

1111

COPY

State of Montana, } ss.  
County of Fergus.

Filed MAY 23 1960  
at 2:00 o'clock P.M.

May Rathbun  
County Clerk and Recorder

\$1.00 pd.

T. 19 N. R. 20 E. 22

County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|   |  |  |  |
|---|--|--|--|
|   |  |  |  |
| X |  |  |  |
|   |  |  |  |
|   |  |  |  |

Owner Peerless Oil & Gas Company Peerless Inc.  
Wyata Ranch Division 1670 Denver Club Bldg.  
Address Denver 2, Colorado

Driller W. L. Livingston Address \_\_\_\_\_

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

Location: Sec. 23 T. 19 R. 20 1/4 sec. SW, NW

Type of well \_\_\_\_\_ Equipment used \_\_\_\_\_  
(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: \_\_\_\_\_ feet.

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

(over)

E. L. LIVINGSTON DRILLING CONTRACTOR

Log of Horse Ranch well No. 35

0 to 10 ft.-----surface clays and soil  
 10 to 20 ft.-----gravel  
 20 to 40 ft.-----extremely hard sand  
 40 to 55 ft.-----grey shal<sup>e</sup> and streaks of hard sand  
 55 to 90 ft.-----hard sand  
 90 to 105 ft.-----soft grey shale and streaks of sand  
 105 to 175 ft.-----grey firm shale and hard streaks of sand  
 175 to 180 ft.-----grey sand medium hard  
 180 to 210 ft.-----grey shale and streaks of hard grey sand  
 210 to 220 ft.-----soft grey shale and streaks of sand  
 220 to 235 ft. grey sand with hard streaks  
 235 to 245 ft.-----soft grey sand (made 6 gallons per minute of water)  
 245 to 255 ft.-----grey and blue clay and sand  
 255 to 265 ft.-----grey sand with hard streaks  
 265 to 275 ft.-----grey sand and clay  
 275 to 285 ft.-----grey sand and firm grey shale  
 285 to 300 ft.-----soft grey shale and streaks of hard sand  
 300 to 330 ft.-----sandy shale and some clay  
 330 to 350 ft.-----sand with streaks of shale  
 350 to 355 ft.-----hard sand with shale  
 355 to 385 ft.-----sand and dark shale (water increased to 20 gal. per min)  
 385 to 390 ft.-----dark sand  
 390 to 430 ft.-----clayey shale and sand  
 430 to 455 ft.-----soft sand (more increase in water to 27 gal. per min.)  
 455 to 467 ft.-----soft sand turning to clay  
 467 to 470 ft.-----extremely hard sand  
 470 to 485 ft.-----soft sandy, clayey shale and coal  
 485 to 487 ft.-----soft sand and clay  
 487 to 492 ft.-----hard sand  
 492 to 505 ft.-----soft sand some clay

82 ft. of 8 5/8" surface casing cemented with 13 sacks. net return on cement.  
 502 ft. of 6" O.D. galvanized 14 thread ~~xxxx~~ water well casing  
 Above casing slot perforated from 225 ft. to 285 ft. and from 320 ft to 502  
 6" O.D. casing is Braden headed and welded to 8 5/8 surface pipe.

1110

COPY

State of Montana, } ss.  
County of Fergus.

Filed MAY 22 1924  
at 2:00 o'clock P. M.

May R. R. R.  
County Clerk and Recorder

4/10-92.

T. 19 <sup>4</sup> R. 20 <sup>12</sup>  
County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|  |   |  |
|--|---|--|
|  |   |  |
|  |   |  |
|  |   |  |
|  | X |  |

Peerless Oil & Gas Company  
Owner Wyata Ranch Division

Peerless Inc.  
1670 Denver Club Bldg.  
Denver 2, Colorado

Driller Roy Cottrell

Address Montana

Date Started

Date Completed 1948

Location: Sec. 23 T. 19 R. 20  $\frac{1}{4}$  sec. SE SW

Type of well

(Dug, driven, bored, or drilled)

Equipment used

(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:

feet.

Shut-in pressure, for flowing well:

lb./sq. in. on:

(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)

(over)

Large Rough Well No. 2 - 1948 - (Taylor House)

Driller - Cottrell, Ray, Montana.

Location - In Arnolds Valley adjacent to Taylor House:  
Township 19, Range 20, Section 23.

Size of hole - 5 inches

Size of casing - 4 inches ID

Depth of hole - 310 feet

Case - 178 feet

Cemented - Yes

Rate of flow - 30 gals per minute.

|  |   |  |  |
|--|---|--|--|
|  | X |  |  |
|--|---|--|--|

Location: Sec. 23 T. 19 R. 20 1/4 sec. SE 1/4 SW 1/4

Type of well..... Equipment used.....  
(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:..... feet.

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

.....  
.....  
.....  
.....  
.....  
.....

1106 CO

State of Montana. }  
County of Fergus. }

Filed

MAR 2 1960

at 2:00

o'clock P. M.

May Rathbun  
County Clerk and Recorder

9/10-82



22

T. 19N R. 20E  
County Fergus

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

**WATER WELL LOG**

|   |  |  |  |
|---|--|--|--|
|   |  |  |  |
| X |  |  |  |
|   |  |  |  |
|   |  |  |  |

Owner **Fearless Oil & Gas Company** **Fearless Inc.**  
**Wytams Ranch Division** **1670 Denver Club Bldg.**  
Address **Denver 2, Colorado**

Driller \_\_\_\_\_ Address \_\_\_\_\_

Date Started \_\_\_\_\_ Date Completed **1-3-50**

Location: Sec. **23** T. **19N** R. **20E**  $\frac{1}{4}$  sec. **S 2 NW 4**

Type of well \_\_\_\_\_ Equipment used \_\_\_\_\_  
(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: \_\_\_\_\_ feet.

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

(over)



## GEOLOGIC REPORT

Wytena Cattle Company  
Horse Ranch No. 1 Eagle Well  
Section 23, T 10 N, R 20 E  
Pergus County, Montana  
Surface Formation: Judith River  
Lowest Formation Tested: Eagle  
Total Depth: 1430 feet  
Casing Record:

10-3/4" set at 104' with 50 sacks of cement  
7" set at 1180' with 50 sacks of cement

### Tentative Formation Tops

Started in Judith River Formation  
Claggett Formation - - - - - 645 ft.  
Eagle Formation - - - - - 1085 ft.  
- - - - - 1182 ft. (?)

### Summary and Conclusions

The well was drilled through the Eagle sand and probably into the upper Colorado silt. Three sandy water bearing zones were encountered in the Eagle.

The upper zone was from 1120 to 1130 feet, the middle zone from 1182 to 1230 feet, and the lower zone from 1310 to 1400 feet.

While pulling the packer, following a drill stem test, the well was swabbed in and flowed at the rate of approximately two thousand (2,000) barrels per day. This flow was the combined Judith River and Eagle waters.

Because of the thinness of the sand at 1120 feet and the thick silty (and caveable) section above the sand at 1182 feet, it was deemed advisable to set the production casing at 1180 feet. After cleaning out, the well flowed only about five hundred (500) barrels per day. On December 20, 1949, the sand at 1120 to 1130 feet was gun perforated. The flow immediately increased to approximately 1,500 barrels per day.

Analysis of the water (attached to rear of report) indicates a water satisfactory for stock or irrigation.

No indications of combustible gas was noted at any time during the drilling.

Respectfully submitted,

*Herbert D. Hadley*  
Herbert D. Hadley

January 5, 1950

# LITHOLOGIC LOG

## Little River Formation

- 0 - 101 Surface hole. No samples taken but drillers reported alternating claystone, siltstone, sandstone, and some very hard calcareous layers.
- 101 - 150 Claystone, dark grey, silty and limy; alternating with beds of sandstone, fine to medium grained, quartzose, coaly and black cherty, occasional red-brown biotite flakes, calcareously cemented, tight, non-porous but breaks up easily.  
 120-30 Zones of silty and sandy nature  
 130-40 Some sandy zones show a little porosity.
- 150 - 230 Sandstone, mostly medium grained, quartzose, cherty, carbonaceous, glauconitic, silty; only a few coarse zones show any porosity, the others are tighter cemented with white calcareous cement.  
 150-60 Zones of limy dark grey claystone  
 160-70 Much red-brown biotite (phlogopite?)  
 180-90 Lenses of grey and brownish-black carbonaceous claystone within the sandstone.
- 230 - 250 Claystone, silty to almost sandy, with quartz grains and biotite, only slightly limy, grey to dark grey with carbonaceous spots and flakes.
- 250 - 290 Siltstone, grey and blue-grey, with much carbonaceous material and zones of brownish-grey claystone.
- 290 - 310 Sandstone, grey to green-grey, quartzose, coaly, medium grained, silty, non-calcareous matrix, probably somewhat porous, but with zones of tight cement.
- 310 - 380 Siltstone, grey to green-grey, fine grained sandy, carbonaceous, and with zones of silty carbonaceous claystone.
- 380 - 420 Claystone, grey and brown, carbonaceous, with zones of silty texture, also zones of fine grained quartz and slightly carbonaceous sandstone, somewhat permeable.
- 420 - 535 Sandstone, medium grained, well sorted, quartzose, somewhat glauconitic, calcic, probably permeable.  
 420-30 Calcareously cemented  
 430-40 Probably water bearing  
 460-70 Very good water sand, no matrix showing  
 470-80 Probably with thin clay and silt beds; red brown biotite and pyrite zones.  
 490-500 Good water sand as in 460-80, with some silty and some calcareous zones.  
 520-30 Medium grained and some silty zones and carbonaceous patches.

- 535 - 555 Siltstone, grey to greenish-grey, soft.
- 555 - 590 Claystone, grey, greenish-grey, and dark grey, somewhat calcareous, and some patches of carbonaceous material, also some silty zones.
- 590 - 620 Siltstone, grey, with dark grey carbonaceous claystone beds and fine grained quartzose sandy zones.
- 620 - 635 Sandstone, medium grained, quartzose, glauconitic, well sorted, no matrix, good water sand, and with some pyrite aggregate fragments.
- 635 - 645 Siltstone, dark grey, carbonaceous and soft.
- 645 - 650 Claystone, dark grey, carbonaceous, and soft.

Claggett Formation

- 650 - 830 Claystone, dark grey, thinly micaceous, with some carbonaceous material in spots and thin flakes; with occasional zone of silty or sandy texture.
- 660-70 Same as above with very dark grey claystone but with no carbonaceous material showing.
- 680-90 Zones of lighter grey, silty and carbonaceous nature
- 690-700 Carbonaceous specks in all varieties of claystone and silty to sandy claystone.
- 730-40 Small fragments of buff, brown, white, calcite and limestone included in the claystone.
- 740-80 Same as 730-40
- 780-90 With some beds of light grey quartzite.
- 890-800 Same as above but with very little quartzite.
- 800-10 Claystone, blue-grey grading into light grey quartz sandy siltstone and sandstone, medium grained, well sorted, quartzose, cherty, well cemented, white calcareous matrix; some pyrite and coal fragments.
- 810-20 Same but mostly siltstone and sandy claystone.
- 820-30 Silty zones tend to be lighter grey and limy.
- 830 - 900 Claystone, as above in 650-830, but with better evidence of shaly parting and with occasional limestone fragment.
- 830-40 Some dark grey to black limestone, dense.
- 840-50 Same but with no limestone
- 850-70 Same but with limestone as in 830-40
- 870-90 Zones of fine grained quartzose silty sandstone.
- 890-900 Fragments of orange-brown, fine to medium grained, quartzose, limy, soft cemented, non-porous sandstone.
- 900 - 995 Shale, black to grey-black, hard enough to break in angular fragments, with small limestone fragments, brown.
- 995 - 1085 Claystone, dark grey to gray-buff, non-calcareous, waxy, perhaps with some bentonite included.

- 1085 - 1120 Siltstone, light grey, quartzose, soft, and limy.
- 1120 - 1130 Sandstone, medium grained, quartzose, black cherty, glauconitic, some tight, white, limy matrix but mostly loose, porous and permeable, probably water bearing.
- 1130 - 1182 Siltstone, grey, non-calcareous but very clayey.  
 1150-60 With pyrite and coal fragments combined, and some sandy zones.  
 1170-80 Zones of very silty, fine grained, poorly sorted, soft sandstone.

#### EAGLE FORMATION ?

- 1182 - 1230 Sandstone, medium grained, fairly well sorted, quartzose, black cherty, glauconitic, soft, some white, non-calcareous matrix, but mostly permeable and probably water bearing.
- 1230 - 1290 Siltstone, grey, limy, some sandy zones, and soft  
 1250-60 Also grey-buff sandy bentonite.  
 1280-90 Zones of dark grey micaceous claystone and grey-buff bentonite.
- 1290 - 1310 No samples. Unable to get samples because drilling mud was too thick and fragments would not settle out.
- 1310 - 1350 Sandstone, grey-brown, fine grained, quartzose, cherty, angular to sub-rounded, fairly well sorted, and very, very silty.  
 1320-40 Also with zones of dark grey claystone.  
 1340-50 Some zones of light grey, limy, tightly cemented, quartzose, cherty, glauconitic, fine to medium grained, well sorted, sandstone.
- 1350 - 1400 Sand, poorly sorted, quartzose, cherty, occasional glauconite and many grains are yellow to red-brown iron stained.  
 1370-1400 Also with pyrite fragments and zones of sandstone, medium grained, poorly sorted, quartzose, cherty, glauconitic, tightly cemented with lime and sometimes pyrite.
- 1400 - 1430 Siltstone, grey, soft, and somewhat limy. Also with zones of sandstone, fine to medium grained, grey "salt and pepper", tightly cemented with limy matrix and cement. Also bentonite, white, sandy.

1116 COPY

State of Montana, }  
County of Fergus. } ss.

Filed..... MAY 23 1960 ..... 12  
at..... 2:00 ..... o'clock P.M.  
May Rathburn  
County Clerk and Recorder

W/10 p2.

T 19 N R 20 E

County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|  |  |  |   |
|--|--|--|---|
|  |  |  |   |
|  |  |  |   |
|  |  |  |   |
|  |  |  | X |

Owner Fearless Oil & Gas Company  
Wylona Ranch Division

Peerless Inc.  
1570 Denver Club Bldg.  
Denver 2, Colorado

Driller W. I. Livingston

Address Winnett, Montana

Date Started

Date Completed

Location: Sec. 24 T. 19 R. 20 1/4 sec. SE SE

Type of well

(Dug, driven, bored, or drilled)

Equipment used

(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: feet.

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

(over)

# W. L. LIVINGSTON

P. O. BOX 211  
WINNETT, MONTANA

Wyandott Cattle Company  
Horse Ranch Well No. 5

0--33 ft.-----soft clay and shale  
33--37 "-----hard blue sand  
37--50 "-----blue, sandy, clayey shale  
50--60 "-----blue and gray clayey shale, dark sand  
60--75 "-----blue and gray clayey shale--hard sand--streaks of coal  
75--85 "-----blue and gray sandy, clayey shale, oyster shells, streaks of coal  
  
95--95 "-----dark gummy clay and sand streaks  
95--100 "-----dark clayey shale, streaks of sand  
100--110 "-----soft light gray clayey shale and sand streaks  
110--120 "-----firm dark shale and hard buff colored sand streaks  
120--160 "-----soft gray clayey shale and streaks of coal and sand  
160--180 "-----medium hard gray shale and lime shell  
180--190 "-----gray and dark coaly shale  
190--210 "-----soft gray and blue clayey shale  
210--220 "-----various colored firm shale  
220--230 "-----hard sand and streaks of shale  
230--235 "-----firm dark gray shale  
235--250 "-----firm dark gray shale and soft light gray and blue shale  
250--264 "-----firm blue and gray shale  
264--270 "-----hard to medium hard gray shale  
270--275 "-----soft gray and blue shale, hard streaks of sand  
275--280 "-----hard sand and streaks of firm gray shale  
280--295 "-----gray shale and streaks (thin) of hard gray sand  
295--310 "-----soft gray shale  
310--320 "-----firm gray shale and streaks of hard gray sand  
320--330 "-----gray shale and medium soft sand--a little water  
330--335 "-----gray shale and soft sand-- a little more water  
335--338 "-----hard sand-- a little gray shale  
338--350 "-----soft dark gray sand--well flowing 6 gal. per minute  
350--353 "-----soft dark gray sand and streaks of firm dark gray shale  
353--395 "-----firm dark gray shale and streaks of hard sand  
395--450 "-----various colored shale and thin streaks of medium soft sand  
450--468 "-----soft gray sand-- increase in water to 9 gal. per minute  
468--528 "-----soft gray shale and thin streaks of sand  
528--570 "-----soft gray sand  
Ran 568 feet of 4 1/2 O.D. casing and cemented from 328' with 34 sacks of cement  
Slot perforated casing from 330' to 350' and from 450' to 470' and from 528' to 568'. Well flowing 12 gal. per minute.



W. L. L. V. 1931  
 P. O. Box 231  
 Winnett, Montana

Wyata Cattle Company Horse Ranch No. 8

Sec 24  
 Sec 24 T 19 N 20

0 to 33 ft. ----- soft clay and shale  
 33 to 37 ft. ----- hard blue sand  
 37 to 50 ft. ----- blue, sandy, clayey shale  
 50 to 60 ft. ----- blue and gray clayey shale, dark sand  
 60 to 75 ft. ----- blue and gray sandy, clayey shale - hard sand - streaks of coal  
 75 to 85 ft. ----- blue and gray sandy, clayey shale, oyster shells, streaks of coal  
 85 to 95 ft. ----- dark sandy clay and sand streaks  
 95 to 100 ft. ----- dark clayey shale, streaks of sand  
 100 to 110 ft. ----- soft light gray clayey shale and sand streaks  
 110 to 120 ft. ----- firm dark shale and hard buff colored sand streaks  
 120 to 160 ft. ----- soft gray clayey shale and streaks of coal and sand  
 160 to 180 ft. ----- medium hard gray shale and lime shell  
 180 to 190 ft. ----- gray and dark coaly shale  
 190 to 210 ft. ----- soft gray and blue clayey shale  
 210 to 220 ft. ----- various colored firm shale  
 220 to 230 ft. ----- hard sand and streaks of shale  
 230 to 235 ft. ----- firm dark gray shale  
 235 to 250 ft. ----- firm dark gray shale and soft light gray and blue shale  
 250 to 264 ft. ----- firm blue and gray shale  
 264 to 270 ft. ----- hard to medium hard gray shale  
 270 to 275 ft. ----- soft gray and blue shale, hard streaks of sand  
 275 to 280 ft. ----- hard sand and streaks of firm gray shale  
 280 to 295 ft. ----- gray shale and thin streaks of hard gray sand  
 295 to 310 ft. ----- soft gray shale  
 310 to 320 ft. ----- firm gray shale and streaks of hard gray sand  
 320 to 330 ft. ----- gray shale and medium soft sand - a little water  
 330 to 335 ft. ----- gray shale and soft sand - a little more water  
 335 to 338 ft. ----- hard sand - little gray shale  
 338 to 350 ft. ----- soft dark gray sand - well flowing 6 gal. per minute  
 350 to 353 ft. ----- soft dark gray sand and streaks of firm dark gray shale  
 353 to 395 ft. ----- firm dark gray shale and streaks of hard sand  
 395 to 425 ft. ----- various colored shale and thin streaks of medium soft sand  
 425 to 450 ft. ----- various colored shale and thin to medium soft sand  
 450 to 468 ft. ----- soft gray sand - increase in water to 8 gal. per min.  
 468 to 525 ft. ----- soft gray shale and thin streaks of sand  
 525 to 570 ft. ----- soft gray sand

Ran 568 feet of 4 1/2 in. casing and cemented from 325' to top with 34 sacks of cement. Shot perforated casing from 350' to 360' and from 450' to 470' and from 525' to 560'. Well flowing 12 gal. per minute.



1113

COPY

State of Montana, } ss.  
County of Fergus.

MAY 23 1960

Filed

at 2:20 o'clock P.M.

May Rathbun  
County Clerk and Recorder

\$1.00 pa.

23

T. 19 N R. 20 E  
County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|  |   |  |  |
|--|---|--|--|
|  |   |  |  |
|  | X |  |  |
|  |   |  |  |
|  |   |  |  |

Peerless Oil & Gas Company  
Owner Wytana Ranch Division

Peerless Inc.  
1670 Denver Club Bldg.  
Address Denver 2, Colorado

Driller P. L. Ferguson

Address Roundup, Montana

Date Started.....

Date Completed.....

Location: Sec. 26 T. 19 R. 20 1/4 sec. SE 1/4 NW 1/4

Type of well..... Equipment used.....  
(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:.....feet.

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

(over)

LOG OF WELL NO. 12

SE 1/4, Sec 25, T 19 R 20

Located near the white ranch house in section.

|           |                                                    |
|-----------|----------------------------------------------------|
| 0 - 10 ft | Overburden                                         |
| 10 - 20   | sandy shale                                        |
| 20 - 30   | Hard sand                                          |
| 30 - 40   | Blue shale                                         |
| 40 - 55   | Gray shale                                         |
| 55 - 70   | Blue and gray shale                                |
| 70 - 85   | Gray sandy shale                                   |
| 85 - 90   | Pink sandy shale                                   |
| 90 - 105  | Light gray shale                                   |
| 105 - 120 | Sandy light shale                                  |
| 120 - 140 | Dark sandy shale                                   |
| 140 - 160 | Gray and green shale                               |
| 160 - 180 | Gray shale and lime streaks                        |
| 180 - 195 | Dark shale                                         |
| 195 - 200 | Light shale and green                              |
| 200 - 220 | Dark brown sandy lime (source water)               |
| 220 - 235 | Light sandy shale (well flowing 3 gal. per minute) |
| 235 - 260 | Light and brown sandy shale, more water            |
| 260 - 275 | Light and pink sandy shale                         |
| 275 - 290 | Brown sandy shale (more water)                     |
| 290 - 300 | Light green shale                                  |
| 300 - 315 | Green firm shale                                   |

I set 295 feet 5 inches of 4 inch casing in this well. I slotted the last two joints for a total distance of 44 feet 6 inches. The save catcher, or basket, has been set at a depth of 195 feet. This leaves approximately 44 feet 6 inches of perforated pipe below it. This well was drilled to a total depth of 315 feet, leaving 11 feet 2 inches of open hole as a catch basin for water or any sediment that may fall into the well. I have made a tight connection between the 4 inch pipe and the 8 inch surface pipe and have installed the proper connection at the top of this well, and have reduced it to a 2 inch outlet and have placed a 2 inch control valve on the well.

The well was flowing at the time of completion 5 gallons per minute.

Respectfully submitted.

S/ P. L. Ferguson  
Laurens, Montana

1117

COPY

State of Montana, )  
County of Beaver )

Filed..... 11-18-1960 ..... 19  
at..... Reno ..... o'clock P.M.

May Rathbun  
County Clerk and Recorder

41-00-Pl .

File No. 17384

T 19 R 20

DUPLICATE

County Fergus

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

RECEIVED  
JAN 2 1964

## Declaration of Vested Groundwater Rights

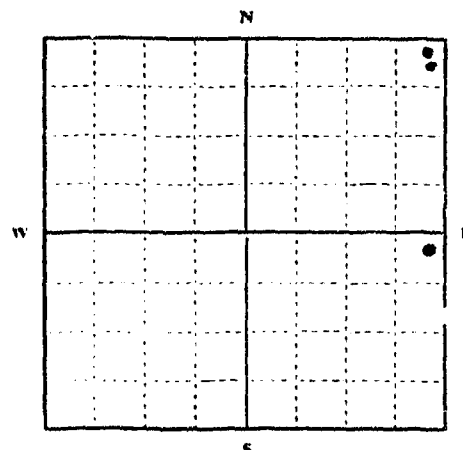
(Under Chapter 237, Montana Session Laws, 1961)

1. Emma Grindheim, of 605 Barnes St, Lewistown  
(Name of Appropriator) (Address) (Town)

County of Fergus

State of Montana

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



NE 1/4 SE  
NE 1/4 NE Sec. 27 T. 19 R. 20

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

1 spring developed 1947  
1 spring developed 1946  
1 spring undeveloped

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

All springs one 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

None

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

2 springs  
gravity flow thru pipes  
one spring natural flow

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

one spring started and completed in 1947  
one spring started and completed in 1961 one spring natural

8. The depth of water table

ground level

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

One spring cement casing 4 ft x 4 ft x 6 ft  
One spring 4 ft x 12 ft galvanized steel culvert  
One spring natural flow out of ground surface

10. The estimated amount of groundwater withdrawn each year

1,576,500 galon

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

Surface dirt &amp; Rock and sand rock

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

Emma Grindheim

Date

Dec 30-63

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.

17384

State of Alabama  
County of Jefferson

COPY

DEC 20 1963

Filed

at 3:20

o'clock P.M.

\$0.09  
P.D.

Way Nathan  
County Clerk and Recorder

T. 19 <sup>N</sup> R. 20E

County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|  |  |   |  |
|--|--|---|--|
|  |  |   |  |
|  |  | X |  |
|  |  |   |  |
|  |  |   |  |

Owner **Pearless Oil & Gas Company**  
**Wyata Ranch Division**

**Pearless Inc.**  
Address **1670 Denver Club Bldg.**  
**Denver 2, Colorado**

Driller **P. L. Ferguson**

Address **Roundup, Montana**

Date Started

Date Completed **August 15, 1953**

Location: Sec. **28** T. **19** R. **20E** 1/4 sec. **SW 1/4**

Type of well

(Dug, driven, bored, or drilled)

Equipment used

(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: feet.

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

(over)



P. L. FERGUSON  
Phone 3 0 9 W  
Roundup, Montana

Wytana Cattle Co. Horse Ranch, SW $\frac{1}{4}$  NE $\frac{1}{4}$  Sec. 28, T 18, R 20E, Fergus Co.

LOG Well No. 15

|       |     |                                                  |
|-------|-----|--------------------------------------------------|
| 0 -   | 3   | surface                                          |
| 3 -   | 7   | gravel                                           |
| 7 -   | 15  | gravel boulders                                  |
| 15 -  | 18  | sand water                                       |
| 18 -  | 21  | hard sandstone desementary rocks                 |
| 21 -  | 50  | light blue clay some water                       |
| 50 -  | 60  | brown shale                                      |
| 60 -  | 70  | light blue clay                                  |
| 70 -  | 85  | sandy clay                                       |
| 85 -  | 125 | blue clay                                        |
| 125 - | 132 | hard sand                                        |
| 132 - | 140 | porous sand more water (could not baildown)      |
| 140 - | 160 | blue sandy clay                                  |
| 160 - | 165 | porous sand water                                |
| 165 - | 170 | sand water flowing 2 $\frac{1}{2}$ gal. per min. |
| 170 - | 180 | sand shale                                       |
| 180 - | 210 | light blue shale                                 |
| 210 - | 220 | porous sand water 4 $\frac{1}{2}$ gal per.min.   |
| 220 - | 235 | porous sand                                      |
| 235 - | 240 | light blue clay                                  |
| 240 - | 250 | brown shale                                      |
| 250 - | 260 | porous sand water 6 gal. per. min.               |
| 260 - | 265 | porous sand more water 11 gal. per. min.         |
| 265 - | 272 | sand                                             |
| 272 - | 276 | dark brown shale                                 |

Drove 7 in. for cave string. set 268 ft. 4 $\frac{1}{2}$  in. OD casing for production. Slot perforated 4 $\frac{1}{2}$  from 185 to 185, from 210 to 230 and from 250 to 268. Well flowed 11 Gal. per. Min. at the time it was completed.

P. L. Ferguson  
driller

Aug 15 - 1953  
date of completion



1120

COPY

FILED IN 1120  
OF 1120

Filed..... MAY 22 1960 .....  
at..... 2:00 ..... o'clock P.M.

*May Rathbun*  
County Clerk and Recorder

\$1.00 - pd.

T. 19 N R. 20 E

County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|  |   |  |  |
|--|---|--|--|
|  |   |  |  |
|  |   |  |  |
|  | X |  |  |
|  |   |  |  |

Owner Peerless Oil & Gas Company  
Wytana Ranch Division Address Peerless Inc.  
1670 Denver Club Bldg.  
Denver 2, Colorado

Driller P. L. Ferguson Address Roundup, Montana

Date Started Date Completed

Location: Sec. 35 T. 19 R. 20 1/4 sec. NE 1/4 SW 1/4

Type of well (Dug, driven, bored, or drilled) Equipment used (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: feet.

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

(over)

LOG OF HORSE RANCH WELL # 13  
Located in NE $\frac{1}{4}$  SW $\frac{1}{4}$  Sec 35 T 19 R 20

Formation encountered in drilling water well #13 Wyata Cattle Co.

|           |     |                                                     |
|-----------|-----|-----------------------------------------------------|
| 0 - 10    | ft. | Overburden                                          |
| 10 - 25   |     | Sandy shale                                         |
| 25 - 45   |     | Light sticky shale                                  |
| 45 - 65   |     | Light brown shale                                   |
| 65 - 85   |     | Gray sandy shale                                    |
| 85 - 120  |     | Brown sandy shale (Some water)                      |
| 120 - 172 |     | Dark brown shale                                    |
| 172 - 197 |     | Blue shale                                          |
| 197 - 220 |     | Gray shale                                          |
| 220 - 255 |     | Light sticky shale                                  |
| 255 - 275 |     | Light brown shale                                   |
| 275 - 305 |     | Light gray shale                                    |
| 305 - 325 |     | Light brown shale                                   |
| 325 - 352 |     | Gray shale                                          |
| 352 - 376 |     | Light blue sandy shale                              |
| 376 - 392 |     | Light brown sandy shale                             |
| 392 - 399 |     | Water sand (Hole filled to within 76 ft of surface) |
| 399 - 414 |     | Blue shale.                                         |

4 inch pipe set at 392 ft. Cave catcher set at  
392 ft. 22 ft joint (Perforated) below cave catcher. 8 5/8ths  
O. D. pipe set at 93 ft. (Cemented 43 sacks). Sledge nipple  
from 3 in to 4 in.

I hereby certify that the above is a true and  
correct copy of the original.

*R. H. Jessiman*  
*Laurey, Montana*

1118

COPY

State of Montana, } ss.  
County of Fergus.

Filed..... MAY 23 1960 ..... 18  
at..... 2:00 ..... o'clock P. M.

May Rothman  
County Clerk and Recorder

4/00-92.

## GROUNDWATER INDEX

Page 1 of 1

County Logan Twp. 1976 Rge. 31 E

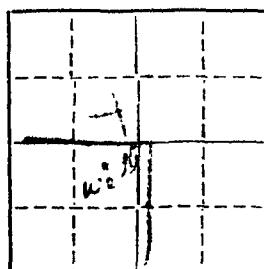
[illegible]

T. 19N R. 21E 13  
County 5

STATE ENGINEER

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG



Owner A. J. Lewis Address Lewistown  
Driller Lewis Address Lewistown  
Date Started 1914 Date Completed 1914  
Location: Sec. 13 T. 19 R. 21  $\frac{1}{4}$  sec. SW 1/4 Sec 13

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

Water use: Domestic ☐ Municipal ☐ Stock ☒ Irrigation ☐  
Industrial ☐ Drainage ☐ Other: None

Casing: 3.0 ft. to 11 ft. Type 11 Size 11  
Casing: 260 ft. to 260 ft. Type 11 Size 11  
Casing: 260 ft. to 260 ft. Type 11 Size 11

Perforated or Screened: Ft. 555 to ft. 550 Ft. 550 to ft. 550

Type of screen or perforations 11

Static Water level, for non-flowing well: 31 feet.

Shut-in pressure, for flowing well: 31 lb. sq. in. on: June 26 (date)

Pumping water level: 1 feet at 1 gal. per min.

How tested: None

Length of test: None

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

11' pipe cemented at 41 ft  
2' pipe set with 2 packers  
13' pipe set at 71 ft  
11' pipe set at 208 ft

(over)

Log of Well

| Depth, feet |     | Description of Material Drilled |
|-------------|-----|---------------------------------|
| From        | To  |                                 |
| 0           | 12  | 12' 0" 2' 0"                    |
| 12          | 25  | 12' 0" 2' 0"                    |
| 25          | 45  | 12' 0" 2' 0"                    |
| 45          | 255 | 12' 0" 2' 0"                    |
| 255         | 374 | 12' 0" 2' 0"                    |
| 374         | 410 | 12' 0" 2' 0"                    |
| 410         | 440 | 12' 0" 2' 0"                    |
| 440         | 530 | 12' 0" 2' 0"                    |
| 530         | 620 | 12' 0" 2' 0"                    |
| 620         | 670 | 12' 0" 2' 0"                    |
| 670         | 790 | 12' 0" 2' 0"                    |
| 790         | 860 | 12' 0" 2' 0"                    |

State of Michigan,  
County of Berkeley,  
4:35  
1953  
Notary Public  
County Clerk and Notary Public

97335

Log 1



T. 19 N R. 21 E 17  
County Fergus

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|   |  |  |  |
|---|--|--|--|
| X |  |  |  |
|   |  |  |  |
|   |  |  |  |
|   |  |  |  |

Peerless Oil & Gas Company  
Owner Wytana Ranch Division Address Peerless Inc. 1670 Denver Club Bldg. Denver 2, Colorado  
Driller W. L. Livingston Address Winnett, Montana  
Date Started \_\_\_\_\_ Date Completed \_\_\_\_\_  
Location: Sec. 17 T. 19 R. 21  $\frac{1}{4}$  sec. NW, NW $\frac{1}{4}$

Type of well \_\_\_\_\_ Equipment used \_\_\_\_\_  
(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: \_\_\_\_\_ feet.

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

(over)



# W. L. LIVINGSTON

W. L. LIVINGSTON  
WINNETT MONTANA

Wytana Cattle Company Horse Ranch well No. 7 East Pasture

|        |     |                                                                        |
|--------|-----|------------------------------------------------------------------------|
| 0 to 8 | ft. | Dark shale                                                             |
| 8      | 10  | Bentonite                                                              |
| 10     | 38  | dark shale                                                             |
| 38     | 40  | muddy shale                                                            |
| 40     | 120 | dark shale and streaks of bentonite at 70'                             |
| 120    | 135 | dark shale, sandy, firm                                                |
| 135    | 150 | gray shale and streaks of dark firm shale                              |
| 150    | 180 | dark gray shale with soft streaks                                      |
| 180    | 210 | dark firm shale                                                        |
| 210    | 225 | dark muddy shale                                                       |
| 225    | 240 | dark shale                                                             |
| 240    | 250 | dark shale and streaks of hard gray shale                              |
| 250    | 253 | dark shale                                                             |
| 253    | 255 | hard gray sand                                                         |
| 255    | 265 | soft sandy, clayey shale                                               |
| 265    | 270 | soft sandy brown shale                                                 |
| 270    | 275 | soft brown and gray clayey shale, sandy                                |
| 275    | 320 | soft sandy, clayey shale                                               |
| 320    | 345 | soft, muddy shale darker                                               |
| 345    | 350 | soft gray shale, hard gray lime and sand streaks                       |
| 350    | 355 | soft gray muddy shale and sand streaks                                 |
| 355    | 360 | soft gray and brown shale and sand streaks                             |
| 360    | 370 | soft gray muddy shale and sand streaks                                 |
| 370    | 380 | medium soft dark gray sand, some hard streaks                          |
| 380    | 385 | oyster shells, sand and soft gray muddy shale                          |
| 385    | 395 | soft gray clayey shale and sand and coal streaks                       |
| 395    | 415 | soft gray clayey shale and hard sand streaks                           |
| 415    | 450 | soft gray and brown clayey shale                                       |
| 450    | 470 | soft gray, blue and brown shale and streaks of sand and coal           |
| 470    | 485 | soft gray sand and streaks of gray, clayey shale                       |
| 485    | 500 | <del>soft gray, muddy shale - thin streaks of soft to hard sand</del>  |
| 500    | 520 | soft gray, muddy shale - thin streaks of soft to hard sand             |
| 520    | 530 | hard gray sand and streaks of light shale                              |
| 530    | 590 | light gray shale and hard to medium sand streaks                       |
| 590    | 645 | various colored shales and streaks of med. to hard sand - coal streaks |
| 645    | 675 | medium soft gray sand                                                  |
| 675    | 680 | various colored shales and streaks of med. to hard sand and shells     |
| 680    | 720 | muddy brown coaly shale                                                |
| 720    | 725 | soft gray, sandy shale                                                 |
| 725    | 730 | medium hard sand, streaks of shale                                     |
| 730    | 738 | soft gray, clayey sand                                                 |
| 738    | 740 | hard sand                                                              |
| 740    | 743 | soft, gray, clayey sand - some hard streaks                            |
| 743    | 760 | various colored shales - streaks of sand and coal                      |
| 760    | 780 | soft, gray, clayey shale, sandy                                        |
| 780    | 795 | firm gray shale and streaks of sand                                    |
| 795    | 805 | gray sandy shale - soft                                                |
| 805    | 810 |                                                                        |

A-1

WELL PUMPS

DRILLING CONTRACTOR

PIPE & SUPPLIES

## W. L. LIVINGSTON

P. O. BOX 1231  
WINNETT MONTANA

Log of Horse Ranch Well no. 7 (continued)

|              |       |                                                                       |
|--------------|-------|-----------------------------------------------------------------------|
| 810--830 ft. | ----- | various colored shales                                                |
| 830--833 "   | ----- | gray shale and thin streaks of bentonite                              |
| 833--838 "   | ----- | soft sand-salt and pepper-fine grained (first water,                  |
| 838--840 "   | ----- | hard sand                                                             |
| 840--846 "   | ----- | sand with streaks of shale                                            |
| 846--880 "   | ----- | soft medium fine sand-drilled 1 ft. per min. & incr-<br>ease in water |
| 880--898 "   | ----- | firm various colored shales and streaks of sand                       |
| 898--902 "   | ----- | soft gray sand                                                        |
| 902--904 "   | ----- | hard white quartz crystals- concretions                               |
| 904--935 "   | ----- | firm greenish shale and streaks of bentonite and<br>hard concretions  |
| 935--945 "   | ----- | gray, clayey, sticky shale                                            |

Ran 878' of 4" O.D. casing- bottom 50' slot perforated- cemented same from  
828 feet up with 30 sacks of cement- set pipe down on shoulder at 829' after  
cement was displaced. 1 ft.  
Filled company for 900' of hole. Cemented top with 1 sack of cement.  
Well flowing 10 gal. per minute.

1112 COPY

State of Montana, } ss.  
County of Fergus.

Filed MAY 23 1900  
at 2:00 o'clock P. M.

May Rathbone  
County Clerk and Recorder

\$100 pd.

T. 94 R. 21E  
County F

MONTANA BUREAU OF MINES AND GEOLOGY  
Butte, Montana

WATER WELL LOG

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Owner E. E. Mann Address W. Fred  
Driller Harold Address Gay  
Date Started 1937 Date Completed 1937  
Location: Sec. 17 T. 21 R. 1/4 sec. SW 4 of NW 4  
E of M. 21

Type of well 12-1/2" Equipment used                       
(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:                      feet.

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

## Log of Well

| Depth, feet |      | Description of Material Drilled |
|-------------|------|---------------------------------|
| From        | To   |                                 |
| 0           | 10   | Yellow clay sand rock           |
| 10          | 20   | Yellow silty clay shale         |
| 20          | 30   | Hard                            |
| 30          | 40   | Hard                            |
| 40          | 50   | Hard                            |
| 50          | 60   | Hard                            |
| 60          | 70   | Hard                            |
| 70          | 80   | Hard                            |
| 80          | 90   | Hard                            |
| 90          | 100  | Hard                            |
| 100         | 110  | Hard                            |
| 110         | 120  | Hard                            |
| 120         | 130  | Hard                            |
| 130         | 140  | Hard                            |
| 140         | 150  | Hard                            |
| 150         | 160  | Hard                            |
| 160         | 170  | Hard                            |
| 170         | 180  | Hard                            |
| 180         | 190  | Hard                            |
| 190         | 200  | Hard                            |
| 200         | 210  | Hard                            |
| 210         | 220  | Hard                            |
| 220         | 230  | Hard                            |
| 230         | 240  | Hard                            |
| 240         | 250  | Hard                            |
| 250         | 260  | Hard                            |
| 260         | 270  | Hard                            |
| 270         | 280  | Hard                            |
| 280         | 290  | Hard                            |
| 290         | 300  | Hard                            |
| 300         | 310  | Hard                            |
| 310         | 320  | Hard                            |
| 320         | 330  | Hard                            |
| 330         | 340  | Hard                            |
| 340         | 350  | Hard                            |
| 350         | 360  | Hard                            |
| 360         | 370  | Hard                            |
| 370         | 380  | Hard                            |
| 380         | 390  | Hard                            |
| 390         | 400  | Hard                            |
| 400         | 410  | Hard                            |
| 410         | 420  | Hard                            |
| 420         | 430  | Hard                            |
| 430         | 440  | Hard                            |
| 440         | 450  | Hard                            |
| 450         | 460  | Hard                            |
| 460         | 470  | Hard                            |
| 470         | 480  | Hard                            |
| 480         | 490  | Hard                            |
| 490         | 500  | Hard                            |
| 500         | 510  | Hard                            |
| 510         | 520  | Hard                            |
| 520         | 530  | Hard                            |
| 530         | 540  | Hard                            |
| 540         | 550  | Hard                            |
| 550         | 560  | Hard                            |
| 560         | 570  | Hard                            |
| 570         | 580  | Hard                            |
| 580         | 590  | Hard                            |
| 590         | 600  | Hard                            |
| 600         | 610  | Hard                            |
| 610         | 620  | Hard                            |
| 620         | 630  | Hard                            |
| 630         | 640  | Hard                            |
| 640         | 650  | Hard                            |
| 650         | 660  | Hard                            |
| 660         | 670  | Hard                            |
| 670         | 680  | Hard                            |
| 680         | 690  | Hard                            |
| 690         | 700  | Hard                            |
| 700         | 710  | Hard                            |
| 710         | 720  | Hard                            |
| 720         | 730  | Hard                            |
| 730         | 740  | Hard                            |
| 740         | 750  | Hard                            |
| 750         | 760  | Hard                            |
| 760         | 770  | Hard                            |
| 770         | 780  | Hard                            |
| 780         | 790  | Hard                            |
| 790         | 800  | Hard                            |
| 800         | 810  | Hard                            |
| 810         | 820  | Hard                            |
| 820         | 830  | Hard                            |
| 830         | 840  | Hard                            |
| 840         | 850  | Hard                            |
| 850         | 860  | Hard                            |
| 860         | 870  | Hard                            |
| 870         | 880  | Hard                            |
| 880         | 890  | Hard                            |
| 890         | 900  | Hard                            |
| 900         | 910  | Hard                            |
| 910         | 920  | Hard                            |
| 920         | 930  | Hard                            |
| 930         | 940  | Hard                            |
| 940         | 950  | Hard                            |
| 950         | 960  | Hard                            |
| 960         | 970  | Hard                            |
| 970         | 980  | Hard                            |
| 980         | 990  | Hard                            |
| 990         | 1000 | Hard                            |

90070

# Log of Well

| Depth, feet |      | Description of Material Drilled |
|-------------|------|---------------------------------|
| From        | To   |                                 |
| 0           | 10   | Yellow clay rock                |
| 10          | 20   | Yellow shale                    |
| 20          | 30   | Hard shale                      |
| 30          | 40   | Hard shale                      |
| 40          | 50   | Hard shale                      |
| 50          | 60   | Hard shale                      |
| 60          | 70   | Hard shale                      |
| 70          | 80   | Hard shale                      |
| 80          | 90   | Hard shale                      |
| 90          | 100  | Hard shale                      |
| 100         | 110  | Hard shale                      |
| 110         | 120  | Hard shale                      |
| 120         | 130  | Hard shale                      |
| 130         | 140  | Hard shale                      |
| 140         | 150  | Hard shale                      |
| 150         | 160  | Hard shale                      |
| 160         | 170  | Hard shale                      |
| 170         | 180  | Hard shale                      |
| 180         | 190  | Hard shale                      |
| 190         | 200  | Hard shale                      |
| 200         | 210  | Hard shale                      |
| 210         | 220  | Hard shale                      |
| 220         | 230  | Hard shale                      |
| 230         | 240  | Hard shale                      |
| 240         | 250  | Hard shale                      |
| 250         | 260  | Hard shale                      |
| 260         | 270  | Hard shale                      |
| 270         | 280  | Hard shale                      |
| 280         | 290  | Hard shale                      |
| 290         | 300  | Hard shale                      |
| 300         | 310  | Hard shale                      |
| 310         | 320  | Hard shale                      |
| 320         | 330  | Hard shale                      |
| 330         | 340  | Hard shale                      |
| 340         | 350  | Hard shale                      |
| 350         | 360  | Hard shale                      |
| 360         | 370  | Hard shale                      |
| 370         | 380  | Hard shale                      |
| 380         | 390  | Hard shale                      |
| 390         | 400  | Hard shale                      |
| 400         | 410  | Hard shale                      |
| 410         | 420  | Hard shale                      |
| 420         | 430  | Hard shale                      |
| 430         | 440  | Hard shale                      |
| 440         | 450  | Hard shale                      |
| 450         | 460  | Hard shale                      |
| 460         | 470  | Hard shale                      |
| 470         | 480  | Hard shale                      |
| 480         | 490  | Hard shale                      |
| 490         | 500  | Hard shale                      |
| 500         | 510  | Hard shale                      |
| 510         | 520  | Hard shale                      |
| 520         | 530  | Hard shale                      |
| 530         | 540  | Hard shale                      |
| 540         | 550  | Hard shale                      |
| 550         | 560  | Hard shale                      |
| 560         | 570  | Hard shale                      |
| 570         | 580  | Hard shale                      |
| 580         | 590  | Hard shale                      |
| 590         | 600  | Hard shale                      |
| 600         | 610  | Hard shale                      |
| 610         | 620  | Hard shale                      |
| 620         | 630  | Hard shale                      |
| 630         | 640  | Hard shale                      |
| 640         | 650  | Hard shale                      |
| 650         | 660  | Hard shale                      |
| 660         | 670  | Hard shale                      |
| 670         | 680  | Hard shale                      |
| 680         | 690  | Hard shale                      |
| 690         | 700  | Hard shale                      |
| 700         | 710  | Hard shale                      |
| 710         | 720  | Hard shale                      |
| 720         | 730  | Hard shale                      |
| 730         | 740  | Hard shale                      |
| 740         | 750  | Hard shale                      |
| 750         | 760  | Hard shale                      |
| 760         | 770  | Hard shale                      |
| 770         | 780  | Hard shale                      |
| 780         | 790  | Hard shale                      |
| 790         | 800  | Hard shale                      |
| 800         | 810  | Hard shale                      |
| 810         | 820  | Hard shale                      |
| 820         | 830  | Hard shale                      |
| 830         | 840  | Hard shale                      |
| 840         | 850  | Hard shale                      |
| 850         | 860  | Hard shale                      |
| 860         | 870  | Hard shale                      |
| 870         | 880  | Hard shale                      |
| 880         | 890  | Hard shale                      |
| 890         | 900  | Hard shale                      |
| 900         | 910  | Hard shale                      |
| 910         | 920  | Hard shale                      |
| 920         | 930  | Hard shale                      |
| 930         | 940  | Hard shale                      |
| 940         | 950  | Hard shale                      |
| 950         | 960  | Hard shale                      |
| 960         | 970  | Hard shale                      |
| 970         | 980  | Hard shale                      |
| 980         | 990  | Hard shale                      |
| 990         | 1000 | Hard shale                      |

Sediment

DEC 16 1957

Finished Drilling  
Oct. 5  
Bad weather held  
completion Nov 10

90070

## GROUNDWATER INDEX

Page 1 of 1

County Argus Twp. 19 N Rge. 22 E

[illegible]



File No. **27454**

SEP 21 1966

T **19N R22E**  
County **Judith**

DUPLICATE

LOG

STATE OF MONTANA

ADMINISTRATOR OF GROUNDWATER CODE

OFFICE OF STATE ENGINEER

Top of Ground

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

0 1 Topsoil  
1 15 Clay Gravel streaks  
15 480 Bear Paw shale  
480 482 Top Judith River Formation  
482 505 White sandstone  
505 520 Sandy shale Brown  
520 535 Sandy shale streaks  
535 537 sandstone  
537 542 Hard silicate sand  
542 580 Sandstone shaly  
580 590 Sandy shale dark grey  
590 610 White sand, shaley  
610 620 Sandstone  
620 627 Sandy shale Brown  
627 631 Brown sandstone and  
631 638 coal streaks  
638 650 White sandstone  
650 655 Brown sand and coal  
655 659 White sandy shale  
659 668 Sandstone soft  
668 678 Coal  
678 690 Brown and white green  
690 810 speckled shale  
810 845 Coal and brown shale  
845 865 Grey sandstone  
865 876 White shale varnated  
876 878 blue green specks  
878 927 Sandy shale hard  
927 933 Sandstone fractured  
933 970 Water  
865 876 Hard sandstone Water  
876 878 Extremely hard silicate  
878 927 Sand  
927 933 White sandstone  
933 970 Water at 910  
Brown sand  
Grey sand

# Notice of Completion of Groundwater Appropriation by Means of Well

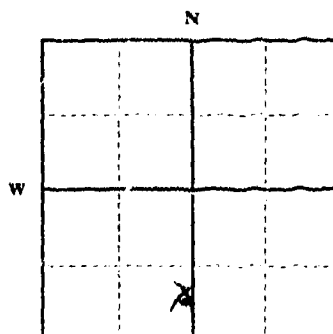
DEVELOPED AFTER JANUARY 1, 1962

(Under Chapter 237, Montana Session Laws, 1961)

Owner **Olaf Rindal** Address **Roy, Montana**Driller **George O. Singley** Address **Lewistown, Mont.**Date of Notice of appropriation of groundwater **None**Date well started **Sept. 7, 1966** Date completed **Sept. 16, 1966**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) |
| 7-7/8                |                                | 0           | 18        |                    |             |           |
| 6-1/8                |                                | 18          | 349       |                    |             |           |
| 5-5/8                |                                | 349         | 970       |                    |             |           |
|                      | 4 1/2 OD 4 1/2 ID above ground | 1           | 970       | 4" slots 1/8" wide | 800         | 970       |



Static Water Level for non-flowing well

..... **none** feet.Shut-in Pressure for Flowing Well..... **10#**Pumping Water Level..... **none** feetat..... **none** gal. per minute.

Discharge in gal. per min. of flowing well

..... **3**How Tested..... **Measured 10 min.**Length of Test..... **10 min.**

Remarks: (Gravel packing, cementing, pack-

ers, type of shutoff)..... **Cave catchers**..... **above perforations, sealed**..... **packer with 10 sacks cement.**

(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 **19**Driller's Signature **George O. Singley****41, 42, 3**



27454 COPY

State of Montana. } ss.  
County of Fergus }

Filed SEP 19 1966 12  
at 11:35 o'clock A.M.

*Wm. Rothman*  
County Clerk and Recorder

\*20-*pt*.

File No. 17058T. 19 R. 22

DUPLICATE

County Fergus

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

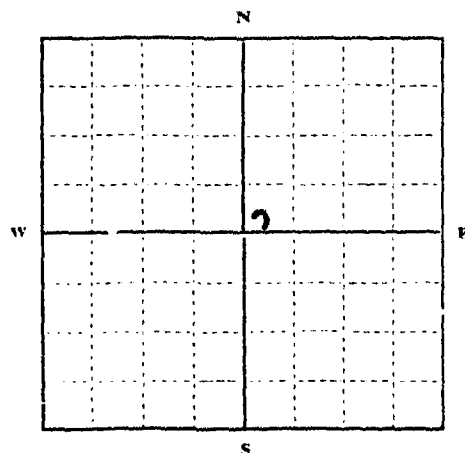
## Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED  
DEC 27 1963

STATE ENGINEER

1. Ralph M. Beatty of Fergus (Name of Appropriator) (Address) (Town)  
County of Fergus State of Montana  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



SE 1/4 Sec. 31, T. 19, R. 22

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 Water3. Date or approximate date of earliest beneficial use; and how continuous the use has been 1950 continuous4. The amount of groundwater claimed (in miner's inches or gallons per minute) 3500 gallons per day

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

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

7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater June 19508. The depth of water table 7.75

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

Dug Pit 7.5 open A Spring 9.0 ft long 40.75 wide 8 ft deep10. The estimated amount of groundwater withdrawn each year 200,000

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

Rock & shale

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

Signature of Owner Ralph M. BeattyDate Dec 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 Quadruplicate for the Appropriator.

13277

17058

COPY

State of Montana, } ss.  
County of Fergus }

Filed DEC 26 1963 19  
at 2:00 o'clock P.M.

*Wm. H. Hutton*  
County Clerk and Recorder

*200 pt.*

File No. 17057T 19 R 22

DUPLICATE

County Fergus

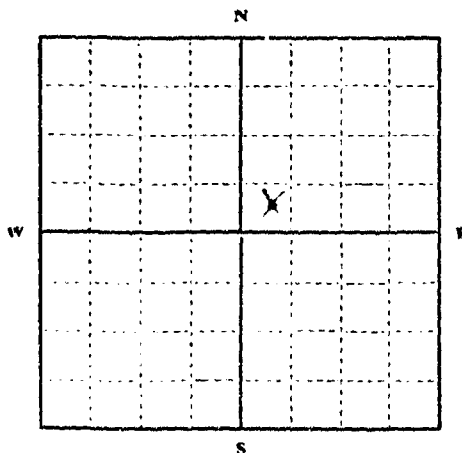
STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

**Declaration of Vested Groundwater Rights**

(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED  
DEC 27 1963  
STATE ENGINEER

1. Ralph M Beatty, of Fergus,  
(Name of Appropriator) (Address) (Town)  
County of Fergus State of Montana  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



SE  $\frac{1}{4}$  Dec 31 T. 19 R. 22

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 1960
4. The amount of groundwater claimed (in miner's inches or gallons per minute) Well 3000 gallons per day
5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof
6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal  
Well by mechanical pump
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater June 1960 Mechanical pump
8. The depth of water table 4 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 Dug Well 16 FT deep Cased with A 37.00T CULVERT
10. The estimated amount of groundwater withdrawn each year 180 000 gallons
11. The log of formations encountered in the drilling of each well if available Rock & shale
12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record

Signature of Owner Ralph M Beatty

Date Dec 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 Quadruplicate for the Appropriator.

13276

17057

COPY 1

FILED  
DEC 26 1963  
at 2:00 o'clock P.M.  
Wang Outhman  
County Clerk and Recorder  
200

File No. 17268

T R

DUPLICATE

County

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)

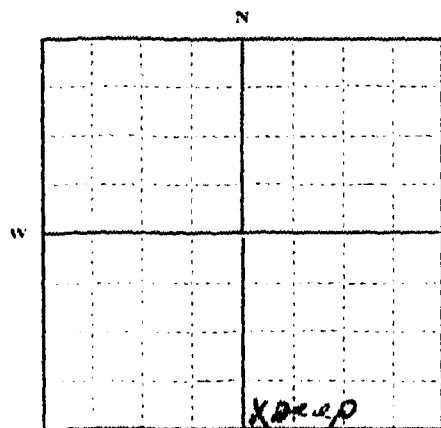
1. JERRY SIKOLY  
(Name of Appropriator)Box 460  
of ~~Box 460~~  
(Address)

(Town)

County of FLEET

State of MONTANA

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

S42 T18 R22 S41 A2204  
SR 1/2 Sec. 35 T19 R22Indicate 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 DOMESTIC  
GARDEN & WATER3. Date or approximate date of earliest beneficial use; and how continu-  
ous the use has been DAILY SINCE1910 ON THE SHALLOW WELL  
AND DEEP WELL SINCE SEPT 19/19584. The amount of groundwater claimed (in miner's inches or gallons  
per minute) 10 GAL FROM DEEP WELL  
20 GALLONS FROM SHALLOW5. If used for irrigation, give the acreage and description of the lands  
to which water has been applied and name of the owner thereof6. 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 SEPT 19/1958

SHALLOW WELL SOME TIME IN 1910

8. The depth of water table DEEP WELL LEVEL OF TOP GROUND  
AND SHALLOW 4 FT FROM TOP9. 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 groundwater6 INCH CASING IN DEEP WELL  
SAND ROCK CURBING IN SHALLOW

10. The estimated amount of groundwater withdrawn each year 730 000 GALLONS

11. The log of formations encountered in the drilling of each well if available SURFACE 12 FT 0 IN  
132 BLUE SHALE WITH 1/4 INCH 21 Y BENT 30 BLACK SAND  
319 SAND SHALE 450 SANDY SHALE  
526 GRAY SAND SHALE HARD 696 BLACK SHALE  
706 COAL WITH SAND 226 CAP ROCK SHALE 75 SAND 726 15' JUDITH12. 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

RUTARY PRILLAD

EE HARRELL BRILLING

Signature of Owner

JERRY SIKOLY  
Date Dec 30/1963

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

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

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

17198

17268

COPY

State of Montana  
County of ...  
Filed DEC 30 1963 19  
a 12:15 P.M.  
May R. R. R.  
County Clerk and Recorder  
a 2:00 p.m.



## GROUNDWATER INDEX.

Page 1 of 1

County Logan Twp. 197 Rge. 23 E

[illegible]



GW2

File No. 13775

DUPLICATE

T. 12 N. R. 2 E

County. . . . .

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

Notice of Completion of Groundwater  
Appropriation by Means of Well

(Under Chapter 237, Montana Session Laws, 1961)

Owner: Frank Cinchaki Address: 22, Mont.

Driller: J. &amp; E. Drilling Address: Bennett, Mont.

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

Date well started 11/1/62 Date Completed 12/1/62

Type of well: Drilled Equipment Used: Rotary  
(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.

10-- top soil, grey shal, grey clay, bent.  
(Top of Ground) streaks, shells rich  
(bear paw shale)  
(Elev. above sea level . . . . .)

710-- clay, hard lime streaks &  
silkstone streaks shale

790-- fine salt & pepper sand streaks  
shale & clay (Judith River)

964-- silkstone, grey shale, grey clay  
and bent.

1020-- silty sand, hard sand streaks  
quartz, shale & grey clay

1020-- soft lt. grey sand, grey shale  
& clay

1210-- grey lumpy shale, black shale, chert  
& bent. some hard silkstone  
(Claggett shale)

1620-- grey shale, grey clay, & bent

1747-- small pebble conglomerate

1750-- med soft coarse silt & pebble  
(top of bed)

1752-- sand with thin shale breaks

1891-- sand with streaks of conglomerate & shale  
fine sand med. soft to hard

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale  
place of use, if possible. Each  
small square represents 10 acres.

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

1900-- sand with streaks of conglomerate & shale

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

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

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

Discharge in gal. per min. of flowing well 70 G.P.M.

How Tested . . . . . Length of Test . . . . .

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) . . . . .

Larkin Pit 21 casing anchor packer set

at 17.5'

Driller's License Number

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 the Appropriator.

13775

COPY

State of Montana, } ss.  
County of Fergus, }  
MAR 22 1963  
Filed.....19  
at 2:35 o'clock P.M.  
Way C. Lathrop  
County Clerk and Recorder

\$20.00 pd

File No. 9489

DUPLICATE

T. 19 R. 23County FERGUS

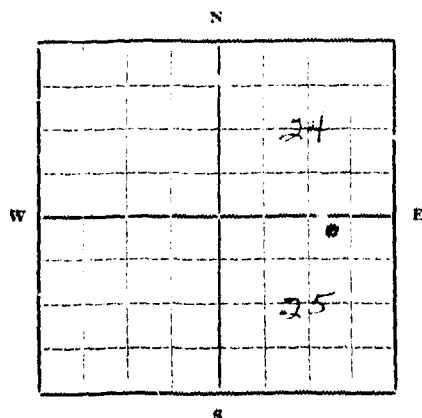
STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

**Declaration of Vested Groundwater Rights**

(Under Chapter 237, Montana Session Laws, 1961)

STATE ENGINEER

1. LARRY JORDAN of Roy  
(Name of Appropriator) (Address) (Town)  
County of FERGUS State of MONTANA  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



N.W. 1/4 NE 1/4 Sec. 25, T. 20 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 SEPT. 7, 1961  
CONTINUOUS
4. The amount of groundwater claimed (in miner's inches or gallons per minute) 60 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
6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal FLOWING
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater SEPT. 7, 1961
8. The depth of water table 17.14 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 ARTESIAN 6 INCH HOLE  
138.4 ft. deep  
14.28 FT. 5 INCH CASING 15 1/2 LB'S  
456 " 3 " " 92 "
10. The estimated amount of groundwater withdrawn each year
11. The log of formations encountered in the drilling of each well if available 918 ft. BEAR PAW SHALE, 400 ft. JUDITH RIVER SAND, 396 ft. SHALE, 170 ft. 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 county record

Signature of Owner Larry JordanDate April 20 - 62

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.

9489

COPY

State of Nevada } ss.  
County of Esmeralda }

Filed APR 25 1962 19  
at 2:45 o'clock P.M.

*Way Rathbun*  
County Clerk and Recorder

*\*200 ph*

File No. 8254

T. 11 R. 1

**DUPLICATE**

County.....

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

## Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

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

A blank sheet of graph paper with a grid pattern. The grid consists of 10 columns and 8 rows of squares. A vertical line runs down the center, dividing the grid into two equal halves of 5 columns each. A horizontal line runs across the middle, dividing the grid into two equal halves of 4 rows each. This creates four quadrants, each measuring 5 columns by 4 rows. There are small dark marks near the top center of the page, above the grid.

..... $\frac{1}{4}$ ..... Sec..... T..... R.....

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

2. The beneficial use on which the claim is based.
  3. Date or approximate date of earliest beneficial use; and how continuous the use has been.
  4. The amount of groundwater claimed (in miner's inches or gallons per minute).
  5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof.
  6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal.
- tion of the construction of the well, wells, or other works for withdrawal.
- size and depth of each well or the general specifications of any other water.
- withdrawn each year.
- the drilling of each well if available.
- ture as may be useful in carrying out the policy of this act, including any record.

Signature of Owner.....

Date: 11/11/2011

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.

3591.

13257 COR.

State of Montana, }  
County of Fergus. } ss.

Filed FEB 8 1963  
at 4:10 o'clock P.M.  
May J. Cuthbert  
County Clerk and Recorder

200.00

File No. **17240**

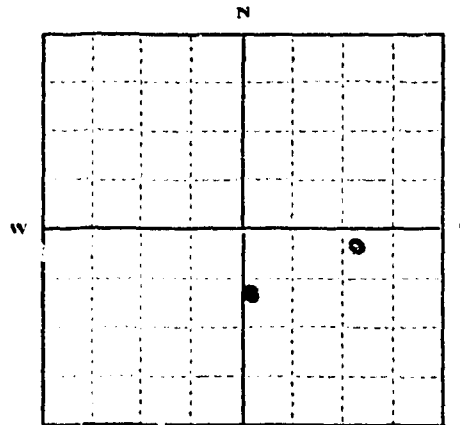
DUPLICATE

T. **19** R. **23**  
County **Fergus**STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

## Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. **Gae Kroby**, of **Ray**,  
(Name of Appropriator) (Address) (Town)  
County of **Fergus** State of **Montana**  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



**NW 1/4 SE 31 T. 19 R. 23**  
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 & sub-irrigation**
3. Date or approximate date of earliest beneficial use; and how continuous the use has been  
**well dug in about 1940  
spring used continuously long before that**
4. The amount of groundwater claimed (in miner's inches or gallons per minute)  
**20 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  
**sub-irrigation for alfalfa fields**
6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal  
**gasoline engine on pump**
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater  
**completed in 1940. Spring improved earlier**
8. The depth of water table  
**varies from 10 to 50 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  
**15 ft deep, cased with metal culvert and rock.**
10. The estimated amount of groundwater withdrawn each year  
**150,000 gal**
11. The log of formations encountered in the drilling of each well if available.  
**no log 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  
**county record that I know of**

Signature of Owner

Date

**Dec. 29, 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.



17240

COPY

State of Montana, } ss.  
County of Fergus }  
Filed DEC 30 1963 19\_\_  
at 10:55 o'clock A.M.  
Vernon G. Rothman  
County Clerk and Recorder  
200 pt.



File No. 15382T. 19 R. 23

DUPLICATE

County Fergus

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

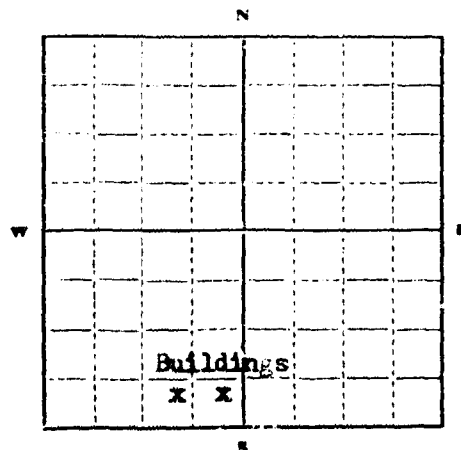
RECEIVED  
SEP 5 1963

# Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

STATE ENGINEER

1. John L. Karaska of Roy  
(Name of Appropriator) (Address) (Town)  
County of Fergus State of Montana  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:

SW 1/4 Sec. 32 T. 19 R. 23

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.....  
two wells 1/4 mile apart for stock and horse use  
since 1940.
3. Date or approximate date of earliest beneficial use; and how con-  
tinuous the use has been.....every day since 1940
4. The amount of groundwater claimed (in miner's inches or gallons  
per minute).....20 gals/ minute
5. If used for irrigation, give the acreage and description of the lands  
to which water has been applied and name of the owner thereof  
none
6. The means of withdrawing such water from the ground and the  
location of each well or other means of withdrawal.....  
piston type pump
7. The date of commencement and completion of the construction of the well, wells, or other works for with-  
drawal of groundwater.....1940
8. The depth of water table.....100 up to 300 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.....hole is 100 to 300 feet deep and comes up  
10 feet of the top. Has to be pumped from there on up.
10. The estimated amount of groundwater withdrawn each year.....100,000 gals
11. The log of formations encountered in the drilling of each well if available.....none
12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including  
reference to book and page of any county record.....none

Signature of Owner John L. KaraskaDate Sept 4, 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.

15382

COR:

State of Maryland,  
County of Pergus }

Filed SEP 4 1963 19  
at 11:15 o'clock A.M.  
Mary Hadden  
County Clerk and Recorder

820-1

GV

17239

File No. ....

DUPLICATE

STATE OF MONTANA  
ADMINISTRATOR OF GROUNDWATER CODE  
OFFICE OF STATE ENGINEER

T. 17 R. 23  
County *Jefferson*  
State Engineer

### Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

1. *Joe Sirecky* of *Ray*  
(Name of Appropriator) (Address) (Town)  
County of *Jefferson* State of *Montana*  
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



SW 1/4 Sec. 32 T. 19 R. 23

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 + irrigation*
3. Date or approximate date of earliest beneficial use; and how continuous the use has been... *spring improved + first well dug in 1916 next in 1934 and 1940*
4. The amount of groundwater claimed (in miner's inches or gallons per minute)... *20 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... *garden and trees Hayfield is sub-irrigated*
6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal... *3 wells, electric pumps, one has run into spring flows*
7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater... *started in 1916 and completed in 1916*
8. The depth of water table... *varies from 10 ft to 50 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... *2 1/2 inch diameter long and lined with metal 1/2 inch apart rings, very in depth from 11 ft to 41 ft. The pump is dug with a back hoe to a depth of 20 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... *log not available*
12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record... *no county record*

Signature of Owner...

Date... *Dec 28, 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.

17239

COPY

State of Montana, }  
County of Fergus. }

Filed DEC 30 1963

at 10:55 o'clock A. M.

Wm. R. Rother  
County Clerk and Recorder

220 pt.