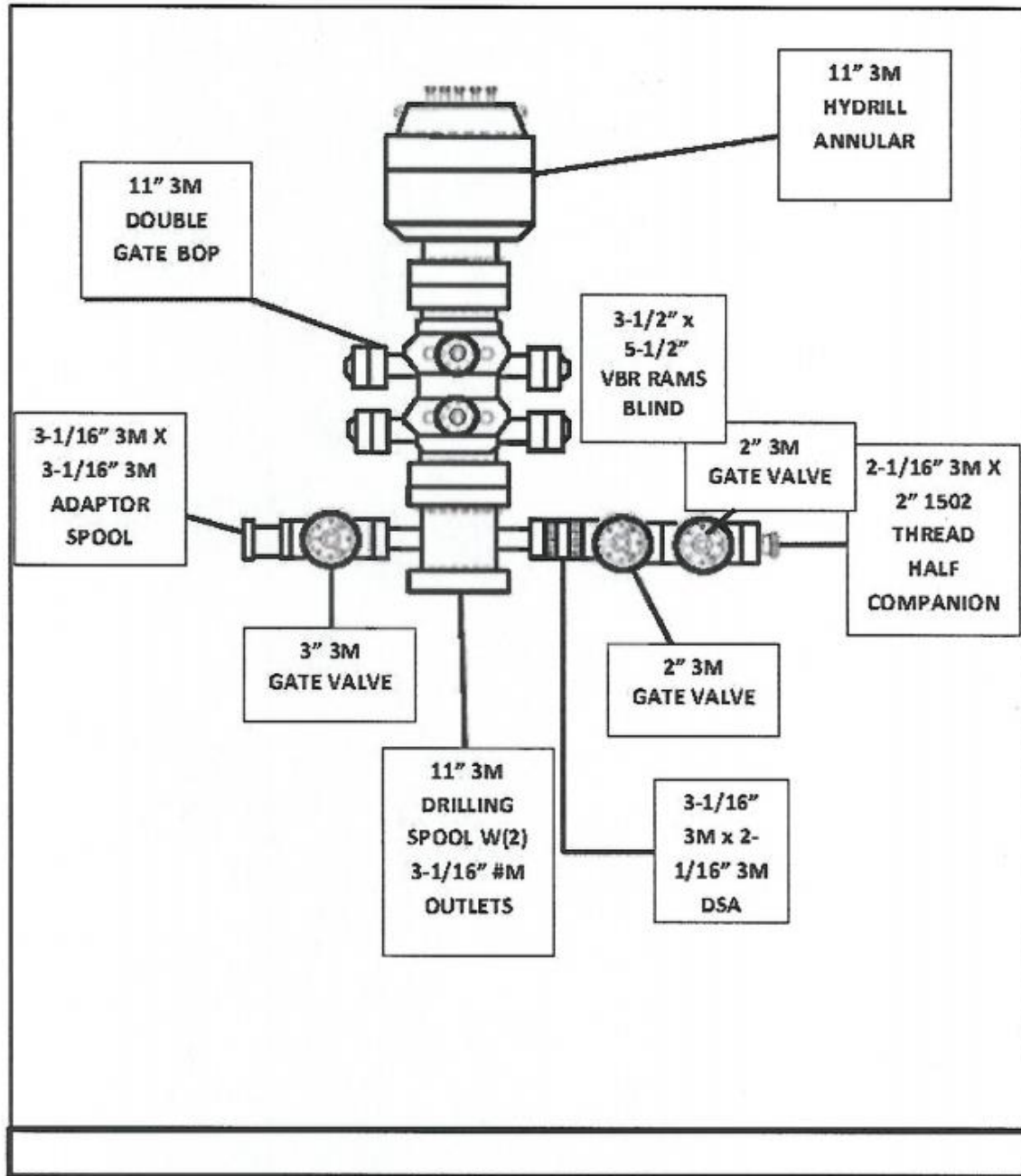
See Paul Graham Drilling Rig 4 Location Diagram Page 12



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).

BOP Diagram



Drilling Plan

Drilling Plan expected to include but not limited to:

1. Drill 20" hole to 102' with water well rig and run 16" casing and set same with cement back to surface.
2. Move in drilling rig.
3. Drill 12 ¼" directional hole with drilling rig to 1,100' and run 9 5/8" casing set same with cement back to surface.
4. Drill 8 ½" directional hole to 4,463' 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.

See Titan Directional Drilling Plan Pages 15-18.

Snake River Oil and Gas

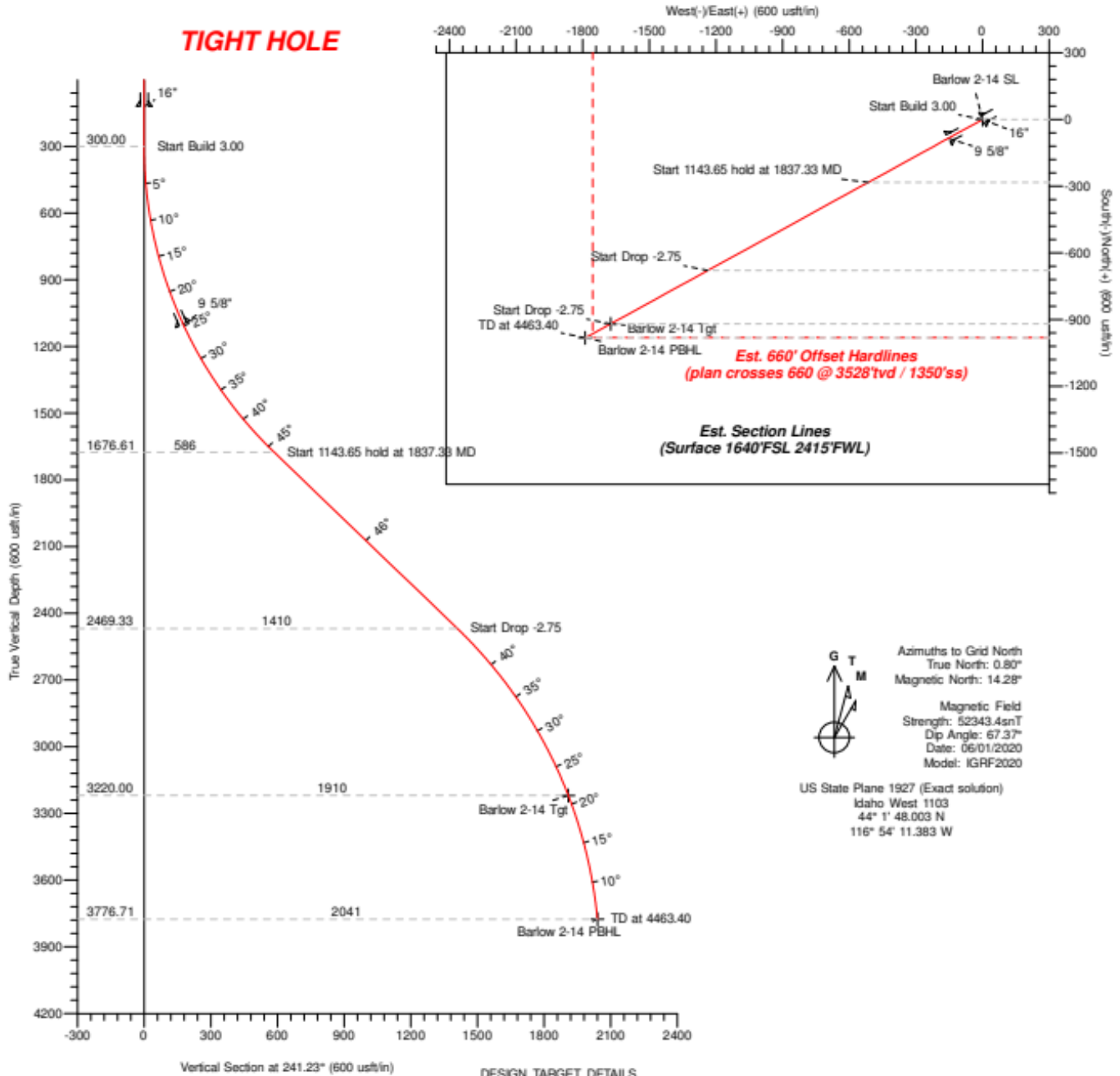
Project: Payette County, ID W'27
Area: Section 14-8N-5W
Site: Barlow 2-14 Pad
Well: Barlow #2-14
Wellbore: #2-14 OH
Design: Plan #3



EST. CASING DETAILS

TVD	MD	Size
120.00	120.00	16
1100.00	1125.46	9-5/8

TIGHT HOLE



US State Plane 1927 (Exact solution)
Idaho West 1103
44° 1' 48.003 N
116° 54' 11.383 W

Magnetic Field
Strength: 52343.4snT
Dip Angle: 67.37°
Date: 06/01/2020
Model: IGRF2020

Azimuths to Grid North
True North: 0.80°
Magnetic North: 14.28°

Titan Directional Drilling

Survey Report

Company:	Snake River Oil and Gas	Local Co-ordinate Reference:	Well Barlow #2-14
Project:	Payette County, ID W'27	TVD Reference:	est.GL+KB @ 2178.00usft (planning)
Site:	Barlow 2-14 Pad	MD Reference:	est.GL+KB @ 2178.00usft (planning)
Well:	Barlow #2-14	North Reference:	Grid
Wellbore:	#2-14 OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5k-14

Project	Payette County, ID W'27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Idaho West 1103		Using geodetic scale factor

Site	Barlow 2-14 Pad		
Site Position:		Northing:	863,411.00 usft
From:	Map	Easting:	196,717.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 *
		Latitude:	44° 1' 48.003 N
		Longitude:	116° 54' 11.383 W
		Grid Convergence:	-0.80 °

Well	Barlow #2-14		
Well Position	+N/-S	0.00 usft	Northing: 863,411.00 usft
	+E/-W	0.00 usft	Easting: 196,717.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	44° 1' 48.003 N
		Longitude:	116° 54' 11.383 W
		Ground Level:	2,164.00 usft

Wellbore	#2-14 OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2020	06/01/20	(°)	(°)	(nT)
			13.48	67.37	52,343.39569401

Design	Plan #3				
Audit Notes:	p3 for 150' rathole added to p2; Surface assumed 20'NW of #1-14				
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	241.23	

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
16"									
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	3.00	241.23	399.95	-1.26	-2.29	2.62	3.00	3.00	0.00
500.00	6.00	241.23	499.63	-5.03	-9.17	10.46	3.00	3.00	0.00
600.00	9.00	241.23	598.77	-11.32	-20.61	23.51	3.00	3.00	0.00
700.00	12.00	241.23	697.08	-20.08	-36.58	41.74	3.00	3.00	0.00
800.00	15.00	241.23	794.31	-31.32	-57.05	65.08	3.00	3.00	0.00
900.00	18.00	241.23	890.18	-44.98	-81.94	93.48	3.00	3.00	0.00
1,000.00	21.00	241.23	984.43	-61.05	-111.20	126.85	3.00	3.00	0.00
1,100.00	24.00	241.23	1,076.81	-79.46	-144.74	165.12	3.00	3.00	0.00
1,125.46	24.76	241.23	1,100.00	-84.52	-153.95	175.63	3.00	3.00	0.00
9 5/8"									
1,200.00	27.00	241.23	1,167.06	-100.17	-182.47	208.16	3.00	3.00	0.00
1,300.00	30.00	241.23	1,254.93	-123.13	-224.30	255.87	3.00	3.00	0.00

Titan Directional Drilling
Survey Report

Company:	Snake River Oil and Gas	Local Co-ordinate Reference:	Well Barlow #2-14
Project:	Payette County, ID W'27	TVD Reference:	est.GL+KB @ 2178.00usft (planning)
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Well:	Barlow #2-14	North Reference:	Grid
Wellbore:	#2-14 OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 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)	
1,400.00	33.00	241.23	1,340.18	-148.28	-270.09	308.12	3.00	3.00	0.00	
1,500.00	36.00	241.23	1,422.59	-175.53	-319.74	364.75	3.00	3.00	0.00	
1,600.00	39.00	241.23	1,501.91	-204.82	-373.09	425.62	3.00	3.00	0.00	
1,700.00	42.00	241.23	1,577.95	-236.07	-430.02	490.56	3.00	3.00	0.00	
1,800.00	45.00	241.23	1,650.47	-269.20	-490.35	559.38	3.00	3.00	0.00	
1,837.33	46.12	241.23	1,676.61	-282.02	-513.72	586.04	3.00	3.00	0.00	
1,900.00	46.12	241.23	1,720.05	-303.76	-553.31	631.21	0.00	0.00	0.00	
2,000.00	46.12	241.23	1,789.37	-338.45	-616.50	703.29	0.00	0.00	0.00	
2,100.00	46.12	241.23	1,858.68	-373.13	-679.68	775.37	0.00	0.00	0.00	
2,200.00	46.12	241.23	1,928.00	-407.82	-742.87	847.45	0.00	0.00	0.00	
2,300.00	46.12	241.23	1,997.31	-442.51	-806.05	919.53	0.00	0.00	0.00	
2,400.00	46.12	241.23	2,066.63	-477.20	-869.23	991.61	0.00	0.00	0.00	
2,500.00	46.12	241.23	2,135.94	-511.88	-932.42	1,063.69	0.00	0.00	0.00	
2,600.00	46.12	241.23	2,205.26	-546.57	-995.60	1,135.76	0.00	0.00	0.00	
2,700.00	46.12	241.23	2,274.57	-581.26	-1,058.79	1,207.84	0.00	0.00	0.00	
2,800.00	46.12	241.23	2,343.89	-615.94	-1,121.97	1,279.92	0.00	0.00	0.00	
2,900.00	46.12	241.23	2,413.20	-650.63	-1,185.15	1,352.00	0.00	0.00	0.00	
2,980.98	46.12	241.23	2,469.33	-678.72	-1,236.32	1,410.37	0.00	0.00	0.00	
3,000.00	45.60	241.23	2,482.58	-685.29	-1,248.29	1,424.02	2.75	-2.75	0.00	
3,100.00	42.85	241.23	2,554.24	-718.85	-1,309.42	1,493.76	2.75	-2.75	0.00	
3,200.00	40.10	241.23	2,629.16	-750.72	-1,367.46	1,559.98	2.75	-2.75	0.00	
3,300.00	37.35	241.23	2,707.17	-780.82	-1,422.29	1,622.53	2.75	-2.75	0.00	
3,400.00	34.60	241.23	2,788.09	-809.08	-1,473.78	1,681.26	2.75	-2.75	0.00	
3,500.00	31.85	241.23	2,871.74	-835.44	-1,521.80	1,736.04	2.75	-2.75	0.00	
3,600.00	29.10	241.23	2,957.92	-859.85	-1,566.25	1,786.75	2.75	-2.75	0.00	
3,700.00	26.35	241.23	3,046.43	-882.23	-1,607.02	1,833.26	2.75	-2.75	0.00	
3,800.00	23.60	241.23	3,137.07	-902.55	-1,644.03	1,875.48	2.75	-2.75	0.00	
3,889.68	21.13	241.23	3,220.00	-918.96	-1,673.94	1,909.60	2.75	-2.75	0.00	
3,900.00	20.85	241.23	3,229.64	-920.74	-1,677.18	1,913.29	2.75	-2.75	0.00	
4,000.00	18.10	241.23	3,323.91	-936.78	-1,706.39	1,946.62	2.75	-2.75	0.00	
4,100.00	15.35	241.23	3,419.67	-950.63	-1,731.61	1,975.39	2.75	-2.75	0.00	
4,200.00	12.60	241.23	3,516.70	-962.25	-1,752.78	1,999.54	2.75	-2.75	0.00	
4,300.00	9.85	241.23	3,614.78	-971.61	-1,769.84	2,019.00	2.75	-2.75	0.00	
4,400.00	7.10	241.23	3,713.68	-978.70	-1,782.75	2,033.73	2.75	-2.75	0.00	
4,463.41	5.35	241.23	3,776.71	-982.01	-1,788.78	2,040.60	2.75	-2.75	0.00	

Titan Directional Drilling
Survey Report

Company:	Snake River Oil and Gas	Local Co-ordinate Reference:	Well Barlow #2-14
Project:	Payette County, ID W27	TVD Reference:	est.GL+KB @ 2178.00usft (planning)
Site:	Barlow 2-14 Pad	MD Reference:	est.GL+KB @ 2178.00usft (planning)
Well:	Barlow #2-14	North Reference:	Grid
Wellbore:	#2-14 OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #3	Database:	EDM 5k-14

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Barlow 2-14 SL - hit/miss target - Shape	0.00	360.00	0.00	0.00	0.00	863,411.00	196,717.00	44° 1' 48.003 N	116° 54' 11.383 W
- plan hits target center - Point									
Barlow 2-14 Tgt - plan hits target center - Point	0.00	360.00	3,220.00	-918.96	-1,673.94	862,492.00	195,043.00	44° 1' 38.697 N	116° 54' 34.116 W
Barlow 2-14 PBHL - plan hits target center - Point	0.00	0.00	3,776.71	-982.01	-1,788.78	862,428.95	194,928.16	44° 1' 38.058 N	116° 54' 35.675 W

Casing Points						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
	120.00	120.00	16"	16	19	
	1,125.46	1,100.00	9 5/8"	9-5/8	12-1/4	

Logging Plan

1. Mud loggers will collect and analyze the lithology of drill cuttings and mud gas values from conductor casing shoe to total depth (120' to 4,463' MD)
2. Open Hole Logging Program 1,100' – 4,463':

Run 1: TD to Surface Casing shoe (1,100' – 4,463')

Triple Combo on drill pipe.

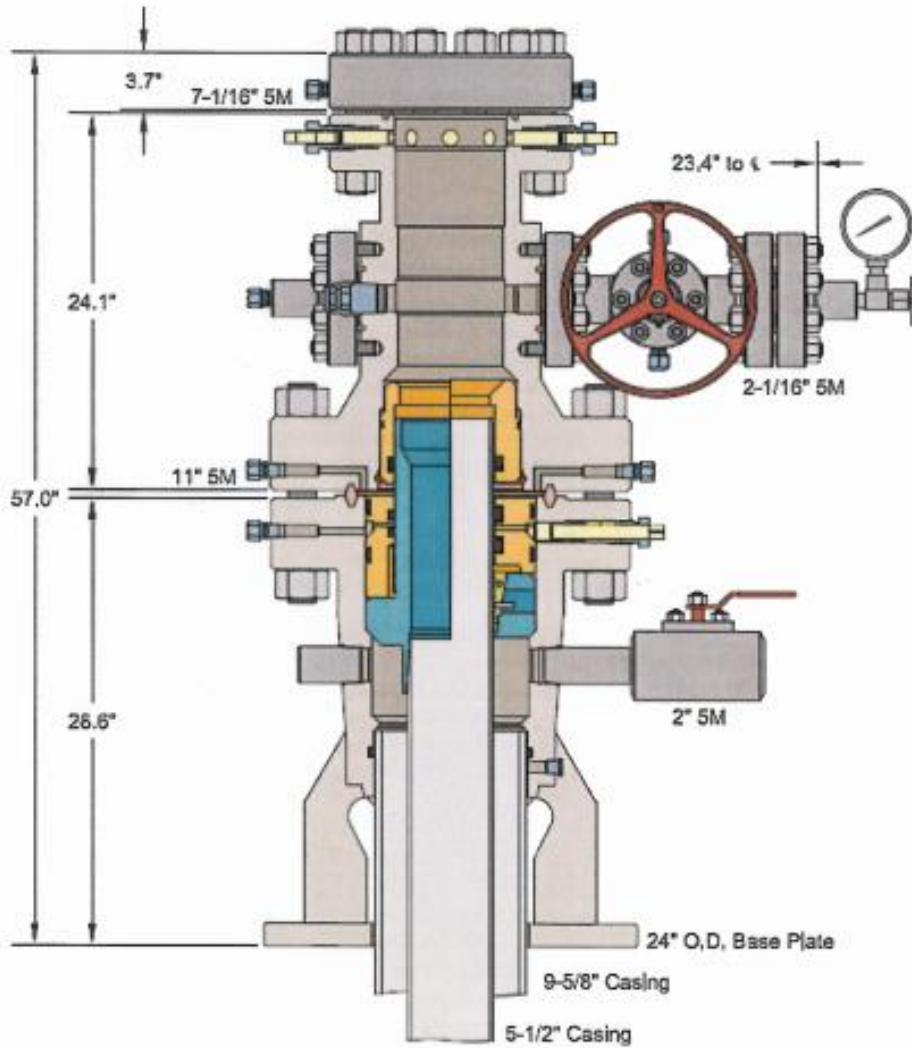
Triple Combo is induction, Gamma Ray, and Neutron/Density Porosity Logs.

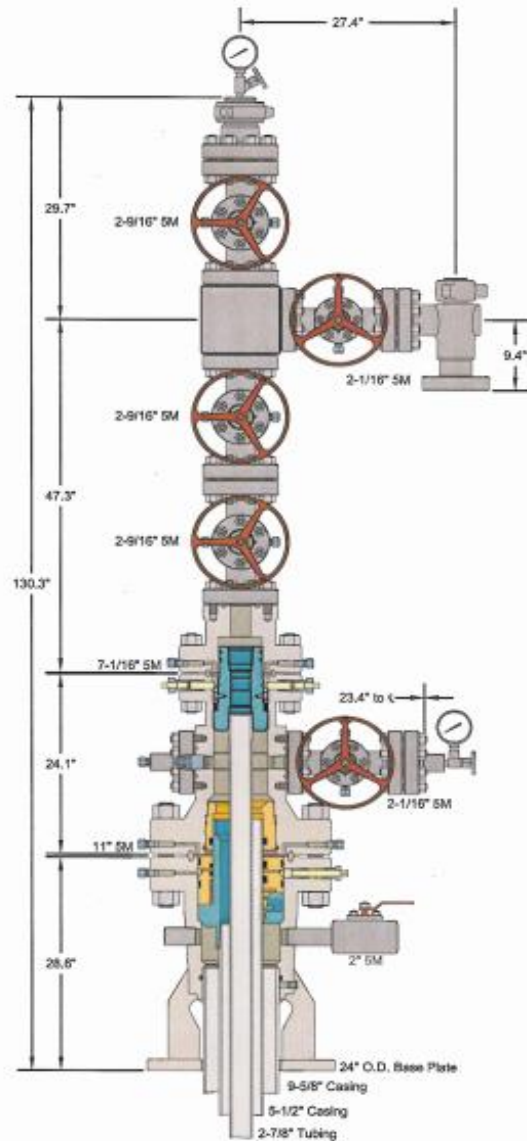
Wellhead

See Surface Wellhead System Diagram Page 21.

See Surface Wellhead System with Wellhead Assembly Diagram Page 22

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

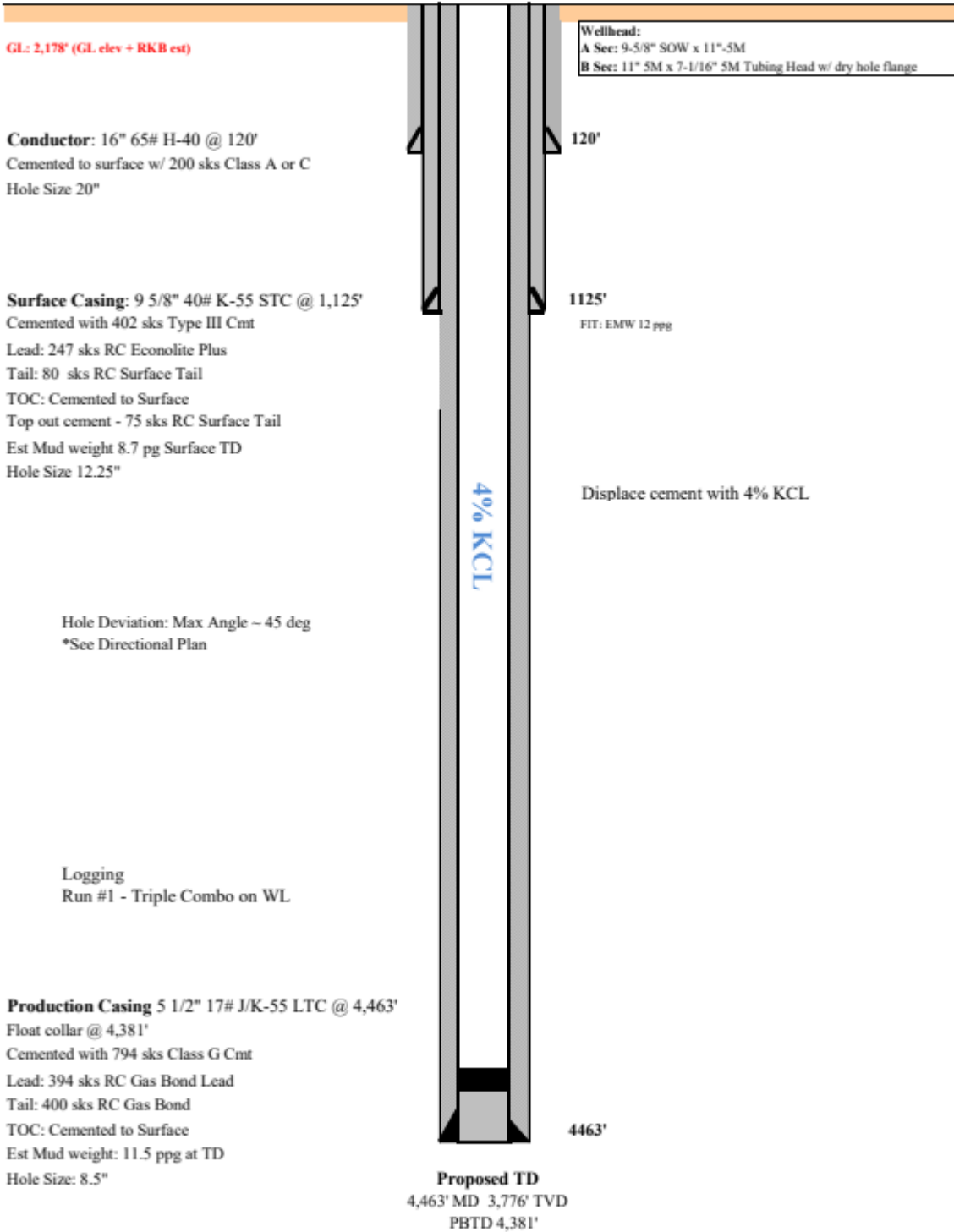
FOR REFERENCE ONLY
DRAWING NO. AE25547

Wellbore Schematic

See Barlow 2-14 Proposed Wellbore Schematic Page 24.

Snake River Oil and Gas
Well Name: Barlow 2-14
Location: Section 14-8N-5W
Payette County, Idaho
Field: Harmon
PROPOSED WELLBORE DIAGRAM

DATE: 4/9/20



Well Name: Barlow 2-14	Field: Harmon
County: Payette	State: ID
Total Depth (MD) 4,463'	TVD: 3,776'

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 on the evaluation
6. Reestablish initial visual composition
 - a. Ensure the reclaimed landscape features conform to the prior conditions of the site.

Proposed SROG Barlow #2-14
 Estimated Pre-drilling Geological
 Formation Tops

<u>Zone</u>	<u>Expected Depths (RKB)</u>	
	<u>MD (ft)</u>	<u>TVD (ft)</u>
Glenns Ferry	0' (Surface)	0' (Surface)
Shallow Sand	1320'	1265'
Chalk Hills	2540'	2150'
Sand "B"	3894'	3220'
Sand "D"	4228'	3543'
Payette Formation	NDE	NDE

NDE=Not Deep Enough