

STATE OF MONTANA, } ss. 286576
County of Richland,

Filed this 31 day of
December A.D. 1963
at 11:46 o'clock A.M.

E. B. Rooken
County Recorder
E. Rooken
Deputy

fee 8.20
filed

File No.

STATE WATER CONSERVATION BOARD

T. 21 N. R. 57 E. 30

DUPLICATE

NOV 15 1966

County. Richland

LOG

Blk. _____ McDermott _____ STATE OF MONTANA
 Butzard _____ McKee _____ ADMINISTRATOR OF GROUNDWATER CODE
 Coyle _____ Norton _____ OFFICE OF STATE ENGINEER
 Darlington _____ Sullivan _____

Top of Ground

(Elev. above sea level 19 1966)

Notice of Completion of Groundwater Appropriation by Means of Well

DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

Owner James Boyer Address Edinburg Mont.Driller Francis Boyer Address Edinburg Mont.

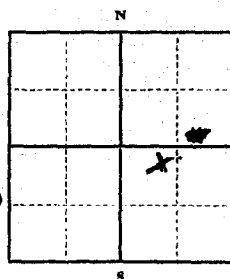
Date of Notice of appropriation of groundwater _____

Date well started Aug. 1, 1966 Date completed Aug. 10, 1966Type of well Drilled Equipment used Rotary
(Dug, Driven, bored or drilled) (Churn drill, rotary or other)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.

0. 30 toxic yellow clay
 30 40 coal
 40 76 gray clay
 76 77 coal
 77 165 gray shale
 165 190 sandstone
 190 226 shale
 226 230 coal
 230 264 gray shale
 264 269 coal
 269 287 gray shale
 287 288 rock
 288 297 gray shale
 297 300 rock
 300 332 crumbly gray shale
 332 336 coal
 336 380 shale
 380 405 sandstone (300 P.M.)
 405 489 hard gray shale
 489 495 coal
 495 502 hard gray shale
 502 506 coal
 506 560 gray shale
 560 574 hard rock
 574 589 hard brown shale
 589 595 coal
 595 720 hard gray shale
 720 741 sandstone 2 1/2 p.s.
 741 745 coal
 745 775 hard gray shale
 775 777 rock
 777 789 rock
 789 798 sandstone
 798 830 firm gray shale

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
	4.75" O.D. 10" I.D.	0	36			
	1 1/2" hole casing	0	830	1" 1/2" 2"	720	740
				"	777	797



Static Water Level for non-flowing well _____ feet.

Shut-in Pressure for Flowing Well 21 1/2 lb

Pumping Water Level _____ feet

at _____ gal. per minute.

Discharge in gal. per min. of flowing well

5 1/2 gallons

How Tested _____

Length of Test _____

Remarks: (Gravel packing, cementing, pack-

ers, type of shutoff) top casing is10 ft long 3 1/2" O.D. at 740 to 720 2 1/2" yellow shaleit has 2 packers at 7773 to 8 1/2 gallons per min.

(Continue on reverse side)

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).

Show exact depth of bottom.

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.

Driller's License Number

Driller's Signature

41,603

STATE OF MONTANA, } ss. 299430
County of Richland,

Filed this 14th day of

Nov. A. D. 1966

at 1:25 clock, P. M.

Helen Linker
County Recorder

R. Sundheim
Deputy

fee: 2.00

filed

File No.

T. 21 N. R. 58 E.

DUPLICATE

County RICHLAND

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater... 1904Owner Arthur W. Bouchard Address Lambert MontContractor (if any) Bert Fuller (deceased)Address of Contractor Lambert MontDate Started 6-1-04 Date Completed 8-1-04

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

TRENCHING, WHEN WATER WAS USEDFOR HOUSE USE CURB ANDPIPE WERE ALSO USED

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

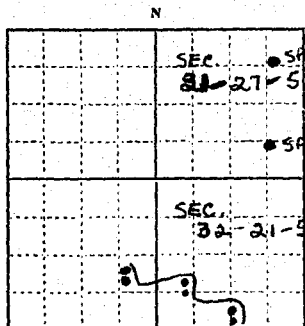
estimate approximate lengths of periods of use. WATER ISUSED YEAR ROUND FOR LIVESTOCKEACH SPRING FLOWS AT LEAST5 GALLONS PER MINUTE, THOUGHSOME OF THIS MERELY RUNS OFFOR SOAKS AWAY.Signature of Owner. Arthur W. BouchardDate 12-31-63

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.



SEC. 21-27-57

SE 1/4 SW 1/4 Sec. 32 T. 21 R. 58 E.
Indicate point of appropriation
and place of use, if possible.

29654

STATE OF MONTANA, } - 286360
County of Richland,

Filed this 31 day of

December A.D. 1963

at 9:20 P.M.

E. L. Keaton

County Clerk

E. L. Keaton

Deputy

for \$200
filed

GROUNDWATER INDEX

Page 1 of 9

County Richland Twp. 21 N Rge. 59 E

[illegible]

File No.

T. 21 N 59 E

DUPLICATE

County Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1919Owner Russell A. Munn Address SidneyContractor (if any) noneAddress of Contractor noneDate Started _____ Date Completed 1959Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable. Natural springComes out of side hills, trenches
gravel filled and piped to
tanks below

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

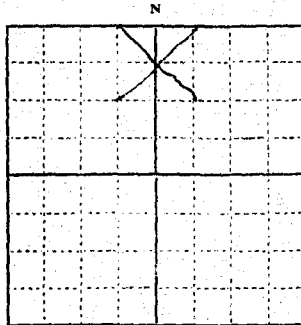
1 1/2 gallon per minute
used 9 months of the yearSignature of Owner Russell A. MunnDate Dec. 31, 1963

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



NE 1/4 Sec. 1 T. 21 N. R. 59 E

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

29960

STATE OF MONTANA, ss: 286666

County of Richland,

Filed on 31 day of

December 1963

at 2:36 o'clock P.M.

E. L. Perkins

County Recorder

per 200

Deputy

filed

File No.

DUPLICATE

T. 21 N 59 R
County RichlandSTATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

STATE ENGINEER

Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1963
Owner Russell G. Mercer Sidney, Mont Address
Contractor (if any) none
Address of Contractor none
Date Started Date CompletedDescribe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable. natural spring developed & piped into tank 3/4 gallon per minute, comes out of side hill

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. piped into tank, used 9 months of the year, about 3/4 gallon per minuteSignature of Owner Russell G. Mercer
Date Dec 31, 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

STATE OF MONTANA, } ss. 286667
County of Richland,

Filed this 31 day of
December A.D. 1963.

at 2:27 o'clock P.M.

E. J. Leeper
County Recorder
Heber Shurbe
Deputy

fee 2.00
filed

GW 3

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

File No.

T. 21 N. R. 59 E.

DUPLICATE

County Richmond

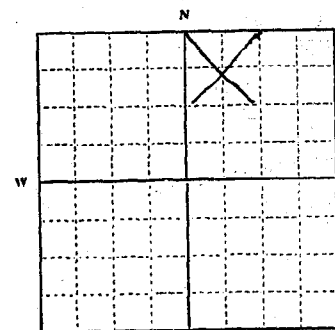
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

STATE ENGINEER

Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1919Owner Russell H. Meren Address SidneyContractor (if any) NoneAddress of Contractor NoneDate 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 springin bottom of draw or creek

N 1/4 Sec. 1 T. 21 R. 59
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

About 1 1/2 gallons per minute
used 9 months of the year
Not developed

Signature of Owner Russell H. MerenDate Dec. 31, 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

29962

STATE OF MONTANA, } ss. 286668
County of Richland,

Filed this 31 day of
December A.D. 1963
at 7:30 o'clock P.M.

G. L. Zaehner
County Recorder
Helen Luerke
Deputy

See 20
Filed

File No.

DUPLICATE

T. 21st R. 59thCounty Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

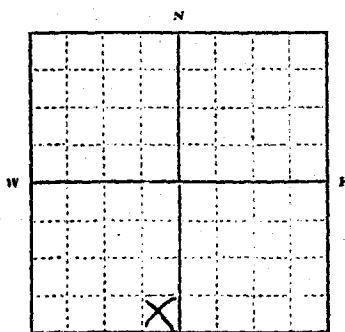
Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater Aug. 18, 1918Owner Russell G. MercerAddress Sidney, Mont.Contractor (if any) noneAddress of Contractor noneDate 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 spring

comes to the surface



5th Sec 2 T 21 R 59
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

about 1 gallon per minute -
used about 9 months of the
year - especially summer
months

Signature of Owner Russell G. MercerDate Dec. 31, 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

27763

STATE OF MONTANA, No. 286669
County of Richland,

Filed this 31 day of
December A.D. 1963
at 2:39 o'clock P.M.

E. L. Hansen
County Recorder
Helen Stuebe
Deputy

for \$2.00
filed

File No. SW 2

STATE WATER CONSERVATION BOARD

News, Malta

JUL 8 1966

T. 21N R. 59E 2

DUPLICATE

Top of Ground

(Elev. above sea level)

Driller: McDermott
 Subdriller: McNulty
 County: Richland
 State: STATE OF MONTANA
 Department: ADMINISTRATOR OF GROUNDWATER CODE
 Office: OFFICE OF STATE ENGINEER

Notice of Completion of Groundwater Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

0-12 sand
 12-42 grey shale
 42-46 grey-brown shale
 46-48 grey shale
 48-59 grey shaly sand coal
 59-60 coal
 60-66 grey shaly sand coal
 66-68 grey shale
 68-76 grey shaly sand coal
 76-103 grey shale
 103-105 grey sandy shale
 105-130 grey shale
 130-136 grey sandy shale
 136-138 grey brown sandy shale
 138-137 grey shaly sand
 137-172 sand stone
 172-180 grey shaly sand

Owner: Russell Mercer Address: Sidney, Montana
 Driller: Dave Gulbran Address: Sidney, Montana

Date of Notice of appropriation of ground water

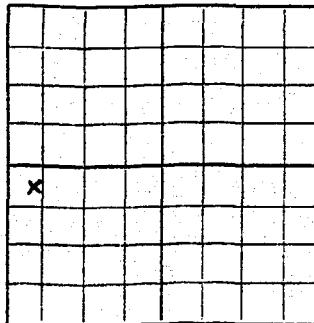
Date well started 7/2/66 Date Completed 7/5/66

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

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.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
4"	4" - 9"	0	167'			
	open hole	167'	180'			



SW 1/4 Sec 2 T. 21 N. R. 59 E

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

Static Water Level for non-flowing well 156 feet.

Shut-in Pressure for Flowing Well

Pumping Water Level 165 feetat 7 gal. per minute.

Discharge in gal. per min. of flowing well

How Tested

Length of Test

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)

Driller's License Number

Dave Gulbran
 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 School of Mines and Quadruplicate for Appropriator.

File No. SW 2

STATE WATER CONSERVATION BOARD

JUL 8 1966

T. 21N R. 57E 2

Nowa, Malta

DUPLICATE

Top of Ground

(Elev. above sea level)

Owner McDermott County Richland
 Driller McNulty STATE OF MONTANA
 Sec. 21 ADMINISTRATOR OF GROUNDWATER CODE
 Dept. 21 OFFICE OF STATE ENGINEER
 District 21

Notice of Completion of Groundwater Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

0-12 sand
 12-42 grey shale
 42-48 grey-brown shale
 48-50 grey shale
 50-52 grey shaly sand coal
 52-55 coal
 55-58 grey shaly sand coal
 58-62 grey shale
 62-72 grey shaly sand coal
 72-75 grey shale
 75-85 grey sandy shale
 85-90 grey shale
 90-100 grey sandy shale
 100-105 grey brown sandy shale
 105-107 grey shaly sand
 107-112 sand stone
 112-120 grey shaly sand

Owner Russell Herzer Address Sidney, Montana
 Driller Dave Gulbraa Address Sidney, Montana

Date of Notice of appropriation of ground water

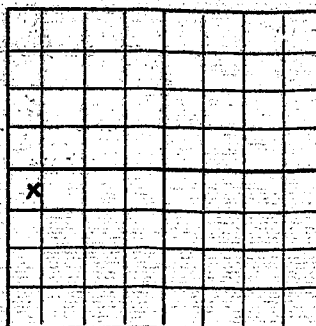
Date well started 7/2/66 Date Completed 7/5/66

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

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.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
4"	4" - 9#	0	167'			
	open hole	167'	180'			



SW 1/4 Sec. 2 T. 21 R. 59
 Indicate location of well and place of use, if possible. Each small square represents 10 acres.

Static Water Level for non-flowing well 158 feet

Shut-in Pressure for Flowing Well

Pumping Water Level 163 feetat 7 gal. per minute

Discharge in gal. per min. of flowing well

How Tested

Length of Test

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)

34

Driller's License Number

Dave Gulbraa
 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 School of Mines and Quadruplicate for Appropriator.

41214

298381

298381

STATE OF MONTANA, } 298381
County of Richland,

Filed this 7th day of
July A. D. 1966.
at 2:38 o'clock P. M.

Walter Lierke
County Recorder
E. Hardy

Fee: 2.00
filed

File No.

DUPLICATE

 2211 R 59 E
 RICHLAND
 County

 STATE OF MONTANA
 ADMINISTRATOR OF GROUNDWATER
 OFFICE OF STATE ENGINEER

 RECEIVED
 SEP 25 1963
 STATE ENGINEER

 0 Top of Ground
 15 clay (Elev. above sea level 1980)
 15
 31 sand & clay
 31
 40 fine gravel
 40
 45 gray clay

Notice of Completion of Groundwater Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

Owner Levi Albert Address Sidney Mont.Driller Francis Boyce Address Sidney Mont.

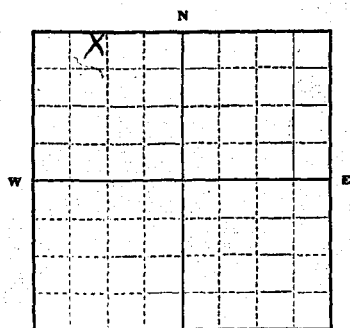
Date of Notice of Appropriation of Groundwater.....

Date well started Sept. 16 1963 Date Completed Sept. 17 1963
 Type of well Drilled 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)
4 1/2"	4" ID II lbs	0	40	torch cuts	33	4



N 1/4 Sec. 4 T21 R. 59

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

Show exact depth of bottom.

40

Static Water Level for non-flowing Well.....26.....feet.

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

Pumping Water Level.....29.....feet at 12.....gal. per minute.

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

How Tested tailer Length of Test 2 Hours
 Remarks: (Gravel packing, cementing, packers, type of shutoff, loca-
 tion 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).....

Driller's License Number

Francis Boyce
 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 Quadruplicate for the Appropriator.

6647

STATE OF MONTANA, } ss. 985001
County of Richland,

Filed this 24 day of

Oct. A. D. 19 63
at 1:30 o'clock, P. M.

E. L. Kooker
County Recorder
H. Atchison
Deputy

fee: \$2.00
filed

File No. _____

T. 21^N R. 59^E

DUPLICATE

County _____

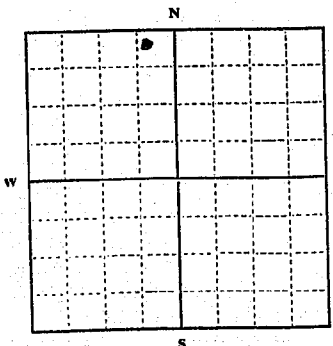
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

B
JAN 20 1964

Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. Richard D. Blackwood, of SKAAR Rte Sidney
(Name of Appropriator) (Address) (Town)
County of Richland State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



N.E. 1/4 Sec. 5 T. 21 R. 59

Indicates 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 Approx 1940 To Date
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 1 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 Pump Jack
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater 1940 Approx
8. The depth of water table 60 ft. approx
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 60 ft
10. The estimated amount of groundwater withdrawn each year 100,000 GAL
11. The log of formations encountered in the drilling of each well if available NONE 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 AVAILABLE

Signature of Owner

Date 12-31-63

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

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

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

29867

286574

STATE OF MONTANA, } ss.
County of Richland, }

Filed this 31 day of

December A. D. 19 63

at 12:54 o'clock, P. M.

E. L. Kooker
County Recorder

E. Cook
Deputy

fee \$2.00
filed

File No. _____

T. 21 R. 39 E.

DUPLICATE

County Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

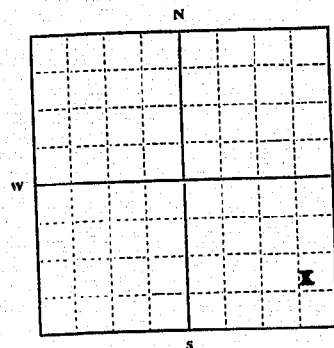
D
R

JAN 10 1964

Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. Lee J. McGinnis, of Stear Route, Sidney,
(Name of Appropriator) (Address) (Town)
County of Richland State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



Lot 10
1/4 Sec 6 T. 21 R. 39

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
Stockwater
3. Date or approximate date of earliest beneficial use; and how continuous the use has been About 1946 and has been in use ever since.
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 10 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
electric motor
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater: About 1946
8. The depth of water table about 80 feet deep
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
steel casing about 4 inch
10. The estimated amount of groundwater withdrawn each year unknown
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 Owner

Lee J. McGinnisDate 12-31-63

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

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

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

30143

286905

STATE OF MONTANA, }
County of Richland, }

Filed this 3 day of
January A. D. 19 64
at 3:43 o'clock, P.M.
E. L. Kasker
County Recorder
E. L. Kasker
Deputy

Fee \$2.00
filed

GW -

File No.

DUPLICATE

T. 21 N. R. 59 E.

County Richland

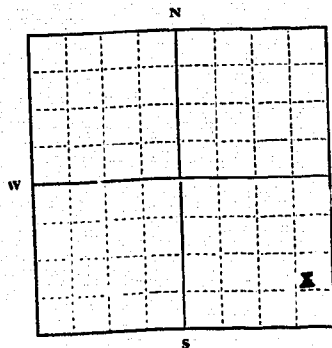
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. Lee J. McGinnis, of Shaw Bldg. Sidney, Montana
(Name of Appropriator) (Address) (Town)
County of Richland State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



Let 10
1/4 Sec. 6 T. 21 R. 59

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 About 1953 and has been in use ever since
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 10 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
electric motor

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater About 1953
8. The depth of water table 80 feet deep
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
steel casing about 4 inch
10. The estimated amount of groundwater withdrawn each year unknown
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 Owner

Date 12-31-63

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

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

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

30144

286906

STATE OF MONTANA,
County of Richland, 1st

Filed this.....3..... day of
January A. D. 19*64*
at.....3:44..... o'clock, P. M.
.....*E. L. Kerk*.....
County Recorder
.....*E. L. Kerk*.....
Deputy

fee \$200
filed

File No.

DUPLICATE

T. 21 N. R. 59 E.
County RichlandSTATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER JUL 15 1963Notice of Completion of STATE ENGINEER
Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

Owner Walter Huphill Address Cody, Wyo.Driller Francis Boyce Address Helena, Mont.

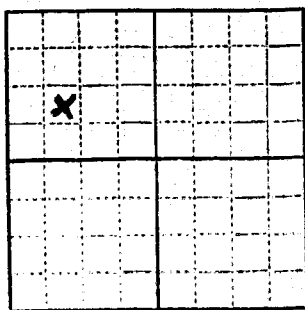
Date of Notice of Appropriation of Groundwater

Date well started Feb 1, 1963 Date Completed Feb 16, 1963Type of well drilled 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.

Top of Ground
0 22 sandy clay fill 960
22 63 sandy fine gravel fill
63 83 gray clay
83 96 coal
96 135 gray soft clay
135 169 gray shale
169 179 rock firm
179 180 soft rock
180 181 hard rock
181 216 gray shale
216 224 soft rock
224 257 firm shale
257 261 coal
261 277 shale
277 280 rock
280 305 hard shale
305 319 sandstone 1 1/2 yellow
319 410 shale top of rock
410 441 hard shale
441 471 sandstone water strata 4" 10 1/2 ft.
4 gallons per minute
471 480 shale 3 1/2"

Kind Size	From (Feet)	To (Feet)	PERFORATIONS		
			Kind Size	From (Feet)	To (Feet)
	0	69			
	0	480	1/2 x 2"	440	480



1/4 Sec. 7 T. 21 N. R. 59 E.
Indicate location of well and
place of use, if possible. Each
small square represents 10 acres.

Show exact depth of bottom.
471 ft bottom of water strata

Static Water Level for non-flowing Well feet.

Shut-in Pressure for Flowing Well 20 lbs Feb 16, 1963

Pumping Water Level feet at gal. per minute.

Discharge in gal. per min. of flowing well 4 gallons

How Tested Length of Test

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)

93
Driller's License NumberFrancis Boyce
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 Quadruplicate for the Appropriator.

STATE OF MONTANA,
County of Richland,

283572

Filed this 12 day of

July A. D. 1963
at 9 o'clock, P.M.

E. L. Hooden

County Recorder

D. Sullivan

Deputy

per: 4200
filed

Q.

Approved Stock Form—State Publishing Co., Helena, Montana—42234

File No.

T. 21 N. R. 39 E.

DUPLICATE

County Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

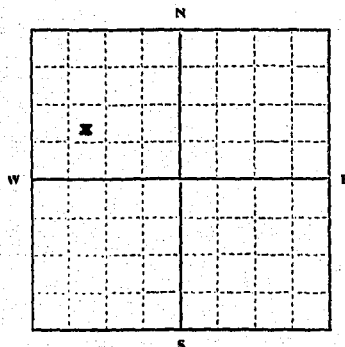
Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

WITHOUT WELL

1. Lee J. McGinnis (Name of Appropriator), of Shawnee, Sidney, Montana (Address) (Town)

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



Lot 4
1/4 Sec. 7 T21 R. 39

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. Stockwater

3. Date or approximate date of earliest beneficial use; and how continuous the use has been. About 1953—been in use ever since.

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

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

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

8. The depth of water table. 490 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. from 4 inch to 1 1/2 inch steel casing

10. The estimated amount of groundwater withdrawn each year. unknown

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 Owner Lee J. McGinnis

Date. 12-31-63

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

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

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

30142

286904

STATE OF MONTANA, } ss.
County of Richland,

Filed this 3 day of
January A. D. 19 64
at 3:42 o'clock, P. M.
E. L. Kooker
County Recorder
E. L. Kooker
Deputy

See 8220
filed

File No.

MONTANA WATER RESOURCES BOARD

T. 21N R. 59E

DUPLICATE

RECEIVED

County Richland

LOG

STATE OF MONTANA

ADMINISTRATOR OF GROUNDWATER CODE

OFFICE OF STATE ENGINEER

Notice of Completion of Groundwater Appropriation by Means of Well

DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

Owner: E. A. Mac Gady Address Sidney, Mont.Driller: Francis Boyce Address Sidney, Mont.

Date of Notice of appropriation of groundwater.....

Date well started Apr. 5, 1968 Date completed Apr. 16, 1968Type of well drilled Equipment used Rotary
(Dug, driven, bored or drilled) (Churn drill, rotary or other)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.

Top of Ground		0 = 12 top suit to sandy clay		Note	
12-28	(Elev. above sea level)	Sand, silt and gravel			
26-34		gray clay			
34-36		rock			
36-44		light gray clay		Owner: E.	
44-69		rock		Driller: J.	
69-158		firm gray shale & thin layers		Date of Note	
158-173		coal		Date well started	
173-200		hard shale		Type of well	
200-235		light gray shale		shale (D)	
235-239		coal		Water use:	
239-307		layers of light & dark		Indicate	
307-311		coal		met with in	
311-337		sandy shale		depth at which	
337-339		coal		strata and hor	
339-404		firm gray shale		Size of	
404-407		Coal		Drilled	
407-500		Soft gray shale & thin layers		Hole	
500-642		hard gray shale		8 in. dia.	
642-643		rock		3 gal. Per Min.	
643-742		hard gray shale			
742-743		hard rock			
743-847		hard gray & brown shale			
847-850		rock			
850-880		Med. hard gray shale			
880-883		rock			
883-1037		hard gray shale some brown to black "			
1037-1042		hard rock			
1042-1158		hard form shale			
1158-1159		rock			
1159-1240		hard gray shale			
1240-270		Sandstone			
Artesian strata		20 gal. Per Min.			

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
layers to sand per min				1 1/4" x 2" torch state	1540	1270

Static Water Level for non-flowing wellfeet.

Shut-in Pressure for Flowing Well 52.....feet.Pumping Water Level.....feet
at.....gal. per minute.Discharge in gal. per min. of flowing well
20 gal. per min.

How Tested.....

Length of Test.....

Remarks: (Gravel packing, cementing, packers, type of shutoff) This well hasa 16ft 3" OD steel packerset from 1224 to 1270 ft.200 ft of 2" plasticprotective casing will also be 14 gal.casing. (Continue on reverse side)

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).

Show exact depth of bottom.

1270

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.

Driller's License Number

Driller's Signature.

44, 112

305022
STATE OF MONTANA, }
County of Richland, } ss.

Filed this 7 day of
May A. D. 1968
at 10:40 o'clock 2 M.

Helen Lierke
County Recorder
Lisa Stanford
Deputy

200

filed

File No. _____

DUPLICATE

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

T. 21 N. R. 59 E.

County Billings

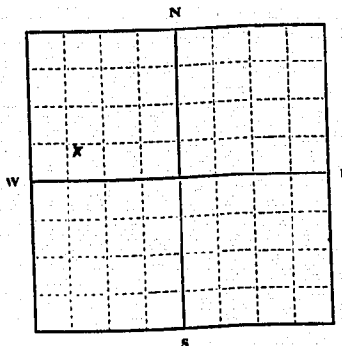
JAN 10 1964

Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. E. P. MacErdy, of Skew Rats Sutney
(Name of Appropriator) (Address) (Town)

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



N. 1/4 Sec. 8 T. 21 R. 59

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 Household
and stockwater

3. Date or approximate date of earliest beneficial use; and how continu-
ous the use has been November 1935
used continuously

4. The amount of groundwater claimed (in miner's inches or gallons
per minute) 9 gal. per minute

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

6. The means of withdrawing such water from the ground and the loca-
tion 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 with-
drawal of groundwater November 1935

8. The depth of water table 171 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 with 2 1/2 inch casing

10. The estimated amount of groundwater withdrawn each year No record kept

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

I have no information on the formations in drilling
this well

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 E. P. MacErdy

Date December 26, 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 Quaduplicate for the Appropriator.

29388

STATE OF MONTANA, } ss. 286059
County of Richland,

Filed this 27 day of
December A. D. 1963.

at 1:02 o'clock, P. M.

E. L. Koshes
County Recorder

E. L. Koshes
Deputy

fee \$20.00
filed

File No.

T. 21 N. R. 59 E.

DUPLICATE

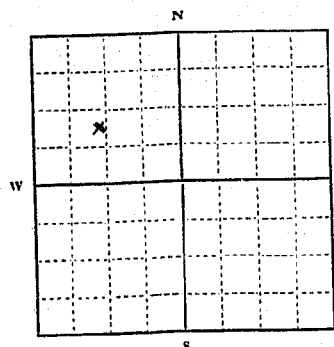
County Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1935Owner E. P. Mac Grady Address Shaw Route Sidney, MontanaContractor (if any) NoneAddress of Contractor NoneDate Started Not Known 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 flowN. W $\frac{1}{4}$ Sec. 8 T. 21 R. 59

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.

Natural flow - use occasionally for stock water - no record kept of amount usedSignature of Owner E. P. Mac GradyDate December 26, 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

286062

STATE OF MONTANA, } ss. 286062
County of Richland,

Filed this 27 day of
December A. D. 1963

at 1:05 o'clock P. M.
E. R. Kosken
County Recorder
E. R. Kosken
Deputy

fee \$2.00
filed

File No.

T. 21N R. 59E

DUPLICATE

County Richland

LOG

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEERNotice of Completion of Groundwater
Appropriation by Means of Well

DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

Owner Dr. N J Hastetter Address Circle Mont.Driller Francis Boyce Address Sidney Mont.Date of Notice of appropriation of groundwater 12-20-69Date well started Feb. 24 1970 Date completed Mar. 9 1970Type of well drilled Equipment used rotary
(Dug, driven, bored or drilled) (Churn drill, rotary or other)Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐
Industrial ☐ Drainage ☐ Other ☐

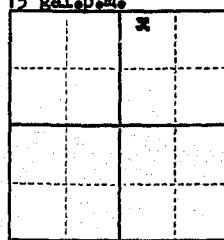
Indicate on the diagram the character and thickness of the different strata met with in drilling, such as soil, clay, shale, gravel, rock or sand, etc. Show depth at which water is encountered, thickness and character of water-bearing strata and height to which the water rises in the well.

0	(Elev. shows sea level 20.5 app.)
18	yellow clay
30	hard sandstone
48	gray clay
53	coal
103	gray shale
164	hard sandstone
182	gray shale
197	hard sandstone
211	firm shale
227	coal
231	gray shale
243	coal
298	gray shale
303	coal
376	gray shale
381	rock
406	gray shale
413	rock
504	firm gray shale
535	gray shale thin layers
583	gray shale sandstone
633	layers shale & driftsand
635	rock
704	hard gray shale
705	rock
829	hard gray shale
830	rock
910	gray shale
915	sandstone artisan 1/2 gal. p.m.
1160	hard gray shale
1161	rock
1215	hard gray shale
1253	medium hard gray shale
1278	sandstone artisan strata 15 gal. p.m.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS	Kind Size	From (Feet)	To (Feet)
5"	1 1/4" d. 11 lbs. p.f.	0	43	torch slots	3"		
3 1/2"	1 1/2" galv.	0	1278		3"	1250	1278

Doc. No. 314279

Filed for record

this 30 day of MarchA. D. 19 70 at 8:53o'clock 9 A. M.

Static Water Level for non-flowing well

feet

Shut-in Pressure for Flowing Well 56 lbs.

Pumping Water Level _____ feet

at _____ gal. per minute.

Discharge in gal. per min. of flowing well 15 gal.

How Tested _____

Length of Test _____

Remarks: (Gravel packing, cementing, packers, type of shutoff) 10' ft. steel packer set at 1240 ft. to 1250 ft. cement back to top

(Continue on reverse side)

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).

Show exact depth of bottom.

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.

no. 92

Driller's License Number

Driller's Signature Francis Boyce

46283

MONTANA WATER RESOURCES BOARD
RECEIVED

MAR 31 1970

STATE OF MONTANA, } ss. 314279
County of Richland,

Filed this 30 day of

March A.D. 1970

at 8:53 P.M.

Helga Lierke
County Recorder

Lisa Olson

200
filed

File No.

T. 21N R. 59E

DUPLICATE

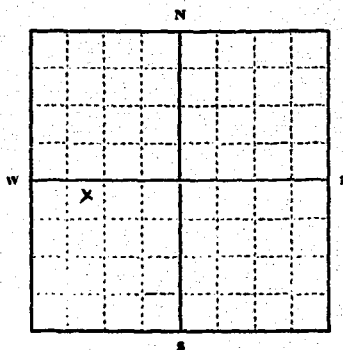
County Richland

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. P. MacTrady, of Skew Lake Sibney
(Name of Appropriator) (Address) (Town)
County of Richland State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



S. 1/4 Sec. 10, T. 21, R. 59

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.

Stockwater

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

1957
Part time

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

6 gals 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

Electric motor and pump jack

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

1957

8. The depth of water table

60 feet

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

Electric motor with pump jack and 3 inch casing

10. The estimated amount of groundwater withdrawn each year

No record kept

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

No record of formations in drilling well

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

E. P. MacTradyDate December 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.

29389

STATE OF MONTANA, } ss. 21666
County of Richland,

Filed this 27 day of
December A. D. 1963
at 1:04 o'clock, P.M.

C. R. Hooker
County Recorder

C. Hook
Deputy

fee \$200
filed

File No.

T. 31 N. 59 E.

DUPLICATE

County Ridgely

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

STATE ENGINEER

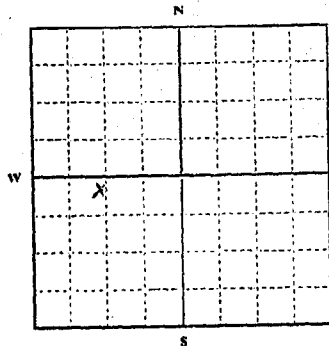
**Notice of Completion of Groundwater Appropriation
Without Well**

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1957
Owner E. P. MacReady Address Skew Route
Contractor (if any) None
Address of Contractor None

Date Started 1957 Date Completed 1957

Describe means of obtaining groundwater without a well "as by sub-irrigation and other natural processes". Include depth to water when applicable. Two foot deep rock casing with 1 1/2 inch pipe into tank.



S.W. 1/4 Sec. 10 T. 21 N. R. 29 E.

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 from 6 to 8 months out of the year for stock water.
No way of keeping record of amount used.

Signature of Owner E. P. MacReadyDate December 31, 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

STATE OF MONTANA, } ss. 27661
County of Richland, }

Filed this 27 day of

December A. D. 19 63

at 1:06 o'clock P. M.

E. L. Rooker
County Recorder

E. L. Rooker
Deputy

fee \$2.00
filed

File No.

T. 21 N R. 59 E

DUPLICATE

County Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

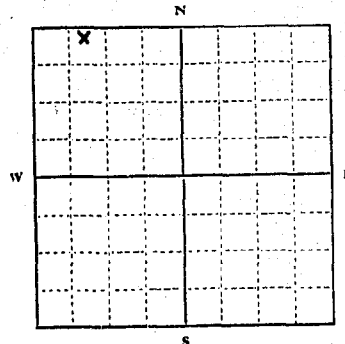
STATE ENGINEER

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

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater 1959Owner E. P. McCreedy Address Deep Root Sidney MontanaContractor (if any) NoneAddress of Contractor NoneDate Started None Date Completed None

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

Natural Flow

N.W. 1/4 Sec. 11 T. 21 R. 59

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 approximately 6 months for stockwater. No method for measuring amount but estimated amount is 2 gal. per minute

Signature of Owner E. P. McCreedyDate 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

STATE OF MONTANA, } ss. 286124
County of Richland.
Filed this 30 day of
Dec. A D 19 63.
at 9:15 P. M.
C. L. Kooker
County Clerk
R. Atchison
Deputy

fee: 2.00
filed

File No.

DUPLICATE

T. 21N 59E
County Richland

JAN 10 1964

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

STATE ENGINEER

Notice of Completion of Groundwater Appropriation
Without Well

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater April 13, 1922Owner Russell G. Mercer Address Sidney, Mont.Contractor (if any) noneAddress of Contractor noneDate 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 spring -
about 1 gal. per minute -
comes out of side hill in
canyon.

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.

About 1 gal. per minute -
used 9 months of the year,
especially in summer.Signature of Owner Russell G. MercerDate Dec 31, 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 Montana Bureau of Mines and Geology and Quadruplicate for the Appropriator.

29959

STATE OF MONTANA,)
County of Richland,) ss. 286665

Filed this 31 day of
December A.D. 1962
at 3:25 o'clock P.M.
E. J. Locken
County Recorder
Helen Dierke
Deputy

fee 2.00
filed

GW 2

MONTANA WATER RESOURCES BOARD
RECEIVED

Approved Stock Form—State Publishing Co., Helena, Montana—45642

T 21 N R 59 E 13

File No.

FEB 18 1970

County Richland

DUPLICATE

LOG

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEERNotice of Completion of Groundwater
Appropriation by Means of Well
DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

Owner Buxbaum Brothers Address Sidney, Montana

Driller Francis Boyce Address Sidney, Montana

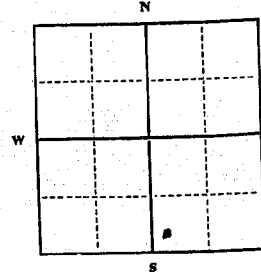
Date of Notice of appropriation of groundwater

Date well started Feb 2, 1970 Date completed Feb 11, 1970

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

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
4 3/4	11 lb. PF 4" I.D.	0	56	N - o - n - e torch slots 1/8" x 2"	1328	1368
3 7/8	14" galv casing	0	1368			



Static Water Level for non-flowing well

Shut-in Pressure for Flowing Well 30 lbs

Pumping Water Level

Discharge in gal. per min. of flowing well 19 gallons

How Tested

Length of Test

Remarks: (Gravel packing, cementing, packers, type of shutoff) 11 ft steel

packer set at 1311 ft to 1328

cemented to top of well

SE 1/4 Sec. 13, T21 N R 59 E
Indicate location of well and place of use, if possible. Each small square represents 40 acres.

Loc. No. 313715

Filed for record

This 17 day of January

A. D. 1970, at 9:25

clock A.M.

(Continue on reverse side)
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).

1368 Show exact depth of bottom.

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.

Driller's License Number

Driller's Signature

46183

STATE OF MONTANA, } ss. 313715
County of Richland,

Filed this 17 day of
February A. D. 1970
at 9:25 o'clock, P. M.
Helen Lierke
County Recorder
Luis Olson
Deputy

200
filed

GW 2

Approved Stock Form—State Publishing Co., Helena, Montana—4564

File No.

T. 21N R 57E
County Richland

DUPLICATE

LOG

28 STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER**Notice of Completion of Groundwater
Appropriation by Means of Well**
DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

Owner Alford Kransen Address Sidney MontDriller Francis Boyce Address Sidney Mont

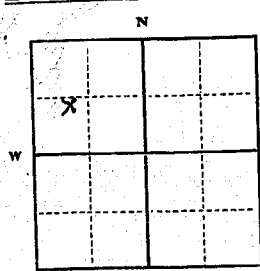
Date of Notice of appropriation of groundwater

Date well started Date completed May 1 1969Type of well dug Equipment used rotary
(Dug, driven, bored or drilled) (Churn drill, rotary or other)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.

0	44	Topsoil & yellow clay fill
44	54	hard fill
54	59	coal
59	70	gray clay
70	74	coal
74	117	gray clay
117	119	rock
119	134	gray shale
134	160	rock
160	221	shale, sandstone & siltstone
221	245	coal
245	275	sandstone
275	322	gray shale
322	323	rock
323	348	sandstone & hard shale
348	362	gray shale
362	366	rock
366	382	fine gray shale
382	385	coal
385	477	gray shale
477	482	coal
482	600	gray shale
600	625	hard yellow brown
625	631	rock
631	829	hard gray shale
829	831	rock
831	969	hard gray shale
969	975	rock
975	1110	hard gray shale
1110	1112	rock
1112	1258	hard gray shale
1258	1300	medium hard shale
1300	1309	hard gray shale
1309	1330	concretionary shale

Size of Drilled Hole	Size and Weight of Pipe	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
5 1/2"	1 1/2" O.D. 11.5 lb	0	155'			
3 1/2"	1 1/2" O.D. 11.5 lb casing	0	1330'	4" x 2"	1305'	1330'



Static Water Level for non-flowing well

Shut-in Pressure for Flowing Well 54 ft

Pumping Water Level feet

at gal. per minute.

Discharge in gal. per min. of flowing well 30

How Tested

Length of Test

Remarks: (Gravel packing, cementing packers, type of shutoff) 20.0 D. X 11.5 steel packer set at 128 ft & 1305 ft.

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

(Continue on reverse side)

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).

Show exact depth of bottom.

1330

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.

No 92
Driller's License NumberFrancis Boyce
Driller's Signature.

45,283

310655
STATE OF MONTANA,
County of Richland,

Filed this 26 day of

May A. D. 1969

2:10 o'clock P. M.

Helen Burke

County Recorder

Lisa Olson

Deputy

2nd
filed

NOTICE OF CONVICTION

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RECEIVED

JAN 19 1959

STATE ENGINEER

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner Bill Albert Address Hamilton, Mont. Box 202
 Driller David Galtman Address Sidney, Mont
 Date Started Nov. 7, 1958 Date Completed Nov 24, 1958
 Location: Sec. 15 T. 21 R. 59 $\frac{1}{4}$ sec. 5 E

Type of well Drilled Equipment used Rotary & Cable tool rig
(Dug, driven, bored, or drilled) (Cable drill, rotary, other)

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

Casing: 0 ft. to 132 ft. Type Iron Size 4"
 Casing: _____ ft. to _____ ft. Type _____ Size _____
 Casing: _____ ft. to _____ ft. Type _____ Size _____

Perforated or Screened: Ft. 35 to ft. 48 Ft. 80 to ft. 132

Type of screen or perforations $\frac{1}{4}$ " and $\frac{3}{8}$ " holes

Static Water level, for non-flowing well: 20 FT. from top feet.

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

Pumping water level: 40 feet at 10 gal. per min.

How tested: Barter

Length of test: 1 HOUR

Remarks: (Gravel pack, g. cementing, packers, type of shut-off, depth of shut-off)

Gravel packed

(over)

Log of Well

Depth, feet		Description of Material Drilled
From	To	
0	3	Brown sandy clay
3	11	Sandstone & gravel
11	35	yellow clay
35	37	Sandstone
37	48	Sandy blue clay
48	79	blue clay
19	108	Hard sandstone
128	170	Sand
170	132	yellow clay

261012
 STATE OF MISSISSIPPI
 County of Hinds
 January 16 1959
 G. J. Foster
 County Auditor
 G. J. Foster
 Deputy

File No.

MONTANA WATER RESOURCES BOARD

RECEIVED**FEB 15 1968**

T. 21 N. R. 59 E

DUPLICATE

County Richland

LOG

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

Top of Ground

(Elev. above sea level.....)

0-18 brown sandy clay
18-33 grey sandy clay
33-54 grey shale
54-89 grey shaly sand
89-103 grey shale
103-106 coal
106-131 grey shale
131-137 grey shaly sand
137-154 grey shale thin layers coal
154-159 grey shaly sand
159-187 grey shale
187-235 grey shale thin vein
235-247 coal
247-257 grey shale

**Notice of Completion of Groundwater
Appropriation by Means of Well**
DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

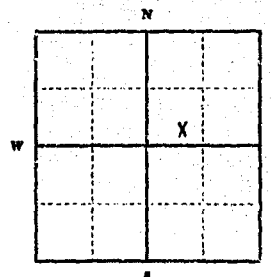
Owner Bill Albert Address Sidney, MontanaDriller Dave Gulbrun Address Sidney, Montana

Date of Notice of appropriation of groundwater.....

Date of completion 1/30/68 Date completed 1/31/68Type of well drilled Equipment used churn
(Dug, Driven, bored or drilled) (Churn drill, rotary or other)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.

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
4"	11 1/2" x 12"	0	257	7	0	5

Static Water Level for non-flowing well
120 feet.

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

Pumping Water Level 230 feet
at 2 1/2 gal. per minute.

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

How Tested beiledLength of Test one hour

Remarks: (Gravel packing, cementing, packers, type of shutoff).....

S.W. 1/4 NE Sec 16, T. 21 N. R. 59 E

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

(Continue on reverse side)

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).

257 Show exact depth of bottom.

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, three copy to be retained by driller.

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

Driller's License Number

Driller's Signature

43,022

304012
STATE OF MONTANA, }
County of Richland, } ss.

Filed this 14 day of
February A. D. 1968
at 1:40 o'clock, P. M.
Helen Gierke
County Recorder
Lewis Stanford

200
filed

File No.

T. 21 N. R. 59 E

DUPLICATE

County Richland

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER
OFFICE OF STATE ENGINEER

Notice of Completion of Groundwater
Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

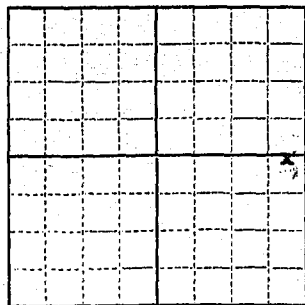
Owner E. P. McGrady Address Sidney, MontanaDriller Francis Boyce Address Sidney, Montana

Date of Notice of Appropriation of Groundwater

Date well started May 20, 1963 Date Completed May 24, 1963Type of well Drilled Equipment Used Rotary
(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)
4 1/2" to 60 ft.	lin pipe	0	61	torch	270'	290'
3 1/2" to 290 ft.	1 1/2" galv. pipe	0	290	slats 2" by 1/4"		



1/4 S. E. Sec. 17 T. 21 R. 59

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

290 ft.
Show exact depth of bottom.

Static Water Level for non-flowing Well feet

Shut-in Pressure for Flowing Well 8 lbs. per sq. in.

Pumping Water Level feet at gal. per minute

Discharge in gal. per min. of flowing well 5 gal.

How Tested Length of Test

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)

packers at 248' & 269'

#92
Driller's License Number
Francis Boyce
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 Quadruplicate for the Appropriator.

4510

STATE OF MONTANA, }
County of Richland, }

288002

Filed this 27 day of

May A. D. 1963

at 1:17 o'clock P. M.

C. H. Hooker
County Recorder

C. Hooker
Deputy

Filed
for \$00

G

Approved Stock Form—State Publishing Co., Helena, Montana—42234

File No.

T. 21N. R. 5E

DUPLICATE

County Richland

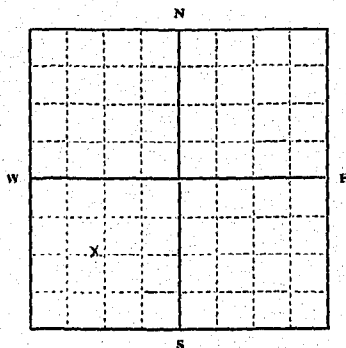
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. E. P. Mac Grady, of Deerfoot Sidney
(Name of Appropriator) (Address) (Town)
County of Richland State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



S.W. 1/4 Sec. 18 T. 21 N. R. 5 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.
Stockwater
3. Date or approximate date of earliest beneficial use; and how continuous the use has been. 1930 or
past time
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 3 gals. 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.
Pump
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater. Commenced in 1930 or
8. The depth of water table. 6.5 feet
9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater.
Pump with 24 inch casing
10. The estimated amount of groundwater withdrawn each year. No record kept
11. The log of formations encountered in the drilling of each well if available.
No information on the formations in drilling this well.
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 E. P. Mac GradyDate December 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.

29387

STATE OF MONTANA, } ss. 486958
County of Richland,

Filed this 27 day of
December A. D. 1963
at 1:00 o'clock, P.M.

E. S. Rooker
County Recorder
E. Cook
Deputy

for B2⁰⁰
filed

21 N 59 E 19

T. Richland

County

RECEIVED
JAN 2 1962

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

STATE ENGINEER

WATER WELL LOG

Andrew Petersen Jr.

Sidney, Mont.

	X		

Owner Francis Boyce Address Trotters, N. Dak.

Driller July 10, 1961 Address July 12, 1961

Date Started 19 21 59 Date Completed 1 North West 4

Location: Sec T R 1/4 sec

Drilled Rotary

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

Water use: Domestic Municipal Stock Irrigation

Industrial 57 Drainage Well casing 4 inch 11 lbs. per ft.

Casing: ft. to ft. Type Size

Casing: ft. to ft. Type Size

Casing: ft. to None ft. Type Size

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

Type of screen or perforations 43 ft. down

Static Water level, for non-flowing well: feet

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

Pumping water level feet at gal. per min.

How tested: 10 hours

Length of test

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

(over)

[illegible]

STATE OF MONTANA,
County of Richland,
ss.

County of Richard,

Filed this

Alas

4.29

1	2	3	4	5	6	7	8	9	10	11	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
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Figure 1 is a line graph showing the percentage of total energy expenditure (TEE) for different activities over a 24-hour period. The Y-axis is 'Percentage of TEE' (0-100) and the X-axis is 'Time of Day' (0-24). The legend indicates: Sleeping (solid line), Sedentary (dashed line), Light (dotted line), Moderate (dash-dot line), and Vigorous (long-dashed line). Sleeping is highest at night (~30-40%), while Vigorous activity peaks during the day (~10-20%).

10

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100

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108

GV

Approved Stock Form—State Publishing Co., Helena, Montana—42234

File No. 2T. 21 N. R. 59 E.

DUPLICATE

County Richland

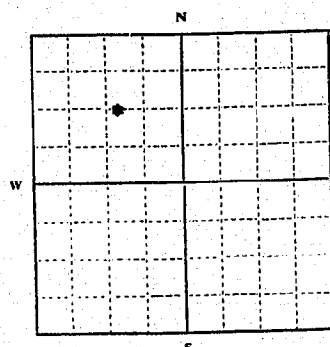
STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

JAN 10 1964

Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. Andrew Jr. & Hazel Peterson, of Stear Route, Richland
(Name of Appropriator) (Address) (Town)
County of Richland State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



S/2 1/4 NW Sec. 19 T. 21 R. 59

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.
Stockwater
3. Date or approximate date of earliest beneficial use; and how continuous the use has been.
June 1, 1961
9 Months Per Year
4. The amount of groundwater claimed (in miner's inches or gallons per minute).
8 Gals. 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 Applicable
6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal.
Windmill & Pump at site of appropriation.

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater.
Construction started May 26, 1961. Completed June 1, 1961
8. The depth of water table.
45 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.
Four inch drilled well, 20 feet deep.
10. The estimated amount of groundwater withdrawn each year.
90,000 Gals.
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

Andrew Peterson Jr.
Hazel Peterson

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
Quadruplicate for the Appropriator.

22912