

**Water Right Conditions  
Tracking Slip**

Groundwater/Hydrology Section

FILE ## G-16257

ROUTED TO: Water Rights

TOWNSHIP/  
RANGE-SECTION: 23S/32E-18

CONDITIONS ATTACHED?  yes  no

REMARKS OR FURTHER INSTRUCTIONS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reviewer: Michael Zwart

**PUBLIC INTEREST REVIEW FOR GROUND WATER APPLICATIONS**

TO: Water Rights Section Date August 18, 2004  
 FROM: Ground Water/Hydrology Section Michael Zwart  
Reviewer's Name  
 SUBJECT: Application G- 16257 Supersedes review of N/A  
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 ground water 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: Steve Rickman County: Harney

A1. Applicant(s) seek(s) 4.0 cfs from three well(s) in the Malheur Lake Basin,  
Poison Creek Slough subbasin Quad Map: Poison Creek Slough

A2. Proposed use: Irrigation, 333.0 ac (P) Seasonality: March 31 to October 31

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

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	HARN 50927	1	Alluvium	4.0	23S/32E-18 NW-NE	3520' E, 50' S fr NW cor S 18
2	HARN 573	2	Alluvium	4.0	23S/32E-18 NW-NW	300' E, 410' S fr NW cor S 18
3	Proposed	3	Alluvium	4.0	23S/32E-18 NE-NW	2420' E, 410' S fr NW cor S 18
4						
5						

\* Alluvium, CRB, Bedrock

Well	Well Elev ft msl	First Water ft bls	SWL ft bls	SWL Date	Well Depth (ft)	Seal Interval (ft)	Casing Intervals (ft)	Liner Intervals (ft)	Perforations Or Screens (ft)	Well Yield (gpm)	Draw Down (ft)	Test Type
1	4134	28	15	2/13/04	246	0-20	0-31	0-60 146-159	60-120 159-245	100	0	B
2	4139	?	20	2/26/63	170±	?*	0-160	?	None	1000	?	
3	4137				4-500	0-200	0-200+					

Use data from application for proposed wells.

A4. **Comments: Well #1 has been deepened (HARN 50934) and repaired (HARN 51023). Well #2 has also been repaired (HARN 572). See attached transfer review memo (T-9692) for additional well construction information. Both existing wells are gravel packed. \*The seal was not described on either well log, but is reported to have been put in place prior to 1994.**

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

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

app no. G 16257

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

B1. Based upon available data, I have determined that ground water\* 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 ground water 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 ground water 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 ground water resource; or
- d.  will, if properly conditioned, avoid injury to existing ground water rights or to the ground water 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 ground water production from no deeper than \_\_\_\_\_ ft. below land surface;
- b.  Condition to allow ground water production from no shallower than \_\_\_\_\_ ft. below land surface;
- c.  Condition to allow ground water production only from the \_\_\_\_\_ ground water 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 Ground Water 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. **Ground water availability remarks:** I am somewhat concerned about the potential for pumping interference between these wells and the nearby well reviewed under file G-16003. Standard permit condition 7B is likely adequate to address this issue. Based on SOW #169, water levels appear reasonably stable.  
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**C. GROUND WATER/SURFACE WATER CONSIDERATIONS, OAR 690-09-040**

C1. 690-09-040 (1): Evaluation of aquifer confinement:

Well	Aquifer or Proposed Aquifer	Confined	Unconfined
1	Valley-fill sed. and underlying pumice/tuffaceous sed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Valley-fill sed. and/or underlying pumice/tuffaceous sed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Pumice, pos. silicic ash-flow tuff underlying lacustrine sed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

**Basis for aquifer confinement evaluation: SWL is generally above the targeted water-bearing zone in the area. Well #1 describes nearly 40 feet of clay. Well #2 is cased to 160 feet, but it is unknown where the well seal is placed.**

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
1	1	Poison Creek Slough	4119	4133	4250	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	1	Poison Creek Slough	4119	4133	4000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	1	Poison Creek Slough	4119±	4133	3500	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<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"/>	<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: Surface water sources are not developed in tuffaceous deposits targeted by well #3. Also, the head relationship suggests a poor hydraulic connection, at least locally. The SWL appears to be about 14 to 20 feet below most nearby canals and surface water sources.**

**Water Availability Basin the well(s) are located within: Poison Cr. Sl. > Ninemile Sl. at mouth (31200106)**

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 source. Limit evaluation to instream rights and minimum stream flows that are pertinent to that surface water source, and 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?
		<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"/>		<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"/>	<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"/>
	<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: This section does not apply.

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													
		%	%	%	%	%	%	%	%	%	%	%	%
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)

(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: This section does not apply.**

Multiple horizontal lines for text entry.

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 ground water 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 The discharge area is likely at a downgradient reach(es) of Poison Creek Slough and/or other surface water sources, and the interference with those sources is also likely to be diffuse. It is not clear that a deep casing and seal, as proposed at Well #3, will result in an aquifer that is likely to be more or less "confined" than other wells with more shallow seals. The regional aquifer ultimately discharges to Malheur Lake.

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References Used: Nearby well logs; review of nearby files, esp. G-16003; GW Report #16, by A. R. Leonard; USGS WSP #841, by A. M. Piper et al.

Multiple horizontal lines for text entry.

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

D1. Well #: 2 Logid: HARN 573/572

D2. THE WELL does not 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:

- a.  constitutes a health threat under Division 200 rules;
- b.  commingles water from more than one ground water reservoir;
- c.  permits the loss of artesian head;
- d.  permits the de-watering of one or more ground water reservoirs;
- e.  other: (specify) \_\_\_\_\_

D4. THE WELL construction deficiency is described as follows: No seal is described on HARN 572, but the log appears to indicate that the well would be sealed in the future. Also, the applicant indicates that the well was sealed prior to purchase of the property. Can a well seal be verified?

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- D5. THE WELL
- a.  was, or  was not constructed according to the standards in effect at the time of original construction or most recent modification.
  - b.  I don't know if it met standards at the time of construction.

D6.  Route to the Enforcement Section. I recommend withholding issuance of the permit until evidence of well reconstruction is filed with the Department and approved by the Enforcement Section and the Ground Water Section.

**THIS SECTION TO BE COMPLETED BY ENFORCEMENT PERSONNEL**

D7.  Well construction deficiency has been corrected by the following actions: \_\_\_\_\_

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\_\_\_\_\_, 200\_\_\_\_\_  
(Enforcement Section Signature)

D8.  Route to Water Rights Section (attach well reconstruction logs to this page).

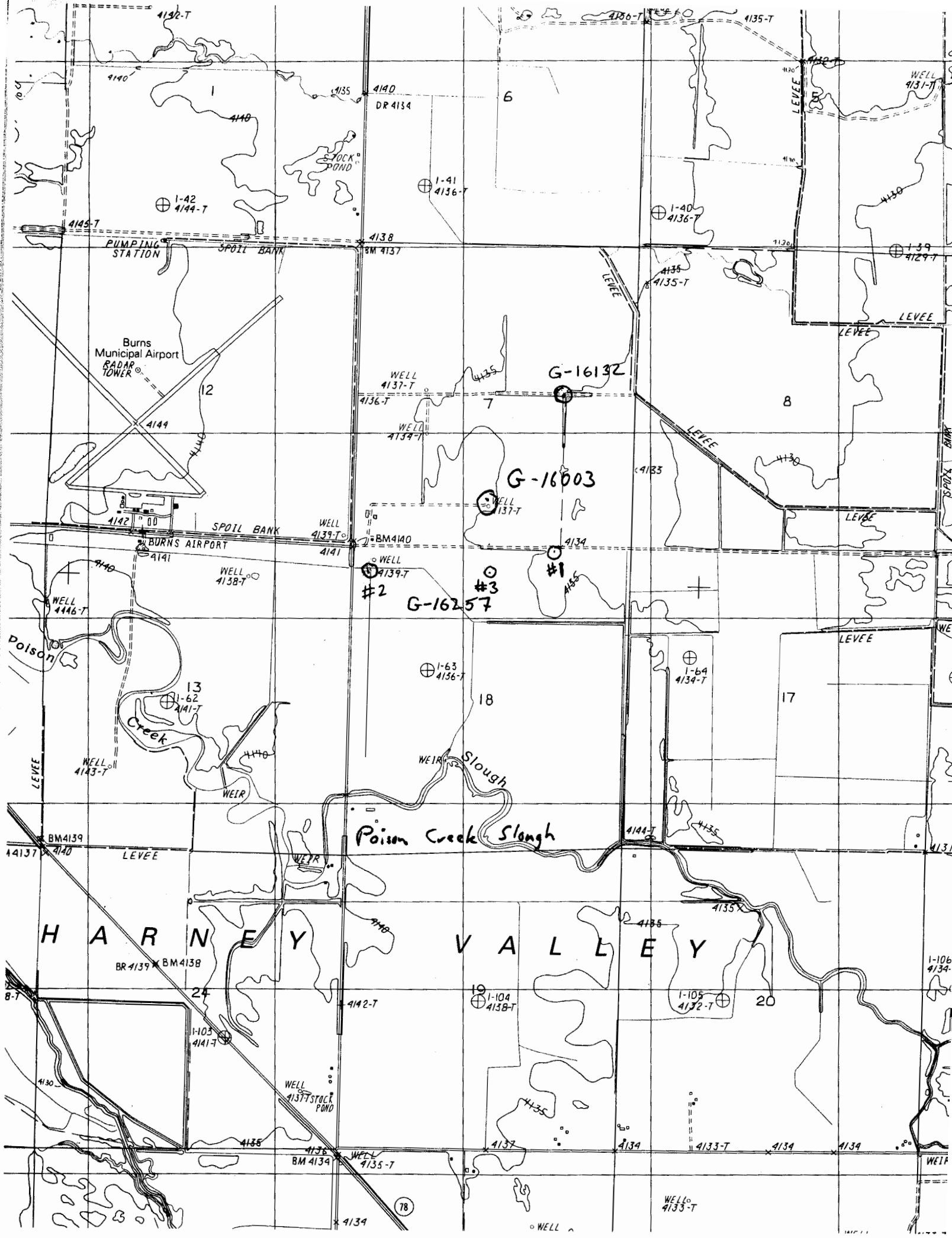
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BURNS MUNICIPAL AIRPORT  
RADAR TOWER

BURNS AIRPORT

POISON CREEK

POISON CREEK SLOUGH

HARNEY VALLEY

G-16132

G-16003

G-16257

1-42  
4144-T

1-41  
4136-T

1-40  
4136-T

WELL  
4131-T

1-39  
4129-T

WELL  
4137-T

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4138-T

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4134-T

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BR 4139

BM4138

1-103  
4141-T

WELL  
4137-T

1-104  
4158-T

1-105  
4132-T

1-106  
4134-T

BM4134

WELL  
4135-T

WELL  
4133-T

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