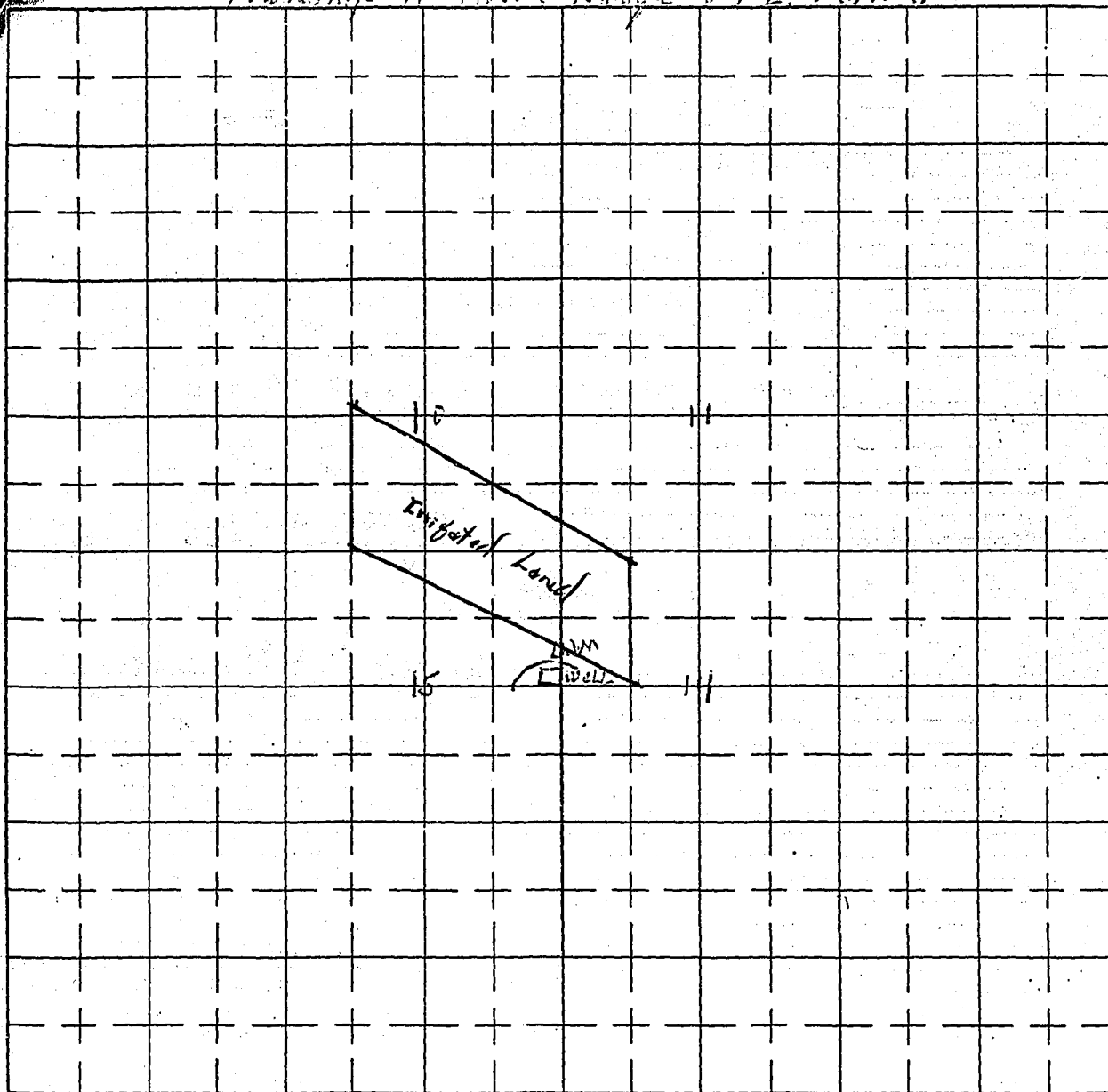


Map of completed water development: Indicate clearly the point of diversion, place of use, section number, township and range number.

Township 11 North Range 24 E. M.P.M.



Scale: 2 inches equal 1 mile

20. THE APPROPRIATOR OR PERMIT HOLDER CERTIFIES THAT THE STATEMENTS APPEARING HEREIN ARE TO THE BEST OF HIS KNOWLEDGE TRUE AND CORRECT.

GRAVES RANCH COMPANY

By: Clarence B. Graves, Pres. November 12, 1973  
Signature of Appropriator or Permit Holder Date  
President of the Corporation

(This section is not to be filled in by Appropriator or Permit Holder)

**ACTION TAKEN**

1. Received by mail over counter in Department's office by Henry The Kinner
2. ☒ Date received: Day 26; Month November; Year 73; Time 11:03 am
3. Recorded in: Book \_\_\_\_\_; Page \_\_\_\_\_; By \_\_\_\_\_
4. Preliminary check by \_\_\_\_\_; Amt. of Fee received \$55.00 T.M. Clark T. 496
5. Receipt No. \_\_\_\_\_; Remarks \_\_\_\_\_
6. Indexed by \_\_\_\_\_; Platted by \_\_\_\_\_
7. Examined by \_\_\_\_\_; Date \_\_\_\_\_
8. Returned for completion on \_\_\_\_\_; or corrected by office on \_\_\_\_\_
9. Date to be returned by Appropriator or Permit Holder \_\_\_\_\_
10. Date corrected form resubmitted to Department's office \_\_\_\_\_
11. Form field checked by \_\_\_\_\_; Date \_\_\_\_\_
12. Microfilmed by \_\_\_\_\_; Date \_\_\_\_\_  
Roll No. \_\_\_\_\_
13. Certificate of Water Right number issued according to this form \_\_\_\_\_
14. Certificate of Water Right not issued at this time for the following reasons: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
15. Date Certificate of Water Right issued \_\_\_\_\_

(For Department Use Only)

(for Department use only)

See attached correspondence.

20

T. 11 R. 24 E

County Russell

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
AUG 2 1961

WATER WELL LOG

STATE ENGINEER

			X

Owner Graves Ranch Company Address Roundup, Montana

Driller McGee Drilling Co. Address Miles City, Mont

Date Started March 12, 1961 Date Completed Same

Location: Sec 20 T. 11N R. 24E 1/4 sec. SE1

Type of well Drilled Equipment used Rotary  
(Dug, driven, bored, or drilled) (Churn drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐

Industrial ☐ Drainage ☐ Other:

Casing: 0 ft. to 160 ft. Type 20 Ga. Gal. Size 4" 5"

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Perforated or Screened: Ft. 130 to ft. 160 Ft. to ft.

Type of screen or perforations 1/2" holes

Static Water level, for non-flowing well: 90 feet.

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

Pumping water level 130 feet at 12 gal. per min.

How tested: Pump

Length of test 4 hours

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

(over)

### Log of Well

[illegible]



T. 11N R. 24E

County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
AUG 2 1961

WATER WELL LOG

STATE ENGINEER

	x	

Owner Graves Ranch Company Address Roundup, Montana

Driller Eugene Rice Address Roundup, Montana

Date Started July 8, 1960 Date Completed Same

Location: Sec. 22 T. 11N R. 24E 1/4 sec. NW 1/4

Type of well Drilled Equipment used Rotary  
(Dug, driven, bored, or drilled) (Churn drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐

Industrial ☐ Drainage ☐ Other:

Casing: 0 ft. to 60 ft. Type 20Ga. Gal. Size 5"

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Perforated or Screened: Ft. 30 to ft. 60 Ft. to ft.

Type of screen or perforations 1/2" holes

Static Water level, for non-flowing well: 25 feet.

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

Pumping water level 40 feet at 22 gal. per min.

How tested: Pump

Length of test 24 hours

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

(over)

### Log of Well

[illegible]

Form No. 18  
8-60

T. \_\_\_\_\_ R. \_\_\_\_\_

County Missoula

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
DEC 28 1961

Water Well Log

STATE ENGINEER

		x

Owner Reynolds & Co. Company Address Bozeman, Montana

Driller Don & Son Address Bozeman, Montana

Date Started April 1960 Date Completed Dec. 1960

Location: Sec. 25 T. 11N R. 24E  $\frac{1}{4}$  sec. 1

Type of well Hand-dug Equipment used Hand-dug  
(Dug, driven, or drilled) (Churn, drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☐ Irrigation ☐  
Industrial ☐ Drainage ☐ Other \_\_\_\_\_

Casing: 2 ft. to 20 ft. Type Heavy steel Size 3"

Casing: \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Type \_\_\_\_\_ Size \_\_\_\_\_

Casing: \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Type \_\_\_\_\_ Size \_\_\_\_\_

Perforated or screened: Ft. \_\_\_\_\_ to ft. \_\_\_\_\_. Ft. \_\_\_\_\_ to ft. \_\_\_\_\_

Type of screen or perforations \_\_\_\_\_

Static water level, for non-flowing well: 12 feet.

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

Pumping water level 25 feet at 10 gal. per min.

How tested: Boiler

Length of test 2 hours

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

(over)

## Log of Well

[illegible]

Form No. 18  
8-60

T. 11 R. 24

County Misselshell

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
DEC 15 1961

STATE ENGINEER

# Water Well Log

	x

Owner Graves Ranch Company Address Roundup, Montana

Driller	Unknown	Address

Date Started	Unknown	Date Completed
--------------	---------	----------------

Location: Sec. 28 T. 11 R. 24  $\frac{1}{4}$  sec. SW4

Type of well drilled Equipment used Unknown  
(Dug, driven, bored, or drilled) (Churn, drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐  
Industrial ☐ Drainage ☐ Other ☐

Casing: <u>unknown</u>	ft. to	ft.	Type	Size
------------------------	--------	-----	------	------

Casing: \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Type \_\_\_\_\_ Size \_\_\_\_\_

Casing:	ft. to	ft.	Type	Size
---------	--------	-----	------	------

Perforated or screened: Ft. \_\_\_\_\_ to ft. \_\_\_\_\_. Ft. \_\_\_\_\_ to ft. \_\_\_\_\_.

Type of screen or perforations \_\_\_\_\_

Static water level, for non-flowing well: 35 feet.

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

Pumping water level 40 feet at 8 gal. per min.

How tested: random

Length of test 1 hour

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

This well was drilled about 1920 and there is no log available.

(over)

Form No. 18  
8-60

T. 11 R. 24

County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
DEC 15 1961

Water Well Log

STATE ENGINEER

x		

Owner Graves Ranch Company Address Roundup, Mont.

Driller Western Geophysical Co Address L. A. Calif.

Date Started August 6, 1956 Date Completed same

Location: Sec. 22 T. 11 R. 24  $\frac{1}{4}$  sec. SW $\frac{1}{4}$

Type of well Drilled Equipment used Rotary  
(Dug, driven, bored, or drilled) (Churn, drill, rotary, other)

Water use: Domestic ☒ Municipal ☐ Stock ☐ Irrigation ☐  
Industrial ☐ Drainage ☐ Other                     

Casing: 0 ft. to 120 ft. Type 20 Ga. Galv. Size 5"

Casing:            ft. to            ft. Type            Size           

Casing:            ft. to            ft. Type            Size           

Perforated or Screened: Ft. 55 to ft. 100 . Ft.            to ft.           

Type of screen or perforations  $\frac{1}{2}$ " holes

Static water level, for non-flowing well: 35 feet.

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

Pumping water level 110 feet at 2 $\frac{1}{2}$  gal. per min.

How tested: pump

Length of test 1 hour

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

(over)

## Log of Well

[illegible]



Form No. 18  
8-60

T. 11 R. 24

County Missoula

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
DEC 15 1961

Water Well Log

STATE ENGINEER

	X	

Owner Graves Ranch Company Address Roundup, Montana

Driller Matt Jasbeck Address Roundup, Mont.

Date Started October 1957 Date Completed Same

Location: Sec. 24 T. 11 R. 24  $\frac{1}{4}$  sec. SW

Type of well Drilled Equipment used Churn  
(Dug, driven, bored, or drilled) (Churn, drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐  
Industrial ☐ Drainage ☐ Other                     

Casing: 0 ft. to 100 ft. Type 20 Ga. Galv. Size 6"

Casing:            ft. to            ft. Type            Size           

Casing:            ft. to            ft. Type            Size           

Perforated or screened: Ft. 40 to ft. 100. Ft.            to ft.           

Type of screen or perforations  $\frac{1}{2}$ " holes

Static water level, for non-flowing well: 30 feet.

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

Pumping water level 90 feet at 10 gal. per min.

How tested: hailer

Length of test 1 hour

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

(over)



## Log of Well

[illegible]

(over)

## Log of Well

[illegible]

File No. ....

DUPLICATE

T. 11 N. R. 24E

County MUSSELSHELL

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

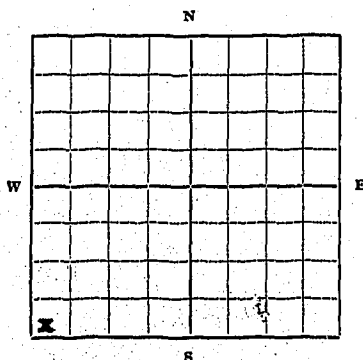
**Declaration of Vested Groundwater Rights**

(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED  
DEC 27 1963  
STATE ENGINEER

1. GRAVES RANCH COMPANY, of ROUNDUP MONTANA  
(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:



SW 1/4 Sec. 28 T. 11 R. 24E  
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 watering stock

3. Date or approximate date of earliest beneficial use; and how continuous the use has been Aug 4 1956

4. The amount of groundwater claimed (in miner's inches or gallons per minute) 2 1/2 gal per min on pump

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

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater Aug 4 1956

8. The depth of water table 35 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 pump only Depth 120 ft.

10. The estimated amount of groundwater withdrawn each year AS needed for stock 6,481,000

11. The log of formations encountered in the drilling of each well if available  
0 to 20 ft yellow clay; 20 to 60' dark shale; 60 to 70' dark sandstone  
70 to 120' dark 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 none

GRAVES RANCH COMPANY  
Signature of Owner Clara B. Graves

Date President 9/23/63

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.

13604

169392

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 26 DAY OF Dec A.D. 19 63

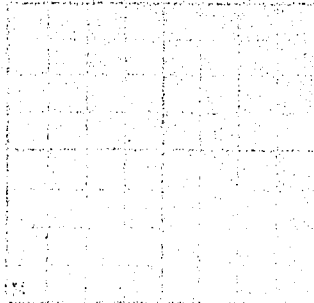
AT 1:28 O'CLOCK P.M.  
B. H. MATZKE

COUNTY RECORDER

DEPUTY

*Elaine J. Goss*

\$2.00



**NOTICE OF COMPLETION OF GROUNDWATER  
APPROPRIATION BY MEANS OF WELL**  
Developed after January 1, 1962

(Under Chapter 237 Montana Session Laws, 1961, as amended)

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, last copy to be retained by driller.

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

Owner Graves Ranch  
Address Roundup, Montana

Date well started 5-19-70  
completed 5-28-70

Type of well drilled  
(Dug, driven, bored or drilled)

Equipment used churn  
(Churn drill, rotary or other)

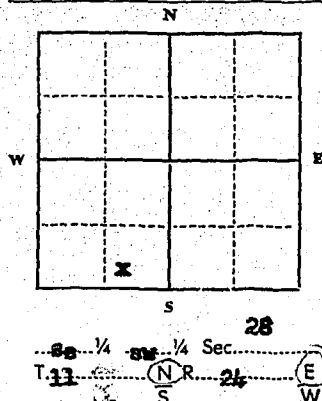
Water Use: Domestic ☒ Municipal ☐ Stock ☐ Irrigation ☐  
Industrial ☐ Drainage ☐ Other ☐\* Garden/Lawn ☐

\*Describe

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).

**ESTIMATED ANNUAL WITHDRAWAL**

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
92	8" I.D. 22.11	0	9	1" holes	55	65
7"	6" I.D.	0	20	4 per ft.	70	110
6"	5" plastic	0	110			



Static water level 19 ft.\*  
Pumping water level 19 ft.\*  
at 6 gallons per minute,  
measured        minutes after pumping  
began.  
\*Measured from ground level.  
Well developed by balin  
for one hours.  
Power        Pump        HP  
Remarks: (Gravel packing, cementing,  
packers, type of shutoff)  
both 6" & 8" casing cemented

INDICATE LOCATION OF WELL AND PLACE OF USE, IF POSSIBLE.  
EACH SMALL SQUARE REPRESENTS 40 ACRES.

Driller's Signature Joe Homol  
Driller's Address Box 898 Roundup, Mont

LICENSE NO. 95

County Musselshell

**DRILLER'S LOG**

Indicate the character, color, thickness of strata such as soil, clay, sand, gravel, shale, sandstone, etc. Show depth at which water is found and height to which water rises in well.

Top of Ground		(Elev. above sea level)
From (Feet)	To (Feet)	
6	6	gravel
6	28	static water level 19'
28	49	yellow clay
49	56	tan sandy shale
56	59	shale
59	59	cap rock (water 1 S.D.M.)
59	68	sandy shale
68	80	buff colored sand
80	85	shale
85	108	gray sand (water 1 S.D.M.)
108	110	blue shale

110 Show exact depth of bottom

47964

181491

STATE OF MONTANA  
MUSSELSHELL COUNTY  
FILED THIS 12 DAY OF  
January A.D. 1971  
AT 1:30 O'CLOCK P.M.  
**CLAUDE F. FLETCHER**  
COUNTY RECORDER  
James D. ...  
DEPUTY



GV

File No. ....

DUPLICATE

T. 11N. R. 24E

County. MUSSELSHELL

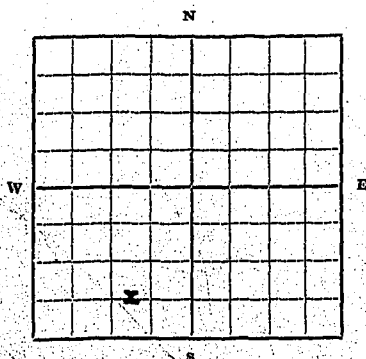
STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

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

RECEIVED  
DEC 27 1963

STATE ENGINEER

1. GRAVES RANCH COMPANY, of 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:



SW 1/4 Sec 28 T. 11 R. 24

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 STOCK WATER
3. Date or approximate date of earliest beneficial use; and how continuous the use has been Continuous as needed for live-  
livestock September 1952
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 1 1/2 gal. 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 2 pump
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater SEPTEMBER 1952
8. The depth of water table 130 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 unknown
10. The estimated amount of groundwater withdrawn each year as needed for stock 288,800 gals
11. The log of formations encountered in the drilling of each well if available  
0 to 20 ft yellow clay; 20 to 60 ft dark shale; 60 to 70 ft dark sandstone  
70 to 135 ft dark 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  
Recorded previously # 7649

GRAVES RANCH COMPANY

Signature of Owner

Clean B. ShaverDate 7/23/63 President

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 School of Mines and Quadruplicate for the Appropriator.

13601



169389

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 26 DAY OF

Dec A.D. 19 63  
AT 1:25 O'CLOCK P.M.

B. H. MATZKE

COUNTY RECORDER

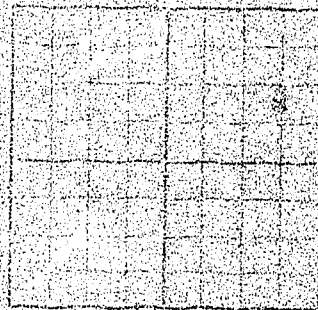
*Clarence J. Gussner*  
DEPUTY

2.00

RECORD OF DEEDS

BOOK 10 PAGE 100

RECORDED



169389

1. The following is a true and correct copy of the original as the same appears in the records of the County Recorder of Musselshell County, Montana.

2. The original is on file in the office of the County Recorder.

3. The original is on file in the office of the County Recorder.

4. The original is on file in the office of the County Recorder.

5. The original is on file in the office of the County Recorder.

6. The original is on file in the office of the County Recorder.

7. The original is on file in the office of the County Recorder.

8. The original is on file in the office of the County Recorder.

9. The original is on file in the office of the County Recorder.

10. The original is on file in the office of the County Recorder.

File No. \_\_\_\_\_

T. 11N R. 24E

DUPLICATE

County. MUSSELSHELL

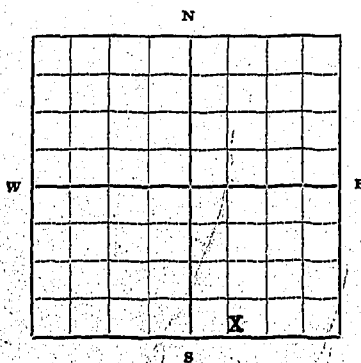
STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
DEC 27 1963

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

STATE ENGINEER

1. GRAVES RANCH COMPANY of 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:



SW 1/4 Sec. 28 T. 11 R. 24  
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 STOCK WATER
3. Date or approximate date of earliest beneficial use; and how continuous the use has been unknown
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 8 gal per minute — pump
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
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater unknown
8. The depth of water table 35 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 unavailable Depth 110 ft.
10. The estimated amount of groundwater withdrawn each year as need for stock: 993,600
11. The log of formations encountered in the drilling of each well if available unavailable well drilled about 1920
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 \_\_\_\_\_

GRAVES RANCH COMPANY  
Signature of Owner Clara B. Graves  
Date 9/23/63 President

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.

13599

169387

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 26 DAY OF

Dec A. D. 1963

AT 1:23 O'CLOCK P.M.

B. H. MATZKE

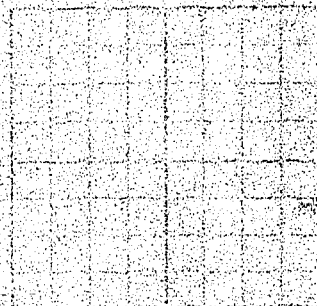
COUNTY RECORDER

*Clare J. Goss*  
DEPUTY

72.00

RECEIVED  
OFFICE OF BEVERLY BARNARD  
CLERK OF DISTRICT COURT  
MUSSELSHELL COUNTY  
MONTANA

RECORDED  
INDEXED  
DEC 27 1963



RECEIVED  
CLERK OF DISTRICT COURT  
MUSSELSHELL COUNTY  
MONTANA

RECEIVED  
CLERK OF DISTRICT COURT  
MUSSELSHELL COUNTY  
MONTANA

Form No. 18  
8-60

30

T. 11 R. 24

County Russell

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
OCT 18 1961

STATE ENGINEER

Water Well Log

		X

Owner Graves Ranch Company Address Roundup, Montana

Driller Joe Korb Address Roundup, Montana

Date Started \_\_\_\_\_ Date Completed \_\_\_\_\_

Location: Sec. 30 T. 11 R. 24  $\frac{1}{4}$  sec. SEA

Type of well Drilled Equipment used Churn  
(Dig, driven, bored, or drilled) (Churn, drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐  
Industrial ☐ Drainage ☐ Other \_\_\_\_\_

Casing: 0 ft. to 126 ft. Type 20ga. Galv. Size 5"

Casing: \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Type \_\_\_\_\_ Size \_\_\_\_\_

Casing: \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Type \_\_\_\_\_ Size \_\_\_\_\_

Perforated or screened: Ft. 60 to ft. 110 . Ft. \_\_\_\_\_ to ft. \_\_\_\_\_

Type of screen or perforations  $\frac{1}{8}$ " holes

Static water level, for non-flowing well: 68 feet.

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

Pumping water level 90 feet at 8 gal. per min. \_\_\_\_\_

How tested: 3000

Length of test 1 hour

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

This was an old well that was deepened October 20, 1961

(over)

## Log of Well

[illegible]

RECEIVED  
OCT 2 1957

T. 11 R. 24

County Musselshell

STATE ENGINEER

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG


Owner Jay C. & Cleon B. Graves Address Roundup, Mont.

Driller Petty Geophysical Co. Address Roundup, Montana

Date Started 9-3-57 Date Completed 9-3-57

Location: Sec. 36 T. 11 R. 24 1/4 sec. SW 1/4 NW 1/4

Type of well Drilled

(Dug, driven, bored, or drilled)

Equipment used Rotary

(Chain drill, rotary, other)

Water use: Domestic ☐

Municipal ☐

Stock ☒

Irrigation ☐

Industrial ☐

Drainage ☐

Other:

Casing: 0 ft. to 93 ft. Type Steel Tubing Size 2"

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Perforated or Screened: Ft. to ft. Ft. to ft.

Type of screen or perforations Casing was set on top of Artesian flow

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

Shut-in pressure, for flowing well: 12 lb./sq. in. on: 10-1-57 (date)

Flowing

Pumping water level: feet at gal. per min. 15

How tested:

Length of test:

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

Casing is cemented in on top of Artesian flow and a valve is attached to the casing at the surface.

(over)

### Log of Well

[illegible]



## GROUNDWATER INDEX

Page 3 of

County Muskegon Twp. 11N Rge. 25E

[illegible]



GW 3

Approved Stock Form—State Publishing Co., Helena, Montana—42262

File No. ....

T. 11 N. R. 25 E. 3

DUPLICATE

County Missoula

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 16 1965

Notice of Completion of Groundwater Appropriation Without Well

(Under Chapter 237 Montana Session Laws, 1961)

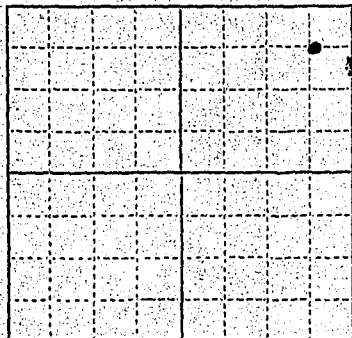
Date of Appropriation of Groundwater 7/1/58Owner David Iverson Address North Star Route Roundup Mont.

Contractor (if any) .....

Address of Contractor .....

Date Started 6/20/58 Date Completed 7/1/58

Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable. Developed a spring by means of excavation to a depth of 5 feet



NE 1/4 Sec. 3 T. 11 R. 25  
Indicate point of appropriation and place of use, if possible.

Quantity of water developed and used with explanation of method used to measure or estimate such amount. If use is intermittent estimate approximate lengths of periods of use.

produces at 20 gal per min.

Signature of Owner David IversonDate Jan 15, 1965

This form to be prepared by contractor (if any), otherwise by the owner.

Three copies of this notice are to be filed with the County Clerk and Recorder of the county in which the works are 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.

38873

171949

STATE OF MONTANA.  
MUSSELSHELL COUNTY.

FILED THIS 15 DAY OF  
January A.D. 1965  
AT 1:15 O'CLOCK PM.

CLAUDE F. FLETCHER

COUNTY RECORDER

DEPUTY

2.00

GW 3

File No. ....

DUPLICATE

T. 11 N. R. 25

County. Musselshell

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 2 1964  
STATE ENGINEER

# Notice of Completion of Groundwater Appropriation Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater About 1900 and before.

Owner M. G. Mang Address Roundup, Montana

Contractor (if any) None

Address of Contractor None

Date Started Unknown Date Completed About 1900

Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable. There is a natural gravity

flow of the water from one end of the spring

and water is also pumped from the spring which

pumped water flows in a different direction than does the gravity flow stream. The water in the spring is approximately 6' deep, and the spring is lined with steel tractor rims.

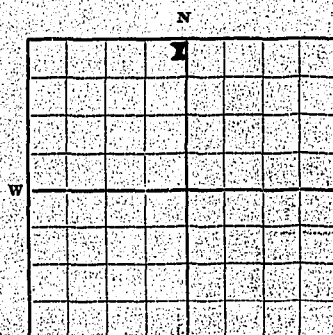
Quantity of water developed and used with explanation of method used to measure or estimate such amount. If use is intermittent estimate approximate lengths of periods of use. Sufficient

for watering from 80 to 100 head of cattle and

other livestock the year around.

NE 1/4 NW 1/4 Sec. 4 T. 11 N. R. 25

Indicate point of appropriation and place of use, if possible.



Signature of Owner M. G. Mang

Date December 30, 1963

This form to be prepared by contractor (if any), otherwise by the owner.

Three copies of this notice are to be filed with the County Clerk and Recorder of the county in which the works are 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 the Appropriator.

17794

169545

STATE OF MONTANA  
MUSSELSHELL COUNTY

FILED THIS 20 DAY OF

APRIL 1968

AT 11:00 O'CLOCK P.M.

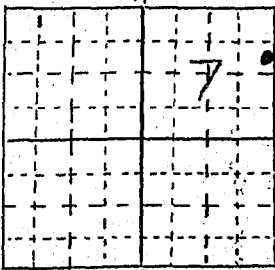
B. H. MATZKE

COUNTY RECORDER

*Francis L. Pearson*  
DEPUTY

State of Montana  
Administrator of groundwater Code  
Office of State EngineerDECLARATION OF VESTED GROUNDWATER RIGHTS  
(Under Chapter 237, Montana Session Laws, 1961)

1. Andrew Peterson....., of..... Grandview.....  
(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:



S.E. 1/4 Sec. 7, T. 11 N. R. 25 E.

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. Stock Water
3. Date or approximate date of earliest beneficial use; and how continuous the use has been 10-13-58 at all times
4. The amount of groundwater claimed (in miner's inches or gallons per minute). 10 gal. 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. Windmill and pump
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of ground water commenced 9-14-58 completed 10-6-58
8. The depth of water table 80 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. 170 ft. deep 6 inch casing
10. The estimated amount of groundwater withdrawn each year. 50,000 gal.
11. The log of formations encountered in the drilling of each well if available. gravel
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

Date

Andrew Peterson  
12/31/63



169731

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 31 DAY OF  
December A. D. 1963  
AT 3:40 O'CLOCK P M.

B. L. MATTHEWS

COUNTY RECORDER

Francis L. Dawson  
2<sup>nd</sup> DEPUTY

T. 11 R. 25 S. 8  
County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
AUG 7 1961

WATER WELL LOG

STATE ENGINEER


Owner M. C. Mang Address Roundup

Driller Address

Date Started June 1932 Date Completed June 1932

Location: Sec. 8 T. 11 R. 25 1/4 sec. S. 8-11-25

Type of well dug Equipment used Pick & shovel  
(Dug, driven, bored, or drilled) (Churn drill, rotary, other)

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. Ft. to ft.

Type of screen or perforations

Static Water level, for non-flowing well: 10 feet feet.

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

Pumping water level: 10 feet at 20 gal. per min.

How tested: Centrifugal Pump

Length of test: 29 years

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

(over)

[illegible]

From

To

### Description of Material Drilled

0

16

Gravel



OW 2

Approved Stock Form—State Publishing Co., Helena, Montana—39089

File No. ....

T. 11 N. R. 25 E.

DUPLICATE

County MusselshellSTATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER  
OFFICE OF STATE ENGINEER

OCT 8 1963

Top of Ground  
(Elev. above sea level. 3500)**Notice of Completion of Groundwater  
Appropriation by Means of Well**

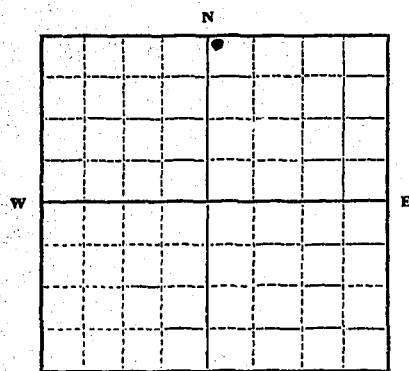
(Under Chapter 237, Montana Session Laws, 1961)

Owner Emil Zimmerman Address Roundup Mont.Driller Allen Scott Address DeceasedDate of Notice of Appropriation of Groundwater 1921Date well started 1919 Date Completed 1921Type of well Drilled Equipment Used Cable Tools  
(dug, driven, bored or drilled) (Churn, drill, rotary or other)Water Use: Domestic ☐ Municipal ☐ Other ☐ Irrigation ☐  
Industrial ☐ Drainage ☐ 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.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
	15 1/2"	1'-8"	600	NONE		
	12 1/2"	600	1250			
	8"	1250	2130			

← Water Sand



NW 1/4 Sec. 9 T. 11 N. R. 25 E.

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

← Water Sand

Show exact depth of bottom.

2130

Static Water Level for non-flowing Well Not Known feet.Shut-in Pressure for Flowing Well Not KnownPumping Water Level Not Known feet at \_\_\_\_\_ gal. per minute.Discharge in gal. per min. of flowing well 2 Gal. per min.How Tested Over Flow Pipe Length of Test 24 Hrs.

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).....

Not Known  
Driller's License NumberDeceased  
Driller's Signature

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 Montana Bureau of Mines and Geology and Quaduplicate for the Appropriator.

6254.

168684

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 10th DAY OF  
October A. D. 1963  
AT 1:40 O'CLOCK P.M.

B. H. MATZKE

COUNTY RECORDER

DEPUTY

\$2.00

FILED

RECEIVED

RECEIVED BY COUNTY RECORDER  
MUSSELSHELL COUNTY, MONTANA  
OCT 17 1963

RECEIVED BY COUNTY RECORDER  
MUSSELSHELL COUNTY, MONTANA  
OCT 17 1963

File No. ....

T. 11N. R. 25E 21

DUPLICATE

County MissoulaSTATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER  
OFFICE OF STATE ENGINEERRECEIVED  
APR 29 1965

Top of Ground

(Elev. above sea level 3250)

0-20 gravel  
20-40 shale  
40-50 Bentonite  
50-80 shale  
80-205 shale  
205-215 Bentonite  
215-260 shale  
260-270 Bentonite  
270-340 shale  
340-350 Bentonite  
350-480 shale  
470-480 Bentonite  
480-750 shale  
750-755 Bentonite  
755-1090 shale  
1090-1160 sandstone  
1160-1360 claystone  
1360-1460 upper catereck sandstone  
1460-1530 lower catereck sandstone  
1530-1560 Lakota  
1560-1635 Morrison sandstone

# Notice of Completion of Groundwater Appropriation by Meas

(Under Chapter 237, Montana Session Laws, 1961)

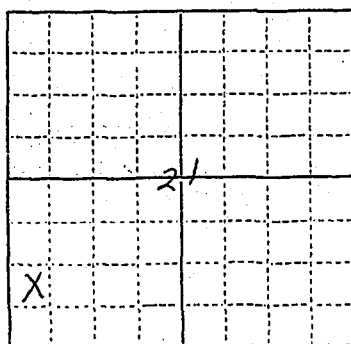
Owner U.S. Bureau of Land Management Address Lewistown, Mont.Driller Askin Drilling Co. Address Missoula, Mont.

Date of Notice of Appropriation of Groundwater .....

Date well started Oct 24 1964 Date Completed Dec 12 1964Type of well Water well Equipment Used Rotary  
(dug, driven, bored or (Churn, drill, rotary or  
drilled) other)Water Use: Domestic ☐ Municipal ☐ Other ☐ Irrigation ☐  
Industrial ☐ Drainage ☐ 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.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
5 1/2"	4" I.D.	30	1635	Slotted	1535	1635
10"	12 lb. pipe	0	30 ft			
	8" I.D.					
	32 lb. pipe					



SW 1/4, Sec. 21, T. 11N. R. 25E  
Indicate location of well and place of use, if possible. Each small square represents 10 acres.

Show exact depth of bottom.

1635 ft.Static Water Level for non-flowing Well 136 feet.

Shut-in Pressure for Flowing Well .....

Pumping Water Level 960 feet at 1.5 gal. per minute.

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

How Tested Bailer Length of Test 4 hrs

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) Cemented

from top of perforation with 50 sacks  
Cement

Driller's License Number 50Driller's Signature George F. Askin

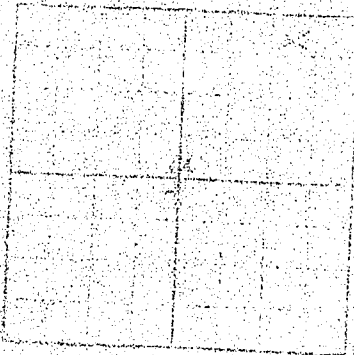
This form to be prepared by driller, and three copies to be filed by the owner with the County Clerk and Recorder in the county in which the well is located.

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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

39091

172397



STATE OF MONTANA,  
MUSSELSHELL COUNTY, } ss.

FILED THIS 28 DAY OF

April A. D. 1965

AT 8:37 O'CLOCK AM

CLAUDE F. FLETCHER

COUNTY RECORDER

Claine J. Brown  
DEPUTY

\$2.00

APR 28 1965  
MUSSELSHELL COUNTY  
RECORDED  
INDEXED  
FILED  
CLAUDE F. FLETCHER  
COUNTY RECORDER  
MUSSELSHELL, MONTANA

THIS DEED WAS RECORDED FOR THE PURPOSE OF  
PROTECTING THE INTERESTS OF THE PARTIES  
TO THE SAME AND IS NOT TO BE CONSIDERED  
AS A GUARANTEE OF THE ACCURACY OF THE  
DESCRIPTION THEREIN.

APR 28 1965  
MUSSELSHELL COUNTY  
RECORDED  
INDEXED  
FILED  
CLAUDE F. FLETCHER  
COUNTY RECORDER  
MUSSELSHELL, MONTANA

File No. \_\_\_\_\_

T. 11 N. R. 25

DUPLICATE

County Musselshell

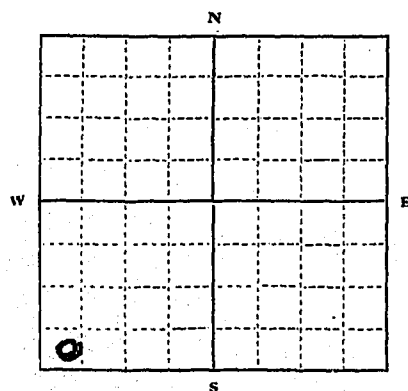
STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 2 1964  
STATE ENGINEER

## Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. Johnson Bros, of Roundup  
(Name of Appropriator) (Address) (Town)  
County of Musselshell State of MONT  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



SW 1/4 Sec. 25 T. 10. R. 25

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  
Stock Water
3. Date or approximate date of earliest beneficial use; and how continuous the use has been August 1961
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 5 gallons 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  
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  
Pump & Windmill
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater  
Completed 9 August 1961
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  
4 inch casing 90 ft. deep
10. The estimated amount of groundwater withdrawn each year 200 head
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  
None

Signature of Owner Johnson BrosDate 12-28-63

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.

17837

100

3-11-68

AT 2:50 O'CLOCK P.M.  
B. H. MATZKE  
COUNTY RECORDER  
Francis L. Plawson  
DEPUTY

Francis L. D.  
 COUNTY RECORDER  
 Francis L. D.  
 DEPUTY

DEPUTY

2. 2

1990

100

[illegible]

43

100

[illegible]

100

Wm. H. R. 2

WITNESSES: [Signature] & [Signature]

6-10-76 J. P. (J. P. 11)

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[illegible]

File No. ....

T. 11 N R. 25 25  
County Musselshell

DUPLICATE

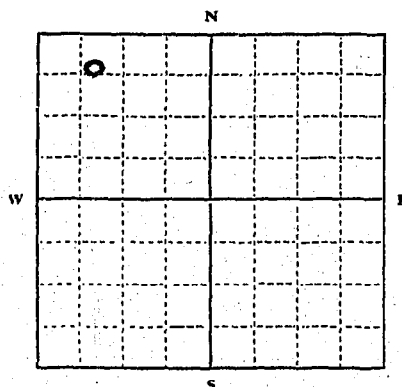
STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

## Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED  
JAN 2 1964

STATE ENGINEER

1. Johnson Bros, of Roundup  
(Name of Appropriator) (Address) (Town)  
County of Musselshell State of MONT  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

NW 1/4 NW Sec. 25 T. 11 N. R. 25

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.

STOCK WATER

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

MAY 19616 MONTH PER YEAR

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

58 P.M.

5. If used for irrigation, give the acreage and description of the lands to which 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

PUMP + ENGINE

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

4-11-61FINISHED 4-29-61

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.

deep.6 INCH STEEL CASING 275 ft

10. The estimated amount of groundwater withdrawn each year.

200 head

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

CLAY + SANDSTONE

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

Johnson Bros  
by Paul JohnsonDate 12-28-63

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 proprietor.

17836



D

169587

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 30 DAY OF

Dec

A. D. 1963

AT 3:25 O'CLOCK P. M.

B. H. MATZKE

COUNTY RECORDER

Francis L. Dawson  
DEPUTY

\$2.00

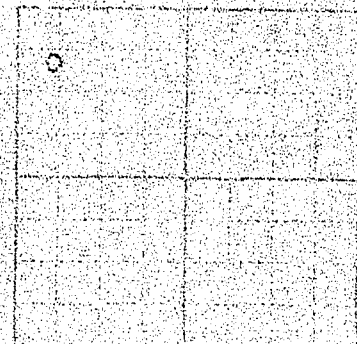
CLERK OF DISTRICT COURT

OFFICE OF COUNTY RECORDER  
MUSSELSHELL COUNTY, MONTANA

10-2-63

11-1-63

11-1-63



MON. MAR. 22 11 32

W. H. D. 11-1-63

11-1-63

11-1-63

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11-1-63

11-1-63

GW 3

Approved Stock Form—State Publishing Co., Helena, Montana—42199

File No. ....

T. 11 N. R. 25

DUPLICATE

County Musselshell

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 2 1964

STATE ENGINEER

Notice of Completion of Groundwater Appropriation  
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater NATURAL FLOWOwner JOHNSON BROS Address ROUNDUPContractor (if any) NONEAddress of Contractor NONE

Date Started \_\_\_\_\_ Date Completed \_\_\_\_\_

Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable.

NATURAL FLOW INTO BASIN

Quantity of water developed and used with explanation of method used to measure or estimate such amount. If use is intermittent

estimate approximate lengths of periods of use.

Approximately FOUR Gallons A  
Minute used INTERMITTENTLY 12 MONTH  
A YEAR

Signature of Owner

Johnson Bros.  
by Paul Johnson  
Date 12-22-63

This form to be prepared by contractor (if any), otherwise by the owner.

Three copies of this notice are to be filed with the County Clerk and Recorder of the county in which the works are 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.

17833

169584

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

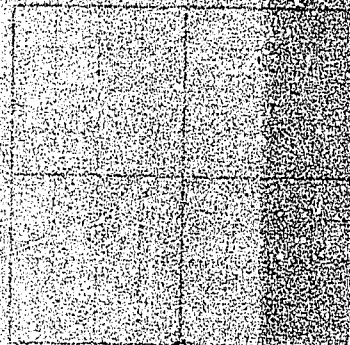
FILED THIS 30 DAY OF

Dec A.D. 1963  
AT 3:10 O'CLOCK PM.

B. H. MATZKE

COUNTY RECORDER

Frances L. Dawson  
DEPUTY



RECEIVED  
MUSSELSHELL COUNTY  
CLERK'S OFFICE  
MUSSELSHELL, MONTANA  
JAN 1 1964

NOTICE TO CREDITORS  
In and for the County of Musselshell, State of Montana, I, Frances L. Dawson, County Clerk, do hereby give notice that the estate of [Name], deceased, is being administered by the undersigned, and that all persons having claims against said estate are to present them to me within the time specified by law.

County Washington

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
DEC 28 1961

STATE ENGINEER

Water Well Log


Owner GRAVES LUNCH COMPANY Address BOZEMAN, MONTANA

Driller WILLIAM J. JONES Address 1012 1/2 N. 10th St. S.W.

Date Started 1961 Date Completed 1961

Location: Sec. 30 T. 44 R. 25  $\frac{1}{4}$  sec. 24 25 26

Type of well \_\_\_\_\_ Equipment used \_\_\_\_\_  
(Dug, driven, or drilled) (Chain, drill, rotary, other)

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. \_\_\_\_\_. Ft. \_\_\_\_\_ to ft. \_\_\_\_\_.

Type of screen or perforations \_\_\_\_\_

Static water level, for non-flowing well: \_\_\_\_\_ feet

Shut-in pressure, for flowing well:                      lb./sq. in. on:                       
 Flowing 3 gallons per minute on August 12, 1940 (date)

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)

This is an old test hole drilled in 1921 and no log is available.

The well had caved in at the 500 foot level and was cleaned out by the Wellman & Hanson Drilling Company in August of 1960. At that time 2 inch pipe was set at the 640 foot level. Total depth of the well is 830 feet. (over)

Form No. 18  
8-60

T. 12 N. R. 25 E.

County Lincoln

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

RECEIVED  
DEC 28 1961

STATE ENGINEER

Water Well Log

2			

Owner Graves Ranch Company Address Roundup, Montana

Driller Gordon Scammon Address Roundup, Montana

Date Started December 1957 Date Completed same

Location: Sec. 31 T. 12 R. 25  $\frac{1}{4}$  sec. NE

Type of well drilled Equipment used Churn  
(Dug, driven, or drilled) (Churn, drill, rotary, other)

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐  
Industrial ☐ Drainage ☐ Other ☐

Casing: 0 ft. to 40 ft. Type steel tubing Size 2 7/8"

Casing:  ft. to  ft. Type  Size

Casing:  ft. to  ft. Type  Size

Perforated or screened: Ft.  to ft. . Ft.  to ft.

Type of screen or perforations

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

Shut-in pressure, for flowing well:  lb./sq. in. on:  (date)  
Flowing 1 1/2 gallons per minute December 1957

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)

Casing was cemented in at 40' level

(over)

## Log of Well

[illegible]

GW 3

Approval Stock Form—State Publishing Co., Helena, Montana—4799

File No. ....

T. 11 N R. 25 E

DUPLICATE

County Musselshell

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 8 1964

# Notice of Completion of Groundwater Appropriation Without Well

STATE ENGINEER

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1963

Owner Johnson Bros Address Roundup

Contractor (if any) self

Address of Contractor \_\_\_\_\_

Date Started OCT 1963 Date Completed OCT 1963

Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable.

excavated to a depth of  
5 Feet with a Flow of water  
of 2 1/2 or 3 gallons a minute

Quantity of water developed and used with explanation of method used to measure or estimate such amount. If use is intermittent

estimate approximate lengths of periods of use

2 1/2 or 3 gallons a minute  
used intermittently 12 month  
a year.

Signature of Owner Johnson Bros by Paul Johnson

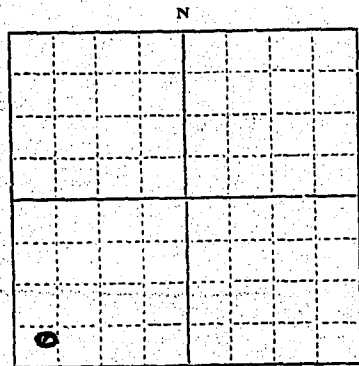
Date 12-22-63

This form to be prepared by contractor (if any), otherwise by the owner.

Three copies of this notice are to be filed with the County Clerk and Recorder of the county in which the works are 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.



SW 1/4 Sec. 33 T. 11 R. 25

Indicate point of appropriation and place of use, if possible.

17835



169586

STATE OF MONTANA,  
MUSSELSHELL COUNTY.

FILED THIS 30 DAY OF

Dec A. D. 19 63  
AT 3:20 O'CLOCK P.M.

B. H. MATZKE

COUNTY RECORDER

Frances L. Dawson

DEPUTY

\$2.00

EXAMINED TO STATE

FOR RETURNED TO STATE

FOR RETURNED TO STATE

FOR RETURNED TO STATE

FOR RETURNED TO STATE

FOR RETURNED TO STATE

FOR RETURNED TO STATE

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GW

Approved Stock Form—State Publishing Co., Helena, Montana—4192

File No. ....

T. 11 R. 25  
County. Musselshell

DUPLICATE

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

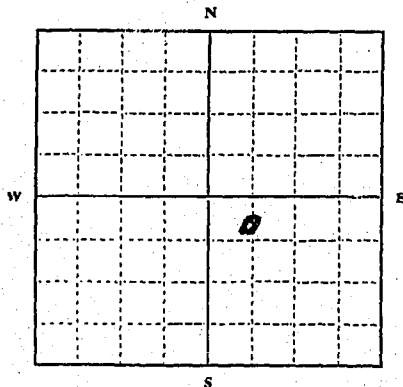
Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED  
JAN 2 1964

STATE ENGINEER

1. Johnson Bros, of Roundup  
(Name of Appropriator) (Address)  
County of Musselshell State of MONT  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



NW 1/4 Sec 36 T. 11 R. 25

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  
STOCK WATER

3. Date or approximate date of earliest beneficial use; and how continuous the use has been  
1953 (approx)

6 MATHS per year

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

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater  
1953

8. The depth of water table  
100 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 inch hole 200 ft. deep

10. The estimated amount of groundwater withdrawn each year  
200 head

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  
None

Signature of Owner. Johnson Bros.  
by Paul Johnson  
Date 12-28-63

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.

17832

MOUSSELESHIRE COUNTY  
 FILED THIS 30 DAY OF Dec  
 A. D. 1943  
 AT 3:05 O'CLOCK P M.  
 B. H. MATZKE  
 COUNTY RECORDER  
*Francis L. Lamm*  
 DEPUTY

FILED THIS 30 DAY OF

AT 3:05 O'CLOCK P M. Dec A D 19 43

B. H. MATZKE

**COUNTY RECORDER**

COUNTY RECORDER  
Francis L. Dawson  
DEPUTY

52 or

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

DEPU

100

**THE**

3

25

1950

*[Faint handwritten notes, possibly bleed-through from the reverse side.]*

1950年10月

1911-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-

100

[illegible]

APR 1964

Abstract: The authors have examined the effects of the addition of 10% by weight of polyethylene glycol (PEG) to the polyurethane (PU) prepolymer on the glass transition temperature ( $T_g$ ) and the mechanical properties of the PU-PEG copolymer. The  $T_g$  of the PU-PEG copolymer decreased with increasing PEG content. The mechanical properties of the PU-PEG copolymer were also affected by the PEG content. The PU-PEG copolymer with 10% PEG content showed the best mechanical properties.

## GROUNDWATER INDEX

Page 1 of 1

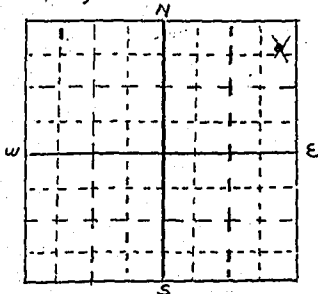
County. Muskegon Twp. 11N Rge. 26E

[illegible]

State of Montana  
Administrator of groundwater Code  
Office of State Engineer

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

1. Harold O. Eliasson....., of 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.....  
Livestock.....Ranch Headquarters.

3. Date or approximate date of earliest beneficial use; and how  
continuous the use has been 1956.....

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

NE 1/4 Sec 2 T. 11. R. 26.5. If used for irrigation, give the acreage and description of the  
lands to which water has been applied and name of the owner  
thereof.....Garden and yard.....

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

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 ground water 1956 completion of well and  
pumping unit.....

8. The depth of water table 410 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.....  
Electric pump, 250 feet pipe cased completely.....

10. The estimated amount of groundwater withdrawn each year 200,000.....

11. The log of formations encountered in the drilling of each well if available.....  
clay, sandstone, eagle sand.....

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 Harold Eliasson

Date Dec. 30 1963

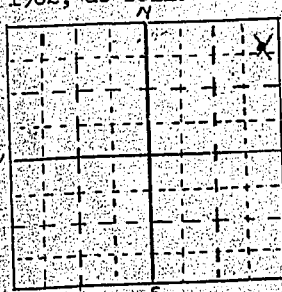


T...N...E...2  
 T...H...R...26...  
 County Musselshell...

State of Montana  
 Administrator of groundwater Code  
 Office of State Engineer

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

1. Harold O. Eliasson....., of 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:



NE 1/4 Sec 2 T. 11. R. 26  
 Indicate point of appropri-  
 ation and place of use, if  
 possible. Each small square  
 represents 10 acres.

2. The beneficial use on which the claim is based.....  
Livestock.....Ranch..Headquarters.
3. Date or approximate date of earliest beneficial use; and how  
 continuous the use has been 1956.....
4. The amount of groundwater claimed (in miner's inches or gallons  
 per minute) 12 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 Garden and yard.....
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 ground water 1956...completion of well and  
pumping unit.....
8. The depth of water table 410 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.....  
Electric pump...250 feet pipe cased completely.....
10. The estimated amount of groundwater withdrawn each year 200,000.....
11. The log of formations encountered in the drilling of each well if available.....  
clay...sandstone...sage sand.....
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 Harold O. Eliasson  
 Date Dec. 30...1963

169642

STATE OF MONTANA, } ss.  
MUSSELSHELL COUNTY }

FILED THIS 31 DAY OF

December A. D. 1963

AT 11:32 O'CLOCK AM

B. H. MATTHEW

COUNTY RECORDER

Francis L. Dawson  
DEPUTY

2<sup>00</sup>



GW3

File No. ....

DUPLICATE

T. 11 N. R. 26

County Mussellshell

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 3 1964

STATE ENGINEER

**Notice of Completion of Groundwater Appropriation Without Well**

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater Nov 6 1890

Owner Andrew Hershey

Address Roundup Mont

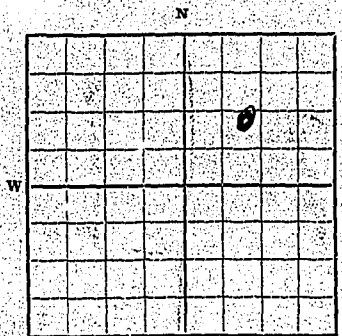
Contractor (if any) .....

Address of Contractor .....

Date Started Aug 10, 1890

Date Completed Nov 1, 1890

Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable. 6 ft to water dug out so it runs out



NE 1/4 Sec 3 T11 R26

Indicate point of appropriation and place of use, if possible.

Quantity of water developed and used with explanation of method used to measure or estimate such amount. If use is intermittent estimate approximate lengths of periods of use

used for stock water  
6 mo to 8 mo of the year  
500 gal to 800 gal per day

Signature of Owner Andrew Hershey

Date Dec 30<sup>th</sup> 1963

This form to be prepared by contractor (if any), otherwise by the owner.

Three copies of this notice are to be filed with the County Clerk and Recorder of the county in which the works are 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 the Appropriator.

20576

169732

STATE OF MONTANA  
MUSKIEE COUNTY

THE 31 DAY OF

*December* 19*23*

AT 3:42 O'CLOCK P.M.

B. E. MATZKE

COUNTY RECORDER

*Thomas A. Dwyer*

GW 4

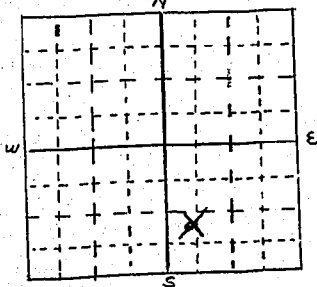
State of Montana  
Administrator of groundwater Code  
Office of State Engineer

T...11...R...26...  
County Musselshell...

RECEIVED  
JAN 3 1964

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

1. Harold D. Eliasson, of 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. Live stock water well.....
3. Date or approximate date of earliest beneficial use; and how continuous the use has been 1950.....
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 6.9244225 P.M.P. 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.....  
ELECTRIC PUMP JACK.....
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of ground water 1950.....
8. The depth of water table 120 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 150,000.....
11. The log of formations encountered in the drilling of each well if available SAND.....  
SAND STONE CLAY SAND.....
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 Harold D. Eliasson  
Date Dec 30, 1963