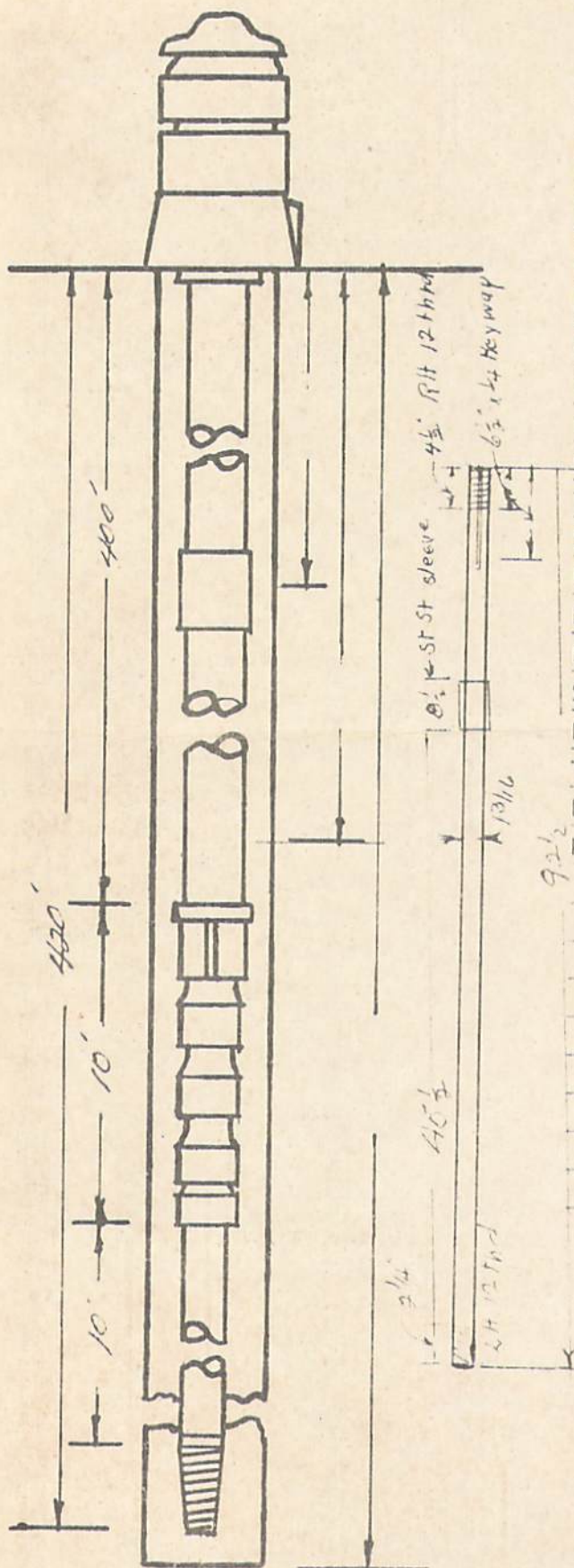


# Specifications For Deep Well Turbine

for: Tut Vernon Ia  
Well #4 at tower 1972



|                    |                                 |        |        |           |
|--------------------|---------------------------------|--------|--------|-----------|
| MAKE OF PUMP       | Fairbanks Morse                 |        | SIZE   | 250       |
| MAKE OF MOTOR      | Fairbanks Morse                 |        |        |           |
| FRAME              | 2005 PV                         | PH     | 3      | RPM 1750  |
| BASE               | Fairbanks                       | DISC   | 6"     |           |
| COLUMN             | 5 1/2" FM                       | THRDS  | Coarse |           |
| SHAFT              | 1 3/16" FM raised sleeve 1 1/8" |        |        |           |
| OIL TUBE           | none                            |        |        |           |
| GPM                | 250                             | THD    | 488'   | HP 40     |
| BOWL EFF           | 76%                             |        |        |           |
| BOWL               | 8" JHC Gould                    | STAGES | 16     | OD 7 1/4" |
| STRAINER           | None                            | TYPE   |        |           |
| TAILPIPE           | 40.5"                           | ID     | 10 ft  | LENGTH    |
| STATIC WATER LEVEL | 293                             |        |        |           |
| PUMPING LEVEL      | 365                             | @      | 250    | GPN       |
| DEPTH OF WELL      | 1566                            |        |        |           |
| DIAMETER OF WELL   | 8"                              | 8" e   |        |           |
| SCREEN             | none                            |        |        |           |
| BOTTOM TUBE        | 5 9/8 x 15'                     |        |        |           |
| TOP TUBE           | 5 9/4 x 6'                      |        |        |           |
| BOTTOM SHAFT       | 5 9/2 x 1 3/16                  |        |        |           |
| PACKING SIZE       | 9 1/2"                          |        |        |           |

12" shaft ext  
 old pipe all refaced New column  
 added 5 ft 5 x 1 3/16 FM

LOUIS F. WHITNEY CO.

1714 E Ave., N E  
 CEDAR RAPIDS IOWA

Regarding Mt. Vernon Jordan Well

Drill cuttings were examined and formation tops identified as follows:

|                  |       |
|------------------|-------|
| St. Peter        | 959'  |
| Prairie du Chien | 1004' |

Estimated top of Jordan:  
1385'

I have made a preliminary examination of the well cuttings and believe the formation tops to be as follows:

Jordan 1385'

St Lawrence 1452'

V coded  
STATE HYGIENIC LABORATORY, DES MOINES BRANCH

The University of Iowa  
405 STATE OFFICE & LAB BLDG, E 7th & COURT  
DES MOINES, IOWA 50309

LAB NO. 1297

MINERAL ANALYSIS

MINERAL NO. 10142

REPORTED 3 October 1973

TOWN Mt. Vernon COUNTY Linn  
OWNER OF SUPPLY City of Mt. Vernon  
COLLECTOR'S NAME Ron Stellick  
DATE COLLECTED 24 July 1973 Date Received: 27 July 1973  
REPORT TO Department of Environmental Quality  
3920 Delaware  
Des Moines, Iowa 50316

FIELD DATA

SOURCE Mt. Vernon WELL DATA  
SAMPLING POINT Well #2 (New well by elevated storage tank) NAME OR NUMBER Well #2  
CONSTRUCTION DATE July 1973 DEPTH 1566'  
PUMPED HRS AT GPM  
WAS SAMPLE FREE OF TURBIDITY WHEN COLLECTED? Yes  
TEMPERATURE °C ALKALINITY (mg/l CaCO<sub>3</sub>)P T pH  
IS A POLYPHOSPHATE BEING USED? No DATE OF PREVIOUS SAMPLE None

LABORATORY ANALYSIS  
(MILLIGRAMS PER LITER)

SPECIFIC CONDUCTANCE AT 25° C 1300 micromhos SILICA (SiO<sub>2</sub>) 8.6  
TOTAL RESIDUE 905 TOTAL IRON (Fe) 1.6  
FILTRABLE RESIDUE 905 SOLUBLE IRON (Fe) 1.6  
ALKALINITY AS CaCO<sub>3</sub> P None T 268 pH 7.05 DATE 27 July 1973  
HARDNESS AS CaCO<sub>3</sub> 444 mg/l 25.9 gpg

POSITIVE IONS

POTASSIUM (K<sup>+</sup>) 16  
SODIUM (Na<sup>+</sup>) 100  
CALCIUM (Ca<sup>++</sup>) 100  
MAGNESIUM (Mg<sup>++</sup>) 55  
MANGANESE (Mn<sup>++</sup>) 0.02

NEGATIVE IONS

NITRATE (NO<sub>3</sub><sup>-</sup>) <0.1  
FLUORIDE (F<sup>-</sup>) 1.2  
CHLORIDE (Cl<sup>-</sup>) 60  
SULFATE (SO<sub>4</sub><sup>-2</sup>) 370  
BICARBONATE (HCO<sub>3</sub><sup>-</sup>) 327  
CARBONATE (CO<sub>3</sub><sup>-2</sup>) None

TRACE METALS

ARSENIC <0.01  
BARIUM 0.1  
CADMIUM <0.01  
CHROMIUM <0.01  
COPPER <0.01  
LEAD <0.01  
ZINC 0.13  
Mercury <1 ug/l  
Silver <0.01

ANALYST

Ryan, LAF

R. L. MORRIS, Ph.D.  
ASSOCIATE DIRECTOR AND  
PRINCIPAL CHEMIST

650

700

750

800

850

900

950

1000

1050

1100

9-6-72

Mt Vernon

Recheck of  
Jordan - St. Lawr.

B64  
Gutt.

SE - NB sh in sample  
Mc Greg.

Pec.

959 - Glen Sh

St. Peter

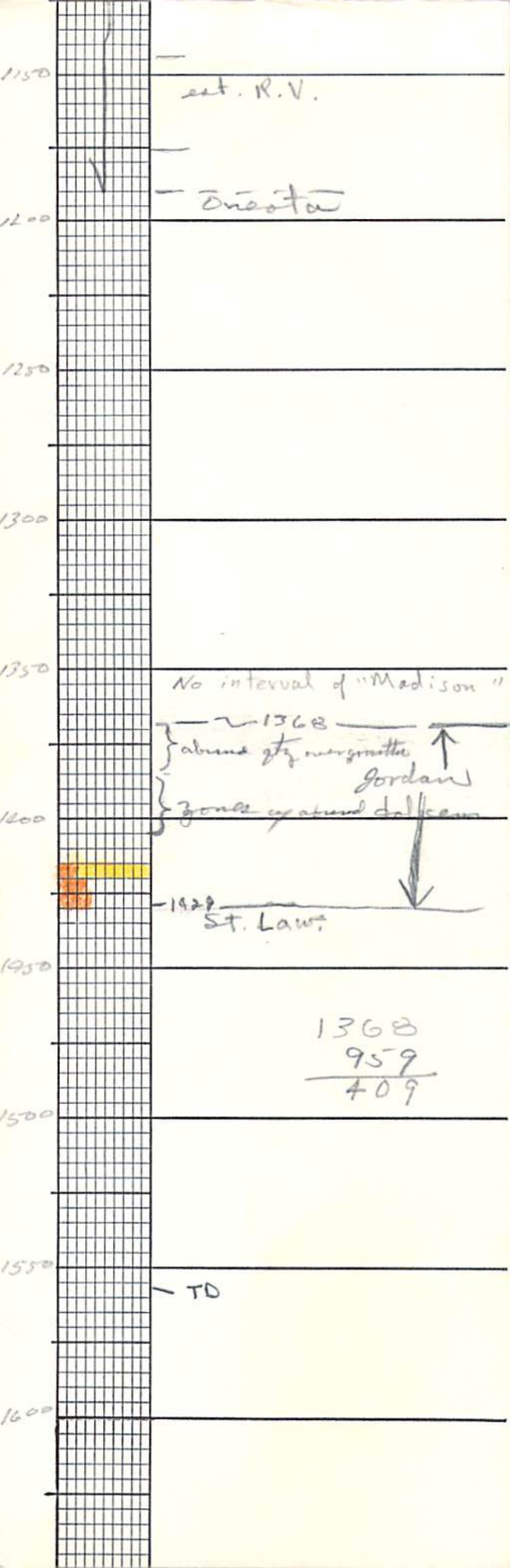
zoned w/ abund. dol  
Cem. in upper 1/2

~ 1008 -

P. de ch.

W.R.

N 15



1150

est. R.V.

1200

Onesta

1250

1300

1350

No interval of "Madison"

~ 1368

abund. etc. mergrinites Jordan

zone of abundant dol. etc.

1400



1929 St. Law.

1450

1368

959

409

1500

1550

TD

1600