Form No. 18

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

Water Well Log

<table>
<thead>
<tr>
<th>Owner</th>
<th>B. E. Sweeney</th>
<th>Address</th>
<th>Roundup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driller</td>
<td>W. J. Dunn</td>
<td>Address</td>
<td>Roundup</td>
</tr>
<tr>
<td>Date Started</td>
<td>Oct 10, 1959</td>
<td>Date Completed</td>
<td>Oct 15, 1959</td>
</tr>
<tr>
<td>Location: Sec. 30, T. 10 R. 27 1/2 sec.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Type of well: Drilled  Equipment used: cable drill

Water use:
- Domestic
- Municipal
- Stock
- Irrigation
- Industrial
- Drainage
- Other

Casing: 0 ft. to 175 ft. Type: gal. Size: 6 in.
Casing:________ ft. to________ ft. Type:________ Size:________
Casing:________ ft. to________ ft. Type:________ Size:________
Perforated or screened: Ft. 115 to ft. 175. Ft.________ to ft.________
Type of screen or perforations: slotted

Static water level, for non-flowing well: 70 ft. from top________ feet.
Shut-in pressure, for flowing well:________ lb./sq. in. on:________ (date)

Pumping water level: 80 feet at ______ gal. per min.

How tested: flow at completion

Length of test: 30 min to 1 hr.

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

(over)
Log of Well

<table>
<thead>
<tr>
<th>Depth (feet)</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-20</td>
<td>sand &amp; clay</td>
</tr>
<tr>
<td>20-55</td>
<td>sand</td>
</tr>
<tr>
<td>55-110</td>
<td>sandy shale</td>
</tr>
<tr>
<td>110-113</td>
<td>sand</td>
</tr>
<tr>
<td>113-123</td>
<td>water sand</td>
</tr>
<tr>
<td>123-154</td>
<td>sand</td>
</tr>
<tr>
<td>154-192</td>
<td>water sand</td>
</tr>
<tr>
<td>192-175</td>
<td>sand, shale bottom</td>
</tr>
</tbody>
</table>
Owner: B.C. Barry
Address: (必定填写)
Driller: J.L. Jackson
Address: (必定填写)
Date Started: Aug 14, 1958
Date Completed: Aug 20, 1958
Location: Sec. 32, T. 10 R. 27 W sec. NW q 6

Type of well: (注: 自定义工具, 例如: Bore, Drilled,或Dug)
Equipment used: (注: 自定义工具, 例如: Churn Drill, Rotary, or Other)

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

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

Perforated or Screened: (日期)
Type of screen or perforations: [ ]
Static Water level, for non-flowing well: [ ] feet.
Shut-in pressure, for flowing well: [ ] lb/sq. in.
Pumping water level: [ ] feet at [ ] gal. per min.
How tested: [ ]
Length of test: [ ]

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

(over)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 5</td>
<td>Surface</td>
</tr>
<tr>
<td>5 - 20</td>
<td>Sandy light shale</td>
</tr>
<tr>
<td>20 - 65</td>
<td>Buff Cloudy sandy shale</td>
</tr>
<tr>
<td>65 - 86</td>
<td>Dark Calcareous shale</td>
</tr>
<tr>
<td>86 - 98</td>
<td>Sandy shale, little line</td>
</tr>
<tr>
<td>98 - 130</td>
<td>Buff Calcareous sand</td>
</tr>
<tr>
<td>130 - 134</td>
<td>Hard gray shale</td>
</tr>
<tr>
<td>134 - 166</td>
<td>Gray shale, 140</td>
</tr>
<tr>
<td>166 - 168</td>
<td>Blue shale</td>
</tr>
</tbody>
</table>
Form No. 18

<table>
<thead>
<tr>
<th>Water Well Log</th>
</tr>
</thead>
</table>
| Owner: B. F. Sacking | Address: 
| Driller: P. J. Ferguson | Address: 
| Date Started: Aug. 1, 1957 | Date Completed: Aug. 1, 1957 |
| Location: Sec. 22 T. 10 R. 27 1/2 sec. 32 |

<table>
<thead>
<tr>
<th>Type of well</th>
<th>Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment used</td>
<td>Cable drill</td>
</tr>
<tr>
<td>Water use:</td>
<td>Domestic</td>
</tr>
<tr>
<td>Casing:</td>
<td>0 ft. to 165 ft.</td>
</tr>
<tr>
<td>Casing:</td>
<td>ft. to ft.</td>
</tr>
<tr>
<td>Perforated or screened:</td>
<td>Ft.: 156 to Ft.: 165</td>
</tr>
<tr>
<td>Static water level, for non-flowing well:</td>
<td>90</td>
</tr>
<tr>
<td>Shut-in pressure, for flowing well:</td>
<td>lb./sq. in. on:</td>
</tr>
<tr>
<td>Pumping water level:</td>
<td>70</td>
</tr>
<tr>
<td>How tested:</td>
<td></td>
</tr>
<tr>
<td>Length of test:</td>
<td>1 / 2 hour</td>
</tr>
<tr>
<td>Remarks:</td>
<td>(Gravel packing, cementing, packers, type of shut-off, depth of shut-off)</td>
</tr>
<tr>
<td>Depth (feet)</td>
<td>Description of Material Drilled</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>From To</td>
<td></td>
</tr>
<tr>
<td>0 5</td>
<td>Surface soil</td>
</tr>
<tr>
<td>5 10</td>
<td>Sandy light shale</td>
</tr>
<tr>
<td>10 65</td>
<td>Buff colored sandy shale</td>
</tr>
<tr>
<td>65 86</td>
<td>Dark colored clay</td>
</tr>
<tr>
<td>76 98</td>
<td>Sandy shale, little water</td>
</tr>
<tr>
<td>98 130</td>
<td>Buff colored sand</td>
</tr>
<tr>
<td>130 134</td>
<td>Hard shale grain</td>
</tr>
<tr>
<td>134 166</td>
<td>Gray shale sand</td>
</tr>
<tr>
<td>166 168</td>
<td>Blue shale</td>
</tr>
<tr>
<td>Sec.</td>
<td>Name of Appropriator</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Gaffena, Louis</td>
</tr>
<tr>
<td>4</td>
<td>Gaffena Birch Shusler Co</td>
</tr>
<tr>
<td>7</td>
<td>Notte, C.H.</td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Gaffena, L. (U.)</td>
</tr>
<tr>
<td>16</td>
<td>Gaffena Ranch</td>
</tr>
<tr>
<td>18</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Gaffena, Wesley</td>
</tr>
<tr>
<td>21</td>
<td>&quot;</td>
</tr>
<tr>
<td>23</td>
<td>Gaffena, Wilbur</td>
</tr>
<tr>
<td>23</td>
<td>&quot;</td>
</tr>
<tr>
<td>32</td>
<td>Gaffena, Wesley Betty</td>
</tr>
<tr>
<td>32</td>
<td>Gaffena Ranch</td>
</tr>
</tbody>
</table>
Notice of Completion of Groundwater Appropriation by Means of Well

DEVELOPED AFTER JANUARY 1, 1962
(Under Chapter 237, Montana Session Laws, 1961)

Owner: Laverne Hoffner
Address: Musselshell, Mont.

Drill: Harry M. Conwell
Address: Coulee, Mont.

Date of Notice of appropriation of groundwater: Dec. 28, 1966
Date completed: Jan. 7, 1967

Type of well: Drilled
Equipment used: Rotary

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 characteristic of water-bearing strata and height to which the water rises in the well.

<table>
<thead>
<tr>
<th>Size of Drilled Hole</th>
<th>Size and Weight of Drill</th>
<th>From (Feet)</th>
<th>To (Feet)</th>
<th>PERFORATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot; 1/4</td>
<td>11 #</td>
<td>0</td>
<td>4.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>none</td>
</tr>
</tbody>
</table>

Static Water Level for non-flowing well: feet.
Shut-in Pressure for Flowing Well: feet.
Pumping Water Level: gal. per minute.
Discharge in gal. per min. of flowing well.

How Tested: stopwatch
Length of Test: minutes
Remarks: (Gravel packing, cementing, packers, type of shutoff)

Indicate location of well and place of use, if possible. Each small square represents 40 acres.

Static Water Level for non-flowing well: feet.
Shut-in Pressure for Flowing Well: feet.
Pumping Water Level: gal. per minute.
Discharge in gal. per min. of flowing well:

How Tested: stopwatch
Length of Test: minutes
Remarks: (Gravel packing, cementing, packers, type of shutoff)

Indicate location of well and place of use, if possible. Each small square represents 40 acres.

Use—If used for irrigation, industrial, drainage or other. Explain, state number of acres and location or other data (i.e.: Lot, Block and Addition).

Livestock

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

Please answer all questions. If not applicable, so state, otherwise the form will be returned.
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

1. **Goffa Ranch & Livestock Co.**, of **Roundup**
   (Name of Appropriator) (Address) (Town)
   County of **Roundup**. State of **Montana**
   have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

| SE 11-41-10-28 | 5 acres |

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

3. Date or approximate date of earliest beneficial use; and how continuous the use has been before 1970, 3 months out of each year.

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.

6. 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 ground water...
   Completed before 1950.

8. The depth of water table ...
   42 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...
   Driven well with pump, galvanized steel, 208 feet.

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.
   *The well started in *P* #1, 1938, 394 feet deep in the *P* field.*

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 count record...

Signature of Owner: **Goffa Ranch & Livestock Co.**
By: **John Doe**
Date: **December 31, 1962**
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

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

C. H. Hall, of Roundup, County of Musselshell, 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: Stockwater

3. Date or approximate date of earliest beneficial use; and how continuous the use has been: 6-1-50 - Continuous

4. The amount of groundwater claimed (in miner's inches or gallons per minute): 25 gal/min

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: Pump well - 120 ft

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: 5-1-50 to 6-1-50

8. The depth of water table: 5-0

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: 250' well - 6" casing

10. The estimated amount of groundwater withdrawn each year: 2,000,000 gal

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

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: None

Signature of Owner: C. H. Hall
Date: Dec. 31, 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.
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

C. H. Hall
(Name of Appropriator)

of
(Address)

Roundup
(Town)

County of Musselshell
State of Montana

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

1. Name of Appropriator:

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:
   8-1-1958 - Continuous

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

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:
   7-15-58 to 8-1-58

8. The depth of water table:
   40 feet. Antesian flow to surface

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:
   400 ft. Well - 6" Casing

10. The estimated amount of groundwater withdrawn each year:
    5000000 gallons

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

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: Dec. 31, 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.
Form No. 18
8-60

Montana Bureau of Mines and Geology
Butte, Montana

Owner: L. W. Glaze
Address: Leadup
Driller: L. W. Glaze
Address: Leadup
Date Started: May 24, 1938
Date Completed: June 4, 1938
Location: Sec. 15 T. 10 R. 28 S.E. of S.E.

Water Well Log

<table>
<thead>
<tr>
<th>Type of Well</th>
<th>Equipment Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driven</td>
<td>churn</td>
</tr>
</tbody>
</table>

Water use:
- Domestic
- Municipal
- Stock
- Irrigation
- Industrial
- Drainage
- Other

Casing:
- 0 ft. to 180 ft. Type: Galvanized
- Size: 10"

Perforated or screened:
- Ft. 150 to Ft. 175
- Ft. 175 to Ft.

Type of screen or perforations:

Static water level, for non-flowing well: 24 feet.

Shut-in pressure, for flowing well: 2 lb./sq. in. on: ______ (date)

Pumping water level: 170 feet at 60 gal. per min.

How tested: Drilling

Length of test: One hour

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

(over)
### Log of Well

<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
</tr>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td>34</td>
<td>88</td>
</tr>
<tr>
<td>85</td>
<td>138</td>
</tr>
<tr>
<td>138</td>
<td>160</td>
</tr>
<tr>
<td>160</td>
<td>175</td>
</tr>
<tr>
<td>175</td>
<td>180</td>
</tr>
<tr>
<td>Type of well</td>
<td>Drilled</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Water use:</td>
<td>Domestic Municipales Stock Irrigation</td>
</tr>
<tr>
<td>Casing:</td>
<td>ft. to ft. Type Size</td>
</tr>
<tr>
<td>Perforated or Screened: Ft. to Ft.</td>
<td></td>
</tr>
<tr>
<td>Static Water level, for non-flowing well:</td>
<td></td>
</tr>
<tr>
<td>Shut-in pressure, for flowing well:</td>
<td></td>
</tr>
<tr>
<td>How tested:</td>
<td></td>
</tr>
<tr>
<td>Length of test:</td>
<td></td>
</tr>
<tr>
<td>Remarks:</td>
<td></td>
</tr>
</tbody>
</table>

---

State Engineer
MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: Coffena Ranch
Address: Roundup, Mont

Driller: P. L. Ferguson
Address: Roundup, Mont

Date Started: 6-5-58
Date Completed: 12-58

Location: Section 15, T. 10 N., R. 28 W., M. sec. 283

Type of well: Drilled
Equipment used: Churn drill

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

Industrial [ ] Drinking [ ] Other [ ]

Casing: 0 ft. to 180 ft. Type Light six in. Size Galvanized

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Perforated or Screened: Ft. to Ft. 65 65 143 175

Type of screen or perforations: Slot perforations

Static Water level, for non-flowing well: 95 feet below surface

Shut-in pressure, for flowing well: 125 lb/sq in. (date)

Pumping water level: 160 feet at 325 gal/min

How tested: bailin

Length of test: 90 min

Remarks: Gravel packing, cementing, packers, type of shut-off, depth of shut-off)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
</tr>
<tr>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>24</td>
<td>85</td>
</tr>
<tr>
<td>85</td>
<td>138</td>
</tr>
<tr>
<td>138</td>
<td>160</td>
</tr>
<tr>
<td>160</td>
<td>175</td>
</tr>
<tr>
<td>175</td>
<td>180</td>
</tr>
</tbody>
</table>
Form No. 18
8-60

T. 10 R. 22
County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: Goftena Ranch & Livestock Co. Address: Roundup, Montana
Driller: Miles Jackson Address: ________________________________
Date Started: Jan. 1961 Date Completed: April 1, 1961
Location: Sec. 18 T. 10 R. 28 1/4 sec. 39

Type of well Drilled: __________ Equipment used: standard oil rig
(Dug, driven, bored, or drilled) (Tubewell, drill, rotary, other)

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

Casing: 0 ft. to 150 ft. Type: heavy Size: 8-5/8
Casing: 0 ft. to 720 ft. Type: Heavy 14 1/2 Size: 5 1/2
Casing: ______ ft. to ______ ft. Type: ______ Size: ______

Perforated or Screened: Ft. ______ to Ft. ______. Ft. ______ to Ft. ______

Type of screen or perforations: slits in casing

Static Water level, for non-flowing well: ______ Feet.
Shut-in pressure, for flowing well: 42 lb./sq. in. on: June 1961

Pumping water level ______ feet at ______ gal. per min.
How tested: __________
Length of test: one minute

Remarks: (Gravel packing, cementing, packers, type of shut-off, depth of shut-off)
C-150 ft. cemented off - 400 to 500 ft cemented again

(over)
## Log of Well

<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>From</th>
<th>To</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>180</td>
<td>sand and shale of Judith River</td>
<td></td>
</tr>
<tr>
<td>180</td>
<td>690</td>
<td>Cretaceous shale</td>
<td></td>
</tr>
<tr>
<td>690</td>
<td>770</td>
<td>Upper Eagle</td>
<td></td>
</tr>
</tbody>
</table>
**Notice of Completion of Groundwater Appropriation by Means of Well**

**DEVELOPED AFTER JANUARY 1, 1962**

(Under Chapter 237, Montana Session Laws, 1961)

**Owner:** Wesley Jefferson  
**Address:** Helena, Mont.

**Driller:** Harvy McConnell  
**Address:** Helena, Mont.

**Date of Notice of appropriation of groundwater:** Dec 15, 1967  
**Date completed:** March 1, 1968

**Type of well:** Drilled  
**Equipment used:** Churn Drill

**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.

<table>
<thead>
<tr>
<th>Size of Drilled Hole</th>
<th>Size and Depth of Casing</th>
<th>From</th>
<th>To</th>
<th>Perforations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>554</td>
<td>830</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>256</td>
<td>800</td>
<td>8  20</td>
</tr>
</tbody>
</table>

**Static Water Level for non-flowing well:** 0 feet

**Shut-In Pressure for flowing Well:** 9 gal. per minute.

**Pumping Water Level:** 220 feet

**Discharge in gal. per min. of flowing well:**

**How Tested:** Driller

**Length of Test:** 8 hrs.

**Remarks:** (Gravel packing, cementing, packers, type of shut-off, 30 ft. casing, 20 ft. 10 in. x 8 in. cemented from 20 ft. 30 days, 30 days, 

**USE—If used for irrigation, industrial drainage or other. Explain, state number of acres and location or other data (i.e.: Lot, Block and Addition).**

**Livestock:**

---

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, tissue copy to be retained by driller.

Please answer all questions. If not applicable, so state, otherwise the form will be returned.
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1963)

1. Wesley and Betty Collins, of Delphi, Montana
   (Name of Appropriator) (Address) (Town)

   County of Powell, 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:

      Stock Water

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

      Mar 10, 1951

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

   If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof. Not used for Irrigation

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

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

   Collector 1962

   6. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of ground water:

      Mar 10, 1951. It was completed on Sept. 15, 1963

   7. The depth of water table: 150 feet

   8. The depth of water table: 150 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 ground water:

      Drilled well, 4 inch casing, and depth of 225 feet

   10. The estimated amount of groundwater withdrawn each year: several thousand gallons

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

      Log not 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 count record:

      None recorded and no other information that can be noted.

   Signature of Owner: Betty Jefferson

   Date: Dec 27, 1963
Form No. 18
8-60
T. 11 R. 28
County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

<table>
<thead>
<tr>
<th>Type of well drilled</th>
<th>Equipment used</th>
<th>Owner</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Silber Goffen</td>
<td>Ground, Montana</td>
</tr>
<tr>
<td>Driller</td>
<td>Address</td>
<td>AG. C. Barker</td>
<td></td>
</tr>
<tr>
<td>Date Started</td>
<td>Date Completed</td>
<td>Nov.</td>
<td>Dec. 1960</td>
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<tr>
<td>Location</td>
<td></td>
<td>Sec. 23</td>
<td>T. 1C R. 28 1/4 sec. NE4</td>
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<thead>
<tr>
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<tr>
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<td>Standard oil rig</td>
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<table>
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<th>Water use</th>
<th>Equipment used</th>
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<td>Municipal</td>
<td></td>
</tr>
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<td>Stock</td>
<td>X</td>
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<tr>
<td>Irrigation</td>
<td></td>
</tr>
<tr>
<td>Industrial</td>
<td></td>
</tr>
<tr>
<td>Drainage</td>
<td></td>
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<td>Other</td>
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<tr>
<th>Casing</th>
<th>Type</th>
<th>Size</th>
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<tr>
<td>0 ft. to 100 ft.</td>
<td>Heavy</td>
<td>8-5/8</td>
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<tr>
<td>0 ft. to 660 ft.</td>
<td>Heavy 14</td>
<td>5</td>
</tr>
<tr>
<td>Perforated or Screened</td>
<td>Ft. to Ft.</td>
<td>Ft. to Ft.</td>
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<table>
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<tr>
<th>Type of screen or perforations</th>
<th>Slits in casing</th>
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<tr>
<th>Static Water level</th>
<th>Shut-in pressure</th>
<th>Pumping water level</th>
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<tbody>
<tr>
<td>for non-flowing well</td>
<td>for flowing well</td>
<td>feet at 2 gal. per min.</td>
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<tr>
<td>Feet.</td>
<td>36 lb./sq. in. on:</td>
<td>(lbs)</td>
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<tr>
<th>Remarks</th>
<th>(Gravel packing, cementing, packers, type of shut-off, depth of shut-off)</th>
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<tbody>
<tr>
<td>C - 100 ft. cement</td>
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(over)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
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<tbody>
<tr>
<td>0</td>
<td>sand &amp; shale of Judith River &amp; Clear Creek</td>
</tr>
<tr>
<td>720</td>
<td>sand &amp; shale of Eagle</td>
</tr>
</tbody>
</table>

Log of Well
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

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

1. Wilbur V. Goffman, of Box 8, Roundup
   (Name of Appropriator) (Address) (Town)
   County of Musselshell, 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 is livestock water

3. Date or approximate date of earliest beneficial use; and how continuous the use has been since December, 1960

4. The amount of groundwater claimed (in miner's inches or gallons per minute) is 2 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 is flowing water

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater is December, 1960

8. The depth of water table is 690 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 is a 6 inch casing and depth is 690 feet

10. The estimated amount of groundwater withdrawn each year is 1,626,000 gallons

11. The log of formations encountered in the drilling of each well if available none

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: Wilbur V. Goffman
Date December 23, 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.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1963)

1. Wesley and Betty Coffman, of Delphia, Montana
   (Name of Appropriator) (Address) (Town)
   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
      Stock water

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been
      Before 1910; with intermittent use since

   4. The amount of groundwater claimed (in miner's inches or gallons per minute)
      About 6 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
      Not used for irrigation

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

   SW 4, Sec 32, T 10, R 28
   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
      Information on the well unknown

   8. The depth of water table
      100 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
      Drilled, eight inch casing and depth of 30 feet

   10. The estimated amount of groundwater withdrawn each year
      Average of several thousand gallons

   11. The log of formations encountered in the drilling of each well if available
      Log not 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
      None that we know of

   Signature of Owner
   Date: Dec. 27, 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.
169460

STATE OF MONTANA, SHELL COUNTY.

THIS ——— DAY OF 19
A. D.
O'CLOCK
M.

COUNTY RECORDER

STATE OF MONTANA, MUSSELHELL COUNTY.

FILED THIS ——— DAY OF A. D.
19
AT 3:33 O'CLOCK P.
M.

R. H. MASTERS
COUNTY RECORDER

F. E. DAWSON
DEPUTY
MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: Sappin, Ranch
Address: Roundup, MT

Driller: L. Sappin
Address: Roundup, MT

Date Started: May 24, 1956
Date Completed: June 1, 1956

Location: Sec. 11, T. 44, R. 14

Type of well: Drilled
Equipment used: Churn drill

Water use: Stock

Casing: 1 ft. to 18 ft. Type: Galvanized, Size: 6"

Perforated or Screened: Ft. 30 to Ft. 82

Type of screen or perforations: Alec

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

Shut-in pressure, for flowing well: 130 lb./sq. in. on: (date)

Pumping water level: 50 feet at: 6 gal. per min.

How tested: Discharge

Length of test: 1 hr.

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

(over)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
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</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
</tr>
<tr>
<td>0 - 4</td>
<td>Surface Soil</td>
</tr>
<tr>
<td>4 - 12</td>
<td>Hard sand</td>
</tr>
<tr>
<td>12 - 34</td>
<td>Dark sticky shale</td>
</tr>
<tr>
<td>34 - 85</td>
<td>Light gray sandy shale that gal per Min.</td>
</tr>
<tr>
<td>85 - 138</td>
<td>Gray shale with feldsparite</td>
</tr>
<tr>
<td>138 - 160</td>
<td>Grayish dark granitic clay</td>
</tr>
<tr>
<td>160 - 175</td>
<td>Porous sand, H2O 5 gal per Min.</td>
</tr>
<tr>
<td>175 - 180</td>
<td>Shale</td>
</tr>
<tr>
<td>Sec.</td>
<td>Name of Appropriator</td>
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<tr>
<td>------</td>
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<tr>
<td>17</td>
<td>H &amp; H Komah Co.</td>
</tr>
<tr>
<td>17</td>
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<tr>
<td>22</td>
<td></td>
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<tr>
<td>23</td>
<td></td>
</tr>
</tbody>
</table>
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: [Name]
   Address: [Address]
   Town: [Town]

   County of [County]
   State of Montana

   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:
      [Stock Water]

   3. Date or approximate date of earliest beneficial use; and how continuous the use has been:
      [6-1-68]
      [Flowing well]

   4. The amount of groundwater claimed (in miner's inches or gallons per minute):
      [5 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:
      [Acreage and description]
      [Owner's name]

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

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

   8. The depth of water table:
      [850 ft]

   9. If 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:
       [2,624,000]

   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:
       [Information]

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.
Declaration of Vested Groundwater Rights
(Under Chapter 237, 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 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 (in mixer'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 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.
<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. H. Matzke</td>
<td></td>
<td>File this 30th day of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A.D. 1863</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At 11:30 o'clock A.M.</td>
</tr>
<tr>
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<td></td>
<td></td>
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<tr>
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</table>
**Declaration of Vested Groundwater Rights**

(Under Chapter 237, Montana Session Laws, 1961)

<table>
<thead>
<tr>
<th>Name of Appropriator</th>
<th>(Address)</th>
<th>(Town)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

County of

State of

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

1. **The beneficial use on which the claim is based:** Stock Water

2. **The date or approximate date of earliest beneficial use; and how continuous the use has been:** June 1948

3. **The amount of groundwater claimed (in miner's inches or gallons per minute):** 15 gallon per minute

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

5. **The means of withdrawing such water from the ground and the location of each well or other means of withdrawal:** Electrical Submersible Pumping

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

7. **The depth of water table:** 120 ft

8. **The estimated amount of groundwater withdrawn each year:** 50,000 gal yearly

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

10. **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:** 12-30-58

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.
STATE OF MONTANA,
MUSSELSHELL COUNTY,

FILED THIS 30
DAY OF
Dec.
A.D. 1963.
AT 11:49 O'CLOCK A.M.

B. H. MATZKE
COUNTY RECORDER

FRANCIS J. MILLER
DEPUTY
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: [Individual or Entity]
   Address: [Address]

2. County: [County]
   State: [State]

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

4. The amount of groundwater claimed (in miner's inches or gallons per minute):
   - 10 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:

8. The depth of water table:
   - About 120 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:
    - 60,000

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: [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.
# GROUNDWATER INDEX

## County
- **Mandan**

## Township
- **1C**

## Range
- **30E**

<table>
<thead>
<tr>
<th>Sec.</th>
<th>Name of Appropriator</th>
<th>Type of Form</th>
<th>County File No.</th>
<th>Remarks</th>
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<td>669487</td>
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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:
2. The beneficial use on which the claim is based:

Stock Water

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

July 1960

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

15 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:

[Blank]

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

[Blank]

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

[Blank]

8. The depth of water table:

3700 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:

[Blank]

10. The estimated amount of groundwater withdrawn each year:

1,000,000

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

[Blank]

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:

[Blank]

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 Approprierator.
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

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

(Owner) of (Address) (Town)
Countv 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

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 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 Approprietor.
# GROUNDWATER INDEX

<table>
<thead>
<tr>
<th>Sec.</th>
<th>Name of Appropriator</th>
<th>Type of Form</th>
<th>County File No.</th>
<th>Remarks</th>
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<td>Daugherty, E. D.</td>
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<td>169691</td>
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<td>Harriton, Vern</td>
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<td>&quot;</td>
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<td>155103</td>
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<td>23</td>
<td>Davis, Betty Joan</td>
<td>BU14</td>
<td>1694121</td>
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</tbody>
</table>
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

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

ELIZABETH Giese of Box 236 Roundup
(Name of Appropriator)

County Musselshell State of Montana
(Address) (Town)

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:

LIVESTOCK DRINKING WATER

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

Nov 14 1952

Every Year

4. The amount of groundwater claimed (in miner's inches or gallons per minute) CAN NOT BE PAIRED DRY

By WELL DRILLER

5. If use is for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof NOT USED FOR IRRIGATION

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

JUMP

SACK GASOLINE ENGINE

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

Completed Nov 14 1952

8. The depth of water table:

7 FEET FROM TOP OF 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:

SIX-INCH DRILLED WELL

THIRTY NINE FEET DEEP

10. The estimated amount of groundwater withdrawn each year:

DO NOT KNOW

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

NOT 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

Date Dec 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 Appropiorator.
STATE OF MONTANA,
MUSSELHELL, COUNTY.1

FILED THIS 3RD DAY OF
DEC.
A. D. 1963
AT 2:00 O'CLOCK P.M.

B. H. MASON
COUNTY RECORDER

DANIEL L. DAWSON
DEPUTY
DECLARATION OF VESTED GROUNDWATER RIGHTS
(Under Chapter 237, Montana Session Laws, 1961)

State of Montana
Administrator of groundwater Code
Office of State Engineer

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

1. E. D. Daugherty, of Roundup, MT
   County of Meade, 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:

      Stock Water

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

      1960

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

      20 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 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 count record:

Signature of Owner: [Signature]

Date: [Date]

[20536]
### WATER WELL LOG

**Owner:** Vern P. Harmon  
**Address:** Lewistown, Mont.  
**Driller:** Don Strand  
**Address:** Strand  

**Date Started:** June 14, 1960  
**Date Completed:** July 15, 1960  
**Location:** Sec. 24, T. 9 R. 77  

<table>
<thead>
<tr>
<th>Type of well</th>
<th>Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment used</td>
<td>Churn drill</td>
</tr>
</tbody>
</table>

**Water use:**  
- Domestic  
- Municipal  
- Stock  
- Irrigation

**Casing:**  
- 0 ft. to 16 ft. Type Plain  
- 0 ft. to 16.0 ft.  
- 12 ft. to 154 ft.  

**Perforated or Screened:**  
- 16 ft.  

**Static Water level, for non-flowing well:** 122 ft. from top  

**Shut-in pressure, for flowing well:**  
- **(date)**  

**Pumping water level:** 143 feet at 5 gal. per min.  

**How tested:** Bail - tested  

**Length of test:** Three hours (3)  

**Remarks:**  
Gravel packed with 5 inch washed gravel out side casing to bottom to prevent caving from plugging formations. Very slow drilling because of the soft pitch of formations. Top was turned out to be a log pond so had to go to next well. © of water
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9</td>
<td>Shale and clay</td>
</tr>
<tr>
<td>9.21</td>
<td>Yellow clay</td>
</tr>
<tr>
<td>21.29</td>
<td>Sticky brown shale</td>
</tr>
<tr>
<td>29.41</td>
<td>Sand rock</td>
</tr>
<tr>
<td>41.49</td>
<td>Brown sand rock</td>
</tr>
<tr>
<td>49.58</td>
<td>Soft shale - tan and grey</td>
</tr>
<tr>
<td>58.62</td>
<td>Dark brown shale</td>
</tr>
<tr>
<td>62.69</td>
<td>Grey shale</td>
</tr>
<tr>
<td>69.76</td>
<td>Sand rock</td>
</tr>
<tr>
<td>76.77</td>
<td>Sand rock</td>
</tr>
<tr>
<td>77.84</td>
<td>Sand rock</td>
</tr>
<tr>
<td>84.88</td>
<td>Grey shale</td>
</tr>
<tr>
<td>88.91</td>
<td>Coal</td>
</tr>
<tr>
<td>91.101</td>
<td>Grey shale</td>
</tr>
<tr>
<td>104.112</td>
<td>Soft grey shale - streaks of sand</td>
</tr>
<tr>
<td>112.120</td>
<td>Sandy grey shale</td>
</tr>
<tr>
<td>120.122</td>
<td>Sandy brown shale</td>
</tr>
<tr>
<td>132.132</td>
<td>Sandy grey shale</td>
</tr>
<tr>
<td>132.133</td>
<td>Water, sand - 3½ ft. below</td>
</tr>
<tr>
<td>133.151</td>
<td>Sandy grey shale</td>
</tr>
<tr>
<td>151.153</td>
<td>Water, sand - 3½ ft. below</td>
</tr>
<tr>
<td>153.160</td>
<td>Reddish brown shale</td>
</tr>
</tbody>
</table>
Form No. 18
8-60

T. 7    R. 22

County

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

Water Well Log

Owner

Driller

Date Started

Date Completed

Location: Sec. 1 T. 10 R. 22 1/4 sec.

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. 75 to Ft. 12. Ft. 12 to Ft. 18

Type of screen or perforations

Static water level, for non-flowing well: 67 feet.

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

Pumping water level: 70 feet at 8 gal. per min.

How tested: _______ RAK

Length of test: 1 HR

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

(over)
Form No. 18
8-60

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

Water Well Log

Owner: KEAN HARMON
Address: SHIMMON, MONT

Driller: J.E. KEIMBACH
Address: ROUNDUP, MONT

Date Started: 8-14-61
Date Completed: 8-15-61

Location: Sec. 4 T. 7 R. 22 1/4 sec. N.W.

Type of well: 

Equipment used: 

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

Industrial [ ] Municipal [ ] Drainage [ ] Other [ ]

Casing: 7 ft. to 172 ft. Type 2 1/2 GAL Size 11/2

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Perforated or screened: Ft. 75 to Ft. 107. Ft. 107 to Ft. 132

Type of screen or perforations: FABULY TSCREEN AND 3/8 INCH 11-2

Static water level, for non-flowing well: 65 feet.

Shut-in pressure, for flowing well: lb./sq. in. on: 

Pumping water level: 90 feet at 8 gal. per min.

How tested: RAKE & D

Length of test: 1 HR

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

(over)
Log of Well

<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>From</td>
<td>To</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>35</td>
</tr>
<tr>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td>45</td>
<td>65</td>
</tr>
<tr>
<td>65</td>
<td>127</td>
</tr>
<tr>
<td>127</td>
<td>131</td>
</tr>
</tbody>
</table>
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

1. Betty Jean Davis
   (Name of Appropria[n])
   of: Roundup, Montana
   (Address) (Town)

   County of: Musselshell
   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: Stockwater

   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): 1 gal.

   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.

   Natural Flow, Spring

   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.

   Surface

   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: 388,800 gals.

   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.

   This water used for stockwater

   continuously since the land has been in private ownership.

   Signature of Owner: Betty Jean Davis
   Date: 12/26/63

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 Appropriaor.
STATE OF MONTANA
MUSSELSHELL COUNTY

FILED THIS 27 DAY OF
DEC. 15 63
AT 2:30 O'LOCK

B. H. MATZKE
COUNTY RECORDER

[Signature]
COUNTY RECORDER

[Signature]
[Title]

[Content not transcribed due to legibility issues]