

Idaho Department of Lands

Director's Office
300 N. 6th Street, Suite 103
P.O. Box 83720
Boise, ID 83720-0050
Phone (208) 334-0200



Dustin T. Miller, Director
Working Lands, Trusted Stewards

**Idaho Oil and Gas
Conservation Commission**

Ray Hinchcliff, Chair
Jennifer Riebe, Vice Chair
Marg Chipman
Marc Haws
Mike Lyden
Shannon Chollett, Secretary

November 7, 2025

Lauren Morahan
Senior Regulatory & Permitting Coordinator
Cascade Exploration, LLC
c/o Koloma
1900 Grant Street, Suite 1250
Denver, Colorado 80203

via email: lmorahan@koloma.com

Re: Permit to Drill #11-027-20004, Twin Peaks #1W, Canyon County, Idaho

Dear Ms. Morahan:

The Idaho Department of Lands (IDL) has completed our review of this Application for Permit to Drill a stratigraphic test well for natural hydrogen submitted October 23, 2025. 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. 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. Surface casing shall be set at a minimum depth of 1,200 feet or ten percent (10%) of the proposed total depth of the well.
3. During drilling and logging of the hole for the intermediate casing, the permittee shall identify any water bearing zones and isolate those zones in the annular space during cementing or completion activities.
4. 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.
5. 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.
6. 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.
7. 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.

8. 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 testing will be allowed to occur below the permitted depth without authorization from the Department.
9. 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.
10. The Department requires a full set of dried, bagged and labeled cuttings from the first sample depth to the final TD of the well. This request was made by the Idaho Geological Survey under the authorization of Idaho Code § 47-306 and Idaho Code § 47-307.
11. Well Log information shall be submitted in paper and electronic formats as required by IDAPA 20.07.07.341. All log copies shall be the final processed logs as provided by the service company. No field / preliminary copies shall be accepted.
12. Idaho Department of Lands inspectors shall have 24-hour, unencumbered access for compliance and regulatory purposes.
13. This permit does not grant the right for ingress or egress nor does this application grant the right to production from unleased lands.
14. This stratigraphic test well will conform to the stipulations set forth in the Final Spacing Order for Docket No. CC-2025-OGR-01-004 dated September 30, 2025.

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, and Idaho Code Title 47, Chapter 3 Oil and Gas Wells – Geologic Information and Prevention of Waste.

The potential for fires in the state of Idaho are always a possibility, especially in the drier summer and autumn months. To prevent human-caused fires, please review the guidelines on the Idaho Department of Lands website for operating vehicles and equipment in a safe manner:

<https://www.idl.idaho.gov/fire-management/fire-prevention-and-preparedness/prevent-unwanted-human-caused-wildfires/>

This permit will be administered by IDL staff from the Southwest Area office and the Boise Director's office who will be inspecting the operations. Please contact James Thum at 208-334-0243 if you have any questions.

Sincerely,



Shannon Chollett
Division Administrator
Minerals, Navigable Waters, Oil & Gas
Idaho Department of Lands

Enc.\1 Application for Seismic permit dated 7/25/2025, approved 9/12/2025

ecc: Heather Bader, Drilling Engineer, Koloma / Cascade Exploration, LLC
James Thum, Idaho Department of Lands
Derek Kraft, Idaho Department of Lands
Dan Lister, Canyon County



October 7, 2025

Idaho Department of Lands – *Oil & Gas Program*
ATTN: Mr. James Thum
300 N 6th Street, Suite 103
Boise, Idaho 83702

Subject: Revised Application for Permit to Drill – Twin Peaks 1W

Dear Mr. Thum:

Enclosed please find a revised application for permit to drill (APD) for Cascade Exploration, LLC's (Cascade Exploration) Twin Peaks 1W stratigraphic test well, located in Section 26, Township 5 North, Range 4 West, in Canyon County, Idaho.

Cascade Exploration has secured a drilling rig to begin exploration efforts in November of this year pending IDL's review and approval of the aforementioned permit.

Should you have any questions pertaining to the enclosed APD, please don't hesitate to contact Lauren Morahan, Senior Regulatory & Permitting Coordinator, for Cascade Exploration at lmorahan@koloma.com or via cell at 720-933-5007.

Thank you in advance for your review and consideration of our proposed exploration application.

Kind Regards,

Lauren Morahan

Lauren Morahan
Senior Regulatory & Permitting Coordinator

Enclosures:

OGR-101 – Twin Peaks 1W Application for Permit to Drill, Deppen of Plug-back

Twin Peaks 1W permit fee payment

Twin Peak 1W IDL Permit Supplement including required plats, maps, schematics, and drill plan



Idaho Department of Lands
Idaho Oil and Gas Conservation Commission



Information on Application for Permit to Drill, Deepen, or Plug Back

This form is four (4) pages, please read and complete all sections.

Additional Information

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 if completed within one (1) year from issuance of permit to drill a well.

Permit Denial:

Applications may be denied for the following reasons:

- Application fee was not submitted. Idaho Code § 47-316 (1)
- Application is incomplete.
- Failure to post required bonds.
- Proposed well will result in a waste of oil or gas, a violation of correlative rights, or the pollution of freshwater supplies. Idaho Code § 47-315.

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.

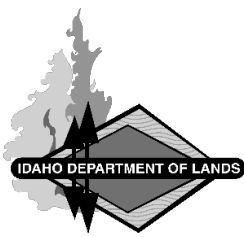
Log Submittals: Idaho Code § 47-316 (4); IDAPA 20.07.02.341

All wells shall have:

- A lithologic log from the bottom of the hole to the top, to the extent practicable. IDAPA 20.07.02.341.01.
- A bottomhole location survey log. IDAPA 20.07.02.341.02.
- A cement bond log. IDAPA 20.07.02.341.03.
- 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. IDAPA 20.07.02.341.04
- All logs shall be submitted to the Department in 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) or two (2) inch for correlation logs and five (5) inches for detail logs. IDAPA 20.07.02.341.05.

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

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



Idaho Department of Lands
Idaho Oil and Gas Conservation Commission



Form for Application For Permit to Drill, Deepen, or Plug Back

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

Operator Information

Name of Operator: _____ Date: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact Name: _____ Telephone: _____

Email Address: _____

Emergency Contact Name/Phone: _____

Description Of Well And Lease

Name of Lease: _____ Well Number: _____

Elevation (ground): _____

Well Location: Section: _____ Township: _____ Range: _____ (or block and survey) _____

(Give footage from Section lines): _____

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

Datum: ☐ WGS84 ☐ NAD83 ☐ NAD27 ☐ Other: _____

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

Distance, in miles, and direction from nearest town or post office: _____

Nearest distance from proposed location to property or lease line: _____ feet

Nearest producing well: _____ feet

Type of Test/Unit: ☐ Gas / 640 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: _____ feet

Proposed depth: _____ Approx. date work will start: _____

Number of acres in lease(s): _____

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

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

Purchased from (Name): _____

Address of above: _____

Bond Type and Number: _____

Surface Rights Owner (At proposed surface location):

Name _____ Phone: _____

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

- ☐ IDL - Idaho Department of Lands
- ☐ IDFG - Idaho Department of Fish and Game
- ☐ IDT - Idaho Department of Transportation
- ☐ Navigable Waterways - 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.

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) _____

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 (Idaho Code §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, Lauren Morahan, the undersigned, state that I am the Senior Regulatory & Permitting Coordinator of Cascade Exploration, 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: 10/6/2025 Signature: Lauren Morahan

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

IDL Office Use Only:

Approval Date: 11/7/25 Approved by: [Signature] Division Amin
Signature and Title

US Well Number: 11-027-20004 Operator Number (if known): N/A



PURCHASE RECEIPT

Department of Lands

300 North 6th Street, Suite 103
 Boise ID 83702
 (208)334-0200
 OTC Local Ref ID: 139428130
 9/24/2025 03:40 AM

Your credit card or bank statement will show a charge from Idaho.gov.

Status: **APPROVED**
 Customer Name: Lauren Morahan
 Type: Visa
 Credit Card Number: **** * 3596

Items	Quantity	TPE Order ID	Total Amount
Payments	1	73502722	\$2,000.00

Customer Name: **Lauren Morahan**

Instrument Number: **Twin Peaks 1W**

Payment Type (Rent/Use/Permit Fees, Timber Sale, Fire, Bond, Other): **Permit fee**

Description: **APD**

Payments	1	73502722	\$2,000.00
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Customer Name: **Lauren Morahan**

Instrument Number: **Twin Peaks 1E**

Payment Type (Rent/Use/Permit Fees, Timber Sale, Fire, Bond, Other): **Permit Fee**

Description: **APD**

Total remitted to the Department of Lands			\$4,000.00
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Tyler Technologies Fee	1	73502722	\$101.00
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Total Amount Charged			\$4,101.00
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To offer the convenience of an electronic payment, a service fee has been added to your transaction. This fee goes to our third-party provider, Tyler Technologies. The Agency does not keep any portion of this fee.



IDL Permit Supplement

Twin Peaks 1W

Canyon County, ID

October 7, 2025

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Well Plat and Rig/Pad Layout

Cascade Exploration, LLC (Cascade Exploration) is requesting approval for a stratigraphic test or science well on a 40-acre spacing unit in the SENE of Section 26, T5N, R4W in Canyon County, Idaho, approximately 2 miles northeast from the town of Notus.

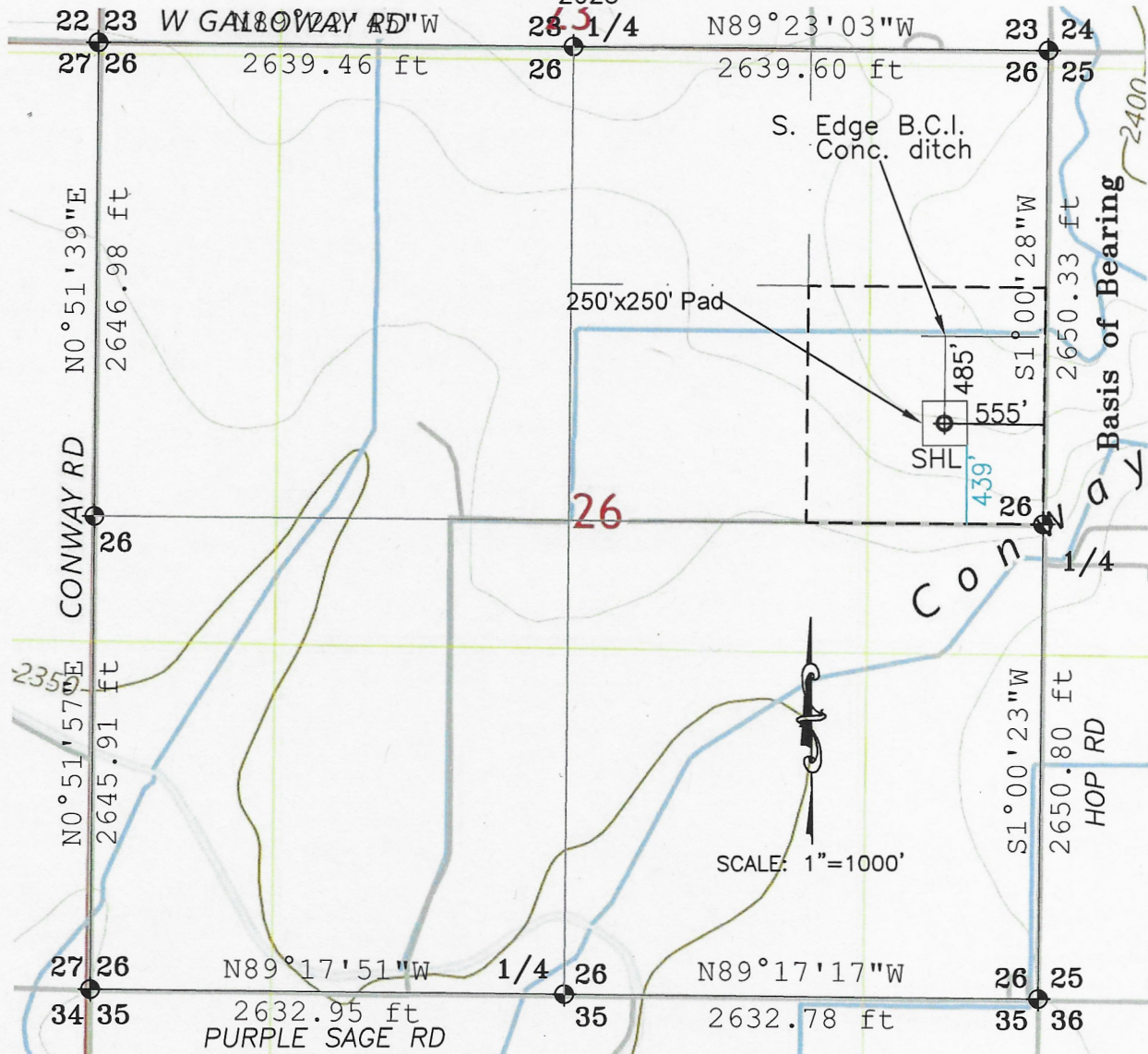
Enclosed please find legal plat package of SHL & BHL location, well location and proximity to unit boundary and relevant features (i.e., highways, waterways, etc.), rig and pad layout, driving directions, and roadway and pad construction cut/fill diagrams.

EXHIBIT UNIT & TOPO MAP OF TWIN PEAKS 1W

LOCATED IN

THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 26,
TOWNSHIP 5 NORTH, RANGE 4 WEST, B.M.,
CANYON COUNTY, IDAHO

-2025-



Surface Hole Location(SHL)

Idaho State Plane Coordinates West Zone 1103
U.S. Survey Feet

1927 Datum N=758510.3 E=229431.1

1927 Lat. N43°44'36.404" Long. W116°46'25.876"

NAD83 N=758480.3 E=2353846.9

WDG84 Lat. N43°44'35.984" Long. W116°46'29.392"

Legend

- Accepted Section Monument
- SHL

UNIT BOUNDARY
NEW ACCESS ROAD

Cascade Exploration, LLC

TWIN PEAKS 1W

Bottom Hole Location(BHL)

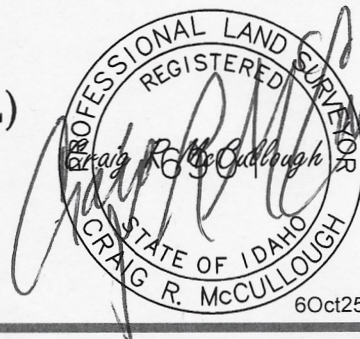
Idaho State Plane Coordinates West Zone 1103
U.S. Survey Feet

1927 Datum N=758510.3 E=229431.1

1927 Lat. N43°44'36.404" Long. W116°46'25.876"

NAD83 N=758480.3 E=2353846.9

WDG84 Lat. N43°44'35.984" Long. W116°46'29.392"



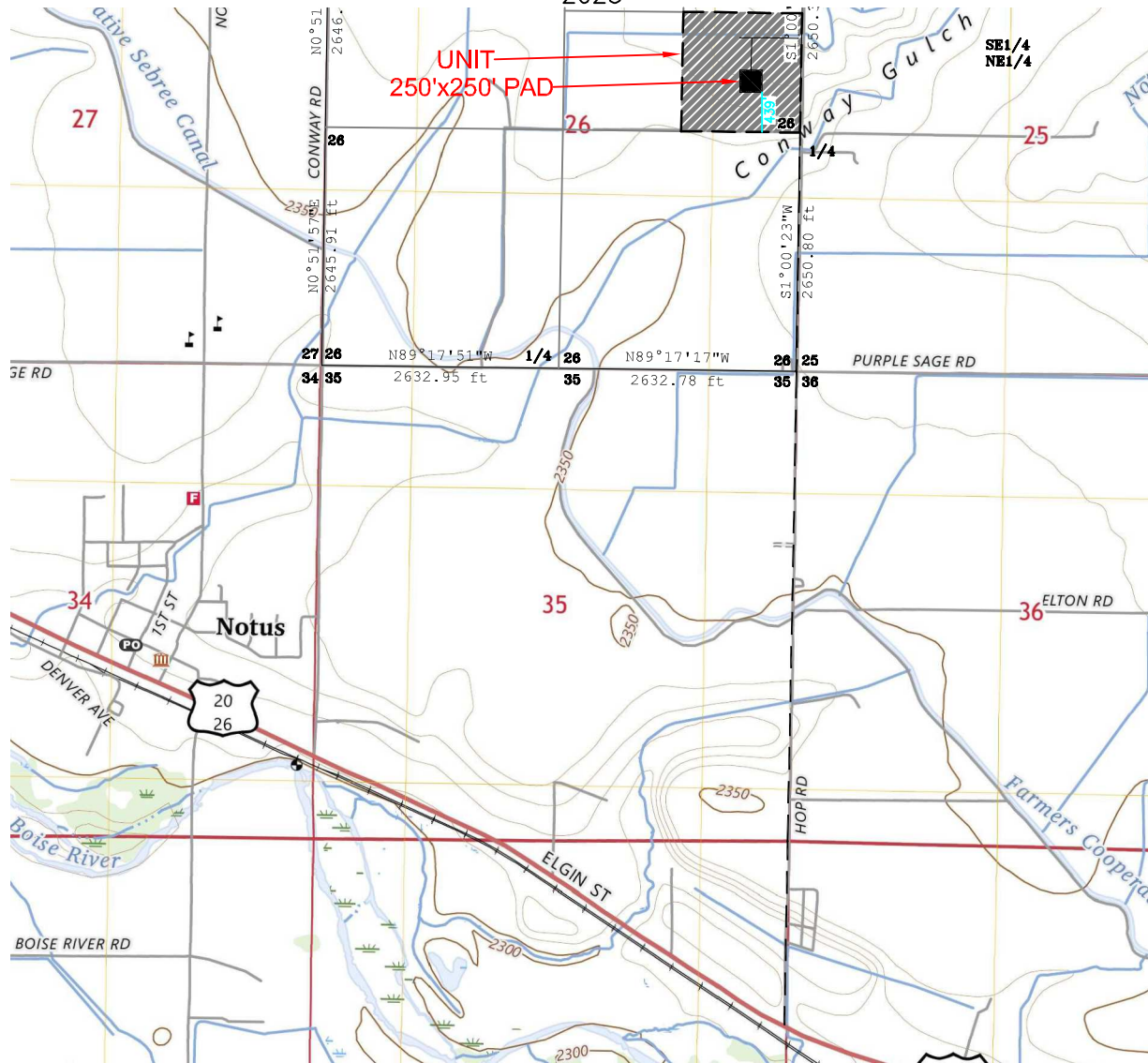
1310 Shady Lane, EMMETT IDAHO
PHONE: 855-477-6901

6Oct25

ACCESS ROAD MAP OF TWIN PEAKS 1W

LOCATED IN

THE SOUTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 26,
TOWNSHIP 5 NORTH, RANGE 4 WEST, B.M.,
CANYON COUNTY, IDAHO
-2025-



Legend

- ACCESS ROAD
- UNIT BOUNDARY
- NEW ACCESS ROAD

Cascade Exploration, LLC

TWIN PEAKS 1W

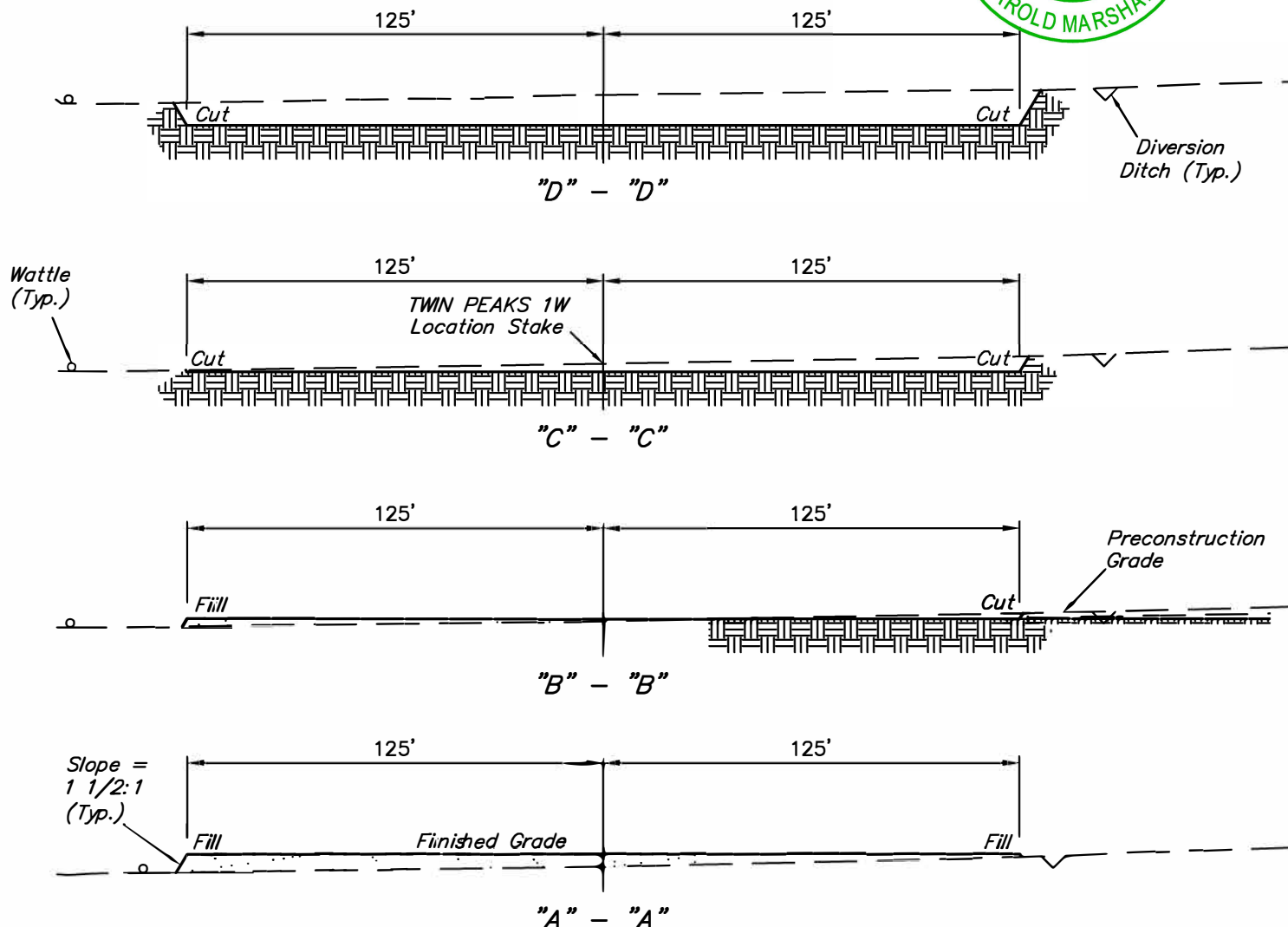
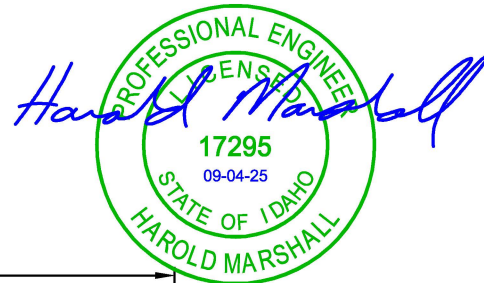


SCALE: 1"=2000'



1310 Shady Lane, EMMETT IDAHO
PHONE: 855-477-6901

X-Section
Scale
1" = 50'



APPROXIMATE EARTHWORK QUANTITIES	
(12") TOPSOIL STRIPPING	2,430 Cu. Yds.
REMAINING LOCATION	1,590 Cu. Yds.
TOTAL CUT	4,020 Cu. Yds.
FILL	1,590 Cu. Yds.
EXCESS MATERIAL	2,430 Cu. Yds.
TOPSOIL	2,430 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	0 Cu. Yds.

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	ACRES
WELL SITE DISTURBANCE	NA	±1.856
30' WIDE ACCESS ROAD R-O-W DISTURBANCE	±745'	±0.513
TOTAL SURFACE USE AREA		±2.369

REV: 1 09-04-25 C.S.C. (ADD STORM WATER FEATURES)

NOTES:

- Fill quantity includes 5% for compaction.
- Calculations based on 12" of topsoil stripping.
- Cut/Fill slopes 1 1/2:1 (Typ.).
- Diversion Ditch not included in earthwork quantities.

Cascade Exploration, LLC.

TWIN PEAKS 1W PAD
SE 1/4 NE 1/4, SECTION 26, T5N, R4W, B.M.
CANYON COUNTY, IDAHO



UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	B.H.	08-04-25	SCALE
DRAWN BY	Z.T.	08-07-25	AS SHOWN
TYPICAL CROSS SECTIONS			

DESCRIPTION:

- COMMERCIAL PRODUCTS CAN BE MADE FROM VARIOUS TYPES OF FIBERS AND SHAVINGS THAT ARE ROLLED UP AND USED AS SEDIMENT BARRIERS.

APPLICATION:

- GOOD FOR SITES WITH LONG SLOPES, GENERALLY FLATTER THAN 10:1

INSTALLATION / APPLICATION CRITERIA:

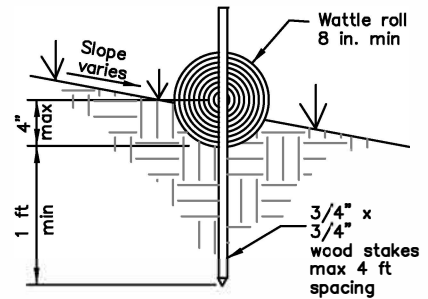
- MUST BE TRENCHED INTO THE GROUND 2 TO 4 INCHES.
- MUST BE STAKED EVERY 4 FEET (MAXIMUM).
- MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED FOR INSTALLATION OF PRODUCT.

LIMITATIONS:

- NOT APPLICABLE FOR HIGH VELOCITY FLOWS
- ONLY USE FOR A TIME PERIOD WITHIN THE EXPECTED LIFE-SPAN OF THE PRODUCT (CHECK WITH MANUFACTURER.)

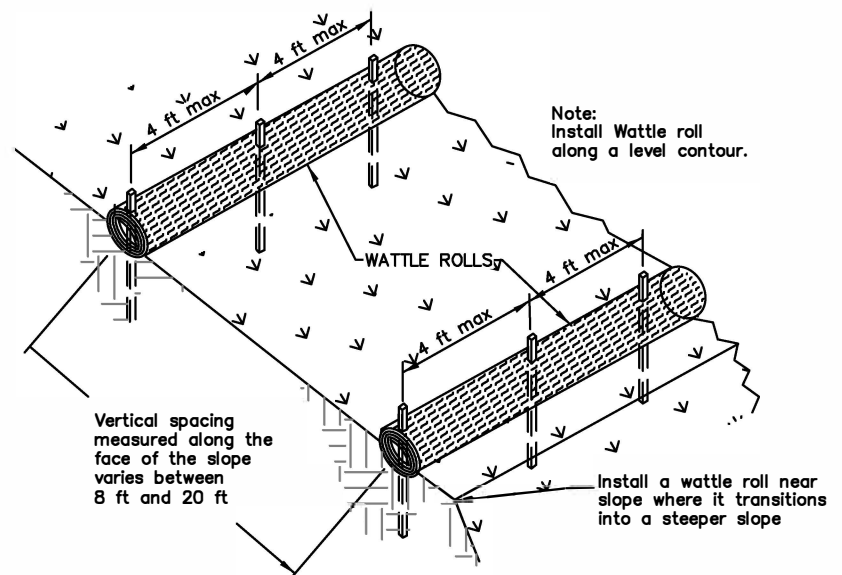
MAINTENANCE:

- MUST BE CHECKED TO ENSURE THAT RUNOFF DOES NOT RUN UNDER OR BYPASS THE FIBER ROLLS.
- SEDIMENT BUILDUP MUST ALSO BE CHECKED AND EXCESS SEDIMENT MUST BE REMOVED.



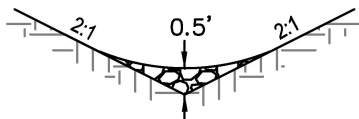
ENTRENCHMENT DETAIL

NO SCALE



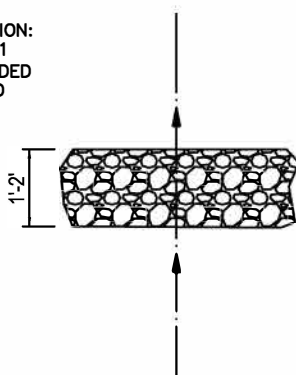
TYPICAL WATTLE ROLL INSTALLATION

NO SCALE



PLAN VIEW

GRAVEL SPECIFICATION:
GRAVEL SHALL BE 1
1/2"-3" WELL GRADED
FREE OF FINES AND
ORGANIC MATTER.



TYPICAL CHECK DAM DETAIL

NO SCALE

DITCH SLOPE	FEET BETWEEN GRAVEL BARS
1%	200' Max
2%	100' Max
4%	50' Max
6%	33' Max
8%	25' Max
10%	20' Max

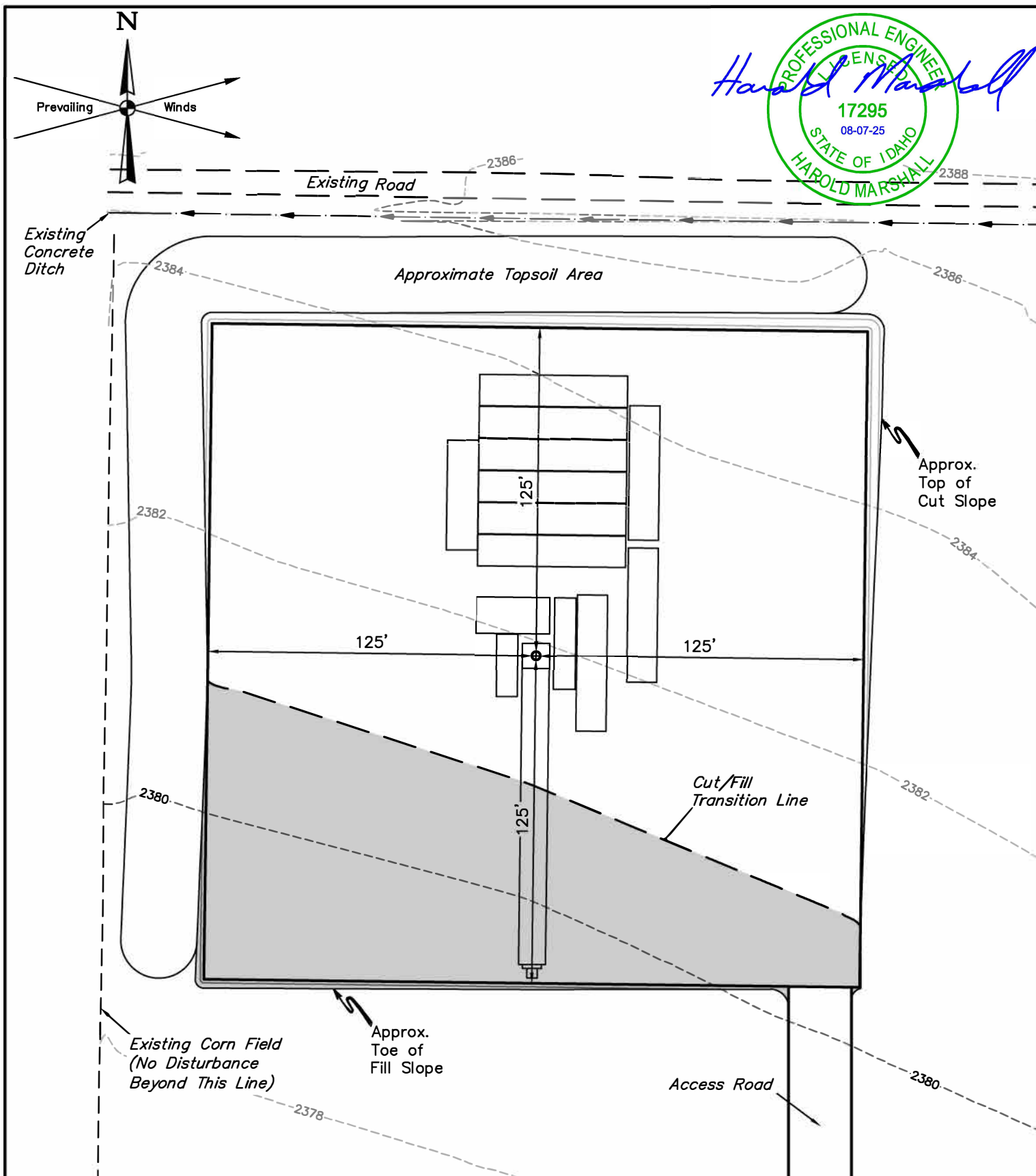
Cascade Exploration, LLC.

**TWIN PEAKS 1W PAD
SE 1/4 NE 1/4, SECTION 26, T5N, R4W, B.M.
CANYON COUNTY, IDAHO**



UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

DRAWN BY	C.S.C.	09-04-25	SCALE AS SHOWN
DAM & WATTLE INSTALLATION			



NOTES:

- Flare Stack is to be located a min. of 100' from the wellhead.
- Contours shown at 2' intervals.

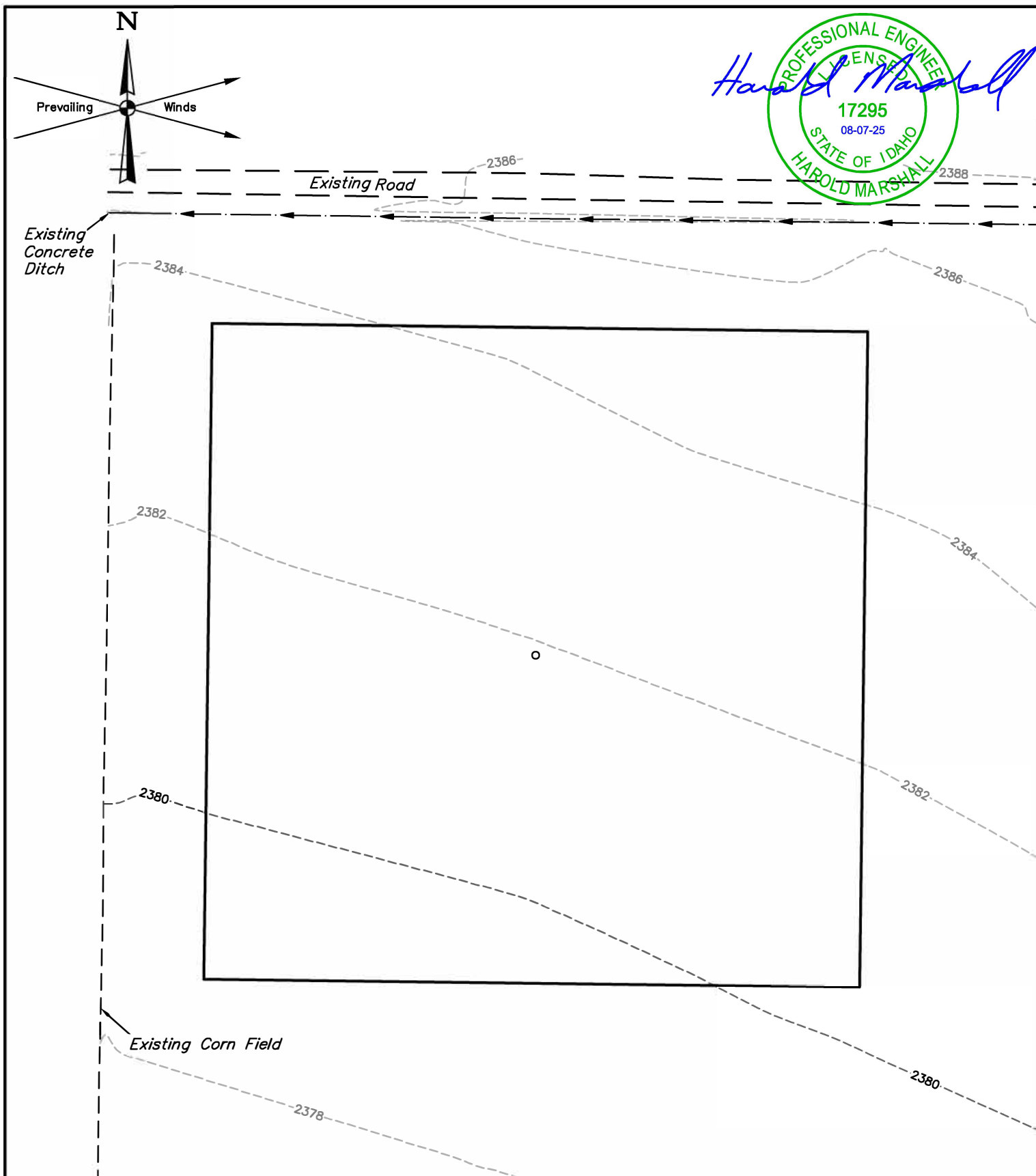
Cascade Exploration, LLC.

TWIN PEAKS 1W PAD
SE 1/4 NE 1/4, SECTION 26, T5N, R4W, B.M.
CANYON COUNTY, IDAHO



UELS, LLC
 Corporate Office * 85 South 200 East
 Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	B.H.	08-04-25	SCALE
DRAWN BY	Z.T.	08-07-25	1" = 50'
TYPICAL RIG LAYOUT			



NOTES:

- Contours shown at 2' intervals.

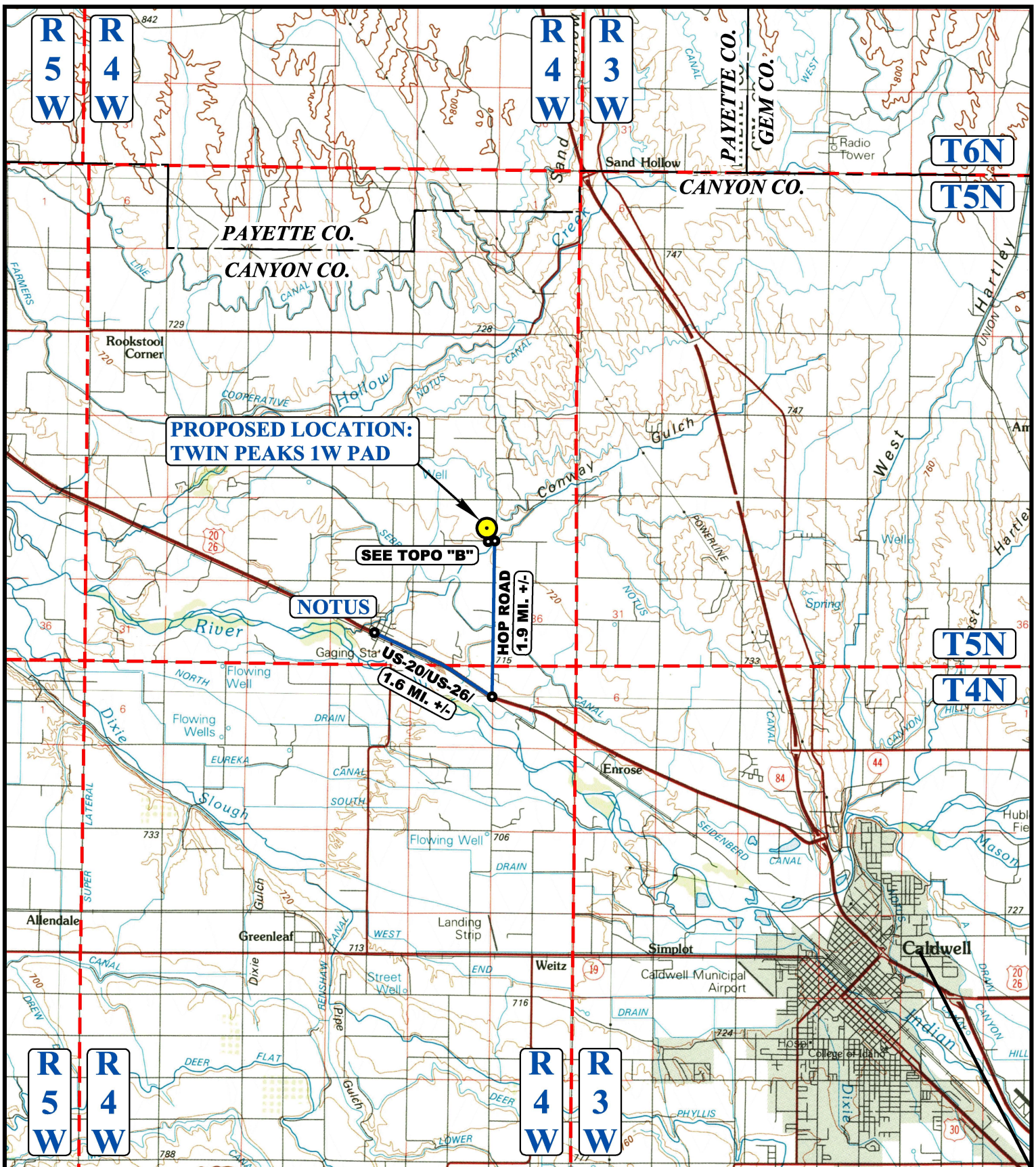
Cascade Exploration, LLC.

**TWIN PEAKS 1W PAD
SE 1/4 NE 1/4, SECTION 26, T5N, R4W, B.M.
CANYON COUNTY, IDAHO**



UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

SURVEYED BY	B.H.	08-04-25	SCALE
DRAWN BY	Z.T.	08-07-25	1" = 50'
FINAL RECLAMATION			



LEGEND:



PROPOSED LOCATION



KOLOMA INC.

TWIN PEAKS 1W PAD
SE 1/4 NE 1/4, SECTION 26, T5N, R4W,
B.M. CANYON COUNTY, IDAHO

SURVEYED BY	B.H.	08-04-25	SCALE
DRAWN BY	Z.T.	08-07-25	1 : 100,000
ACCESS ROAD MAP			TOPO A



UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

Geologic Prognosis

Proposed Well

The well is to be drilled as a vertical well to a depth of 12,000 feet (TVD/MD). The surface and bottom hole location will be in Section 26, Township 5 North, Range 4 West (Canyon County, Idaho).

Geologic Formation Tops

Formation Name	Depth MD (ft)	Depth TVD (ft)	Depth SSTVD (ft)	Thickness (ft)	Lithology	Age
<i>Glenns Ferry Fm.</i>	870	870	1,520	870	Sandstone, siltstone, shale	Pliocene
<i>Chalk Hills Fm.</i>	1,740	1,740	650	1,656	Tuffaceous ss intbd w/ sltst and shales	Upper Miocene
<i>Banberry Basalt</i>	3,396	3,396	-1,006	486	Basalt	Upper Miocene
<i>Poison Creek Fm.</i>	3,882	3,882	-1,492	798	Coarse Fan-Delta Facies	Upper Miocene
<i>Idavada Volcanics</i>	4,680	4,680	-2,290	1,170	welded tuffs, vitric tuffs, and lava flows.	Middle Miocene
<i>Payette Fm.</i>	5,850	5,850	-3,460	297	Mudstns, high silica ss, and congl.	Middle Miocene
<i>Columbia River Flood Basalts</i>	6,147	6,147	-3,757	750	Basalt	Middle Miocene
<i>Payette - Succor Creek</i>	6,897	6,897	-4,507	3,103	Mudstns, high silica ss, and congl.	Middle Miocene
<i>Total Depth</i>	12,000	12,000	-7,610		Mafic igneous intrusives, basalt, diabase	Early Miocene

Types of Tools to be Used

Tool	Purpose	Information
<i>Mud pulse gamma ray</i>	Provide real-time measurements of natural gamma radiation while drilling, transmitted via mud pulse telemetry	Identify lithology and formation changes and guide wellbore placement
<i>Mud pulse directional survey</i>	Transmits real-time wellbore inclination and azimuth data via mud-pulse telemetry, enabling accurate drilling and well path control	Wellbore trajectory and BHL

Logging Program

In accordance with Idaho Code § 47-316 (4); IDAPA 20.07.02.341, Cascade Exploration will run the following logs:

- Lithologic log from BHL to surface, to the extent practicable
- BHL survey log
- Cement bond log

Above logs will be submitted to the Department of Lands in digital format within thirty (30) days of completion of logs being run.

Well Construction & Drilling Program

Casing Program

<i>Well Interval</i>	<i>Size</i>	<i>Grade</i>	<i>Weight</i>	<i>Thread</i>	<i>Casing Setting Depth (MD)</i>	<i>Top of Cement</i>
Conductor	16"	API 5CT	-	-	80'	Surface
Surface	13-3/8"	J55	54.5#	BTC	800'	Surface
Intermediate	9-5/8"	J55	36#	LTC	3,500'	Surface

Cement Program

Surface: Neat cement will be circulated to surface. Volumes will be calculated using 100% excess of theoretical value. If cement fall back occurs, a top job with 1" tubing will be used to bring cement to surface.

Intermediate: Intermediate cement job will bring top of cement to surface. Actual volumes will be calculated and adjusted prior to cementing. Cement volumes will be calculated to include 20% excess in open hole section.

Drilling Plan & Schedule

Cascade Exploration's ultimate intent for the Twin Peaks 1W well is a stratigraphic science or test well. Following drilling and well testing operations, the wellbore will be plugged and properly abandoned and the site reclaimed. A copy of the rig layout can be found in the enclosed plat package.

Expected Spud Date: 1st week of November 2025

- Drill → P&A: 6 – 12 months
 - Drilling operations will span a total period of approximately 2 months, which includes mobilizing equipment and testing. However, the physical drilling operations with the rotary drill rig will take approximately 25-30 days.

Phase in Sequence	Description	Status/Antic. Start Date	Duration of Phase
Pad Construction	Wellsite (pad) surveying completed August 2025; staking to be refreshed approx. 1-2 weeks prior to commencing dirt work. Duration for pad and access road construction: 3-4 weeks	October 20	4 – 6 weeks (including staking refresh)
Drilling Operations	Wellsite and road access constructed. Well is drilled to target depth. Casing and cement are installed for water protection and wellbore stability.	1 st week of November	Rig-mob: 3-4 weeks Drilling operations: 25-30 days
Drilling Testing	Logs/drill stem tests, etc.	November/December	
P&A of Well	Downhole tools are removed, and wellbore is plugged with cement. Wellhead is cut off below ground.	Q1/Q2 2026	P&A: 1-month Reclamation: 1-month (weather dependent)
Reclamation of Site	Wellsite is deconstructed, remaining equipment is removed, and location is reclaimed back to original condition or to landowner/state requirement.	Coordinate w/ landowner	

Groundwater, Aquifer Protection Plan

During drilling operations all wells will be installed with multiple strings of steel casing and neat cement isolating all groundwater, aquifers, and usable water zones. The well will have approximately 80 feet of conductor pipe cemented in place for shallow ground water protection and to provide stability for the drilling rig. In addition, there will be an additional 800 feet of surface casing and approximately 3,500 feet of intermediate casing cemented to protect all aquifers. All strings of casing will be pressure tested to assure integrity after installation and cement integrity will be confirmed with cement bond logs.

Waste Disposal

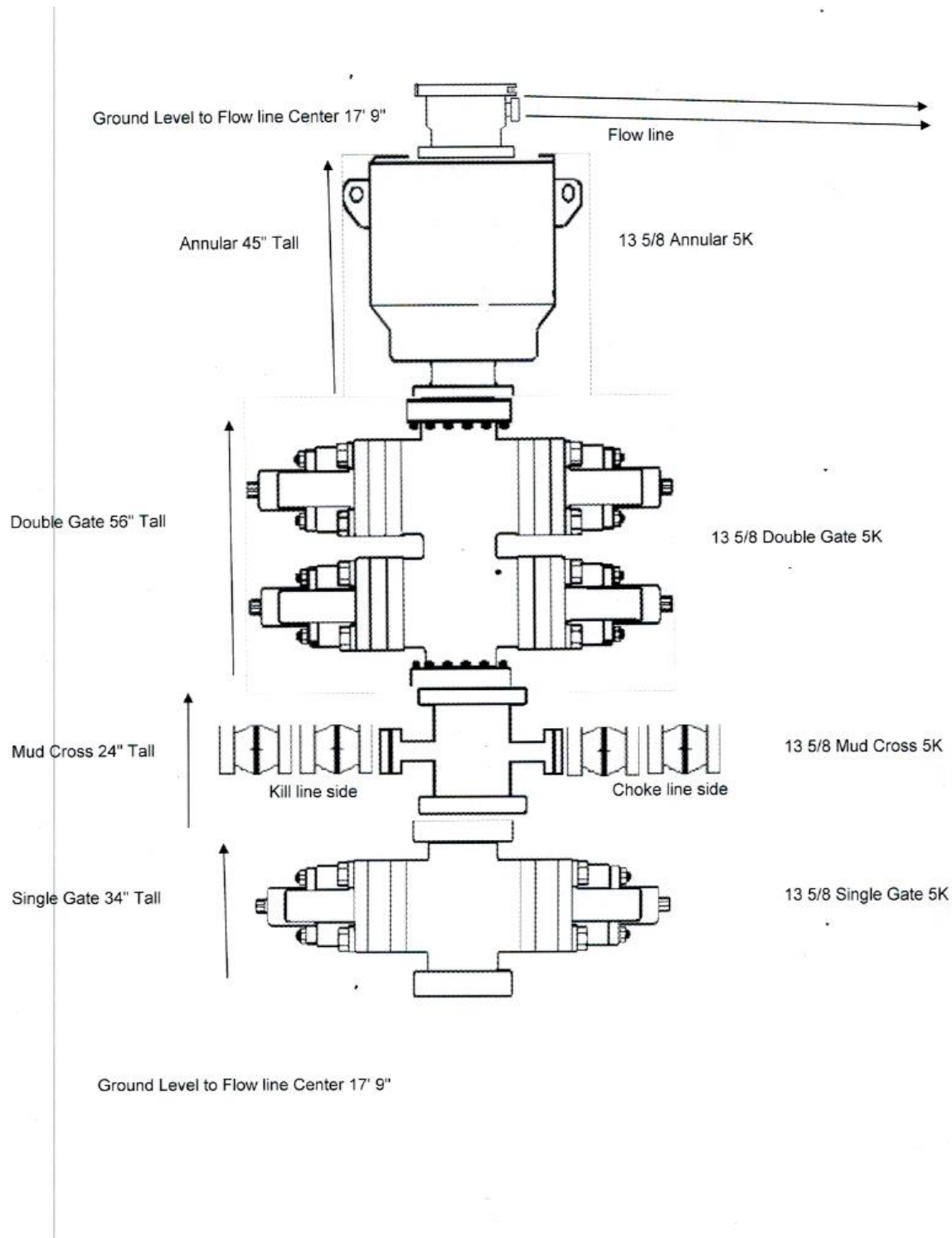
Cascade Exploration will utilize a closed loop system during drilling operations. Closed-loop systems include multiple stages of separation of solids/liquids and will keep all waste contained in steel tanks or bins stored on location. Cascade Exploration does not intend to utilize reserve or flare pits during drilling operations at this time. Potential waste encountered during drilling operations include cuttings, drilling mud and produced water. The cuttings will be separated from the fluid and dried and hauled off location and properly disposed of at a landfill. Drilling mud will consist of fresh water with additives such as clay and antimicrobials. Any wastewater will be stored in steel tanks on locations with secondary containment and hauled off to a permitted disposal site once drilling operations are complete.

Plugging, Abandonment & Site Reclamation

Following drilling and well testing operations, Cascade Exploration intends to plug and abandon (P&A) the wellbore and reclaim the wellsite to its original condition. P&A activity will occur after well testing is complete, weather permitting and depending on observed results. Proposed P&A procedure will be presented to IOGCC for review and input prior to commencing plugging. The wellhead will be cut well below plow depth, capped, and marked in accordance with IDL regulations. The site will then be reclaimed in coordination with the landowner and IDL.

Blowout Preventer

Provided below, please find a schematic of the blowout preventer (BOP) and wellhead assembly.



Erosion Control & Reclamation

Cascade Exploration proposes implementing the following mitigation measures or best management practices (BMPs) to minimize erosion and sediment deposition and maintain site stability for the proposed Twin Rivers 1W location:

- All available topsoil will be removed from the well pad and stockpiled/stored along the north/south/east/west edge of the proposed pad to retain indigenous seed bank and soil microbes that are fundamental to site restoration.
- BMPs for erosion and sediment control will be decided based on site specific needs and may include, but are not limited to: wattles/sediment control logs; silt fences; earthen dikes; drainage swales; sediment traps; subsurface drains; pipe slope drains; inlet protection; outlet protection; gabions; sediment basins; temporary vegetation; permanent vegetation; mulching; geotextiles; sod stabilization; slope roughening; maintaining existing vegetation ;and preservation of mature vegetation. These structures will be installed during construction and left in place and maintained for the life of the project or until the disturbed slopes have been revegetated and stabilized.
- The site will be inspected for BMP integrity and proper installation. Any deficiencies will be noted and addressed in a timely manner.
- Cascade Exploration will limit construction activities during wet periods to avoid excess disturbance of areas surrounding operations.
- Unless specifically requested by the landowner, the proposed access road and well pad will be contoured and revegetated to a stable condition.
- Cascade Exploration will re-grade cut and fill areas awaiting reclamation to match pre-existing contours to the nearest extent possible to provide long term erosion control and site stability.
- Cascade Exploration will grade the topsoil stockpile to ensure that all surfaces can be stabilized safely and effectively.

Interim Reclamation

According to IDAPA 20.07.02 subsection 310.16, interim reclamation for the Project would commence as soon as practicable and, at minimum, within six (6) months following drilling and subsequent operations. Debris, waste material, and equipment associated with drilling and testing would be removed from the location. All disturbed, non-working areas affected by drilling or subsequent operations shall be reclaimed as nearly as practical to their original condition or their designated final land use. The disturbed areas would be reseeded with species consistent with landowner request in the first favorable season following rig demobilization.

Final Reclamation

IDAPA 20.07.02 subsection 310.16 and section 510 outlines the reclamation standards required for final reclamation of a drill site which must be completed within twelve (12) months of plugging the well. Following final reclamation, Cascade Exploration will work with IDL and the landowner to finalize site closure and request release of bond.

Flaring during Drilling Operations

During drilling and testing phases of the proposed stratigraphic test well, limited flaring of natural gas may be necessary to ensure safe and efficient operations. Temporary flaring is required to safely dispose of natural gas that is encountered during drilling from underground reservoirs, known as a “kick”. The purpose of flaring during these operational phases is to maintain well control and ensure personnel and environmental safety by preventing uncontrolled gas release. Flaring will be minimized to the extent practicable.