

# Groundwater Application Review Summary Form

Application # G- 19390

GW Reviewer J. Hootsmans Date Review Completed: 8/1/2025

## Summary of GW Availability and Injury Review:

☒ Groundwater for the proposed use is either over appropriated, will not likely be available in the amounts requested without injury to prior water rights, OR will not likely be available within the capacity of the groundwater resource per Section B of the attached review form.

## Summary of Potential for Substantial Interference Review:

☐ There is the potential for substantial interference per Section C of the attached review form.

## Summary of Well Construction Assessment:

☐ The well does not appear to meet current well construction standards per Section D of the attached review form. Route through Well Construction and Compliance Section.

*This is only a summary. Documentation is attached and should be read thoroughly to understand the basis for determinations and for conditions that may be necessary for a permit (if one is issued).*

## WATER RESOURCES DEPARTMENT

MEMO

August 1, 2025

TO: Application G- 19390

FROM: GW: J. Hootsmans  
(Reviewer's Name)

SUBJECT: Scenic Waterway Interference Evaluation

☐ YES The source of appropriation is hydraulically connected to a State Scenic  
☒ NO Waterway or its tributaries

☐ YES  
☒ NO Use the Scenic Waterway Condition (Condition 7J)

☐ Per ORS 390.835, the Groundwater Section is **able** to calculate ground water interference with surface water that contributes to a Scenic Waterway. The calculated interference is distributed below

☐ Per ORS 390.835, the Groundwater Section is **unable** to calculate ground water interference with surface water that contributes to a scenic waterway; **therefore, the Department is unable to find that there is a preponderance of evidence that the proposed use will measurably reduce the surface water flows necessary to maintain the free-flowing character of a scenic waterway**

### DISTRIBUTION OF INTERFERENCE

*Calculate the percentage of consumptive use by month and fill in the table below. If interference cannot be calculated, per criteria in 390.835, do not fill in the table but check the "unable" option above, thus informing Water Rights that the Department is unable to make a Preponderance of Evidence finding.*

Exercise of this permit is calculated to reduce monthly flows in [Enter] Scenic Waterway by the following amounts expressed as a proportion of the consumptive use by which surface water flow is reduced.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

# PUBLIC INTEREST REVIEW FOR GROUNDWATER APPLICATIONS

TO: Water Rights Section Date 8/1/2025  
 FROM: Groundwater Section J. Hootsmans  
 Reviewer's Name  
 SUBJECT: Application G- 19390 Supersedes review of \_\_\_\_\_  
 Date of Review(s)

## PUBLIC INTEREST PRESUMPTION; GROUNDWATER

**OAR 690-310-130 (1)** *The Department shall presume that a proposed groundwater use will ensure the preservation of the public welfare, safety and health as described in ORS 537.525. Department staff review groundwater applications under OAR 690-310-140 to determine whether the presumption is established. OAR 690-310-140 allows the proposed use be modified or conditioned to meet the presumption criteria. This review is based upon available information and agency policies in place at the time of evaluation.*

**A. GENERAL INFORMATION:** Applicant's Name: Crum Ranch LLC C/O Rob Crum County: Gilliam

A1. Applicant(s) seek(s) 8.912 cfs from 1 well(s) in the Umatilla Basin,  
 \_\_\_\_\_ subbasin

A2. Proposed use Primary and Supplemental Irrigation Seasonality: March 1- October 31

A3. Well and aquifer data (attach and number logs for existing wells; mark proposed wells as such under logid):

POA Well	Logid	Applicant's Well #	Proposed Aquifer*	Proposed Rate(cfs)	Location (T/R-S QQ-Q)	Location, metes and bounds, e.g. 2250' N, 1200' E fr NW cor S 36
1	PROP 446	9	CRB	8.912	1S/22E-12 NESW	1920'N, 3938'W fr SE cor S 12
2						
3						
4						

\* Alluvium, CRB, Bedrock

POA Well	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Drawdown (ft)	Test Type
1	1200	0-900	0-900		0-900			
2								
3								
4								

POA Well	Land Surface Elevation at Well (ft amsl)	Depth of First Water (ft bls)	SWL (ft bls)	SWL Date	Reference Level (ft bls)	Reference Level Date
1	1311	TBD	TBD	TBD	TBD	TBD
2						
3						
4						

Use data from application for proposed wells.

A4. **Comments:** The applicant proposes to drill Well 9 (PROP 446) to obtain groundwater from 900-1200 feet below land surface (bls) in the Columbia River Basalt Group (CRBG) aquifer system. The applicant currently has Wells 1-7 on their property as part of Permit 13628. The applicant is requesting 8.912 cubic feet per second [cfs (4000 gallons per minute, gpm)] from a new water right, and proposing to drill into a deeper water bearing zone than the wells on Permit 13628. The proposed POA is located nearby UMAT 57863, which is one of the POAs (Well 7) on Permit 13628. Note: UMAT 57863 is incorrectly listed as Well 8 on the application map.

A5. ☐ **Provisions of the** Umatilla Basin rules relative to the development, classification and/or management of groundwater hydraulically connected to surface water ☐ **are, or** ☒ **are not**, activated by this application. (Not all basin rules contain such provisions.)  
 Comments: \_\_\_\_\_

A6. ☐ **Well(s) #** 1, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, tap(s) an aquifer limited by an administrative restriction.  
 Name of administrative area: NA  
 Comments: \_\_\_\_\_

**B. GROUNDWATER AVAILABILITY CONSIDERATIONS, OAR 690-310-130, 400-010, 410-0070**

B1. **Based upon available data**, I have determined that groundwater\* for the proposed use:

- a. ☒ **is** over appropriated, ☐ **is not** over appropriated, *or* ☐ **cannot be determined to be** over appropriated during any period of the proposed use. \* This finding is limited to the groundwater portion of the over-appropriation determination as prescribed in OAR 690-310-130;
- b. ☐ **will not** *or* ☐ **will** likely be available in the amounts requested without injury to prior water rights. \* This finding is limited to the groundwater portion of the injury determination as prescribed in OAR 690-310-130;
- c. ☒ **will not** *or* ☐ **will** likely to be available within the capacity of the groundwater resource; or
- d. ☐ **will, if properly conditioned**, avoid injury to existing groundwater rights or to the groundwater resource:
  - i. ☐ The permit should contain condition #(s) \_\_\_\_\_;
  - ii. ☒ The permit should be conditioned as indicated in item 2 below.
  - iii. ☒ The permit should contain special condition(s) as indicated in item 3 below;

- B2.
- a. ☐ **Condition** to allow groundwater production from no deeper than \_\_\_\_\_ ft. below land surface;
  - b. ☒ **Condition** to allow groundwater production from no shallower than 1025 ft. below land surface;
  - c. ☐ **Condition** to allow groundwater production only from the \_\_\_\_\_ groundwater reservoir between approximately \_\_\_\_\_ ft. and \_\_\_\_\_ ft. below land surface;
  - d. ☐ **Well reconstruction** is necessary to accomplish one or more of the above conditions. The problems that are likely to occur with this use and without reconstructing are cited below. Without reconstruction, I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Groundwater Section.

**Describe injury** –as related to water availability– that is likely to occur without well reconstruction (interference w/ senior water rights, not within the capacity of the resource, etc): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- B3. **Groundwater availability remarks:** The application lists Well 9 (PROP 446) as a proposed POA for primary and supplemental irrigation from March to 1 to October 31. The well is proposed to be drilled to 1200 feet bls into basalt and penetrates multiple water-bearing zones in the CRBG aquifer system.

Within the CRBG, most water occurs in confined aquifers that occupy thin rubble zones (interflow zones) at the contacts between lava flows. The interiors of the basalt flows generally have low porosity and permeability and act as confining beds. This geometry generally produces a stack of thin aquifers (interflow zones) separated by thick confining beds (flow interiors). The low permeability of the basalt flow interiors limits the natural vertical connection between overlying aquifers.

Water levels in the vicinity of the POA have been declining since the mid-1990s (see Observation Well Data). PROP 446 is proposed to be drilled deeper than the wells in the area, however, based on topographic elevation difference, existing well GILL 1 will be open to similar intervals as the proposed POA. GILL 1 has open intervals from approximately 980 feet to 100 feet above mean sea level (amsl), whereas the proposed POA would have an open interval from approximately 420 to 80 feet amsl (See Cross Section below). Water levels in GILL 1 have ranged from approximately 1100 to 1000 feet amsl. GILL-1 is approximately 11000 feet away from the proposed POA.

UMAT 57863, the closest well to the POA, was drilled to 1124 feet bls (183 feet amsl) but then sealed to 908 ft bls (approx. 399 feet amsl) after discussions with OWRD in 2017. A deeper water bearing zone (WBZ) from 1066 to 1104 feet bls (241 -

203 feet amsl) with water level elevation of 304 feet bls (1003 feet amsl) was encountered during the original drilling. The encountered water elevation is similar to GILL 1 water level elevations. This WBZ was sealed off at the time of drilling in 2017 and that is the target zone for the proposed POA in this application. Surficial geologic maps and wells indicate that both UMAT 57863 and GILL 1 are developing Grande Ronde Columbia River Basalt, and the proposed POA would be as well (Swanson et al 1981).

The water level elevations in GILL 1 have stabilized around 1000 feet above mean sea level (amsl) since 2014, however the water level has dropped over 100 feet since the time of drilling in 1974. **This level of total decline meets the definition of declined excessively (690-008-0001(4)(d)) which leads to a determination of over-appropriated.**

If the POA is not properly sealed to be isolated from UMAT 57863, the high pumping rate can lead to the injury to the nearby well. Furthermore, Permit 13628, which UMAT 57863 is Well 7, has a <25-foot decline condition, so the pumping could make the nearby well trip its decline condition if the POA is not properly constructed.

Water levels from wells in the Township Range 1S 22E have been steadily declining since 1970 (see Observation Well Data). Moreover, well statistics for the same area show the median well yield as 250 gpm and the maximum well yield as 3500 gpm (see Well Statistics). The requested rate of 4000 gpm (8.912 cfs) is more than 100% of the maximum well yield and 16x the median well yield. **The requested pumping rate is not likely to be available within the capacity of the groundwater resource. The pumping rate is expected to result in declines at the proposed POA.**

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**Special Conditions:**

If a permit is issued, the following Special Conditions are recommended to protect senior users and the groundwater resource:

1. Any well authorized as a Point of Appropriation (POA) under this or subsequent permits shall be open to a single aquifer of the Columbia River Basalt Group and shall meet the applicable well construction standards (OAR 690-200 and OAR 690-210). The open interval in each well shall be no greater than 100 feet unless a single aquifer completion can be demonstrated to the satisfaction of the Department Hydrogeologists, using evidence from a video log, a downhole flowmeter, water chemistry and temperature data, or other downhole geophysical methods. These methods shall characterize the nature of the basalt rock and assess whether water is moving in the borehole. Any discernable movement of water within the well bore when the well is not being pumped shall be assumed as evidence of the presence of multiple aquifers in the open interval. Single aquifer completion for any well with an open interval greater than 100 ft should be demonstrated to the satisfaction of the Department Hydrogeologists prior to authorization as a POA under this or subsequent permits.

If, during well construction or repair, it becomes apparent that the well can be constructed to eliminate aquifer commingling or interference with hydraulically connected streams in a manner other than specified in this permit, the permittee can contact the Department Hydrogeologist for this permit or the Ground Water/Hydrology Section Manager to request approval of such construction. The request shall be in writing and shall include a rough well log and a proposed construction design for approval by the Department. The request can be approved only if it is received and reviewed prior to placement of any new permanent casing and sealing material. If the request is made after casing and seal are placed, the requested modification will not be approved. If approved, the new well depth and construction specifications will be incorporated into any certificate issued for this permit.

2. For any well constructed under this or subsequent permits, a dedicated water-level measuring tube shall be installed in each well. The measuring tube shall meet the standards described in OAR 690-215-0060. When requested, access to the wells shall be provided to Department staff in order to make water-level measurements.
3. For any wells constructed or deepened under this or subsequent permits, the applicant shall coordinate with the driller to ensure that drill cuttings are collected at 10 ft intervals and at changes in formation in each well. A split of each sampled interval shall be provided to the Department.
4. If any geologic and hydrogeologic reports are completed for the permittee during the development of permitted wells, including geophysical well logs and borehole video logs, then copies of the reports shall be provided to the Department. Except for borehole video logs, two paper copies or a single electronic copy shall be provided of each report. Digital tables of any data shall be provided upon request.

**C. GROUNDWATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040****C1. 690-09-040 (1):** Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
<b>1</b>	<b>CRB</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation:** Driller's well report for nearby UMAT 57863 indicates the water level in well rose above the depth at which it was encountered, suggesting the aquifer is confined.

**C2. 690-09-040 (2) (3):** Evaluation of distance to, and hydraulic connection with, surface water sources. All wells located a horizontal distance less than ¼ mile from a surface water source that produce water from an unconfined aquifer shall be assumed to be hydraulically connected to the surface water source. Include in this table any streams located beyond one mile that are evaluated for PSI.

Well	SW #	Surface Water Name	GW Elev ft msl	SW Elev ft msl	Distance (ft)	Hydraulically Connected?			Potential for Subst. Interfer. Assumed?	
						YES	NO	ASSUMED	YES	NO
<b>1</b>	<b>1</b>	<b>Eightmile Canyon</b>	<b>1000 - 1050</b>	<b>1100-1200</b>	<b>2450</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>1</b>	<b>2</b>	<b>Tributary to Eightmile Canyon</b>	<b>1000 - 1050</b>	<b>1100-1200</b>	<b>1200</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer hydraulic connection evaluation:** Water levels and WBZs in nearby similarly constructed wells are below the elevation of nearby surface water sources. In addition, the proposed POA will be cased and sealed to greater than 900 feet bls. **As a result, if constructed as proposed, the POA will not be hydraulically connected to local surface water sources.**

**Water Availability Basin the well(s) are located within:** EIGHTMILE CAN > WILLOW CR - AT MOUTH

**C3a. 690-09-040 (4):** Evaluation of stream impacts for each well that has been determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water (SW) source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that SW source, not lower SW sources to which the stream under evaluation is tributary. Compare the requested rate against the 1% of 80% *natural* flow for the pertinent Water Availability Basin (WAB). If Q is not distributed by well, use full rate for each well. Any checked ☒ box indicates the well is assumed to have the potential to cause PSI.

Well	SW #	Well < ¼ mile?	Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
<b>1</b>	<b>1</b>	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<b>0.01</b>	<input checked="" type="checkbox"/>	<b>**</b>	<input type="checkbox"/>
<b>1</b>	<b>2</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<b>0.01</b>	<input checked="" type="checkbox"/>	<b>**</b>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

C3b. **690-09-040 (4):** Evaluation of stream impacts by total appropriation for all wells determined or assumed to be **hydraulically connected and less than 1 mile** from a surface water source. **Complete only if Q is distributed among wells.** Otherwise same evaluation and limitations apply as in C3a above.

	SW #		Qw > 5 cfs?	Instream Water Right ID	Instream Water Right Q (cfs)	Qw > 1% ISWR?	80% Natural Flow (cfs)	Qw > 1% of 80% Natural Flow?	Interference @ 30 days (%)	Potential for Subst. Interfer. Assumed?
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

**Comments:** **If there is any hydraulic connection, interference would be very high. But if constructed as proposed, then hydraulic connection should not occur.**

C4a. **690-09-040 (5):** Estimated impacts on **hydraulically connected surface water sources greater than one mile** as a percentage of the proposed pumping rate. Limit evaluation to the effects that will occur up to one year after pumping begins. This table encompasses the considerations required by 09-040 (5)(a), (b), (c) and (d), which are not included on this form. Use additional sheets if calculated flows from more than one WAB are required.

Non-Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
Distributed Wells													
Well	SW#	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
		%	%	%	%	%	%	%	%	%	%	%	%
Well Q as CFS													
Interference CFS													
(A) = Total Interf.													
(B) = 80 % Nat. Q													
(C) = 1 % Nat. Q													
(D) = (A) > (C)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
(E) = (A / B) x 100		%	%	%	%	%	%	%	%	%	%	%	%

(A) = total interference as CFS; (B) = WAB calculated natural flow at 80% exceed. as CFS; (C) = 1% of calculated natural flow at 80% exceed. as CFS; (D) = highlight the checkmark for each month where (A) is greater than (C); (E) = total interference divided by 80% flow as percentage.

**Basis for impact evaluation:**

C4b. **690-09-040 (5) (b) The potential to impair or detrimentally affect the public interest is to be determined by the Water Rights Section.**

- C5. ☐ **If properly conditioned**, the surface water source(s) can be adequately protected from interference, and/or groundwater use under this permit can be regulated if it is found to substantially interfere with surface water:
- i. ☐ The permit should contain condition #(s) \_\_\_\_\_;
  - ii. ☐ The permit should contain special condition(s) as indicated in "Remarks" below;

C6. **SW / GW Remarks and Conditions:** \_\_\_\_\_

**References Used:** Application Files: G19390

Swanson, D.A., Anderson, J.L., Camp, V.E., Hooper, P.R., Taubeneck, W.H., and Wright, T. L., 1981, Reconnaissance geologic map of the Columbia River Basalt Group, northern Oregon and western Idaho: U.S. Geological Survey Open-File Report 81-797, 35 p.



**D. WELL CONSTRUCTION, OAR 690-200**

D1. Well #: \_\_\_\_\_ Logid: \_\_\_\_\_

D2. **THE WELL does not appear to meet current well construction standards based upon:**

- a. ☐ review of the well log;
- b. ☐ field inspection by \_\_\_\_\_;
- c. ☐ report of CWRE \_\_\_\_\_;
- d. ☐ other: (specify) \_\_\_\_\_

D3. **THE WELL construction deficiency or other comment is described as follows:** \_\_\_\_\_

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D4. ☐ **Route to the Well Construction and Compliance Section for a review of existing well construction.**

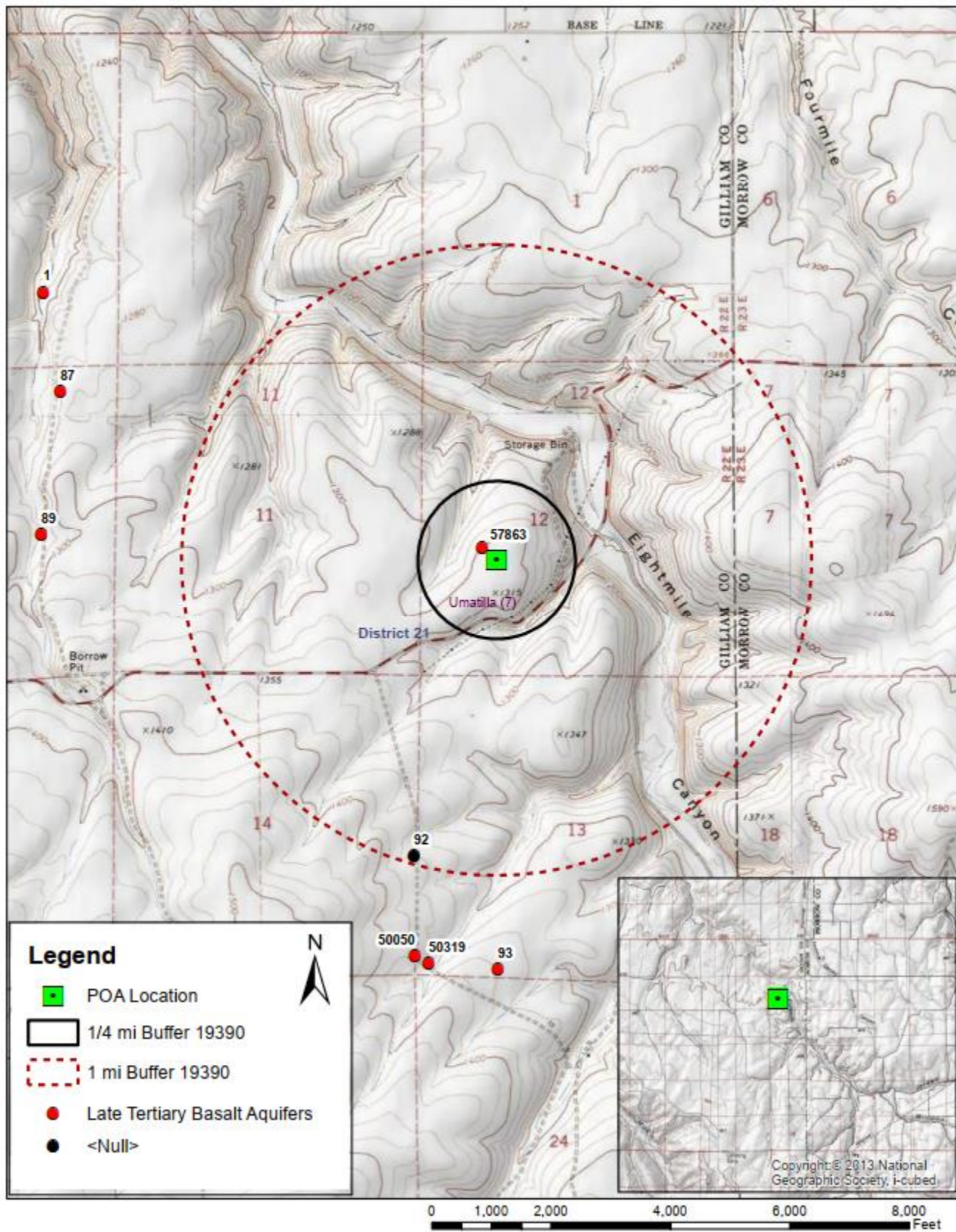
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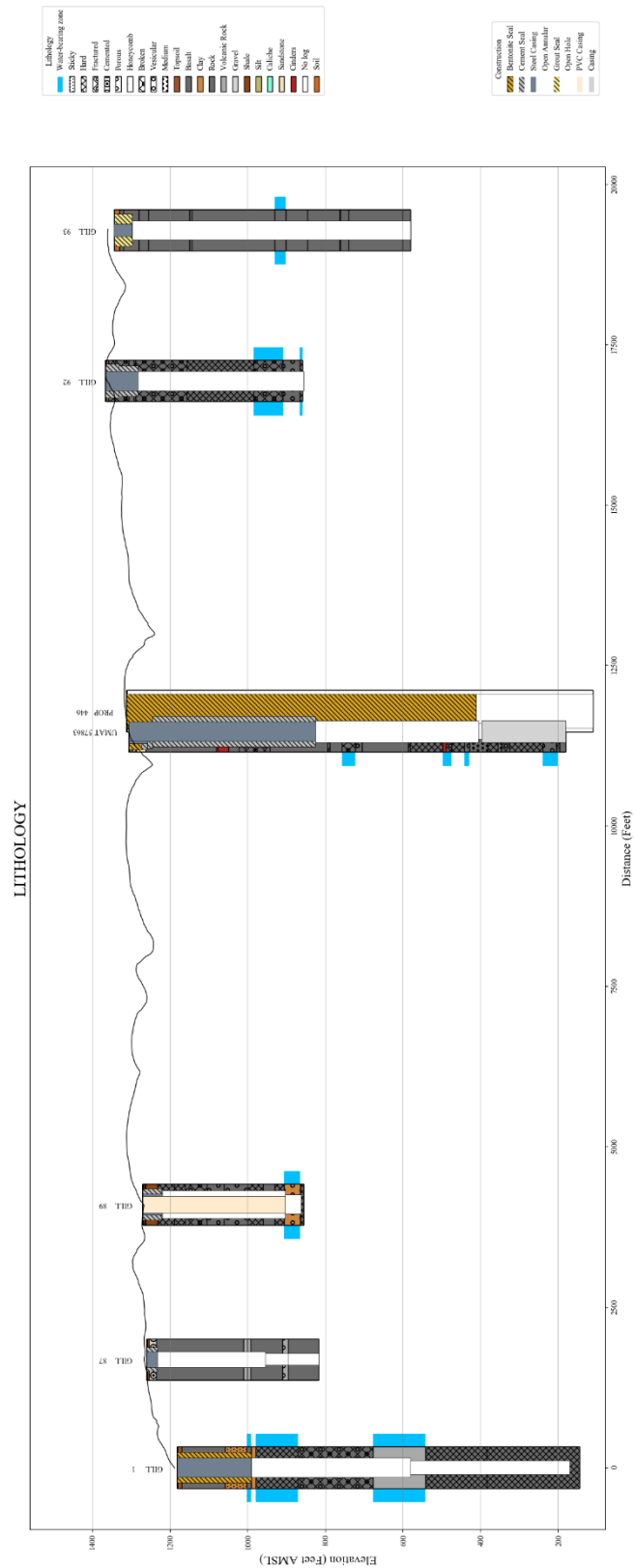
## Well Location Map

## G19390 Crum

1:24,000 scale

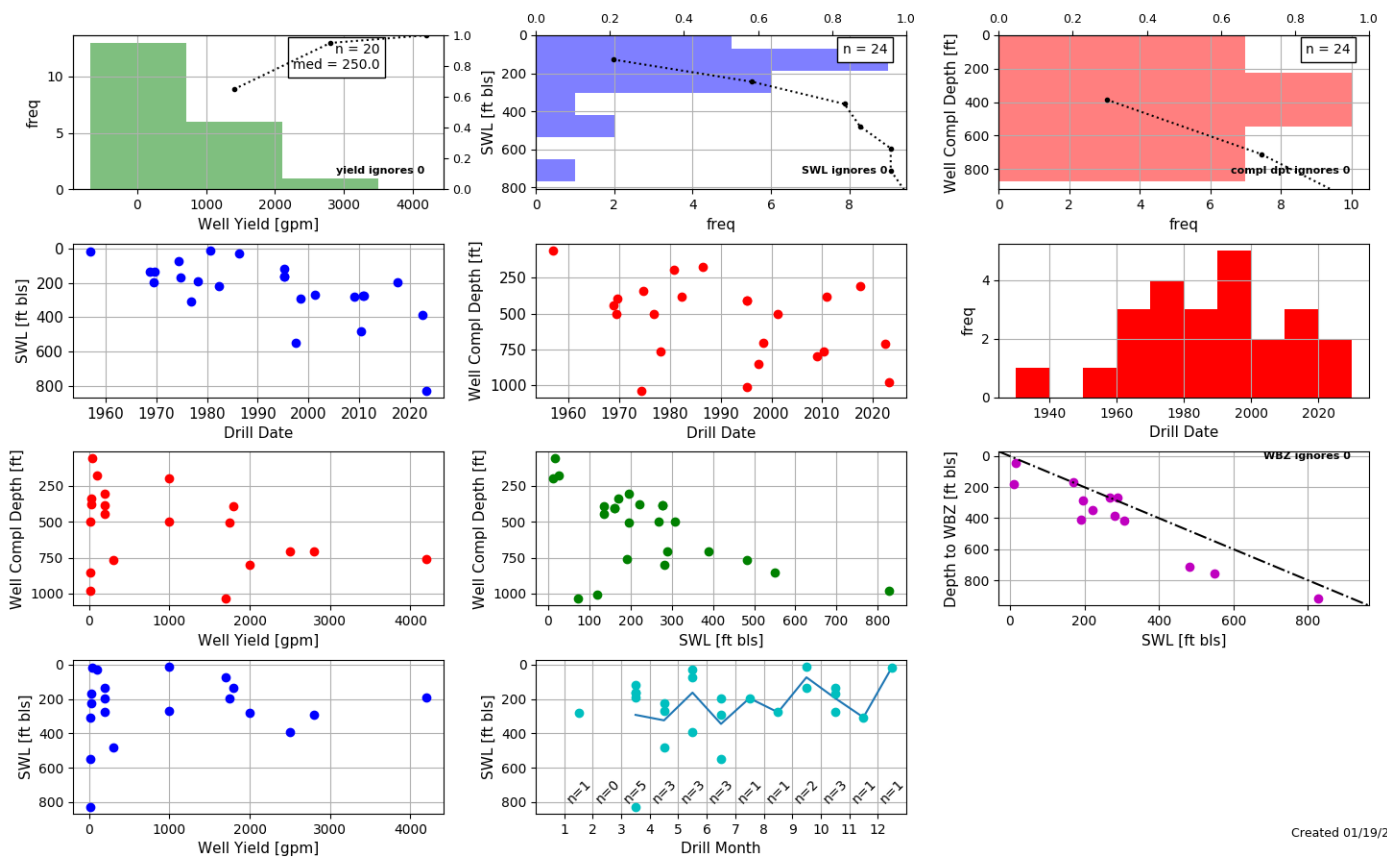


## Cross-Section





## Well Statistics



Created 01/19/2024

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**Water-Level Measurements in Nearby Wells**