STATE OF MONTANA
COUNTY OF HILL

DECLARATION OF VESTED
GROOMER'S RIGHT

ON

1963

2.00 pd.

GORDON & LOHAIRE KUELING

TO

THE PUBLIC

COUNTY CLERK
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

1. Otto Patera, of Hayre Dr., Hayre

County of Hill State of Montana

have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

2. The beneficial use on which the claim is based.

3. Date or approximate date of earliest beneficial use; and how continuous the use has been.

4. The amount of groundwater claimed.

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof.

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal.

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater.

8. The depth of water table.

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater.

10. The estimated amount of groundwater withdrawn each year.

11. The log of formations encountered in the drilling of each well if available.

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record.

Signature of Owner: Otto Patera

Date: 12-9-1963

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology; and Quadruplicate for the Appropriator.
396197

OTTO PATERA

TO

THE PUBLIC

DECLARATION OF VESTED GROUNDWATER RIGHTS

STATE OF MONTANA
COUNTY OF HILL
Filed at 11 o'clock A.M.

11 Dec 1963

B. E. Bion
COUNTY WLSG

Fees: $2.00 pd.
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1962)

1. Danville H. Welch, of Hillford
   County of Hill
   State of Montana

   Have appropriated groundwater according to the Montana laws in effect prior to Jan.
   1, 1962 as follows:

   2. The beneficial use on which the claim is based

   3. Date or approximate date of earliest beneficial use; and has continuous the use has been

   4. The amount of groundwater claimed (in miner's inches or gallons per minute)

   5. If used for irrigation, give the acreage and description of the lands to which water has
      been applied and name of the owner thereof

   6. The means of withdrawing such water from the ground and the location of each well or other
      means of withdrawal

   7. The date of commencement and completion of the construction of the well, wells, or
      other works for withdrawal of groundwater

   8. The depth of water table

   9. So far as it may be available, the type, size and depth of each well or the general
      specifications of any other works for the withdrawal of groundwater

   10. The estimated amount of groundwater withdrawn each year

   11. The log of formations encountered in the drilling of each well if available

   12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

   Signature of Owner: Danville H. Welch
   Date: Dec. 30, 1962

Three copies to be filed by the owner with the County Clerk & Recorder of the County in
which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; triplicate to the
School of Mines and Quadruplicate for the Appropriator.
<table>
<thead>
<tr>
<th>Sec.</th>
<th>Name of Appropriator</th>
<th>Type of Form</th>
<th>County File No.</th>
<th>Remarks</th>
</tr>
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<tbody>
<tr>
<td>7</td>
<td>Russell Wilson</td>
<td>C-44</td>
<td>190322</td>
<td></td>
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<td>8</td>
<td>Bob J. Knopp</td>
<td>C-41</td>
<td>170403</td>
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<td>12</td>
<td>Joe Miller</td>
<td>B-1701</td>
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<td>Joe Johnson</td>
<td>C-64</td>
<td>196728</td>
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<td>Richard Vitt</td>
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<td>William Ditty</td>
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<td>William Hull</td>
<td>C-64</td>
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<td>Hughfield Strother</td>
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<td>John Allwine &amp; Janice</td>
<td>C-64</td>
<td>205752</td>
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<td>31</td>
<td>Samuel E. Kirby</td>
<td>C-64</td>
<td>304055</td>
<td></td>
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</table>
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1964)

1. Russell Olson
   (Name of Appropriator)
   Billings, State of Montana
   (Address) (City)
   County of Cascade
   Appropriated groundwater according to the Montana laws in effect prior to Jan. 1, 1962 as follows:

   2. The beneficial use on which the claim is based:
      Irrigation
      (Date) Sept. 1962

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been:
      (Date) Sept. 1962

   4. The amount of groundwater claimed (in miner's inches or gallons per minute):

   5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof:

   6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal:

   7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater:
      (Date) Sept. 1-1, Sept. 13

   8. The depth of water table:
      (Depth)

   9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater:

   10. The estimated amount of groundwater withdrawn each year:

   11. The log of formations encountered in the drilling of each well if available:

   12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record:

Signature of Owner: Russell Olson
Date: Sept. 13 - 1962

Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; Triplicate to the School of Mines and Quadruplicate for the Appropriator.
RUSSELL WHITTON

to

THE PUBLIC

DECLARATION OF VESTED GROUND
WATER RIGHTS

STATE OF MONTANA
COUNTY OF HILL

Filed at 8:45 o'clock A.M.

ON SEP 3 1962

O. C. YOUNG
COUNTY CLERK

W. DEPUTY

Fee: $2.00 pd.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 2371, Montana Session Laws, 1961)

1. (Name of Appropriator) (Address) (Town)
   County of __________________________ State of ________________
   Have appropriated groundwater according to the Montana laws in effect prior to Jan. 1, 1962 as follows:

2. The beneficial use on which the claim is based

3. Date or approximate date of earliest beneficial use; and how continuous the use has been.

4. The amount of groundwater claimed (in miner's inches or gallons per minute) ___________ Continues

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater

8. The depth of water table _________

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater

10. The estimated amount of groundwater withdrawn each year

11. The log of formations encountered in the drilling of each well if available

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

Signature of Owner ________________ Date ____________

Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE; OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; triplicate to the School of Mines and quadruplicate for the Appropriator.
397108
PEARL J. KNAPP
TO
IN: FUEL G

DECLARATION OF VESTED
GROUNDWATER RIGHTS
# WATER WELL LOG

**Owner:**

**Address:**

**Driller:**

**Address:**

**Date Started:**

**Date Completed:**

**Location:**

<table>
<thead>
<tr>
<th>Section</th>
<th>T.</th>
<th>R.</th>
<th>Sec.</th>
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</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Type of well:**

**Equipment used:**

**Type of screen or perforation:**

**Static Water level, for non-flowing well:**

**Shut-in pressure, for flowing well:**

**Pumping water level:**

**How tested:**

**Length of test:**

**Remarks:**

(Gravel packing, cementing, packers, type of shut-off, depth of shut-off)

**Signature:**

(over)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>From</th>
<th>To</th>
<th>Description of Material Drilled</th>
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<tbody>
<tr>
<td>0</td>
<td>74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>77</td>
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<tr>
<td>25</td>
<td>107</td>
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<td>287</td>
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<td>163</td>
<td>287</td>
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<td>195</td>
<td>287</td>
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<td>277</td>
<td>307</td>
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HI-LINE PUBLISHING CO., HAVRE.
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
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<tbody>
<tr>
<td>260-263</td>
<td>Grey Sandstone—Water 1/2 gal. per min.</td>
</tr>
<tr>
<td>263-264</td>
<td>Hard Grey Sandstone</td>
</tr>
<tr>
<td>264-267</td>
<td>Grey Sandstone</td>
</tr>
<tr>
<td>267-272</td>
<td>Light Brown Shale</td>
</tr>
<tr>
<td>272-274</td>
<td>Grey Shale</td>
</tr>
<tr>
<td>274-276</td>
<td>Brown Shale</td>
</tr>
<tr>
<td>276-281</td>
<td>Blue-grey Shale</td>
</tr>
<tr>
<td>281-289</td>
<td>Grey Shale</td>
</tr>
<tr>
<td>289-292</td>
<td>Blue-grey Shale</td>
</tr>
<tr>
<td>292-297</td>
<td>Grey Sandstone</td>
</tr>
<tr>
<td>297-301</td>
<td>Light Grey Shale—Ivory Shale</td>
</tr>
<tr>
<td>301-310</td>
<td>Grey Sandstone—Water 1/2 gal. per min.</td>
</tr>
<tr>
<td>310-311</td>
<td>Light Grey Shale</td>
</tr>
<tr>
<td>311-312</td>
<td>Blue-grey Shale</td>
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<tr>
<td>312-320</td>
<td>Grey Shale</td>
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<tr>
<td>320-328</td>
<td>Grey Sandstone</td>
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<td>328-330</td>
<td>Grey Shale</td>
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<td>330-340</td>
<td>Grey Sandstone</td>
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<td>Blue-grey Shale</td>
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<td>347-352</td>
<td>Grey Shale</td>
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<td>Grey Sandstone</td>
</tr>
<tr>
<td>360-369</td>
<td>Blue-grey Shale</td>
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<tr>
<td>369-373</td>
<td>Grey Sandstone</td>
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<tr>
<td>Depth, feet</td>
<td>Description of Material Drilled</td>
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<td>------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>270-281</td>
<td>Blue Shale</td>
</tr>
<tr>
<td>281-322</td>
<td>Grey Sandstone—Vapor 1/2 gal. per min.</td>
</tr>
<tr>
<td>322-355</td>
<td>Hard blue Shell</td>
</tr>
<tr>
<td>355-410</td>
<td>Blue Shale</td>
</tr>
</tbody>
</table>
## Water Well Log

**State of Montana, County of**

#### By:

**JOE VALZAN**

**Job Number**

**Document No. 38U367**

---

### Water Well Log Details

- **Date Started**: [ ]
- **Date Completed**: [ ]
- **Location**: Sec. [ ] T. [ ] R. [ ]
- **Type of Well**: [ ]
- **Equipment Used**: [ ]
- **Water Use**: Domestic [ ] Municipal [ ] Stock [ ] Irrigation [ ]
- **Industrial [ ] Drainage [ ] Other**: [ ]
- **Casing**: ft. to ft. Type [ ] Size [ ]
- **Casing**: ft. to ft. Type [ ] Size [ ]
- **Casing**: ft. to ft. Type [ ] Size [ ]
- **Perforated or Screened**: Ft. to Ft. to Ft. to Ft.
- **Type of Screen or Perforation**: [ ]
- **Static Water Level, for non-flowing well**: feet.
- **Shut-In Pressure, for flowing well**: lb. sq. in. on: **(date)**
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODES
OFFICE OF STATE ENGINEER

DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. JOSPEH A. MALSDALE of BOZSTEAD, MONTANA
   (Name of Appropriator)
   (Address)
   (Town)
   (State of)
   County of
   (Name of Appropriate)
   (Address)
   (Town)
   (State of)

   Have appropriated groundwater according to the Montana laws in effect prior to Jan.
   1, 1962 as follows:

2. The beneficial use on which the claim is based

   Name and date

3. Date or approximate date of earliest beneficial use; and how continuous the use has been

   1930

4. The amount of groundwater claimed (in miner's inches or gallons per minute)

   5 g.p.m.

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater

   1930

8. The depth of water table

   10 ft. water table or depth well

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater

   Good Soil / Good Well

10. The estimated amount of groundwater withdrawn each year

11. The log of formations encountered in the drilling of each well if available

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

   Signature of Owner

   Date

Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; triplicate to the School of Mines and quadruplicate for the Appropriator.
Notice of Completion of Groundwater Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

Owner: KELLER
Address: SIMPSON ROUTE

Driller: SIMPSON DRILL INC
Address: HAVRE, MONTANA

Date of Notice of appropriation of ground water

Date well started: 2/1/1972
Date Completed: 3/5/1972

Type of well: DRILLED
Equipment used: CABLE TOOLS
(dug, driven, bored or Churn, drill, rotary or drilled)

Water use: Domestic [ ] Municipal [ ] Stock [ ] Irrigation [ ]
Industrial [ ] Drainage [ ] Other [ ]

Indicate on the diagram the character and thickness of the different strata met with in drilling, such as soil, clay, shale, gravel, rock or sand, etc. Show depth at which water is encountered, thickness and character of water-bearing strata and height to which the water rises in the well.

Static Water Level for non-flowing well

Shut-in Pressure for Flowing Well

Pumping Water Level

Discharge in gal. per min. of flowing well

How Tested: BURL

Length of Test: 4 HOURS

Remarks: (Gravel packing, cementing, packers, type of shutoff, location of use of groundwater if not at well, and any other similar pertinent information, including number of acres irrigated, if used for irrigation)

Indicate location of well and place of use, if possible. Each small square represents 10 acres.

Show exact depth of bottom.

File No. 420523

This form to be prepared by driller, and three copies to be filed by the owner with the County Clerk and Recorder in the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the School of Mines and Quadruplicate for Appropriator.
NOTICE OF COMPLETION OF GROUNDWATER APPROPRIATION

STATE OF MONTANA
COUNTY OF HILL

MARCH 12, 1971

FEE: $2.00 paid
### Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. **Richard Well**
   - **Name of Appropriator**
   - **Address**
   - **Town**

   **County of**
   - **State of**

   have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

2. The beneficial use on which the claim is based: **drinking and cattle use**

3. Date or approximate date of earliest beneficial use: **December 31, 1963**

4. The amount of groundwater claimed (in miner's inches or gallons per minute): **3 gallons**

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof:

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal: **electric pump**

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: **December 31, 1963**

8. The depth of water table: **5 feet**

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater:

   - **Well A:** Depth 300 feet, **drilled 1963**
   - **Well B:** Depth 200 feet, **1962 completion**
   - **Other wells:** **Irrigated Cultivated**

10. The estimated amount of groundwater withdrawn each year: **50,000 gallons**

11. The log of formations encountered in the drilling of each well if available:

   - **Well A:** Depth 300 feet, **gravel, clay, shale**

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record: **MAKE**

   **Signature of Owner:** **Richard Well**
   - **Date:** **12/31/63**

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state; otherwise, the form will be returned.

Original to the County Clerk and Recorder; Duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology, and Quadruplicate for the Appropriator.
RICHARD VELK

TO

THE PUBLIC

DECLARATION OF VESTED
GROUNDWATER RIGHTS

STATE OF MONTANA,
COUNTY OF HILL,
Filed at Lodeck, Rin

NY 7-12-1963
R. G. BLOOM [CLERK]

Fees $12.00 pd.
Owner: William Gerlcy
Address: 420 2nd Ave., Havre

Driller: Herbert Freier
Address: 284 N State St., Havre

Date Started: September 19, 1961
Date Complete: September 25, 1961

Location: Sec. 26
T 36 N R 13 E

Type of well: Drilled
Equipment used: Churn Drill

Water use: Domestic [X] Municipal [ ] Stock [X] Irrigation [ ]

Industrial [ ] Drainage [ ] Other: [ ]

Casing: 0 ft to 62 ft Type: Spang-seamless Size: 7"

Casing: 54 ft to 281 ft Type: Spang-seamless Size: 6"

Casing: [ ] ft to [ ] ft Type: [ ] Size: [ ]

Perforated or Screened: Ft. 100 to Ft. 110 Ft. 228 to Ft. 270

Type of screen or perforations: 1/4" X 5" Perforations

Static Water level, for non-flowing well: 105 feet

Shut-in pressure, for flowing well: [ ] lb. sq. in. on: [ ] (date)

Pumping water level: 260 feet at 5 gal. per min.

How tested: Baier

Length of test: 2 hours

Remarks: (Gravel packing, cementing, packers, type of shut-off, depth of shut-off)

[Signature]
## Log of Well

<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 0</td>
<td>To 42</td>
</tr>
<tr>
<td>42</td>
<td>47</td>
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<td>217</td>
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<td>229</td>
<td>238</td>
</tr>
<tr>
<td>Depth, feet</td>
<td>Description of Material Drilled</td>
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<tr>
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</tr>
<tr>
<td>235-246</td>
<td>Blue Shale</td>
</tr>
<tr>
<td>246-258</td>
<td>Blue-grey Shale</td>
</tr>
<tr>
<td>258-268</td>
<td>Sandy Blue Shale</td>
</tr>
<tr>
<td>268-275</td>
<td>Grey Sandstone - Water - 5 gal. per min.</td>
</tr>
<tr>
<td>275-277</td>
<td>Light Brown Shale</td>
</tr>
<tr>
<td>277-281</td>
<td>Grey Shale</td>
</tr>
</tbody>
</table>
STATE OF MONTANA
ADMINISTRATOR OF GROUNDBASS CODE
OFFICE OF STATE ENGINEER

DECLARATION OF VESTED GROUNDBASS RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. [Name of Appropriator] of [Address], [Town], [County of], [State of], have appropriated groundwater according to the Montana laws in effect prior to Jan. 1, 1962 as follows:

2. The beneficial use on which the claim is based:

3. Date or approximate date of earliest beneficial use; and how continuous the use has been:

4. The amount of groundwater claimed (in miner's inches or gallons per minute):

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof:

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal:

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater:

8. The depth of water table:

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater:

10. The estimated amount of groundwater withdrawn each year:

11. The log of formations encountered in the drilling of each well if available:

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record:

Signature of Owner:

Date:

Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; triplicate to the School of Mines and Quadruplicate for the Appropriator.
397200

WILLIAM H. GERXY

TO

THE PUBLIC

DECLARATION OF VESTED
GROUNDWATER RIGHTS

STATE OF MONTANA,
COUNTY OF HILL,

Filed at 11:00 o'clock a.m.
on March 31, 1963.

COUNTY CLERK

FEE: $2.00 pd.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

1. [Appropriator Name] of [Address], [Town]
   County of [County], State of [State]
   have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

2. The beneficial use on which the claim is based: [Use Description]

3. Date or approximate date of earliest beneficial use; and how continuous the use has been: [Date]

4. The amount of groundwater claimed (in miner's inches or gallons per minute): [Amount]

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof: [Acreage]

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal: [Withdrawal Method]

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: [Date]

8. The depth of water table: [Depth]

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater: [Specifications]

10. The estimated amount of groundwater withdrawn each year: [Amount]

11. The log of formations encountered in the drilling of each well if available: [Log]

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record: [Reference]

Signature of Owner: [Signature]
Date: [Date]

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology, and Quadruplicate for the Appropriator.
C.R.: T.B. SWANSON

TO THE PUBLIC

DECLARATION OF VACANT GROUND AND WATERS

STATE OF MONTANA
COUNTY OF HILL

Filed at 2 o'clock P.M.

ON May 16 1963

R. E. Hans

COUNTY CLERK

DEPUTY

Fee: $2.00 paid.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

1. Name of Appropriator: Striffield Peterson
   Address: Rt 1 Box 37
   Town: Helena
   State: Montana

2. The beneficial use on which the claim is based: Household stock

3. Date or approximate date of earliest beneficial use; and how continuous the use has been: 1920, daily

4. The amount of groundwater claimed (in miner's inches or gallons per minute): 1 gal per minute

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal: Shallow well, pressure system

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: May 1920

8. The depth of water table: 8 ft

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater: 5 ft, diameter 8 ft, depth 20 ft

10. The estimated amount of groundwater withdrawn each year: 500,000 gal

11. The log of formations encountered in the drilling of each well if available

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

Signature of Owner: Striffield Peterson
Date: 12-16-63

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology, and Quadruplicate for the Appropriator.
OAKFIELD DEPARTMENT

TO

THE PUBLIC

DECLARATION OF VACANT GROUND
WATER RIGHTS

(STATE OF MONTANA, Co.)
COUNTY OF HILL

Filed at ___ o'clock ___ P.M.

On ___, 1963

R. E. Bloom
COUNTY CLERK

DEPUTY

Fee: $2.00 per.
DECLARATION OF VESTED GROUNDWATER RIGHTS

(Under Chapter 237, Montana Session Laws, 1962)

1. Russell Peterson, of 301 Boyer Ave., State of Montana
   Have appropriated groundwater according to the Montana laws in effect prior to Jan.
   1, 1962 as follows:

   1. Method of withdrawal
   2. The beneficial use on which the claim is based
   3. Date or approximate date of earliest beneficial user and how continuous the use has been
   4. The amount of groundwater claimed (in million inches or gallons per minute)
   5. If used for irrigation, give the acreage and description of the land to which water has
      been applied and name of the owner thereof
   6. The means of withdrawing such water from the ground and the location of each well or other
      means of withdrawal
   7. The date of commencement and completion of the construction of the well, wells, or
      other works for withdrawal of groundwater
   8. The depth of water table
   9. So far as it may be available, the type, size and depth of each well or the general
      specifications of any other works for the withdrawal of groundwater
   10. The estimated amount of groundwater withdrawn each year
   11. The log of formations encountered in the drilling of each well if available
   12. Such other information of a similar nature as may be useful in carrying out the policy
       of this act, including reference to book and page of any county record

   Signature of Owner

   Date

Three copies to be filed by the owner with the County Clerk & Recorder of the County in
which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; Triplicate to
the School of Mines and Quadruplicate for the Appropriator.
RUSSELL PETERSON

TO

THE PUBLIC

DECLARATION OF VESTED GROUNDWATER RIGHTS

DATE OF MONTANA COUNTY OF BILL
Filed on 9 o'clock A.M.

8-19-1963

FEE: $2.00 paid.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

DECLARATION OF VESTED GROUNDWATER RIGHTS

(Under Chapter 237, Montana Session Laws, 1961)

1. Mrs. Allen E. Larson, of, Harro
   (Name of Appropriator) (Address) (Town)

   County of: Hall State of Montana

   have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

   
   
   Indicate point of appropriation and place of use, if possible. Each small square represents 10 acres.

   

   2. The beneficial use on which the claim is based.

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been since 1962, to the extent known.

   4. The amount of groundwater claimed (in miner’s inches or gallons per minute) __.__ g.p.m.

   5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof.

   6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal.

   7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater. 

   8. The depth of water table __.__ ft.

   9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater.

   10. The estimated amount of groundwater withdrawn each year.

   11. The log of formations encountered in the drilling of each well if available.

   12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record.

   Signature of Owner: ____________________________
   Date: ____________________________

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology, and Quadruplicate for the Appropriator.
Mrs. Allena E. Larson

To

The Public

Declaration of Vested Groundwater Rights

STATE OF MONTANA
COUNTY OF HILL
Filed at 10:10 o'clock A.M.
Date: Oct. 7, 1963
R. E. Blom
COUNTY CLERK

Feet 22,00 rd.
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

ERNEST E. GERCKY
(Signature of Appropnator)
Simonds, MT
(State)

COUNTY OF BILLINGS
(State of MONTANA)

I hereby declare, under the provisions of Chapter 237, Montana Session Laws, 1961, that
I have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

2. The beneficial use on which the claim is based

3. Date or approximate date of earliest beneficial use, and how continuous the use has been: May 12, 1952

4. The amount of groundwater claimed (in inches or gallons per minute): 10 gpm

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof

6. The manner of withdrawing such water from the ground and the location of each well or other means of withdrawal

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater

8. The depth of water table

9. So far as it may be available, the type, size, and depth of each well or other works for the withdrawal of groundwater

10. The estimated amount of groundwater withdrawn each year

11. The log of formations encountered in the drilling of each well if available

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

Signature of Owner: ERNEST E. GERCKY
Date: 12-30-1962

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; Duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology, and Quadruplicate for the Appropnator. 3.
396955

ERNST F. GRIFFY

TO

THE PUBLIC

DECLARATION OF VESTED GROUNDWATER RIGHTS

STATE OF MONTANA

COUNTY OF HILL

Filed at 10 o'clock m.

ON 5-30-1963

FR: $2.00 pd.
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<th>Remarks</th>
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<td>39-2021</td>
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<td>W.E. Muller</td>
<td>Gw4</td>
<td>39-2022</td>
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<td>39-2015-1</td>
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<td>Gw4</td>
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Notice of Completion of Groundwater Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

Owner: ART COX
Address: SIMPSON, MONT

Driller: E. LEE
Address: 1200 3RD ST

Date of Notice of Appropriation of Groundwater: SEPT 20
Date well started: SEPT 20
Date Completed: SEPT 28

Type of well: DRILLED
Equipment Used: CHURH (dug, driven, bored or drilled)

Water Use: Domestic D Municipal D Other D Irrigation D Industrial D Drainage D Stock

Indicate on the diagram the character and thickness of the different strata met with in drilling, such as soil, clay, shale, gravel, rock or sand, etc. Show depth at which water is encountered, thickness and character of water-bearing strata and height to which water rises in the well.

<table>
<thead>
<tr>
<th>Size of Drilled Hole</th>
<th>Size and Weight of Casing</th>
<th>From (Feet)</th>
<th>To (Feet)</th>
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<tr>
<td>To: 186</td>
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</table>

Static Water Level for non-flowing Well: 90 feet.

Shut-in Pressure for Flowing Well:

Pumping Water Level: 196 feet at 5 gal. per minute.

Discharge in gal. per min. of flowing well:

How Tested: BAKER

Length of Test: 26

Remarks: (Gravel packing, cementing, packers, type of shutoff, location of place of use of groundwater if not at well, and any other similar pertinent information, including number of acres irrigated, if used for irrigation).

This well was cased and gravel packed.

Driller's License Number: 42

Driller's Signature:

Original to the County Clerk and Recorder; duplicate to the State Engineer; triplicate to the Montana Bureau of Mines and Geology and quadruplicate for the Appropriator.
397021

ANT COX

TO

THE PUBLIC

NOTICE OF COMPLETION OF GROUNDWATER WITH WELL

STATE OF MONTANA
COUNTY OF BILL

FIEL ON DECEMBER

OF DEC 20, 1963

COUNTY SHERIFF

FEE: $2.00 PA
DECLARATION OF VESTED GROUNDWATER RIGHTS

STATE OF MONTANA
OFFICE OF STATE ENGINEER

DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. E. Mueller
   (Name of Appropriator)
   of 263 State St.
   Havre
   (Address)

   County of Hill
   (County)

   State of Montana
   (State)

   Have appropriated groundwater according to the Montana laws in effect prior to Jan.
   1, 1962 as follows:

   2. The beneficial use on which the claim is based

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been
   June, 1957. Continuous

   4. The amount of groundwater claimed (in miner's inches or gallons per minute)
   160 gal. per day

   5. If used for irrigation, give the acreage and description of the lands to which water has
   been applied and name of the owner thereof

   6. The means of withdrawing such water from the ground and the location of each well or other
   means of withdrawal

   Indicate point of appropriation and place of use, if possible. Each small square represents 10 acres.

   7. The date of commencement and completion of the construction of the well, wells, or
   other works for withdrawal of groundwater
   May, June, 1957

   8. The depth of water table
   30 feet

   9. So far as it may be available, the type, size and depth of each well or the general
   specifications of any other works for the withdrawal of groundwater
   
   10. The estimated amount of groundwater withdrawn each year
   7000 gal.
   
   11. The log of formations encountered in the drilling of each well if available
   
   12. Such other information of a similar nature as may be useful in carrying out the policy
   of this act, including reference to book and page of any county record

   Signature of Owner
   Date

Three copies to be filed by the owner with the County Clerk & Recorder of the County in
which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; Triplicate to
the School of Mines and Quadruplicate for the Appropriator.
W. E. MEULLER

TO

THE PUBLIC

DECLARATION OF VESTED
GROUND/WATER RIGHTS

STATE OF MONTANA
COUNTY OF BILL

Filed at 1 o'clock P.M.

ON DECEMBER 3, 1963

SIGNATURE

DEPUTY

ER: $22.00 pd.
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. **United States Air Force**
   (Name of Appropriator)
   **Missoula**
   (Address)
   County of **Missoula**
   State of **Montana**

   Have appropriated groundwater according to the Montana laws in effect prior to Jan. 1, 1962 as follows:

   N
   RECORD OF WELL 2
   S

   2. The beneficial use on which the claim is based:
      **Potable water**

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been:
      **October 29, 1952 - Continuous to date**

   4. The amount of groundwater claimed (in miner's inches or gallons per minute):
      **4 gallons per minute**

   5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof:
      **None**

   6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal:
      **Reciprocating Cylinder Pump**

   7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater:
      **Completed April 14, 1951**

   8. The depth of water table:

   9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater:

   TYPE: **Drilled.**
   SIZE: **10".**
   DEPTH: **90 ft.**

   10. The estimated amount of groundwater withdrawn each year: **1,728,000 gallons**

   11. The log of formations encountered in the drilling of each well if available:
      **Yellow Sandy Shale, Black Shale, Coal, Black Shale, Light Black Shale, Fossilitous Limestone, Soft Sandstone, Sandy Shale, Bright Shale, Hard Fossilitous Limestone.**

   12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record:

   ________________________________
   Signature of Owner: E.C. Woodring, Major, USAF, Commander
   Date: **28 Aug 1962**

   Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

   PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

   Original to the County Clerk & Recorder; duplicate to the State Engineer; Triplicate to the School of Mines and Quadruplicate for the Appropriator.
UNITED STATES AIR FORCE

to

THE PUBLIC

DECLARATION OF VESTED GROUNDWATER RIGHTS

FILED AT 2:00 P.M.
ON AUG 1, 1962

G. C. Yeen
COUNTY CLERK

By ____________ DEPUTY

Fee: None
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. United States Air Force, of North (Name of Appropriator)
   (Address)
   County of Hill, State of Montana 
   Have appropriated groundwater according to the Montana laws in effect prior to Jan.
   1, 1962 as follows:

2. The beneficial use on which the claim is based:
   Potable water

3. Date or approximate date of earliest beneficial use; and how continuous the use has been:
   November 1953

4. The amount of groundwater claimed (in miner's inches or gallons per minute):
   1,000,000 gallons

5. If used for irrigation, give the acreage and description of the lands to which water has
   been applied and name of the owner thereof:
   None

6. The means of withdrawing such water from the ground and the location of each well or other
   means of withdrawal:
   Reciprocating cylinder pump

7. The date of commencement and completion of the construction of the well, wells, or
   other works for withdrawal of groundwater:
   Completed November 1958

8. The depth of water table:
   10 feet

9. So far as it may be available, the type, size and depth of each well or the general
   specifications of any other works for the withdrawal of groundwater:
   TYPE: Drilled, DEPTH: 750 feet, SIZE 6" to 71/2" ft, 71/2" to 780 ft

10. The estimated amount of groundwater withdrawn each year:
    1,000,000 gallons

11. The log of formations encountered in the drilling of each well if available:
    G壁RT SHALE, LIMESTONE, SAND, COAL, CROSSLINES, OCHRE SHALE, SANDSTONE, BILITHON, BILITHON

12. Such other information of a similar nature as may be useful in carrying out the policy
    of this act, including reference to book and page of any county record:

Signature of Owner: E.G. Woodring, Major, USAF, Commander
Date: 28 Aug 1962

Three copies to be filed by the owner with the County Clerk & Recorder of the County in
which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; triplicate to
the School of Mines and quadruplicate for the Appropriator.
STATE OF MONTANA
COUNTY OF HILL

DECLARATION OF VESTED GROUNDWATER RIGHTS

Filed at 2 o'clock P.M.

ON AUG 7 1962

COUNTY CLERK

DEPUTY

Fees: $none
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. United States Air Force, of North, (Name of Appropriator)
   County of Hill, (Address) (Town) (State of Montana)
   Have appropriated groundwater according to the Montana laws in effect prior to Jan. 1, 1962 as follows:

   2. The beneficial use on which the claim is based
      Potable Water

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been
      Complained Nov. 1, 1958 Continuous use to date.

   4. The amount of groundwater claimed (in miner's inches or gallons per minute)
      5 gallons per minute

   5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof
      MORE

   6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal
      Pressure Turbine Pump

   7. The date of commencement and completion of the construction of the well, wells; or other work for withdrawal of groundwater, November 1, 1958

   8. The depth of water table 60 feet

   9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater
      TYPE--Drilled, Elevation 730', Diameter 12', Depth 65 Feet

   10. The estimated amount of groundwater withdrawn each year (in gallons)

   11. The log of formations encountered in the drilling of each well if available
      YELLOW SANDY Silt, STICKY MUDY SHALE, OCHRY MUDY SHALE, OCHRE SHALE, BLACK SHALE, REDVINTA, GREEN SHALE

   12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

   Signature of Owner P.O. WOODRING, Major, DEP., Commander
   Date 20 Aug 1963

Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE; OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; Triplicate to the School of Mines and Quadruplicate for the Appropriator.
UNITED STATES AIR FORCE

to

THE PUBLIC

DECLARATION OF VESTED GROUNDWATER RIGHTS

DATE OF MONTANA)
COUNTY OF HILL
Filed at 9 o'clock A.M.

ON 7/2/1902

O. C. Year
COUNTY CLERK

Deputy

Fees: None
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

ALBERT F. STRAUB, Chief
Acquisition Branch, Real Estate Division,
U.S. ARMY ENGINEER DISTRICT, Seattle, for and on behalf of

THE UNITED STATES OF AMERICA

(Name of Appropriator) (Address) (Town)

County of King State of Washington

have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

2. The beneficial use on which the claim is based To be used by United States AP for its personal in official duty

3. Date or approximate date of earliest beneficial use; and how continuous the use has been October 1958

4. The amount of groundwater claimed (in miner's inches or gallons per minute) 73 gallons per minute

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal Pumped from well as shown or described on well log

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater Commened May 1958 - Completed October 1958

8. The depth of water table 117 feet

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater 10' - 1700' feet

10. The estimated amount of groundwater withdrawn each year 6,000,000 gallons

11. The log of formations encountered in the drilling of each well if available See attached log

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

For and on behalf of THE UNITED STATES OF AMERICA through U.S. Army Engineer District, Seattle, Real Estate Division

Signature of Owner ALBERT F. STRAUB, Chief
Acquisition Branch
Date

Three copies to be filed by the owner with the County Clerk and Recorder of the county in which the well is located.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.

Original to the County Clerk and Recorder; duplicate to the State Engineer; Triplicate to the Montana Bureau of Mines and Geology; and Quadruplicate for the Appropriator.

1853
# Drill Log

<table>
<thead>
<tr>
<th>Well No.</th>
<th>21 feet</th>
<th>1679 feet</th>
<th>2700 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>DEPARTMENT OF THE ARMY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. <strong>DIVISION</strong></td>
<td>North Pacific</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. <strong>INSTALLATION</strong></td>
<td>Seattle District</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. <strong>HOLE NUMBER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. <strong>ANGLE AND DIRECTION OF HOLE</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6. <strong>THICKNESS OF OVERBURDEN</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. <strong>TOTAL DEPTH</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. <strong>TOTAL CORE RECOVERY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. <strong>SIZE AND TYPE OF BIT</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10. <strong>DESCRIPTION OF DRILL</strong></td>
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<td></td>
</tr>
<tr>
<td>11. <strong>ELEVATION TOP OF HOLE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. <strong>TOTAL CORE RECOVERY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. <strong>RESULT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. <strong>REMARKS</strong></td>
<td></td>
<td></td>
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</table>

**Table:**

<table>
<thead>
<tr>
<th>ELEVATION</th>
<th>DEPTH</th>
<th>LEGEND</th>
<th>CLASSIFICATION OF MATERIALS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>3193</td>
<td>3</td>
<td>firu (loess)</td>
<td>glacial till</td>
<td>Top of rock Bearpaw shale</td>
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<tr>
<td>3177</td>
<td>21</td>
<td>sh</td>
<td>Shale, mottled to dark gray, plastic, w/streaks of slightly sandy shale</td>
<td></td>
</tr>
<tr>
<td>3169</td>
<td>21</td>
<td>sh</td>
<td>Shale, brownish gray, plastic</td>
<td></td>
</tr>
<tr>
<td>3105</td>
<td>45</td>
<td>sh</td>
<td>Shale, dark gray, plastic, medium hard, w/strata of slightly sandy shale at depth 270 feet</td>
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<tr>
<td>3075</td>
<td>135</td>
<td>sh</td>
<td>Shale, black, medium hard, w/slightly sandy shale at base</td>
<td>Base of Bearpaw shale Top of Judith River fm.</td>
</tr>
<tr>
<td>2855</td>
<td>335</td>
<td>sh</td>
<td>Shale, black, medium hard, w/slightly sandy shale at base</td>
<td></td>
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<tr>
<td>2708</td>
<td>102</td>
<td>sh</td>
<td>Shale, dark gray, plastic, medium to dark gray, sandy shale, w/thin strata of gray sandstone and lignite</td>
<td>Base of Bearpaw shale Top of Judith River fm.</td>
</tr>
</tbody>
</table>

**Static Water Level:**

Static water level on 15 June 1959, 117 ft.
<table>
<thead>
<tr>
<th>Elevation (ft)</th>
<th>Depth (ft)</th>
<th>Classification of Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1177</td>
<td>13</td>
<td>fine (loose)</td>
</tr>
<tr>
<td>1169</td>
<td>21</td>
<td>Glacial till</td>
</tr>
<tr>
<td>1205</td>
<td>65</td>
<td>Shale, medium to dark gray, plastic, w/strata of slightly sandy shale</td>
</tr>
<tr>
<td>2075</td>
<td>119</td>
<td>Shale, brownish gray, plastic</td>
</tr>
<tr>
<td>2863</td>
<td>117</td>
<td>Shale, dark gray, plastic, medium hard, w/strata of slightly sandy shale at depth 27′ feet</td>
</tr>
<tr>
<td>2853</td>
<td>335</td>
<td>Shale, black, medium hard, w/ slightly sandy shale at base</td>
</tr>
<tr>
<td>2785</td>
<td>402</td>
<td>Shale, medium to dark gray, sandy shale, w/ thin-strata of gray sandstones and lignite</td>
</tr>
</tbody>
</table>

Top of rock: Barrow shale

Base of Barrow shale: Top of Judith River Formation

Static water level on 15 June 1959, 117 ft.
<table>
<thead>
<tr>
<th>ELEVATION</th>
<th>DEPTH</th>
<th>LEGEND</th>
<th>CLASSIFICATION OF MATERIALS (DESCRIPTION)</th>
<th>NOTE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2567</td>
<td>2567</td>
<td>sh</td>
<td>Shale, medium to dark gray</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. brownish gray</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>b. greenish gray</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>c. interbedded limestite</td>
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</tr>
<tr>
<td>2890</td>
<td>520</td>
<td>sh</td>
<td>Shale, dark gray</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>d. interbedded limestite</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>e. interbedded f.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>f. interbedded g.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>g. interbedded h.</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td>h. interbedded i.</td>
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<tr>
<td>722</td>
<td>722</td>
<td>sh</td>
<td>Shale, light blue-gray</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>interbedded (in part)</td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td>j. interbedded k.</td>
<td></td>
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<td></td>
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<td>l. interbedded l.</td>
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<td></td>
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<tr>
<td>172</td>
<td>172</td>
<td>sh</td>
<td>Shale, gray</td>
<td></td>
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<tr>
<td></td>
<td></td>
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<td>m. interbedded m.</td>
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<td>n. interbedded n.</td>
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<td>o. interbedded o.</td>
<td></td>
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<td>p. interbedded p.</td>
<td></td>
<td></td>
</tr>
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<td>q. interbedded q.</td>
<td></td>
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<td></td>
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<td>r. interbedded r.</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>s. interbedded s.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>t. interbedded t.</td>
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<td>u. interbedded u.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>v. interbedded v.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>w. interbedded w.</td>
<td></td>
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<td>x. interbedded x.</td>
<td></td>
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<tr>
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<td></td>
<td>y. interbedded y.</td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td>z. interbedded z.</td>
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</tr>
</tbody>
</table>

Dynamic water level at 49 gpm, 770 ft.

Dynamic water level at 64 gpm, 642 ft.

Dynamic water level at 75 gpm, 915 ft.

Water (5 gpm) from depths 939 ft to 998 ft.

Base of Judith River fm.

Top of Claggett fm.
<table>
<thead>
<tr>
<th>ELEVATION</th>
<th>DEPTH</th>
<th>LEGEND</th>
<th>CLASSIFICATION OF MATERIALS (Description)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2672</td>
<td>517</td>
<td>sh</td>
<td>Shale, medium to dark gray</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c</td>
<td>Sandstone, gray</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c</td>
<td>Sandstone, gray, w/ interbedded lignite</td>
</tr>
<tr>
<td>2660</td>
<td>523</td>
<td>sh</td>
<td>Sandstone, gray</td>
</tr>
<tr>
<td></td>
<td>533</td>
<td>sh</td>
<td>Shale, dark gray to gray, gray, bentonitic (in part)</td>
</tr>
<tr>
<td>2500</td>
<td>606</td>
<td>sh</td>
<td>Shale, sandy, fine, medium gray</td>
</tr>
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<td></td>
<td>610</td>
<td>sh</td>
<td>Shale, light blue-gray, bentonitic (in part), w/ fine sandstone</td>
</tr>
<tr>
<td>2530</td>
<td>620</td>
<td>w</td>
<td>Sandstone, gray</td>
</tr>
<tr>
<td>2540</td>
<td>630</td>
<td>w</td>
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<td>2550</td>
<td>640</td>
<td>w</td>
<td>Sandstone, gray</td>
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<tr>
<td>2560</td>
<td>650</td>
<td>sh</td>
<td>Shale, sandy, medium gray</td>
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<td>2570</td>
<td>660</td>
<td>sh</td>
<td>Shale, slightly sandy, medium gray</td>
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<tr>
<td>2580</td>
<td>670</td>
<td>us</td>
<td>Sandstone, medium gray to brownish, shaley (in part)</td>
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<tr>
<td>2590</td>
<td>680</td>
<td>us</td>
<td>Sandstone, medium gray to brownish, shaley (in part)</td>
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<td>2600</td>
<td>690</td>
<td>us</td>
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<td></td>
<td>700</td>
<td>us</td>
<td>Sandstone, medium gray to brownish, shaley (in part)</td>
</tr>
<tr>
<td>2710</td>
<td>720</td>
<td>us</td>
<td>Sandstone, medium gray to brownish, shaley (in part)</td>
</tr>
<tr>
<td>2720</td>
<td>730</td>
<td>us</td>
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</tr>
<tr>
<td>2730</td>
<td>740</td>
<td>sh</td>
<td>Shale, brown-gray</td>
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</table>

Judith River fm.

Dynamic water level at 69 gpm, 770 ft.

Dynamic water level at 64 gpm, 812 ft.

Dynamic water level at 75 gpm, 915 ft.

Water (5 gpm) from depth 939 ft. to 998 ft.

Slate of Judith River fm.

Top of Cragget fm.
<table>
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<tr>
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<th>DEPT</th>
<th>LEGEND</th>
<th>CLASSIFICATION OF MATERIALS (Description)</th>
<th>CON SECT.</th>
<th>REMARKS</th>
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<tbody>
<tr>
<td>1550</td>
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<td>Shale, grey to black, w/ rare thin films of sandy shale, plastic (in part)</td>
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<tr>
<td>2156</td>
<td>1026</td>
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<td>Shale, dark gray</td>
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</tr>
<tr>
<td>2156</td>
<td>1391</td>
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<td>Shale, dark gray, hard</td>
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<td></td>
</tr>
<tr>
<td>2156</td>
<td></td>
<td>sh</td>
<td>Shale, dark gray to greenish</td>
<td></td>
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</tr>
<tr>
<td>2067</td>
<td>1095</td>
<td>sh</td>
<td>Shale, grey, w/ minor ants of very fine sand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2067</td>
<td>1107</td>
<td>sh</td>
<td>Shale, medium to dark gray w/minor ants of sand, hard</td>
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<td>2069</td>
<td>1121</td>
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<td>Shale, medium to dark gray</td>
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<tr>
<td>2069</td>
<td>1140</td>
<td>sh</td>
<td>Shale, medium to dark gray</td>
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</tr>
<tr>
<td>2069</td>
<td>1166</td>
<td>sh</td>
<td>Shale, pink, hard</td>
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<td>ELEVATION</td>
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<td>LEGEND</td>
<td>CLASSIFICATION OF MATERIALS (Description)</td>
<td>CORE REC#</td>
<td>BQ/ SAMPLE NO.</td>
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<tr>
<td>1090</td>
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<td>Shale, dark gray</td>
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</tr>
<tr>
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<td>3h</td>
<td></td>
<td>Shale, dark gray, hard</td>
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<tr>
<td>20a</td>
<td>555</td>
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<tr>
<td>1095</td>
<td>5h</td>
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<td>Shale, gray, w/ minor shrs, of very fine sand</td>
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<tr>
<td>2050</td>
<td>555</td>
<td></td>
<td>Shale, medium to dark gray, w/ minor shrs, of sand, hard</td>
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<td></td>
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<tr>
<td>1110</td>
<td></td>
<td></td>
<td>Shale, medium to dark gray</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20h</td>
<td></td>
<td></td>
<td>Shale, gray, hard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1100</td>
<td>3h</td>
<td></td>
<td>Shale, dry gray to black, w/ rare thin struts of sandy shale, plastic (in part)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEVATION</td>
<td>DEPTH</td>
<td>LEGEND</td>
<td>CLASSIFICATION OF MATERIALS (Description)</td>
<td>REMARKS</td>
<td></td>
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<td>--------</td>
<td>---------------------------------------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>1490</td>
<td>1700</td>
<td>sh</td>
<td>Shale, dark gray</td>
<td>Bar of Cloggett f.m.</td>
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<tr>
<td>1507</td>
<td>1623</td>
<td>sh</td>
<td>Shale, bedded, dark to light gray, hard to soft</td>
<td>Hole backfilled with 1/4&quot;-3/8&quot; rounded gravel to depth 153 ft.</td>
<td></td>
</tr>
<tr>
<td>1518</td>
<td>1612</td>
<td>sp</td>
<td>Shale w/ thin beds of sandstone, 6&quot; coal at base</td>
<td>Water encountered at top of Eagle f.m. rose to depth 128.5 ft in 20 hours.</td>
<td></td>
</tr>
<tr>
<td>1524</td>
<td>1606</td>
<td>sp</td>
<td>Sandstone, gray, bedded, moderately lithified</td>
<td>Water encountered in Eagle f.m. below depth 1053 feet rose to depth 180 feet in 24 hours.</td>
<td></td>
</tr>
<tr>
<td>1537</td>
<td>1653</td>
<td>sp</td>
<td>Sandstone, gray, massive, poorly lithified</td>
<td>Top of Eagle formation</td>
<td></td>
</tr>
<tr>
<td>1567</td>
<td>1683</td>
<td>sh</td>
<td>Shale, bedded, dark to light gray, hard to soft</td>
<td>Bottom of Eagle formation</td>
<td></td>
</tr>
<tr>
<td>1590</td>
<td>1700</td>
<td></td>
<td>Bottom of Hole</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Operations**

- Bar of Cloggett formation
- Shale w/thin beds of sandstone, 6" coal at base
- Sandstone, gray, bedded, moderately lithified
- Sandstone, gray, massive, poorly lithified

**Water**

- Water encountered at top of Eagle formation rose to depth 128.5 feet in 20 hours.
- Water encountered in Eagle formation below depth 1053 feet rose to depth 180 feet in 24 hours.
<table>
<thead>
<tr>
<th>ELEVATION</th>
<th>DEPTH</th>
<th>LEASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1567</td>
<td>1623</td>
<td>sh</td>
</tr>
<tr>
<td>1618</td>
<td>1642</td>
<td>sh</td>
</tr>
<tr>
<td>1646</td>
<td>1653</td>
<td>sa</td>
</tr>
<tr>
<td>1190</td>
<td>1700</td>
<td></td>
</tr>
</tbody>
</table>

**Classification of Materials**

- **sh**: Shale, dark gray
- **sa**: Sandstone, gray, massive, poorly lithified
- Top of Eagle formation
- Bottom of 10" casing at depth 1677 ft.
- Hole backfilled with 1/4"-3/4" rounded gravel to depth 1631 ft.
- Water encountered at top of Eagle formation to depth 1656 ft in 5 hours.
- Water encountered in Eagle formation below depth 1653 ft rose to depth 180 ft in 24 hours.
UNITED STATES OF AMERICA

TO

THE PUBLIC

DECLARATION OF VESTED GROUND-WATER RIGHTS

STATE OF MONTANA,
COUNTY OF HILL,

Filed at 2:00 o'clock p.m.

ON JUL 10 1962

O. C. Yeen
COUNTY CLERK

By
DEPUTY

Fee: $2.00 pd.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. Name of Appropriator ___________________________ (Address) ___________________________
   County of ___________________________ State of Montana ___________________________
   Have appropriated groundwater according to the Montana laws in effect prior to Jan. 1, 1962 as follows:

2. The beneficial use on which the claim is based ___________________________

3. Date or approximate date of earliest beneficial use; and how continuous the use has been ________________

4. The amount of groundwater claimed (in miner's inches or gallons per minute) ___________________________

5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof ___________________________

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal ___________________________

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater ___________________________

8. The depth of water table ___________________________

9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater ___________________________

10. The estimated amount of groundwater withdrawn each year ___________________________

11. The log of formations encountered in the drilling of each well if available ___________________________

12. Such other Information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record ___________________________

Signature of Owner ___________________________
Date ___________

Three copies to be filed by the owner with the County Clerk & Recorder of the County in which the well is located.

PLEASE ANSWER ALL QUESTIONS. IF NOT APPLICABLE, SO STATE, OTHERWISE THE FORM WILL BE RETURNED.

Original to the County Clerk & Recorder; duplicate to the State Engineer; triplicate to the School of Mines and quadruplicate for the Appropriator.