

File No.

DUPLICATE

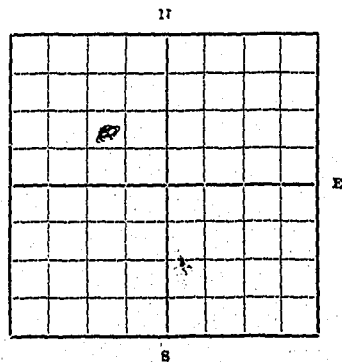
T. ^{N E 7} 10 R 23
County Mustache

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) STATE ENGINEER

1. Mrs. Florence Sherlock, of 1222-1st East, Roundup
(Name of Appropriator) (Address) (Town)
County of Mustache State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



S 1/4
N 1/4 Sec. 7, T. 10 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
- 3. Date or approximate date of earliest beneficial use; and how continuous the use has been June 1953
- 4. The amount of groundwater claimed (in miner's inches or gallons per minute) 30 B.M. per day
3 gal/min
- 5. If used for irrigation, give the acreage and description of the lands to which water has been applied and name of the owner thereof none applicable
- 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 Jan. 26 - 1953 - Completed Feb. 5 - 1953
- 8. The depth of water table 170 feet
- 9. So far as it may be available, the type, size and depth of each well or the general specifications of any other works for the withdrawal of groundwater drilled 6 in. pump 17 feet
- 10. The estimated amount of groundwater withdrawn each year 450,000 gallons
- 11. The log of formations encountered in the drilling of each well if available unknown
- 12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record none

Signature of Owner Mrs. Florence Sherlock
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.

17789

169540

STATE OF MONTANA,
MUSSELSHELL COUNTY.

FILED THIS 30 DAY OF
Dec A. D. 1963
AT 1:38 O'CLOCK P.M.

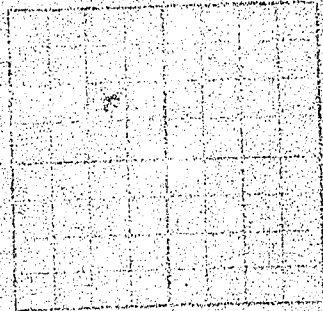
B. H. MATZKE

COUNTY RECORDER

Manuel L. Dawson
DEPUTY

2.00

STATE OF MONTANA
MUSSELSHELL COUNTY
RECORDS & CLERK
MUSSELSHELL



THIS IS TO CERTIFY THAT THE ABOVE
RECORDED INSTRUMENT IS A TRUE AND
CORRECT COPY OF THE ORIGINAL AS
FILED IN MY OFFICE ON THE DATE
AND HOUR HEREIN SET FORTH.

NOTARY PUBLIC

12

v 3

File No.....

T. 16 N. R. 22 E.

County Missoula

DUPLICATE

SW

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

RECEIVED
SEP 13 1963

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

(Under Chapter 237 Montana Session Laws, 1961)

Date of Appropriation of Groundwater.....

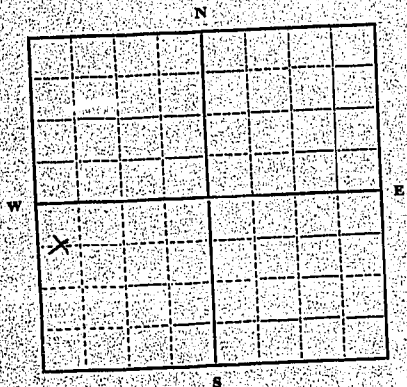
Owner M. D. Benedict Address 2190 BENECH BLVD

Contractor (if any) B. L. H. IN GS. MONT

Address of Contractor None

Date Started P. R. Bought Date Completed 1911

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



S. 1/4 W. Sec. 12 T. 12 R.
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.....

SINCE 1911

Signature of Owner M. D. Benedict

Date 7-8-63

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.

587

168548

STATE OF MONTANA
MUSSELSHELL COUNTY

FILED THIS 12 DAY OF
Sept A.D. 1963
AT 8:05 O'CLOCK A.M.

B. H. MATZKE
COUNTY RECORDER
Francis L. Dawson
DEPUTY

RECORDED
INDEXED
MUSSELSHELL COUNTY

File No. STATE WATER CONSERVATION BOARD

T. 10 R. 22 23

DUPLICATE

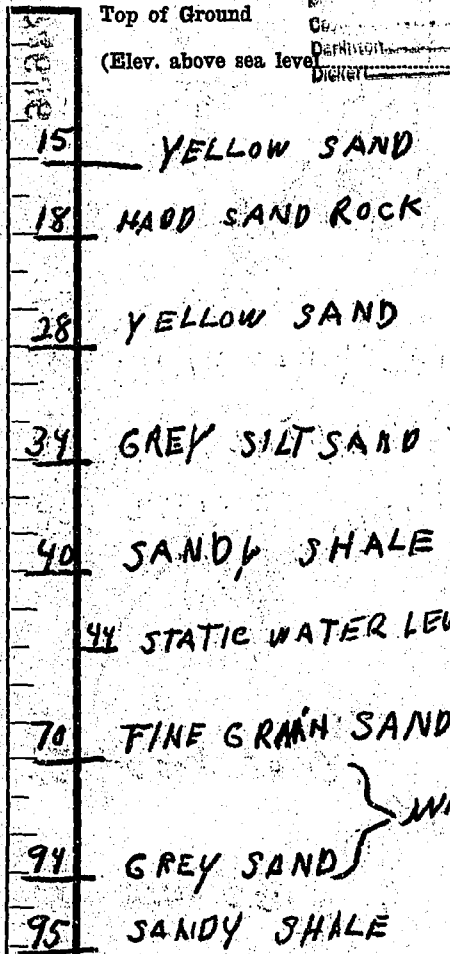
OCT 24 1966

County MOSS

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

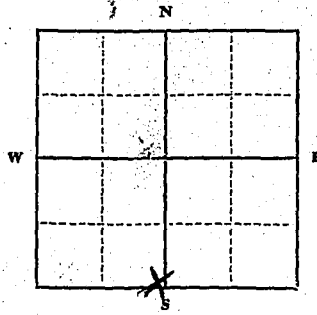
(Under Chapter 237, Montana Session Laws, 1961)



Owner ELIZABETH GIESE Address ROUNDUP MONT
 Driller JOE KOMBOL Address ROUNDUP, MONT
 Date of Notice of appropriation of groundwater NONE
 Date well started 9-24-66 Date completed 9-30-66
 Type 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)
7"	13 1/2" WALL	0	95	4 x 6" SLOTS	70	94



Static Water Level for non-flowing well 44 feet.
 Shut-in Pressure for Flowing Well _____
 Pumping Water Level 70 feet
 at 8 gal. per minute.
 Discharge in gal. per min. of flowing well _____
 How Tested BALLER
 Length of Test 1 HR
 Remarks: (Gravel packing, cementing, packers, type of shutoff)
Cemented AT 16 ft

SE 1/4 SW Sec 23, T. 10, R. 22
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.

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.

95
 Driller's License Number
Joe Kombol
 Driller's Signature

41,548

26

T. 10 N R. 22 E

County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

RECEIVED
APR 11 1961

WATER WELL LOG STATE ENGINEER

		X

Owner Elizabeth Giesas Address Roundup, Montana

Driller Joe Kombol Address Box 898, Roundup, Mont.

Date Started 3/8/61 Date Completed 3/11/61

Location: Sec 26 T. 10 N R. 22 E 1/4 sec. SE 1/4

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

Water use: Domestic Municipal Stock Irrigation

Industrial Drainage Other: _____

Casing: 0 ft. to 150 ft. Type 20 ga. Galv. Size 6"

Casing: _____ ft. to _____ ft. Type _____ Size _____

Casing: _____ ft. to _____ ft. Type _____ Size _____

Perforated or Screened: Ft. 139 to ft. 150 Ft. _____ to ft. _____

Type of screen or perforations Factory Perforated

Static Water level, for non-flowing well: 17 ft. feet.

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

Pumping water level 60 ft. feet at 7 gal. per min.

How tested: Bailor

Length of test One hour

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

(over)

Handwritten notes on the left margin, including "COUNT 1230" and "FIVE MINUTE".

File No.

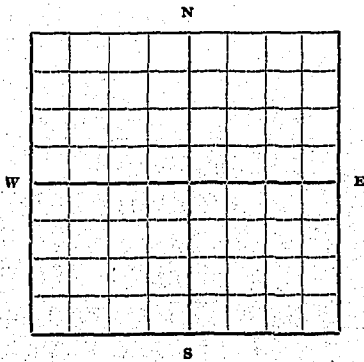
T. 10 N E 26
R. 22
County Musselshell

DUPLICATE

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER
Declaration of Vested Groundwater Rights
(Under Chapter 237, Montana Session Laws, 1961)

RECEIVED
JAN 2 1964
STATE ENGINEER

1. Elizabeth Giese of Box 236 Roundup
(Name of Appropriator) (Address) (Town)
County of Musselshell State of Montana
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



SR 1/4 26 Sec. 10 T. 22 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 livestock water irrigation of garden
- 3. Date or approximate date of earliest beneficial use; and how continuous the use has been 1932, every day for livestock, three months every summer for garden
- 4. The amount of groundwater claimed (in miner's inches or gallons per minute) 25 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 a garden patch, not quite an acre
- 6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal windmill, pumpjack and gasoline engine

- 7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of groundwater 1932
- 8. The depth of water table eighteen 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 hand dug well, six feet wide at the top tapering to about two and one half feet at the bottom, thirty two feet deep
- 10. The estimated amount of groundwater withdrawn each year all we need
- 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 Elizabeth Giese
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.

17803

169554

STATE OF MONTANA,
MUSSELSHELL COUNTY.

FILED THIS 30 DAY OF

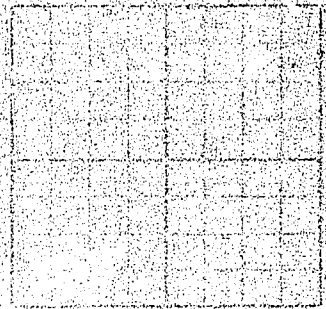
Dec A. D. 19 63

AT 2:06 O'CLOCK P. M.

B. H. MATZKE

COUNTY RECORDER

Francis L. Dawson
DEPUTY



RECORDED
INDEXED

Handwritten notes and faint text at the bottom of the page, including a date stamp 'DEC 30 1963' and other illegible markings.

File No.....

MONTANA WATER RESOURCES BOARD
RECEIVED

T. 10 R. 22 27

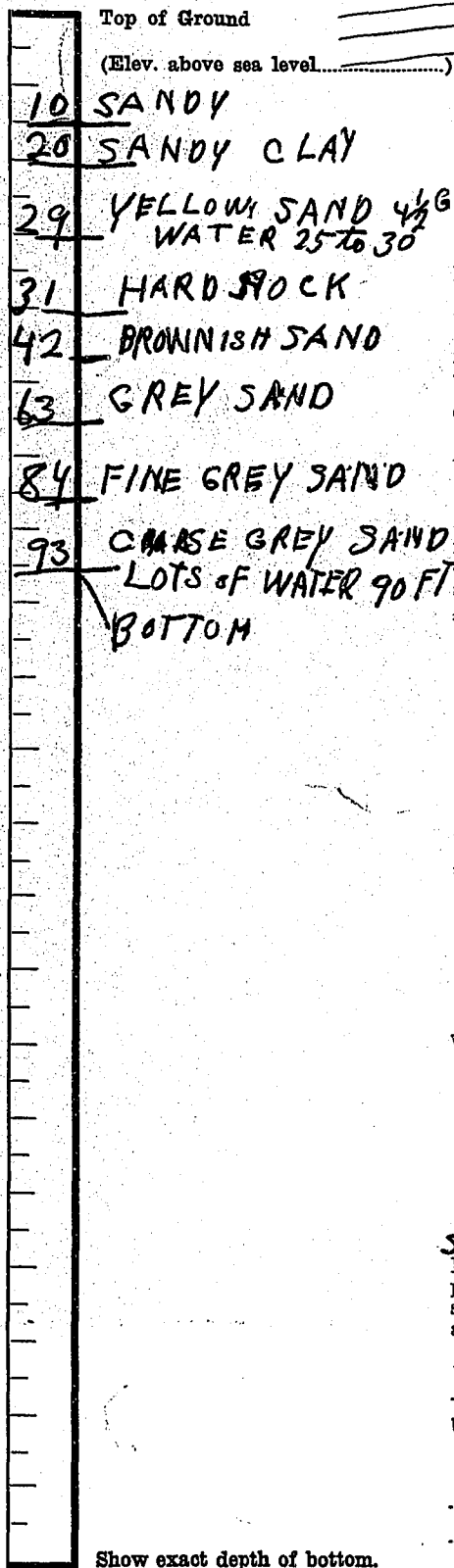
DUPLICATE

County M.U.S.S.

LOG

OCT 2 1967

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: ELIZABETH GIESE Address: ROUNDUP, MONT

Driller: JOE KOMBOL Address: ROUNDUP, MONT

Date of Notice of appropriation of groundwater: NONE

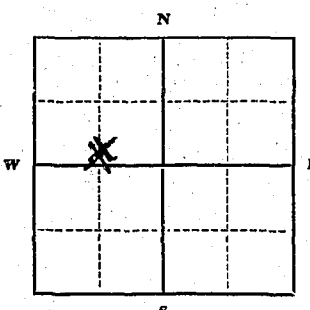
Date well started: 9-6-67 Date completed: 9-16-67

Type 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)
7"	6" I.D. 4 WALL 15" AER FT	0	93	2" x 6" SLOTS	25	30
					80	93



Static Water Level for non-flowing well 12 feet.

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

Pumping Water Level 60 feet at 32+ gal. per minute.

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

How Tested BAILER

Length of Test 2 HR

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

CASING CEMENTED 6 FT FROM TOP

S.M.W. Sec 27, T. 10, R. 22
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.

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.

75
Driller's License Number

Joe Kombol
Driller's Signature

42,354

T. 10N R. 23E
County

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Fearless Oil & Gas Company** **Fearless Incorporated**
Wytana Ranch Division **1670 Denver Club Bldg.**
Address: **Denver 2, Colorado**

Driller: Address:

Date Started: Date Completed:

Location: Sec. 1 T. 10N R. 23E ¼ sec. SW ¼ SW

Type of well: **Drilled** (Dug, driven, bored, or drilled) Equipment used: **Churn Drill** (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)

Description of Material Drilled
Log of Well

Page 2. Water Wells on Pronghorn Ranch.

Pronghorn Ranch Well No. 3 - 1948

Location - Reconditioned old dug well for Lower Ranch residence use.
Section 1, Township 10 N, Range 23 E. SW SE SW

Size of hole - 3 feet

Size of casing - 18 inches corrugated flume

Depth of hole - approximately 18 feet

Curbed with stone outside of 18 inch flume

This is a reconditioned old hand dug well that was curbed with stone, 3 feet inside diameter. Perforated 18 inch corrugated casing set inside and gravel packed. Electric pump installed. Rated 20 gallons a minute.

T. 10N R. 21E

County Musselshell

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

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

Driller..... Address.....

Date Started..... Date Completed.....

Location: Sec. 2 T. 10N R. 21E ¼ sec. NE NW

Type of well **Drilled** (Dug, driven, bored, or drilled) Equipment used **Churn Drill** (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)

LITHOLOGIC LOG

Well #8

All depths relative to rotary bushing
which was five (5) feet above ground.

Judith River

- 0 - 100 No samples taken, but drillers report much sand and some water.
- 100 - 245 Sandstone, fine to coarse grained, grey, quartzose, cherty, glauconitic, some coaly fragments, mostly poorly cemented if at all, drills up as sand, some white clayey matrix, quartz grains often euhedral, fairly well sorted. Chert fragments and grains are white, brown, red-brown, and average larger size than the rest of the sand grains.
- 120-50 Sand as above but porous and probably water bearing.
- 150-60 Same, poorly sorted with more white matrix and spots of buff colored clay. Also pyrite with quartz, chert and coal imbedded in it, and large fragments of brown-black brittle carbonaceous (coaly) shale.
- 160-70 Same with 50% of the sand imbedded in a pyrite matrix.
- 170-80 Siltstone, grey, sandy with quartz and black and green mineral grains, soft, non-porous.
- 230-45 Fine to very fine sandstone, almost siltstone.
- 245 - 270 Siltstone, brown-grey, with large fragments of brown or black carbonaceous material, and with sandy zones grading into brown to grey, fine grained sandstone.
- 270 - 280 Missing
- 280 - 285 Claystone, waxy, navy grey, with sandy zones.
- 285 - 470 Sandstone, medium grained, grey to brownish-grey, poorly sorted, sub-rounded, quartzose, carbonaceous to coaly, soft, some biotite and often orange-buff clayey matrix, somewhat porous.
- 340-80 Sand as above but very porous and probably water bearing.
- 440-70 Sandstone, white, loaded with white clay matrix, quartz, chert, and other unidentifiable mineral grains.
- 470 - 500 Missing
- 500 - 580 Sandstone, quartzose, cherty, green & black mineral and red-brown biotite flakes, fairly well sorted, coarse, very porous, soft, little matrix, grey, sub-rounded grains, probably water bearing.

580 - 650 Siltstone, grey to brownish-grey, black speckled, some quartz grains scattered throughout, soft to silty claystone.

Claggett

650 - 1060 Claystone, dark grey and brownish-grey to black, somewhat shaly, micaceous, soft, lighter colored varieties often spotted with carbonaceous flakes.

700-10 Silty zone

880-90 Few pieces of white limestone

900-10 Silty sandstone

1040-50 Silty to almost fine grained sandstone

Eagle

1060 - 1120 Sandstone, medium to fine grained, quartz, black chert, and some glauconite, silty dark grey-brown matrix, soft, non-porous.

1120 - 1180 Siltstone, sandy and silty, fine grained, dark grey sandstone, very little porous if any, and with larger specks of black carbonaceous material.

1180 - 1268 Sandstone, coarse to medium coarse grained, well sorted, quartz, chert, glauconite, no matrix visible, porous, and with silty and clayey zones; water bearing.

1268 - 1390 Siltstone, grey-brown and sandstone, fine to medium grained, quartz and black mineral grains, rounded, well sorted, soft, silty, grey, alternating with the siltstone.

1320-30 Sandstone, fine grained, medium sorted, glauconitic, fair porous,

1330-40 Some coarse grained sandstone now.

1350-60 Quartzitic zones

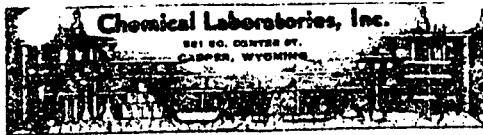
1390 - 1400 Siltstone, grey, sandy, quartzose, micaceous, carbonaceous, tight, non-porous.

1400 - 1430 Sandstone, fine grained, quartzose, very tight, grey, well sorted, and with some white limestone fragments.

Probable Top Colorado

1430 - 1440 Siltstone, dark grey, quartzose, hard.

1440 - Total Depth



WATER ANALYSIS REPORT

Field Pronghorn Ranch, Montana Well No. 8
 Operator H. Hadley Location Sect. 3, T. 10 N., R. 23 E.
 Sampled by _____ Date _____
 Sand Eagle? Depths 1175 - 1110 How sampled Free flow
 Other pertinent data Soft water but too alkaline for prolonged irrigation;
can be used for stock. **H.O.H.**
 Analyzed by KA Date 10-18-49 Lab. No. 3460

PARTS PER MILLION

NA & K	CA	Mg	Fe	SO ₄	CL	CO ₃	HCO ₃	OH	H ₂ S
601	TR	27		923	39	96	295		

MILLIGRAM EQUIVALENTS

26.14		2.22		19.22	1.10	3.20	4.84		
-------	--	------	--	-------	------	------	------	--	--

MILLIGRAM EQUIVALENTS IN PERCENT

46.09		3.91		33.88	1.95	5.64	8.53		
-------	--	------	--	-------	------	------	------	--	--

Total Solids in Parts per Million

By evaporation 1840
 After ignition 1569
 Calculated 1831

Properties of Reaction in Percent

Primary salinity 71.66
 Secondary salinity 0.00
 Primary alkalinity 20.52
 Secondary alkalinity 3.82
 Chloride salinity 5.14
 Sulfate salinity 94.56

Observed pH 8.5

Remarks and conclusions Satisfactory for stock and irrigation.

T. 10N R. 23E

4

County.....

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Fearless Oil & Gas Company** c/o **Fearless Incorporated**
Wyana Ranch Division Address: **1670 Denver Club Bldg.**
Denver 2, Colorado

Driller: **Gordon Scammon** Address: **Roundup, Montana**

Date Started: **February 9, 1953** Date Completed: **February 28, 1953**

Location: Sec. **4** T. **10N** R. **23E** 1/4 sec. **SE4 NE4**

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:.....

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 **100** feet at **10** gal. per min.

How tested: **Bailer**

Length of test.....

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

Cemented

.....

.....

.....

.....

..... (over)

PRONGHORN WELL NO. 24
WYKANA CATTLE COMPANY WATER WELL NO. 24 - SW 1/4 Sec. 4
T 10 N, R 23E

Started February 9, 1953, completed February 25, 1953

0 - 7 ft.	Gravel set 9 ft. 10 inch casing
7 - 70	Shale tan
70 - 115	Shale dark grey (med.)
115 - 186	Shale light grey (hard) water show, 125 ft.
186 - 245	Shale light brown (hard)
245 - 390	Shale light grey (hard) water 2 gallons per minute at break between brown shale and grey shale
390 - 415	Sandstone grey (soft) water bearing
415 - 560	Sandstone grey (hard) water bearing

Total depth 450 feet. 5 1/2 inch casing set at 390 feet cemented
with 20 sacks of cement.
Bridging plug set 400 feet, 10 feet of sand and rock set on
top of plug. Cemented by Halliburton
Water stands 100 feet from top of ground. Miller test 10 gallons
per minute.

COPY

MAR 14 1953

YAPUNCICH-SANDERSON LABORATORIES

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 128C

To Gordon Scammon Date 3-10-53
Address P.O. Box 431, Roundup, Montana
Sample from Wytana Cattle Co. Water Well No. 24, Judith River Sand, 390-450'
Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
		By evaporation	Calculated
Sodium	300	2612	
Calcium	768	2404	
Magnesium	0	2509	
Sulfate	788		
Chloride	23		
Carbonate	106		
Bicarbonate	0		
Total Silica			
Soluble Silica			
Iron			

pH 12.0 plus
Specific gravity 1.010 @ 60° F
Resistivity @ 68° F
ohms per meter cubed 1.45

Total hardness as calcium carbonate 112.0 grains, U. S. gallon

Remarks:

Cement contaminated water. Should be suitable for stock use after removing the contaminated water.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

YAPUNCICH-SANDERSON LABORATORIES

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1321

To Gordon Scammon Date 2-23-53
Address P.O. Box 431, Roundup, Montana
Sample from Wytana Cattle Co. Water Well No. 24 Pronghorn, @ 243'
Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
Sodium	2396	By evaporation	7552
Calcium	99	After ignition	7392
Magnesium	90	Calculated	7708
Sulfate	4034	pH <u>7.6</u>	
Chloride	711	Specific gravity <u>1.011 @ 60° F</u>	
Carbonate	0	Resistivity @ 68° F	
Bicarbonate	768	ohms per meter cubed <u>1.20</u>	
Total Silica			
Soluble Silica			
Iron			

Total hardness as calcium carbonate 30.1 grains U. S. gallon

Remarks: Not recommended for stock use. Mainly a sodium sulfate water.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

T. 10N R. 23E 9

County.....

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

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

Driller **Gordon Scamson** Address **Roundup, Montana**

Date Started..... Date Completed.....

Location: Sec. **9** T. **10N** R. **23E** ¼ sec. **SW** **SW**

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:.....

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 **183** feet at **6** gal. per min.

How tested: **Sailer**

Length of test.....

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

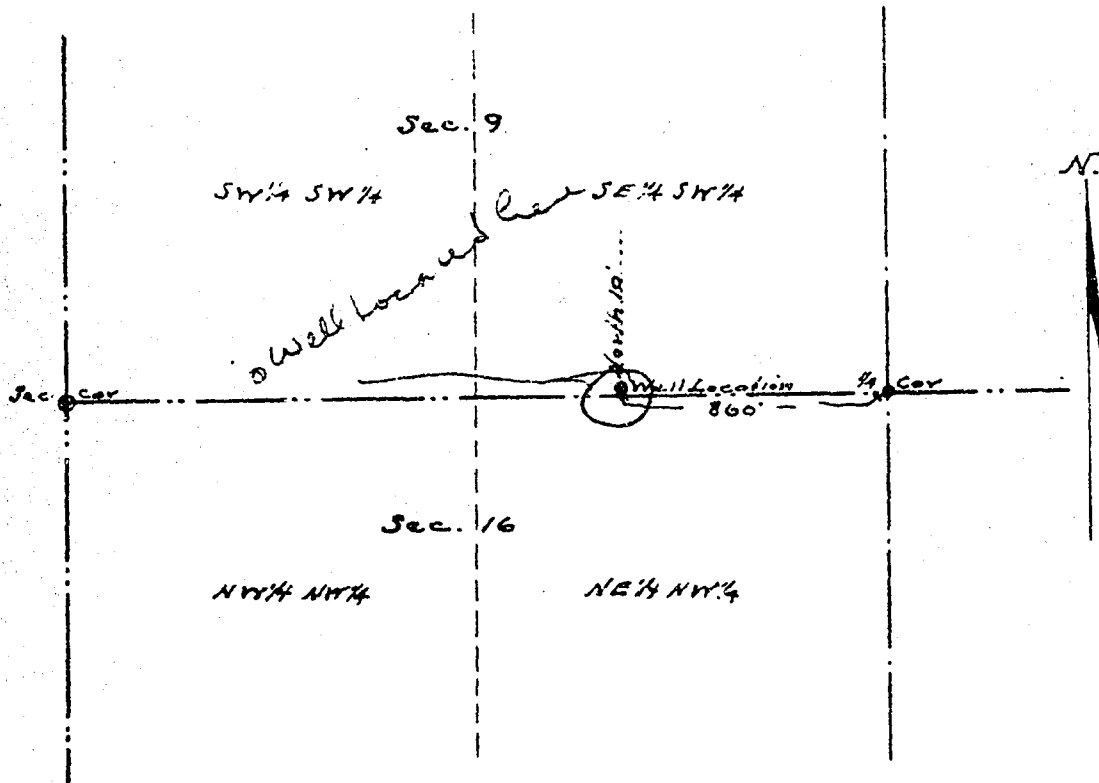
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(over)

Wyfana Cattle Co.
Pronghorn Ranch

Well Location
Sec. 9, T.10N; R.23E.

Scale 1" = 500'



Surveyed Oct. 1952.
Arel Rejer
Lewistown, Mont.

Billings CORE-LAB

5 NORTH 25th ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1241-1

To Mr. Gordon Scammon Date 12-12-52
Address Pox 431, Roundup, Montana
Sample from Wytana Cattle Co. Water Well No. 22, Judith River @ 183'
Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
		By evaporation	
Sodium	718		<u>2894</u>
Calcium	89	After ignition	<u>2674</u>
Magnesium	82	Calculated	<u>2708</u>
Sulfate	1440	pH <u>7.1</u>	
Chloride	29	Specific gravity @ 60°F	<u>1.008</u>
Carbonate	0	Resistivity @ 68°F	
Bicarbonate	710	ohms per meter cubed	<u>3.1</u>
Total Silica	Some organic matter present.		
Soluble Silica			
Iron			

Total hardness as calcium carbonate 32.7 grams U. S. gallon

Remarks: Suitable for stock use.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

FRONCHORN WATER WELL LOG NO. 22 - Section E9, T10N, R22E
SW⁴SW⁴ 9

0 - 3 Rocky top soil
3 - 54 Shale light grey
54 - 62 Shale light grey hard
62 - 120 Lime light grey very hard
120 - 142 Sandstone grey hard (show of water)
142 - 179 Sandstone medium grey (water bearing)
179 - 183 Shale. light grey - Total Depth

Pailor tested 6 gallons per minute
4 1/2 O.D. casing run to bottom, perforated opposite
water sand.

COPY

10

T. 10N R. 23E
County.....

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Peerless Oil & Gas Company**
Wyzana Ranch Division Address: **Peerless Incorporated**
1670 Denver Club Bldg.
Denver 2, Colorado

Driller: **Gordon Scammon** Address: **Roundup, Montana**

Date Started..... Date Completed.....

Location: Sec. **10** T. **10N** R. **23E** 1/4 sec. **SE1 SE1**

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:.....

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 **15** **155** feet at **8** gal. per min.

How tested: **Bailer**

Length of test.....

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

.....

DEC 5 1952

WYAMA CATTLE COMPANY - PRONGHORN WATER WELL No. 21
514.514 10
Section 22, T10N, R23E

0 - 25	Gravel & sand, set 8 inch pipe
25 - 35	Sandy shale, medium
35 - 55	Shale, yellow, medium
55 - 58	Lime shell, hard grey
58 - 80	Sandstone, grey (some water)
80 - 108	Shale grey
108 - 120	Shale brown
120 - 155	Sandstone medium grey (water bearing)

Bailer tested 8 gallons per minute
4 1/2 O.D. casing perforated opposite water sand.
Cave catcher on casing above sand.

COPY

Billings CORE-LAB

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1213

To Mr. Gordon Scammon Date 11-26-52
Address Box 431, Roundup, Montana
Sample from Wytana Cattle Co. Well No. 21 @ 155 feet.
Intended use Domestic and Stock.

Constituents	Parts per Million	Total Solids in Parts per Million	
Sodium	74	By evaporation	<u>1599</u>
Calcium	199	After ignition	<u>1268</u>
Magnesium	83	Calculated	<u>1217</u>
Sulfate	639	pH <u>6.8</u>	
Chloride	14	Specific gravity 60°F <u>1.007</u>	
Carbonate	0	Resistivity - 68°C	
Bicarbonate	321	ohms per meter cubed	<u>7.10</u>
Total Silica			
Soluble Silica			
Iron			

Total hardness as calcium carbonate 49.0 grains/U. S. gallon

Remarks: Some organic matter present. Suitable for stock use.
Can be used for domestic use. Hard water. Recommend softening for domestic purposes.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

13

File No.

T 11N R 23E

DUPLICATE

County Missoula

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
OFFICE OF STATE ENGINEER

RECORDED
JAN 2 1964

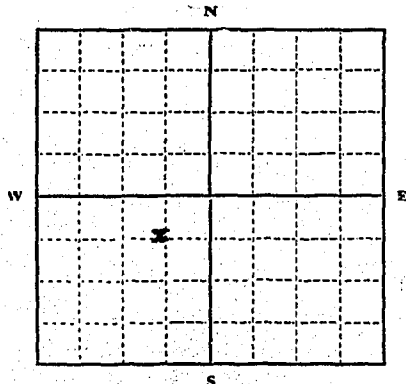
Declaration of Vested Groundwater Rights

(Under Chapter 237, Montana Session Laws, 1961)

STATE ENGINEER

1. GRAVES RANCH CO. of Roundup, Montana
(Name of Appropriator) (Address) (Town)

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



NESW 1/4 Sec. 13 T11N R.23E

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 1890 continuous

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

6. The means of withdrawing such water from the ground and the location of each well or other means of withdrawal
Spring, natural flow, dugout

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

8. The depth of water table Surface

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

10. The estimated amount of groundwater withdrawn each year 5,184,000 gals

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

12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any county record. This water has been used for stockwater and sub-irrigation continuously since the land has been in private ownership.

Graves Ranch Co.

Signature of Owner President

Date 12/27/63

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.

17856

RECEIVED

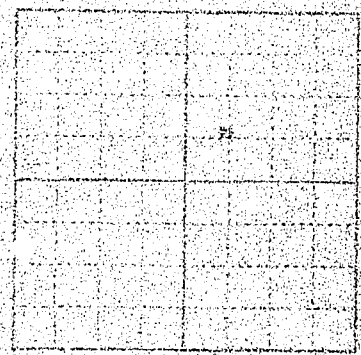
169607

STATE OF MONTANA,
MUSSELSHELL COUNTY, ^{1st}

FILED THIS 30 DAY OF Nov
A. D. 19 63
AT 5:05 O'CLOCK P.M.

B. H. MATZKE
COUNTY RECORDER

Francis L. Lawson
DEPUTY



RECORDED
INDEXED
MUSSELSHELL COUNTY
MONTANA
NOV 30 1963

C

ALL RIGHTS RESERVED
MUSSELSHELL COUNTY
MONTANA

John Abbott, Clerk of the Court, has filed for the purpose of recording the following:

- 1. The following is a copy of the original of the following:
- 2. The following is a copy of the original of the following:
- 3. The following is a copy of the original of the following:
- 4. The following is a copy of the original of the following:
- 5. The following is a copy of the original of the following:
- 6. The following is a copy of the original of the following:
- 7. The following is a copy of the original of the following:
- 8. The following is a copy of the original of the following:
- 9. The following is a copy of the original of the following:
- 10. The following is a copy of the original of the following:

T. 10N R. 23E 18

County.....

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Peerless Oil & Gas Company**
Wynana Ranch Division Address: **Peerless Incorporated**
1670 Denver Club Bldg.
Denver 2, Colorado

Driller: **Gordon Scammon** Address: **Roundup, Montana**

Date Started..... Date Completed.....

Location: Sec. 18 T. 10N R. 23E ¼ sec. NW¼SE¼

Type of well Drilled (Dug, driven, bored, or drilled) Equipment used Churn Drill (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 121 feet at 5 gal. per min.....

How tested: Bailing

Length of test.....

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

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

(over)

FRONCHON WELL O. 20 - NW 1/4 SE 1/4 Section 18,
T10N R23E.

0 - 14	Sandstone grey hard
14 - 19	Shale light grey
19 - 27	Sandstone Grey
27 - 38	Shale light grey
38 - 66	Sandstone grey hard
66 - 94	Shale grey green (sandy)
94 - 99	Shale grey sandy
99 - 107	Sandstone hard grey) ---water bearing
107 - 120	Sandstone medium grey)

Tested 5 gallons per minute on balling.
121 feet 4 1/2 O. D. casing Baker 4 1/2 O. D. cave catcher
used above water sand. Casing perforated 99 ft to 120 ft.

Billings CORE-LAB
 5 NORTH 25TH ST.
 BILLINGS, MONTANA

10-23-52

WATER ANALYSIS REPORT

Lab. No. 1166-2

To Mr. Gordon Stinson Date 10-13-52
 Address Box 431, Roundup, Montana
 Sample from Well #20, Lance formation @ 120'
 Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
		By evaporation	Calculated
Sodium	549	2013	1787
Calcium	50	1935	
Magnesium	40		
Sulfate	1072	pH <u>6.3</u>	Specific gravity <u>1.005</u>
Chloride	35	Resistivity @ 68°F	ohms per meter cubed <u>4.25</u>
Carbonate	0		
Bicarbonate	386		
Total Silica			
Soluble Silica			
Iron			

Total hardness as calcium carbonate 16.9 grams U. S. gallon

Remarks: WYFANA CATTLE COMPANY WELL

Suitable for stock use.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

WESTERN LITHO-PRINT, INC., BILLINGS, MONT

Form No. 18
8-60

18

T. Ten (10) North R. Twenty-three East M.F.M
County Musselshell, Montana

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

RECEIVED
JUL 7 1957

Water Well Log

STATE ENGINEER

23 E.H.P.M.

10	18	

Owner Peerless Oil & Gas Company Address 1670 Denver Club Bldg. Denver 2, Colorado
 Driller Gordon Scamson Address Roundup, Montana
 Date Started July 1957 Date Completed July 1957
 Location: Sec. 18 T. 10 R. 23E $\frac{1}{4}$ sec. NW/4 SE/4

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

Water use: Domestic Municipal Stock Irrigation
 Industrial Drainage Other _____

Casing: Surface ft. to 80 ft. Type _____ Size 6 5/8 OD

Casing: _____ ft. to _____ ft. Type _____ Size _____

Casing: _____ ft. to _____ ft. Type _____ Size _____

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

Type of screen or perforations _____

Static water level, for non-flowing well: 10 feet from surface feet.

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

Pumping water level _____ feet at 5 gal. per min. _____

How tested: _____

Length of test _____

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

Set 80' of 6 5/8" casing with 10 sacks, by B*J. Service, July 11, 1957. Left 6' cement in pipe. Cement came to 9' of top on outside of pipe. Drilled out July 13, 1957.

(over)

19

T. 10N R. 23E

County

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

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

Peerless Incorporated
1670 Denver Club Bldg.
Denver 2, Colorado

Driller: Address:

Date Started: Date Completed:

Location: Sec. 19 T. 10N R. 23E 1/4 sec. NW1/4

Type of well: **Drilled** (Dug, driven, bored, or drilled) Equipment used: **Churn Drill** (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. 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 130 feet at 4-12 gal. per min.

How tested:

Length of test:

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

(over)

PRONGHORN WATER WELL NO. 17 - NW $\frac{1}{4}$ Section 19,
T10N, R23E.

0 - 5 ft.	top soil gravel
5 - 55	Clay - yellow
55 - 220	Shale - dark grey medium
220 - 350	Shale - light grey hard
350 - 353	Sandstone shell hard
353 - 498	Shale - light brown medium
498 - 520	Sandstone - grey hard (water)
520 - 535	Sandy lime hard
535 - 550	Very sandy shale medium
550 - 561	Sandy lime hard.
561 - 570	Very sandy shale medium
570 - 600	Sandstone - grey medium (water)
600 - 605	Grey shale - 605 total depth

490 feet 6" O.D. casing cemented with 25 sacks.
Water 130 feet from top of ground.
4-12 gallons per minute test.

COPY

T. 10N R. 23E

20

County

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Fearless Oil & Gas Company**
Nytana Branch Division Address: **Fearless Incorporated**
1670 Denver Club Bldg.
Denver 2, Colorado

Driller: **Gordon Scammon** Address: **Roundup, Montana**

Date Started Date Completed

Location: Sec. **20** T. **10N R. 23E** 1/4 sec. **34 35**

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

Water use: Domestic Municipal Stock Irrigation
Industrial Drainage Other:

Casing:ft. toft. Type Size

Casing:ft. toft. Type Size

Casing:ft. toft. 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 **300** feet at **10** gal. per min.

How tested: **Bailed**

Length of test

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

Cemented

(over)

WYTABA CATTLE COMPANY
Pronghorn Well Log No. 19 -- NW $\frac{1}{4}$ SE $\frac{1}{4}$ Section 20, T10N, R23E.

NOV 7 1952

0 - 7 Top soil gravel
7 - 30 Shale yellow
30 - 85 Shale dark grey
85 - 100 Hard. Mud stones
100 - 165 Shale light grey (sandy)
165 - 215 Shale light brown
215 - 219 Coal black
219 - 231 Sandstone grey mud (water)
231 - 236 Shale brown
236 - 325 Sandstone grey mud (water)

227 ft. 6 inch casing cemented with 25 sacks.

Water 65 ft. from top of ground.
Bailed 10 gallons per minute at 200 feet.

COPY

Billings CORE-LAB

5 NORTH 15TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

No. 1166-1

To Mr. Gordon Scammon Date 10-13-52
Address Box 431, Roundup, Montana
Sample from Well #19, Upper water in shale. Breaks above Judith River sand.
Intended use Stock (top 22')

Constituents	Parts per Million	Total Solids in Parts per Million
Sodium	1879	By evaporation <u>8157</u>
Calcium	354	After ignition <u>7897</u>
Magnesium	278	Calculated <u>8177</u>
Sulfate	5293	pH <u>6.5</u>
Chloride	57	Specific gravity <u>1.012</u>
Carbonate	0	Resistivity @ 68°F
Bicarbonate	642	ohms per meter cubed <u>1.35</u>
Total Silica		
Soluble Silica		
Iron		

Total hardness as calcium carbonate 118.4 grains/U. S. gallon

Remarks: WYMANA CATTLE COMPANY WELL

High sulfate concentration. Not recommended for stock use.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

WESTERN LITHO-PRINT, INC., BILLINGS, MONT.

Billings CORE-LAB

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1177

To Mr. Gordon Scammon Date October 20, 1952
Address P.O. Box 431, Roundup, Montana
Sample from Wytana Cattle Co. Water Well No. 19, Judith River Sand 220-325'
Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
		By evaporation	
Sodium	1433	After ignition	<u>6248</u>
Calcium	743	Calculated	<u>6048</u>
Magnesium	0		
Sulfate	3292	<u>11.3</u>	
Chloride	48	Specific gravity	<u>1.010</u>
Carbonate	50	Resistivity @ 68°F	
Bicarbonate	0	ohms per meter cubed	<u>1.10</u>
Total Silica			
Soluble Silica			
Iron			
Hydroxide	475		

Total hardness as calcium carbonate 108.4 grains/U. S. gallon

Remarks: Cement contaminated water as indicated by the high pH and presence of hydroxide. Mainly sulfate water; however, the water appears to be suitable for stock use.

SPECIALIZING IN CORE. WATER. GAS AND CRUDE OIL ANALYSES

WESTERN LITHO-PRINT, INC., BILLINGS, MONT.

T. 20 N R. 23E

22

County

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Pearless Oil & Gas Company**
Wytana Ranch Division Address: **Pearless Incorporated**
1670 Denver Club Bldg.
Denver 2, Colorado

Driller: **Gordon Scammon** Address: **Roundup, Montana**

Date Started Date Completed

Location: Sec **22** T. **10N** R. **23E** 1/4 sec. **NE1/4 NW1/4**

Type of well: **Drilled** (Dug, driven, bored, or drilled) Equipment used: **Churn Drill** (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: **343** feet at **6** gal. per min.

How tested: **Bailer**

Length of test

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

Cemented

(over)

Billings CORE-LAB

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1241-2

To Mr. Gordon Scammon Date 12-12-52
Address Box 431, Roundup, Montana
Sample from Wytana Cattle Co. Water Well No. 23, Bear Paw, Upper Water in
Intended use Stock Shale.

Constituents	Parts per Million	Total Solids in Parts per Million	
Sodium	3606	By evaporation	<u>11,942</u>
Calcium	233	After ignition	<u>11,746</u>
Magnesium	72	Calculated	<u>12,097</u>
Sulfate	7800	pH <u>7.3</u>	
Chloride	136	Specific gravity @ 60°F	<u>1.016</u>
Carbonate	0	Resistivity @ 68°F	
Bicarbonate	508	ohms per meter cubed	<u>0.78</u>
Total Silica			
Soluble Silica			
Iron			

Total hardness as calcium carbonate 51.3 grains U. S. gallon

Remarks:

Not suitable for stock use. Mainly sodium sulfate water.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

YAPUNCICH SANDERSON LABORATORIES

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1315

To Mr. Gordon Scammon Date 2-7-53
 Address Box 431, Roundup, Montana
 Sample from Wytana Cattle Co. Water Well No. 23, Lower Sand Judith River.
 Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
Sodium	703	By evaporation	<u>3244</u>
Calcium	752	After ignition	<u>3144</u>
Magnesium	10	Calculated	<u>2778</u>
Sulfate	21	pH <u>12.0</u>	
Chloride	55	Specific gravity <u>1.009 @ 60° F</u>	
Carbonate	227	Resistive @ 68°F ohms/meter ¹	
Bicarbonate		Resistivity @ 68° F	
Total Silica		ohms per meter cubed	<u>0.83</u>
Soluble Silica			
Iron			
Hydroxide	1010		

Total hardness as calcium carbonate 112.1 grains U. S. gallon

Remarks:

Highly cement contaminated water. Cement changes the characteristics of water. Indications are that the water would be suitable for stock use after the well has been cleaned out.

Scammon will clean out well prior to setting up windmill. Sample was taken after well had been completed by Halliburton. (RAO)

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

WYMANA CATTLE COMPANY

WATER WELL LOG NO. 25

Pronghorn Ranch - NW 1/4 Section 22, T10N, R23E.

- 0 - 104 Dark shale - small amount of water 25 feet
104 - 211 Shale, light grey - 2 gallons per minute in shale
break at 104 to 105 feet
211 - 226 Brown shale, medium
226 - 239 Lime, sandy hard
239 - 305 Shale, dark grey sticky
305 - 328 Shale, light hard
328 - 340 Coal shale dark brown
340 - 339 Sandstone, grey hard - water bearing

343 feet 6 inch O. D. casing set and cemented with 20 sacks of cement at top of water sand. Tested by bailer - 2 gallons per minute.

COPY

T. 10N R. 23E
County

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Peerless Incorporated
Peerless Oil & Gas Company
Owner: Wyana Ranch Division Address: Denver 2, Colorado

Driller: Gordon Scamson Address: Roundup, Montana

Date Started: August 7, 1952 Date Completed: August 23, 1952

Location: Sec. 30 T. 10N R. 23E 1/4 sec. S4 S4

Type of well: Drilled (Dug, driven, bored, or drilled) Equipment used: Churn Drill (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: 445 feet at 5 gal. per min.

How tested: _____

Length of test _____

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

Cementing

(over)

PRONGHORN LOG OF WELL NO. 16

S $\frac{1}{2}$ S $\frac{1}{2}$ Section 30, Township 10 north, Range 23 East

Started August 7th, 1952 - Completed August 23rd, 1952.

0	-	25	top soil yellow
25	-	60	shale dark grey
60	-	358	shale light grey
358	-	360	hard shell grey sandstone
360	-	370	sandstone medium hard - streaks - water bearing
370	-	422	hard sandy shale grey
422	-	442	sandstone medium grey - water bearing
442	-	445	shale grey

Total depth 445 feet - Water 20 feet from top of ground -
Tested 6 gallons per minute

355 feet 6 inch casing cemented with 20 sacks.

(Halliburton)

Billings CORE-LAB

3 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1107-2

To Gordon Scammon Date 8-18-52
Address Box 431, Roundup, Montana
Sample from Lower water 359' top Pole Creek, Water Well No. 16
Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
Sodium	787	By evaporation	<u>2336</u>
Calcium	0	After ignition	<u>2240</u>
Magnesium	0	Calculated	<u>2242</u>
Sulfate	1101	pH <u>8.3</u>	
Chloride	87	Specific gravity	<u>1.008 @ 60°F</u>
Carbonate	80	Resistivity @ 68°F	
Bicarbonate	380	Ohms/meter cubed	<u>3.35</u>
Total Silica			
Soluble Silica			
Iron			

Total hardness as calcium carbonate 0 grains/U. S. gallon

Remarks: Suitable for stock use.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

WESTERN APPLIED PRINT, INC., BILLINGS, MONT.

Billings CORE-LAB

5 NORTH 25TH ST.
BILLINGS, MONTANA

WATER ANALYSIS REPORT

Lab. No. 1107-1

To Gordon Scammon Date 9-19-52
Address P.O. Box 431 Roundup, Montana
Sample from Pole Creek, Water Well No. 16, Upper Water Sample : 59'
Intended use Stock

Constituents	Parts per Million	Total Solids in Parts per Million	
		By evaporation	
Sodium	4013	After ignition	<u>12,816</u>
Calcium	150	Calculated	<u>12,620</u>
Magnesium	38		
Sulfate	8390	pH <u>7.9</u>	
Chloride	49	Specific gravity <u>1.011</u> @ <u>68° F</u>	
Carbonate	0	Resistivity @ <u>68° F</u>	
Bicarbonate	815	ohms per meter cubed <u>0.83</u>	
Total Silica			
Soluble Silica			
Iron			

Total hardness as calcium carbonate 43 grains U. S. gallon

Remarks: Not suitable for stock use.

SPECIALIZING IN CORE, WATER, GAS AND CRUDE OIL ANALYSES

WESTERN LITHO-PRINT, INC., BILLINGS, MONT.

RECEIVED

JUL 11 1972

10N 23E 32
Musselshell
County

STATE OF MONTANA
ADMINISTRATOR OF GROUNDWATER CODE
MONTANA WATER RESOURCES BOARD

MONTANA DEPARTMENT OF NATURAL
RESOURCES AND CONSERVATION

DRILLER'S LOG

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

NOTICE OF COMPLETION OF GROUNDWATER
APPROPRIATION BY MEANS OF WELL

Developed after January 1, 1962

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

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

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

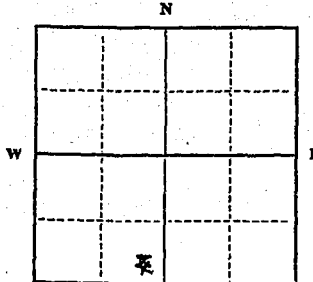
Owner Lake Mason Grazing Assoc.
Address Roundup, Montana
Date well started 6/12/72
completed 6/16/72
Type of well Drilled
Equipment used churn Drill
Water Use: Domestic Municipal Stock Irrigation
Industrial Drainage Other * Garden/Lawn

For Administrator's Use
File 183990
July 2, 1972 9:32am
GW 1

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

ESTIMATED ANNUAL WITHDRAWAL

Size of Drilled Hole	Size and Weight of Casing	From (Feet)	To (Feet)	PERFORATIONS		
				Kind Size	From (Feet)	To (Feet)
72	8" I.D. 1/2" wall	0	4			
	6" I.D. plastic	0	137	1/2 holes	50	55
				4 perf.	75	85
					97	135



Static water level 365.125 ft.*
Pumping water level 3 ft.*
at 60 gallons per minute,
measured 60 minutes after pumping began.
*Measured from ground level.
Well developed by Baling
for 1 hours.
Power Pump HP
Remarks: (Gravel packing, cementing, packers, type of shutoff)

SE 10 SW 23 Sec. 32
T. 10 N. 23 E. 32

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

Driller's Signature Joe Kumbal
Driller's Address Box 898 Roundup Mont.

Top of Ground		(Elev. above sea level)
From (Feet)	To (Feet)	
0	1	surface
1	4	hard cap rock
4	19	sand tan
19	22	shale grey
22	31	cl Clay Blue grey
31	47	sand tan
47	70	Shale hard sandy grey water 2 g.p.m. 54ft.
70	76	sand fine dirty grey
76	82	sand grey water 1/2 g.p.m.
82	87	shale dark
87	99	sand fine dirty grey
99	108	sandrock hard
108	130	sand grey water 125 4 G.P.M.
130	137	shale

LICENSE NO. 95

137 Show exact depth of bottom

50,878

25 212

183990

STATE OF MONTANA,
MUSSELSHELL COUNTY, 88.

FILED THIS 7th DAY OF

July A. D. 1922

AT 9:32 O'CLOCK A.M.

CLAUDE E. FLETCHER
COUNTY RECORDER

Levitt Stearns
DEPUTY

RECORDED

INDEXED

FILED

MUSSELSHELL COUNTY

MONTANA

JUL 11 1922

9:32

A.M.

CLAUDE E. FLETCHER

RECORDER

DEPUTY

LEVITT STEARNS

DEPUTY

MUSSELSHELL COUNTY

MONTANA

JUL 11 1922

9:32

A.M.

CLAUDE E. FLETCHER

RECORDER

DEPUTY

GW 4

32

T. 10 N. R. 23 E.
County of MUSSEL SHELL

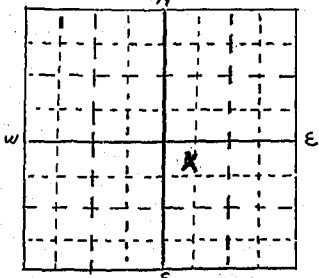
State of Montana
Administrator of groundwater Code
Office of State Engineer

JAN 9 1964

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

STATE ENGINEER

1. E. D. DAUGHERTY..... of ROUNDUP.....
(Name of Appropriator) (Address) (Town)
County of MUSSEL SHELL..... State of MONTANA.....
have appropriated groundwater according to the Montana laws in effect prior to January 1, 1962, as follows:



SE 1/4 Sec 10 N. T. 23 E. 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.....
..... STOCK WATER.....
- 3. Date or approximate date of earliest beneficial use; and how continuous the use has been 1920 APPROX CONTINUOUS.....
- 4. The amount of groundwater claimed (in miner's inches or gallons per minute). 2 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.....
..... WIND MILL.....
- 7. The date of commencement and completion of the construction of the well, wells, or other works for withdrawal of ground water 1920 APPROX.....
- 8. The depth of water table 40 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.....
..... G.I.N. CASING 1 1/2 IN PIPE 2 IN CYLINDER
..... 40 FT DEEP.....
- 10. The estimated amount of groundwater withdrawn each year 10000 GAL.....
- 11. The log of formations encountered in the drilling of each well if available.....
- 12. Such other information of a similar nature as may be useful in carrying out the policy of this act, including reference to book and page of any court record.....

Signature of Owner E. D. Daugherty
Date Dec 7, 1963

20537

169692

STATE OF MONTANA,
MUSSELHELL COUNTY, } ss.

FILED THIS 31 DAY OF
December A. D. 1963
AT 2:00 O'CLOCK P.M.

S. H. MATZKE

COUNTY RECORDER

James L. Lawson
DEPUTY

Summer
1960

33

T 10 R 23

County 799

MONTANA BUREAU OF MINES AND GEOLOGY
Butte, Montana

WATER WELL LOG

Owner: **Peerless Oil & Gas Company** **Peerless Incorporated**
Wyata Ranch Division **1670 Denver Club Bldg.**
Denver 2, Colorado

Driller: **Gordon Scammon** **Roundup, Montana**

Date Started: _____ Date Completed: _____

Location: Sec. **33** T. **10** R. **23** ¼ sec. **NE ¼**

Type of well: **Drilled** (Dug, driven, bored, or drilled) Equipment used: **Churn Drill** (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: **65** feet at **3 bailers per minute** gal. per min.

How tested: **Bailed**

Length of test: _____

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

Completed

(over)

GORDON SCAMMON
Roundup, Montana

LOG OF WATER WELL NO. 11
Fronghorn Ranch
Sheet No. 1
NE $\frac{1}{4}$ NE $\frac{1}{4}$ Sec 35 T10 R23

- 0 - 23 Shale Brown
23 - 49 Shale Black
49 - 57 Shale grey Show water.
57 - 80 Shale black Water 3 gal. per minute, thin sandstone
breaks 72 - 79
80 - 130 Grey shale
130 - 184 Black shale
184 - 191 Grey shale and bentonite
191 - 198 Lime grey, hard.
198 - 202 Shale grey
202 - 205 Bentonite
205 - 208 Shale Black
208 - 331 Shale dark grey.
331 - 338 Lime hard grey.
338 - 342 Shale grey
342 - 344 Lime hard grey
344-364 Shale grey
364 - 366 Lime hard grey
366 - 430 Grey shale sandy
430-438 Lime hard grey coal shale Casing set here 6" O.D.
438 - 440 Brown shale
440 - 530 Sandstone medium grained, water bearing. Water 30' from
top of ground, bailed down to 65'. 3 bailers per minute.
530 - 535 Grey shale. Total depth 535'. Cemented 433' 6" O.D.
casing with 30 sacks cement.

CHEMICAL & GEOLOGICAL LABORATORIES

521 South Center St. P. O. Box 279
 Casper, Wyoming

WATER ANALYSIS REPORT

State Montana ~~Wyoming~~ Water Well No. 11
 Operator Wyiana Cattle Company Location.....
 Sampled by..... Date.....
 Formation Judith River Depth 433-535' How sampled.....
 Other pertinent data 6" pipe set at 433' - used 30 sacks of cement.
 Analyzed by CFD Date 11/6/51 Lab. No. 5604

PARTS PER MILLION (MILLIGRAMS PER LITER)

NA & K	CA	MG	FE	SO ₄	CL	CO ₂	HCO ₃	OH	H ₂ S
773	284	12		838	310	72		344	

MILLIGRAM EQUIVALENTS

33.64	14.17	0.99		17.43	8.74	2.40		20.23	
-------	-------	------	--	-------	------	------	--	-------	--

MILLIGRAM EQUIVALENTS IN PERCENT

34.47	14.52	1.01		17.86	8.95	2.46		20.73	
-------	-------	------	--	-------	------	------	--	-------	--

Total Solids in Parts per Million

Specific Resistivity

Properties of Reaction in Percent

By evaporation.....	2872	at <u>68</u> °F 165 ohms/cm ² 1.65 ohms/m ²	Primary salinity.....	53.62
After ignition.....	2850			Secondary salinity.....	0.00
Calculated.....	2633			Primary alkalinity.....	15.32
				Secondary alkalinity.....	31.06
				Chloride salinity.....	33.38
Observed pH.....	11.9			Sulfate salinity.....	66.62

Remarks and conclusions Cement contaminated water. Indications are that it is
suitable for irrigation and stock use, but not for domestic
use.