**MONTANA BUREAU OF MINES AND GEOLOGY**  
Butte, Montana

**WATER WELL LOG**

<table>
<thead>
<tr>
<th>Owner</th>
<th>Martin Materials</th>
<th>Address</th>
<th>Butte, Montana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driller</td>
<td>Kay Stores</td>
<td>Address</td>
<td>Butte, Montana</td>
</tr>
</tbody>
</table>

**Date Started:** May 27, 1971  
**Date Completed:** June 7, 1971

**Location:** Sec. 2, T. 31 N., R. 29 W., 1/4 sec. NW, SE

**Type of well:** Drilled  
**Equipment used:** Rotard

**Water use:**  
- Domestic [ ]  
- Municipal [ ]  
- Stock [ √ ]  
- Irrigation [ ]

**Industrial [ ]  
- Drainage [ ]

**Casing:**
- 0 ft. to 90 ft.  
- Type: KL  
- Size: 4 1/2" O.D.

**Perforated or Screened:**
- 480 ft. to 895 ft.  
- Type of screen or perforations:  
- Static Water level, for non-flowing well:  
- Shut-in pressure, for flowing well:  

**Pumping water level:** 60 feet at 8 gal. per min.

**How tested:** PUMPED

**Length of test:**

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

<table>
<thead>
<tr>
<th>Remarks</th>
<th>Remarks</th>
<th>Remarks</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(over)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 17</td>
<td>Clay</td>
</tr>
<tr>
<td>12 - 27</td>
<td>Sandstone</td>
</tr>
<tr>
<td>27 - 463</td>
<td>Shale</td>
</tr>
<tr>
<td>463 - 485</td>
<td>Shale</td>
</tr>
<tr>
<td>485 - 491</td>
<td>Sandstone 37&quot;</td>
</tr>
<tr>
<td>491 - 501</td>
<td>Sandstone</td>
</tr>
<tr>
<td>501 - 502</td>
<td>Rock 5&quot;</td>
</tr>
<tr>
<td>502 - 570</td>
<td>Rock 6&quot;</td>
</tr>
<tr>
<td>570 - 573</td>
<td>Rock 35&quot;</td>
</tr>
<tr>
<td>573 - 632</td>
<td>Sandstone</td>
</tr>
<tr>
<td>632 - 642</td>
<td>Rock 42&quot;</td>
</tr>
<tr>
<td>642 - 648</td>
<td>Sandstone</td>
</tr>
<tr>
<td>648 - 649</td>
<td>Rock 16&quot;</td>
</tr>
<tr>
<td>649 - 675</td>
<td>Sandstone</td>
</tr>
<tr>
<td>675 - 676</td>
<td>Rock 4&quot; (sandy)</td>
</tr>
<tr>
<td>676 - 702</td>
<td>Sandstone</td>
</tr>
<tr>
<td>702 - 703</td>
<td>Rock 16&quot;</td>
</tr>
<tr>
<td>703 - 731</td>
<td>Sandstone</td>
</tr>
<tr>
<td>731 - 741</td>
<td>Rock 5&quot;</td>
</tr>
<tr>
<td>741 - 825</td>
<td>Sandstone</td>
</tr>
<tr>
<td>825 - 826</td>
<td>Rock 12&quot;</td>
</tr>
<tr>
<td>826 - 826</td>
<td>Sandstone</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X: 2F = Judith River formation</td>
</tr>
</tbody>
</table>
**Declaration of Vested Groundwater Rights**

*(Under Chapter 237, Montana Session Laws, 1961)*

<table>
<thead>
<tr>
<th>N</th>
<th>W</th>
<th>E</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Matovich Bros.**
   - **County of:** Phillips
   - **State of:** Montana
   - **Address:** Regina

They have appropriated groundwater according to the Montana laws in effect prior to January 1, 1963, as follows:

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

3. Date or approximate date of earliest beneficial use; and how continuous the use has been: **1961, Continuous.**

4. The amount of groundwater claimed (in miner's inches or gallons per minute): **1 gallon per 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: **Free flowing well.**

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: **1961.**

8. The depth of water table: **20 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:

   - **Well:** 530 ft deep
   - **Casing:** 8,30 ft long

10. The estimated amount of groundwater withdrawn each year: **526,150 gal.**

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:

   - **Not available.**

   - **Signature of Owner:** Martin Matovich
   - **Date:** Dec 30, 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.
Miss # 15884
236912

12:43 H.M.
See #

W. Maloney
Clerk & Recorder
<table>
<thead>
<tr>
<th>Type of well</th>
<th>Drilled</th>
<th>Equipment used</th>
<th>Drill</th>
<th>Type of screen or perforations</th>
<th>Water use: Domestic</th>
<th>Municipal</th>
<th>Stock</th>
<th>Irrigation</th>
<th>Casing: 0 ft. to 30 ft.</th>
<th>Size: 6 &quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic</td>
<td></td>
<td></td>
<td></td>
<td>130 ft. to 150 ft.</td>
<td>4 ½ &quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Stock</td>
<td></td>
<td></td>
<td></td>
<td>150 ft. to 65 ft.</td>
<td>2 ½ &quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Stock</td>
<td></td>
<td></td>
<td></td>
<td>Perforated or Screened: 0 ft. to 2 ft.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Type: ID</td>
<td>2 ½ &quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Size: 2 ½ &quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Static Water level, for non-flowing well: 10 feet.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Shut-In pressure, for flowing well: 10 lb/sq. in. on Nov 19, 1960.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pumping water level: 10 feet at 10 gal. per min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>How tested:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Length of test:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Remarks: (Gravel packing, cementing, packers, type of shut-off, depth of shut-off)</td>
<td></td>
</tr>
</tbody>
</table>

(over)
<table>
<thead>
<tr>
<th>Depth, feet</th>
<th>Description of Material Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 100</td>
<td>To 126 clay</td>
</tr>
<tr>
<td>126</td>
<td>140 sandy clay</td>
</tr>
<tr>
<td>140</td>
<td>312 shale</td>
</tr>
<tr>
<td>312</td>
<td>315 Rock 10&quot;</td>
</tr>
<tr>
<td>315</td>
<td>318 Judith River Formations</td>
</tr>
<tr>
<td>318</td>
<td>319 Rock 14&quot;</td>
</tr>
<tr>
<td>319</td>
<td>341 Judith River Formations</td>
</tr>
<tr>
<td>341</td>
<td>344 Rock 38&quot;</td>
</tr>
<tr>
<td>344</td>
<td>447 Judith River Formations</td>
</tr>
<tr>
<td>447</td>
<td>450 Rock 31&quot;</td>
</tr>
<tr>
<td>450</td>
<td>511 Judith River Formations</td>
</tr>
<tr>
<td>511</td>
<td>512 Rock 14&quot;</td>
</tr>
<tr>
<td>512</td>
<td>651 Judith River Formations</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)

FRANK LOCK of MALTA

County of PHILPS State of MONTANA

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. Date or approximate date of earliest beneficial use; and how continuous the use has been: Oct 1960

3. The amount of groundwater claimed (in miner's inches or gallons per minute): 6 gal 25 sec

4. If used for irrigation, give the acreage and description of the land 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: Natural Flow

6. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: Oct 1960

7. The depth of water table: 600 ft

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

9. 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

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

Signature of Owner:

Date: 12-27-63

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.
Mise#: 15839

236817

Pled: Dec 30, 1963
at: 4:08 P.M.
Fee $2, 00

[Handwritten signature]

[Handwritten signature]
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

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

| Name of Appropria
tor | Address | Town |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Frank Lock</td>
<td>Malta</td>
<td></td>
</tr>
</tbody>
</table>

County of Phillips, State of Montana

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

1. Name of Appropria
tor: Frank Lock
2. Address: Malta
3. Town: Phillips

2. The beneficial use on which the claim is based: [Blank]
3. Date or approximate date of earliest beneficial use, and how continuous the use has been: Sept. 1946
4. The amount of groundwater claimed (in miner's 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: 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: Natural flow
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: Aug. 31, 1946
8. The depth of water table: 820 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: 1 ½” pipe
10. The estimated amount of groundwater withdrawn each year: 5,256,000 gal/yr
11. The logs of formations encountered in the drilling of each well if available: 0-206 Sandle Shale, 206-306 Rock, 306-374 Shale, 374-400 Sandstone, 400-475 Rock, 475-800 Sandle Shale, 800-1000 mostly Sandle Shale, thin Sandstone Struck
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: Frank Lock
Date: 12-27-65

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.
Miss # 15136

236814

Fired: Dec 30, 1963
At: 4:05 P.M.
We # 2.

Kloke and McKee
Chief Reader
<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>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Shree Jee</td>
<td>G &amp; Y</td>
<td>27505</td>
<td></td>
</tr>
</tbody>
</table>

Groundwater Index

County: Phillips
Twp: 21 7
Rge: 30 E
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws 1961)

Frank Lack, a
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

Stock Water

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

Aug. 7, 1946

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

4 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

Natural flow

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

July 31, 1946 - Aug. 3, 1946

8. The depth of water table

280 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


60 ft. pipe 3" N. type

10. The estimated amount of groundwater withdrawn each year

2,200,000 gal/y

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 references to book and page of any county record

None

Signature of

Date 12-27-63

File No.

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>Sec.</th>
<th>Name of Appropriator</th>
<th>Type of Form</th>
<th>County File No.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jacob Lee</td>
<td>G014</td>
<td>3-0846</td>
<td></td>
</tr>
</tbody>
</table>
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

Frank Lock, of Malta, 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: December 3, 1949

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

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: None

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

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: Finished Dec. 3, 1949

8. The depth of water table: 900 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: Not known

10. The estimated amount of groundwater withdrawn each year: 2,628,000 gal.

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: None

Signature of Owner: Frank Lock
Date: 12-26-1962

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 Appropriator.