16827

WELL SCHEDULE

US GEOLOGICAL SURVEY

IOWA DISTRICT WRD

WELL NO. 078170088DDD CO. FISHER

OWNER SULLY TOWNWELL ADDRESS SULLY

DRILLER VARNER WELL CO DATE DRLD Aug 19, 1963 - Dec 21, 1964

MAP

SOURCE OF DATA File

DESCRIPTION M. P. LSD FEET (ABOVE/BELOW) LSD

MASTER CARD – A 9-26-69 RP 1-26-73

STATE	COUNTY	LATITUDE DEG.	LATITUDE MIN.	LATITUDE SEC.	N or S	LONGITUDE DEG.	LONGITUDE MIN.	LONGITUDE SEC.	NO SEQ.
19	95	04	13	42	N	092	50	03	1

CONTINUED FROM ABOVE

ACCURACY	LOCAL WELL NUMBER T.	R.	E/W	SEC.	QUARTERS	LOCAL USE W-NUMBER	LOCAL USE OPTIONAL	OWNER OR NAME	OWNERSHIP	WATER USE	WELL USE	WELL DATA	FREQ. W/L	FIELD CHAR.	HYD. LAB.	QW-DATA	QW-FREQ.	PUMPAGE	APERTURE	LOG DATA	CARD DESIG.
2	078	17	W	08	BDDD	16807	64TOWN	SULLY	M	PW	W	Ø				I				G	A

WELL-DESCRIPTION CARD – B

DUPLICATE CARD A CC 1-19

DEPTH OF WELL	ACCURACY	DEPTH CASED OR FIRST PERF.	DIAM. INCHES	WELL FINISH METH DRILLED	YEAR DRILLED	PUMP SETTING	METH. LIFT	DEEP SHALLOW	POWER	ALTITUDE OF LSD (FEET)	ACCURACY	WATER LEVEL (FEET)	ACCURACY	DATE MONTH	DATE YEAR	YIELD OF WELL (GPM)	METH. DET.	DRAW-DOWN (FEET)	ACCURACY	PUMPING PERIOD (HOURS)	QUALITY OF WATER IRON	SULF.	CHLOR	HARD	S.P. COND.	TEMP.	DATE SAMPLED	CARD DESIG.
0240	3	1746	10	X	64					908	7	-23	2	06	64	330		18	3									B

HYDROGEOLOGIC CARD – C

DUPLICATE CARD A CC 1-19

PHYS-IOG-RAPHY PROV.	SEC.	DRAINAGE BASIN	SUBBASIN	TOPO SETTING	MAJOR AQUIFER (2147) SYSTEM	SERIES USGS	SERIES IGS	UNIT	LITHOLOGY	ORIG.	THICKNESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	MINOR AQUIFER (1677) SYSTEM	SERIES USGS	SERIES IGS	UNIT	LITHOLOGY	ORIG.	THICKNESS	LENGTH WELL OPEN TO	DEPTH TO TOP OF	DEPTH TO CONSOLIDATED ROCK	SOURCE	DEPTH TO BASEMENT	SOURCE	SURF. MAT. LITHOLOGY	SURF. MAT. INFIL.	COEF. TRAN. SIG FIG	COEF. TRAN. XIO	COEF. STOR. SIG FIG	COEF. STOR. XIO-	GEOL. CARDS	CARD DESIG.
1	2	5	5	C	3	S	J	CV	6	40	40	815	1	L	P	Q	D	64	0	1470	A	68	1	67	C			R	J						C

CASING AND SCREEN (SIZE, TYPE, INTERVALS):

22" Pipe Surface to 189'

18" OD Liner w/shoes Top & Bottom 478' to 698'

14" OD Liner w/shoes Top & Bottom 670' - 1168'

16" OD Liner w/shoes 4 bbls Surface to 485' (to save cement)

14" OD Liner 1145' - 1225'

12" ID Liner 1146' - 1421 - 27 tons of Gravel & 15 tons of Sand inserted between 12" & 16" Pipe

12" ID Liner 1587 - 1746'

10" ID Liner Surface to 614' connected to 8" Pipe with 10" x 8" Swedge Nipple

8" ID Pipe 614' - 1746'

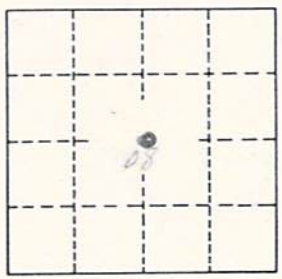
Well is Pressure Grouted with 1492 Sacks of Cement & Bentonite

CODED BY Samuel White SD DATE Feb 13-74

PUNCHED BY DATE

VERIFIED BY DATE

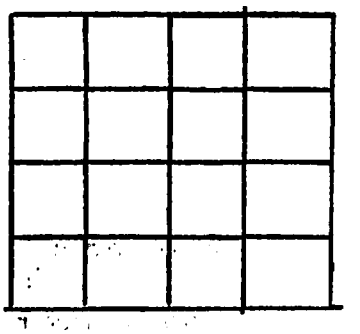
SKETCH ON REVERSE: YES NO



WELL NO. 078170088DDD

#16827

IOWA GEOLOGICAL SURVEY
In Cooperation with U.S. Geological Survey
RECORD OF WELL



Location:

Town: SULLY (NE) (SW) County JASPER

NEAR CEN. Sec. 8, T. 78, N., R. 17 (E) (W) Twp.

Well name and number

Owner SULLY TOWN WELL Address SULLY, IOWA

Tenant Address

Contractor VARNER WELL CO. Address DUBUQUE, IOWA

Drillers

Drilling dates AUG. 1, 1963 - DEC. 21, 1964

Well data:

Altitudes: Drilling. curb ___ feet; Land surface ___ feet

Determined by:

Topographic position

Total depth: Reported 2240 feet; Measured 2240 feet

Drilling method CABLE TOOLS

Hole and casing data 614' OF 10" CSG. 0-614'

1132' OF 8" CSG. SET INTO 10" STRING

Original depth to water ___ ft. above below Date

Source of data

Sources of water: Principal Prairie du Chien - Jordan - St. Lawrence

Others

PRODUCTION DATA

Date

Static water level 240 ± '

Pumping water level 310

Yield (g.p.m.) 350

Measuring point

Duration of pumping

Specific capacity

LABORATORY DATA PL 5-963-4-5-6

Well No. # 16827 Sample range 0 - 2240 No. of samples 435

No. of dupls. and cond. 435 Good Washed range 185 - 2240

Samples prepared by LOVETT Date 12/22/64

Logged by NORTHUP Date 1969

Correlations by Date 1964

DATE STARTED Aug. 19, 1963 DATE COMPLETED Dec. 11, 1964

LOCATION: Sully, Iowa

TOTAL DEPTH 2241'

DIAMETERS: 30" from Surface to 8'
26" from 8' to 189'
21¼"from 189' to 695'
17¼"ffom 695' to 1168'
15¼"from 1168' to 1230'
13" from 1230' to 1747'
8" from 1747' to 2241'

CASING RECORD:

22" pipe from surface to 189'
18" O.D. liner w/shoes top & bottom from 478' to 698'
16" O.D. liner w/shoes top & bottom from 670' to 1168'
16" O.D. liner w/shoes from surface to 485'(to save cement)
14" O.D. liner from 1145' to 1225'
12" I.D. liner from 1146' to 1421'- 27 tons of gravel & 15 tons of sand inserted between 12" & 16" pipe.
12" I.D. liner from 1587' to 1746'.
10" I.D. pipe from surface to 614' connected to 8" pipe with 10" x 8" swedge nipple
8" I.D. pipe from 614' to 1746'
Well is pressure cement grouted with 1492 sacks of cement & bentonite.

STRATA RECORD

From	To	Thickness	Description of Beds
0	36	36	Yellow clay
36	113	77	Yellow clay & boulders
113	128	15	Blue clay
128	170	42	Blue & yellow clay & boulders
170	206	36	Lime-gray-seme sand
206	210	4	Lime & shale
210	269	59	Lime-hard
269	272	3	Lime & shale
272	288	16	Lime-hard
288	317	29	Lime & shale
317	337	20	Lime-gray
337	341	4	Lime-some shale
341	359	18	Lime-gray
359	362	3	Lime-some shale
362	376	14	Lime-gray

DEEP WELL

SULLY, IOWA

From	To	Thickness	Description of Beds
376	412	36	Brown lime
412	431	19	Brown lime & chert
431	447	16	Brown lime
447	452	5	Brown lime & gray lime
452	459	7	Lime & shale
459	462	3	Gray lime
462	480	18	Gray lime & shale
480	531	51	Gray shale
531	553	22	Brown shale
553	580	27	Gray shale
580	587	7	Lime & shale or dolomite
587	591	4	Lime & dolomite
591	597	6	Lime & shale
597	608	11	Lime & dolomite
608	610	2	Lime, dolomite & shale
610	622	12	Lime & shale
622	685	63	Gray shale
685	690	5	Gray shale & trace of lime
690	692	2	Lime & shale
692	695	3	Gray & white lime
695	700	5	Lime & shale
700	702	2	Lime
702	726	24	Lime & shale
726	736	10	Shale
736	755	19	Shale & lime
755	760	5	Lime & mud
760	802	62	Lime
802	805	3	Lime & mud
805	831	26	Lime
831	835	4	Lime & mud
835	843	8	Lime & shale
843	848	5	Lime
848	860	12	Lime & shale
860	863	3	Lime, shale & chert
863	873	10	Lime-hard
873	890	17	Lime & gypsum
890	897	7	Lime-hard
897	903	6	Lime & shale
903	911	8	Lime
911	919	8	Lime & some shale
919	927	8	Shale
927	997	70	Shale & lime
997	1000	3	Lime
1000	1019	19	Lime, chalk & shale
1019	1027	8	Light gray gyp rock & lime
1027	1031	4	Gyp rock
1031	1036	5	Gyp rock & lime
1036	1037	1	Shale-sticky
1037	1041	4	Shale & gyp rock
1041	1062	21	Lime & gyp rock

From	To	Thickness	Description of Beds
1062	1065	3	Gray gyp rock
1065	1069	4	Gyp rock
1069	1071	2	Shale & lime
1071	1074	3	Shale
1074	1080	6	Lime & chert
1080	1083	3	Lime & brown shale
1083	1090	7	Brown shale
1090	1096	6	Lime & pink shale
1096	1097	1	Lime
1097	1102	5	Brown shale
1102	1115	13	Lime & brown shale
1115	1121	6	Light pink shale & lime
1121	1122	1	Multi-colored lime-hard
1122	1125	3	Lime-hard
1125	1138	13	Lime & brown shale
1138	1141	3	Brown & gray shale
1141	1144	3	Light brown shale
1144	1146	2	Light brown shale & lime
1146	1148	2	Lime & brown shale
1148	1150	2	Brown lime & shale
1150	1154	4	Brown shale & lime
1154	1156	2	Brown shale & lime-trace green sh.
1156	1158	2	Brown & green shale
1158	1164	6	Green shale
1164	1168	4	Lime, red & green shale
1168	1172	4	Green shale
1172	1191	19	Gray shale
1191	1193	2	Dark gray shale
1193	1200	7	Brown shale
1200	1214	14	Brown & blue shale
1214	1220	6	Blue-gray shale
1220	1223	3	Brown & blue shale
1223	1225	2	Blue-green shale
1225	1231	6	Blue shale
1231	1241	10	Gray shale
1241	1251	10	Blue-gray shale
1251	1307	56	Gray shale
1307	1213	5	Dark gray shale
1312	1318	6	Gray to brown shale
1318	1327	9	Brown & gray shale
1327	1350	23	Gray & brown shale
1350	1353	3	Gray & brown shale-some lime
1353	1410	57	Gray lime & shale
1410	1432	22	Gray shale & lime
1432	1485	52	Gray lime & shale
1484	1593	109	Brown lime & gray shale
1593	1599	6	Blue-green shale & lime
1599	1601	2	Lime
1601	1627	26	Lime & shale

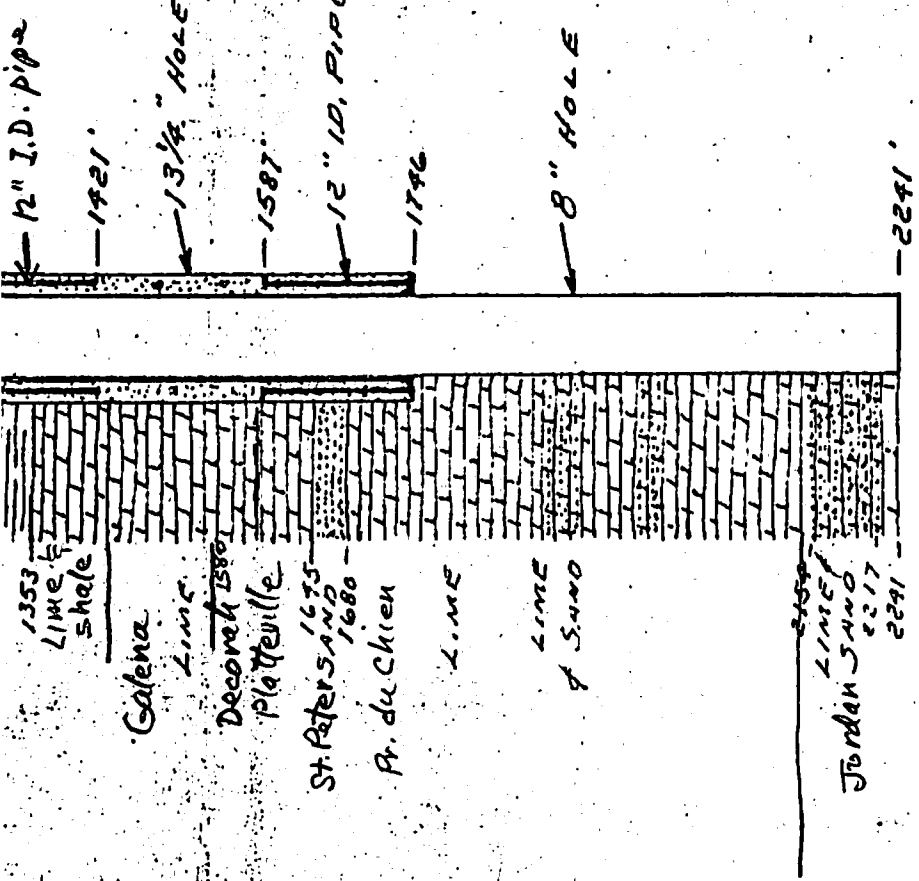
From	To	Thickness	Description of Beds
1627	1642	15	Brown lime & shale
1642	1644	2	Lime & dark green shale
1644	1655	11	Green shale
1655	1677	22	Sand & gray shale
1677	1680	3	Lime & gray shale
1680	1682	2	Sandy gray shale
1682	1691	9	Gray lime & shale
1691	1697	6	Gray lime
1697	1709	12	Lime & shale
1709	1714	5	Gray lime
1714	1716	2	Gray & white lime
1716	1723	7	Lime & shale
1723	1747	24	White chert & lime
1747	1800	53	White & gray lime
1800	1820	20	Light gray lime
1820	1911	91	White sandy lime
1911	1930	19	White sand
1930	1933	3	Sand & lime
1933	1946	13	Sand & dolomite
1946	1956	10	Sandy lime
1956	1969	13	Light brown lime & chert
1969	1978	9	White lime & chert
1978	2019	41	Sandy white lime
2019	2025	6	White & gray lime & chert
2025	2037	12	Sandy white lime
2037	2070	33	Light gray lime
2070	2074	4	Brown lime & chert
2074	2084	10	Light gray lime
2084	2096	12	White & gray lime w/black specks
2096	2102	6	White cherty lime
2102	2119	17	Light gray lime
2119	2167	48	Sandy white lime
2167	2183	16	White sand
2183	2186	3	Light brown lime
2186	2198	12	Brown lime & sand
2198	2220	22	Light brown lime
2220	2222	2	Fine sand & lime
2222	2233	11	Light brown lime
2233	2238	5	Mixed gray & brown lime
2238	2241	3	Light brown & gray lime

STATIC WATER LEVELS

From	To	Level
0	193	None
193	217	30'
217	227	140'
227	236	172'
236	245	192'
245	256	186'
256	267	187'

STATIC WATER LEVELS

From	To	Level
267	278	180'
278	296	174'
296	317	183'
317	333	178'
333	417	184'
417	545	220'
545	569	198'
569	780	220'
780	1003	212'
1003	1019	213'
1019	1125	212'
1125	1223	220'
1223	1306	240'
1306	1324	214'
1324	1369	225'
1369	1392	230'
1392	1410	214'
1410	1467	220'
1467	1484	230'
1484	1501	211'
1501	1600	220'
1600	1615	200'
1615	1626	215'
1626	1677	220'
1677	1691	210'
1691	1703	215'
1703	1746	220'
1746	1830	215'
1830	1916	240'
1916	2003	250'
2003	2037	230'
2037	2066	245'
2066	2074	240
2074	2102	230'
2102	2130	240'
2130	2241	230'



STATIC LEVEL 232'
340 G.P.M. 309' P.L. - 77' D.D. - 4.4 GPM/FT
250 G.P.M. 286' P.L. - 54' D.D. - 4.6 GPM/FT
160 G.P.M. 261' P.L. - 29' D.D. - 5.5 GPM/FT

VARNER WELL & PUMP CO.
DUBUQUE IOWA

SCALE:	APPROVED BY:	DRAWN BY E.C.T
DATE: 12-23-64		REVISED

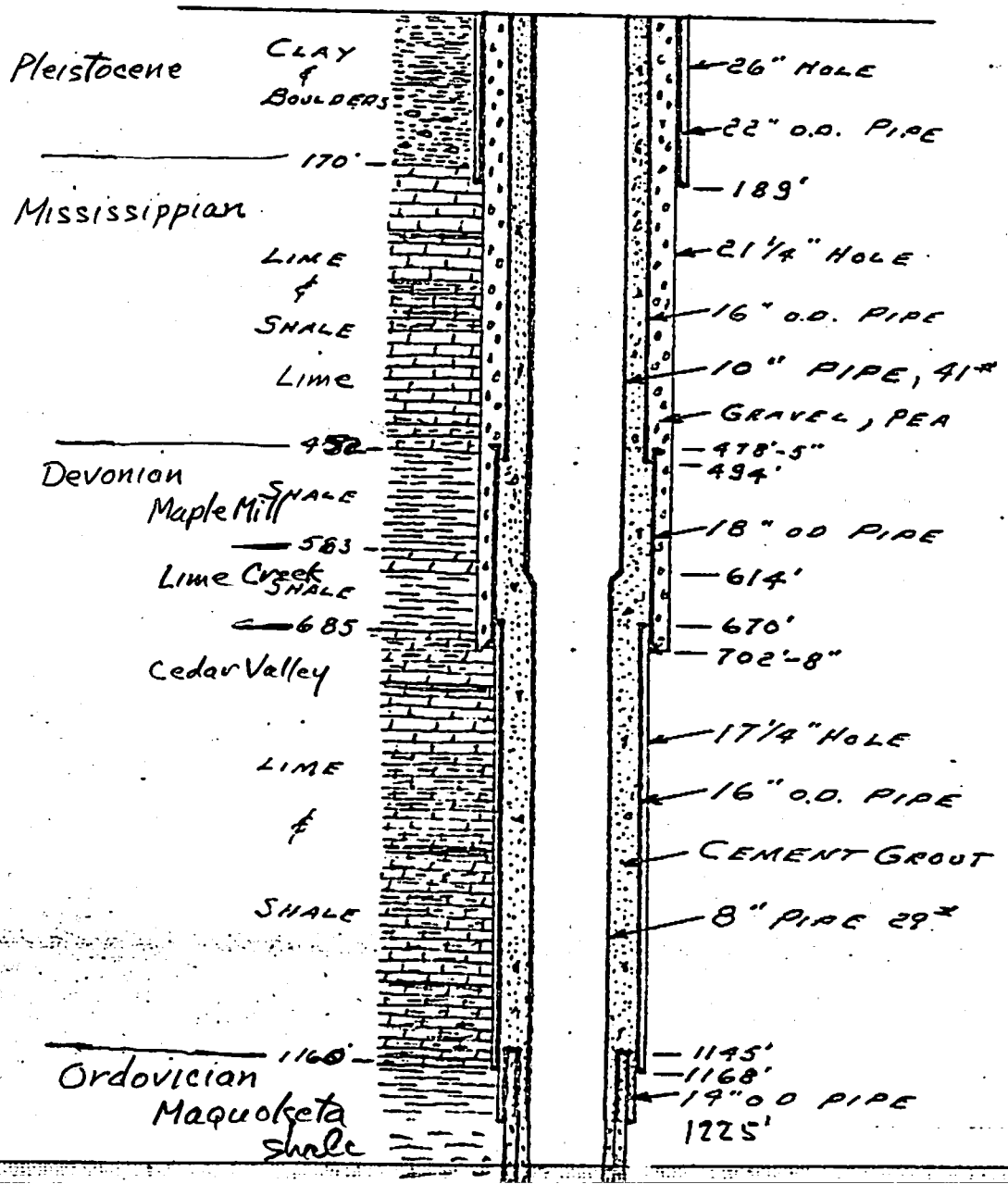
SULLY, IOWA DEEP WELL

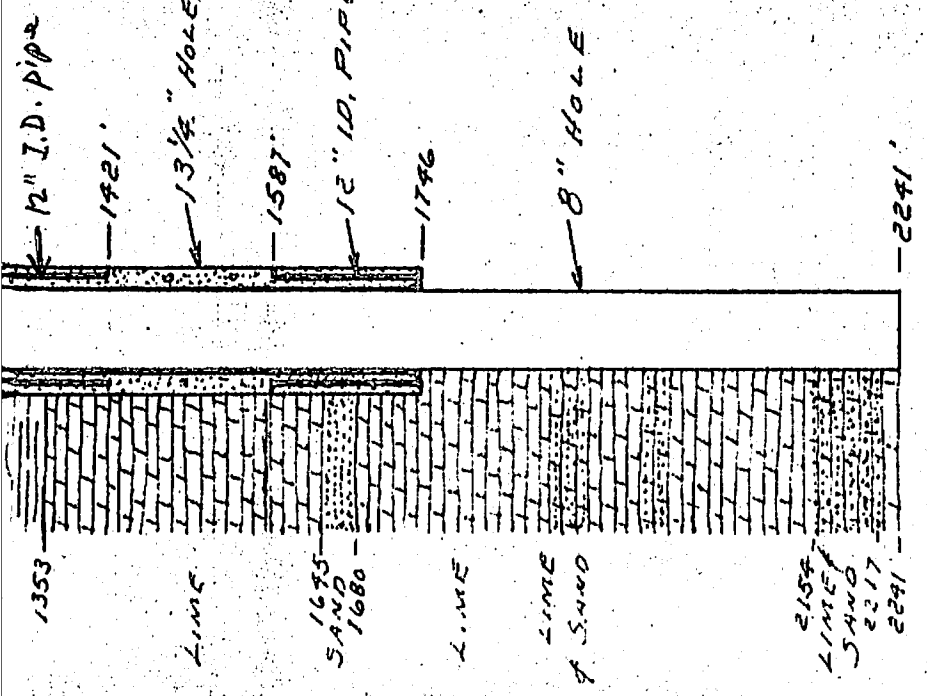
DRAWING NUMBER V-204

SULLY IOWA

WELL COMPLETED

12-22-64





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DUBUQUE IOWA

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SULLY, IOWA DEEP WELL

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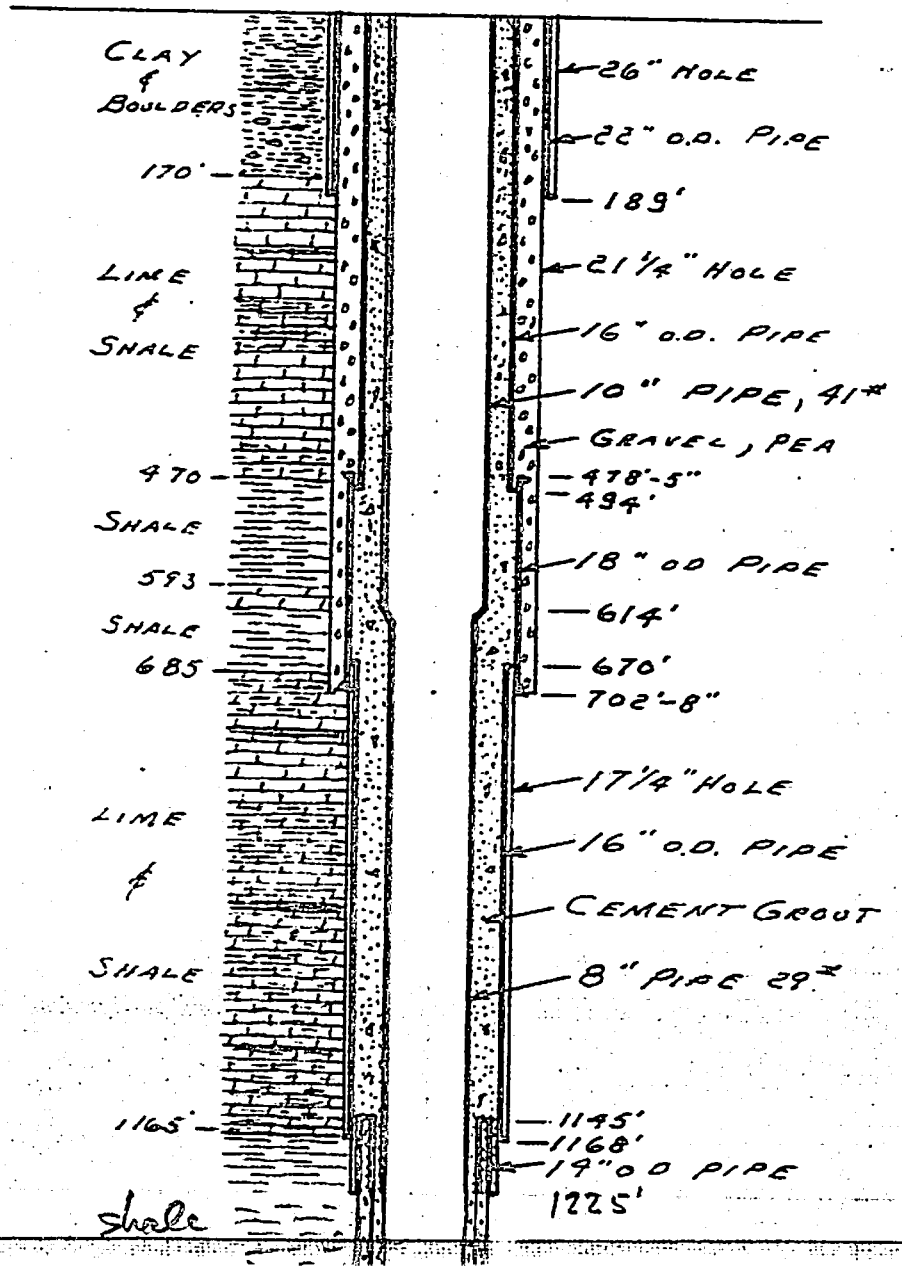
SULLY IOWA

WELL COMPLETED

12-22-64



G-W Jasper Co. Gen Data

May 8, 1963

Mr. Bill Faust
Field Representative
Thorpe Well Company
P. O. Box 1376
Des Moines 13, Iowa

Dear Mr. Faust:

We are replying to your letter of May 3 concerning information on the possibilities of developing a new town well in the Jordan Sandstone at Sully, Iowa. The pertinent data on the geology and general ground-water conditions in this area from the files of the State-Federal Geological Surveys are summarized in the accompanying report.

We hope this report will give you a better understanding of the problems of bringing in a satisfactory well at Sully. If any questions remain or if we can provide you further information on this matter, please let us know.

Very truly yours,

H. G. Hershey

HGH/pjh
m

GROUND-WATER CONDITIONS AT SULLY, IOWA

The following statements represent an interpretation of the available hydrologic data in the files of the Iowa and U. S. Geological Surveys.

The town of Sully (1960 population 508) is located on the Kansan drift upland in the NW¼ sec. 8, T. 78N., R. 17W., Jasper County. A generalized log of the formations encountered in the Sully Co-op Creamery well (1952) 1162 feet deep, and additional anticipated strata down through the St. Lawrence Dolomite is summarized as follows (all depths are referred to the elevation of the well curb at the Co-op Creamery, 928 feet):

Formation	Thickness(ft.)	Depth Range(ft.)
Quaternary System		
Pleistocene Series (12' of loess at top underlain by glacial till)	168	0-168
Mississippian System		
Ste. Genevieve Formation (limestone)	24	168-192
St. Louis Formation (dolomite and limestone, very sandy)	42	192-234
Warsaw-Keokuk-Burlington Formations (dolomite and chert, thin shale in upper part, glauconite in lower part)	140	234-374
Hampton Formation (dolomite, containing much chert in lower part)	62	374-436
North Hill Limestone	10	436-446
No sample	7	446-453
McCraney Limestone	3	453-456
Maple Mill Shale	124	456-580
Devonian System		
Lime Creek Formation (about 30 feet of dolomite at top, underlain by shale)	107	580-687
Cedar Valley Formation (mostly limestone in upper 1/3, some shale; dolomite with considerable gypsum in lower 2/3's)	321	687-1008
Wapsipinicon Formation (gypsum and dolomite in upper 1/3; limestone and chert in lower 2/3's)	110	1008-1118
Silurian System		
Undifferentiated dolomite	39	1118-1157
Ordovician System		
Maquoketa Shale	5	1157-1162 T.D.

Formation	Thickness(ft.)	Depth Range(ft.)
Additional anticipated strata -		
Maquoketa Shale, dolomitic	258	1162-1420
Galena Formation (dolomite, 10-20% chert in lower half)	185	1420-1605
Decorah-Platteville Formations (dolomite, some shale in upper part and at base)	65	1605-1670
St. Peter Sandstone	33	1670-1703
Prairie du Chien Formation (dolomite, very sandy in upper half; 75-foot sandstone and dolomite bed in middle; lower 225 feet dolomite with some chert)	472	1703-2175
Cambrian System		
Jordan Sandstone	50	2175-2225
St. Lawrence Formation (dolomite, silty in upper part, much glauconite in lower half)	250±	2225-2475

All these depth figures may have to be modified slightly owing to local variations in the structure and thickness of the beds, particularly in the section below the top of the Maquoketa Shale. A higher or lower starting elevation will also modify these depth figures somewhat.

Currently Sully obtains its water supply from two wells finished in the lower Hampton and North Hill Formations at depths of 440 and 453 feet. The results are rather disappointing from both a quantitative and qualitative viewpoint. Several years ago these wells were reported to be pumping 10-15 gallons a minute each. Mineral analyses show the water to be acceptable for drinking, but to have sulfate concentrations of more than 1150 parts per million.

Only small quantities of water adequate for farm and domestic wells are expected from the glacial deposits overlying the Mississippian rocks in this vicinity. The results might be different if thick water-bearing sands occur here but this does not seem to be the case.

Some water zones probably will occur at intermediate depths in the Devonian rocks below the Maple Mill-Lime Creek shales and in the Galena-Platteville-St. Peter sequence below the Maquoketa Shale. However, most data indicate that the water from these intervals will be so highly mineralized as to be unfit for drinking.

Perhaps the most promising source for large quantities of water of acceptable drinking quality in this area will be the Jordan Sandstone and associated dolomite strata at a depth range of 2100 to 2300 feet. Normally this aquifer will yield several hundred gallons a minute of potable water to properly constructed wells. Acidizing and developing the water zones should increase the production up to arrange of 500 to 1000 gpm. Grinnell and Brooklyn have the nearest wells pumping from this source. The quality of the water obtained is shown on a separate sheet appended to this report. In a well penetrating the Jordan Sandstone it would be advisable to extend the casing from the surface into the upper part of the Prairie du Chien Formation and grout the pipe in place with neat cement for its full length. This will prevent any mixing of the upper highly mineralized waters with the water from the Jordan reservoir. The static - or non-pumping water level of the Jordan Sandstone is expected to lie between 225 and 250 feet below the surface. Based on an average specific capacity of about 5-6 gallons per foot of drawdown, the aquifer should produce about 300 gpm with the pumping water level at 300 feet.

To sum up, only small supplies of rather highly mineralized water appear to be available from the upper and intermediate formations at Sully. Large quantities of acceptable quality drinking water probably can be obtained by drilling through the Jordan Sandstone to a depth of about 2225-2300 feet. The well will have to be cased and grouted from the surface to a depth of about 1750 feet.

PJH 5-63

IOWA GEOLOGICAL SURVEY
TABULATION OF WATER ANALYSIS
(Dissolved constituents in parts per million)

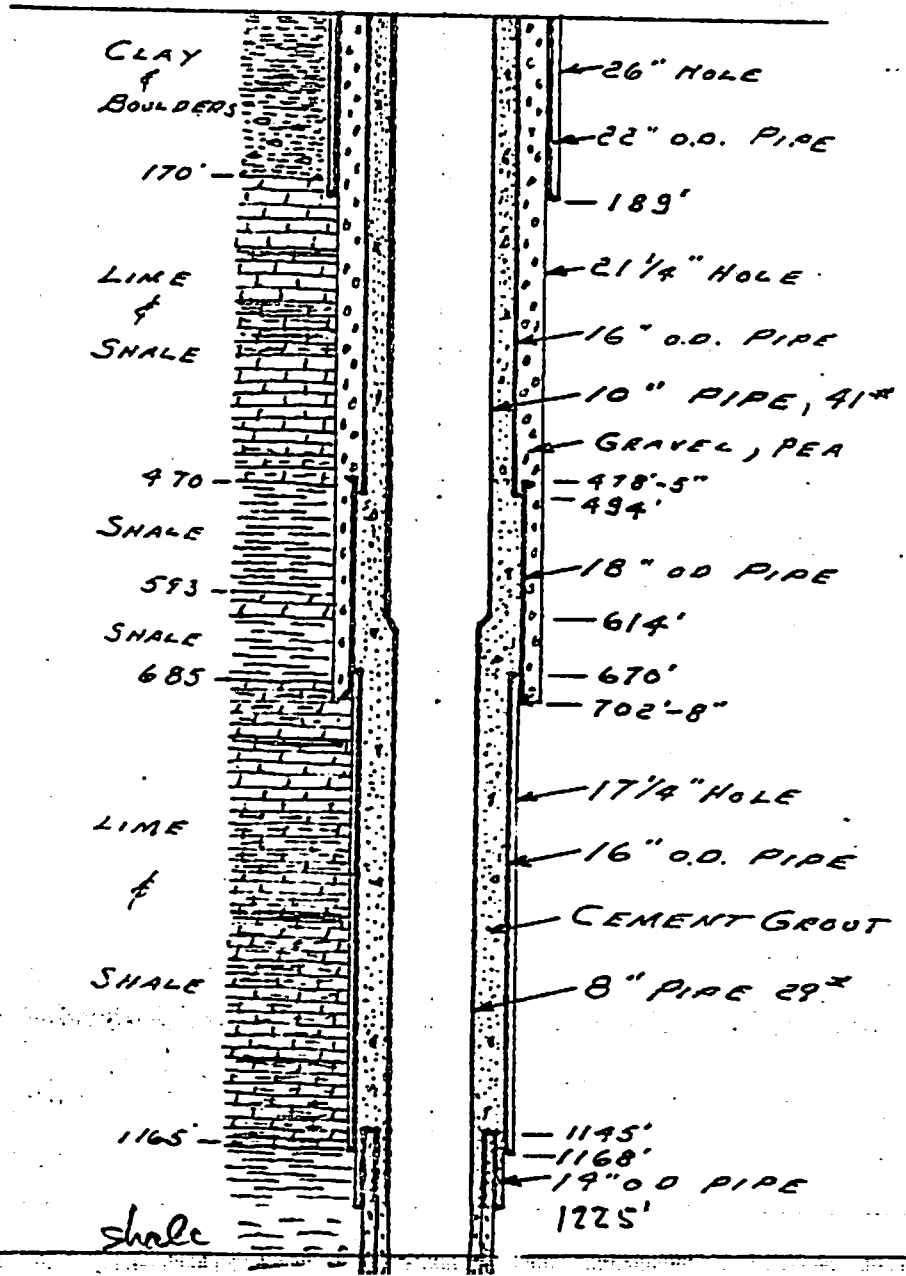
Town - Well No Owner	Date of coll.	Depth (ft.)	Geol. source	°F	Diss. solids	Fe	Mn	Ca	Mg	K	Na	CO_3	HCO_3	SO_4	Cl	F	NO_3	Hardness cal. as $CaCO_3$ tot	carb	non-carb	pH	Cond
Sully, town No. 2 (1957)	3/3/58	453	Miss.		2045	.32	<.05	185	94	9.4	252	0	221	1170	12	2.0	.89	849	181	668	7.4	2450
Grinnell town No. 7 (1955)	1/22/60	2550	Pt du Ch Jordan St Paul	75	728	.58	<.05	79	40	20	99	0	371	258	21	1.4	<0.1	362	304	58	7.7	990
Brooklyn town (1961)	6/15/62	2040	"		941	.56	<.05	102	51	22	120	0	356	403	25	1.1	<0.1	465	292	173	7.5	1320

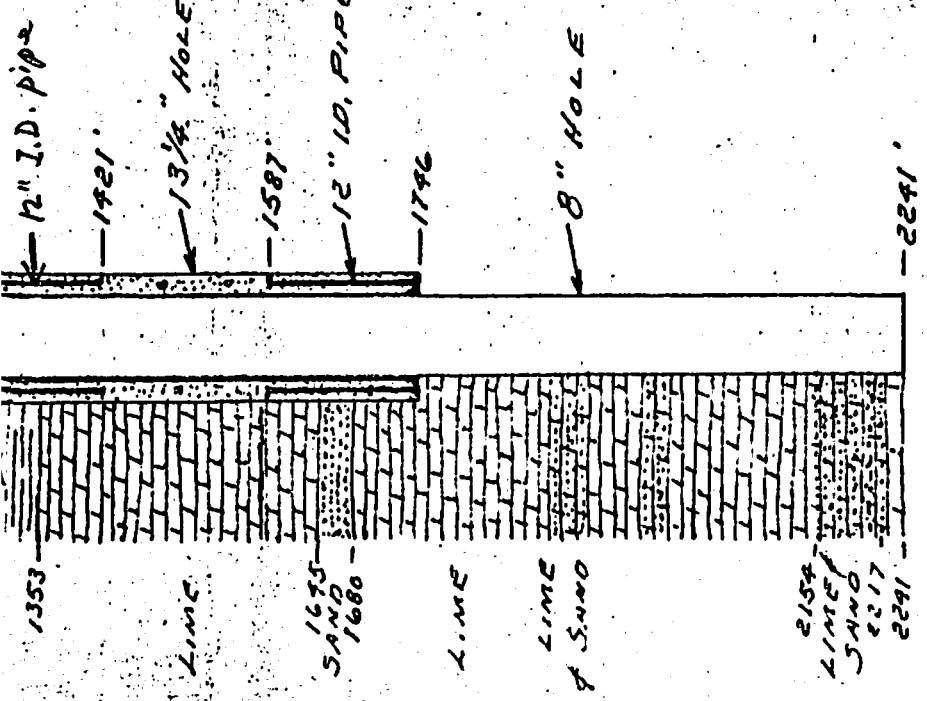
NOTES:

SULLY IOWA

WELL COMPLETED

12-22-64





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VARNER WELL & PUMP CO.
DUBUQUE IOWA

SCALE:	APPROVED BY:	DRAWN BY E.C.T
DATE: 12-23-64		REVISED

SULLY, IOWA DEEP WELL

DRAWING NUMBER V-204

VARNER WELL & PUMP CO.

DUBUQUE, IOWA

WELL TEST DATA SHEET

Job City Hall — Date tested December 21, 1964

Location Sully, Iowa — Tested by

Dia. of well 8" — Pump used: Driver

Depth of well 2241' — Column and shaft 310'

Length of airline 310' — Bowls

Non-pumping level 232' — Manufacturer

Orifice size 4" x 6" — Serial No.

TIME	PITOMETER READING (IN.)	G. P. M.	AIR GAUGE READING (FEET)	PUMPING LEVEL	DRAWDOWN	DISCH. PRESSURE LBS.	DISCH. PRESSURE FEET	TOTAL PUMPING HEAD	TEMP.	REMARKS
10:30	0	0	232		0		0			START OF TEST
10:40	10	200	228	278	46					Adjust valv
11:00	10	200	270	270	38					Cloudy
11:30	10	200	269	269	37					Clear Open up
[illegible]	28+	340	309	308	76					Clear
[illegible]	28-	340	309	309	77				71°	Clear
1:00	28-	340	309	309	77					Clear
1:30	29½	338	308	308	76					Clear
2:00	29	330	308	308	76					Clear
2:30	22	330	310	310	78					Choke valv Clear
3:00	23	304	298	298	66					Choke to 250
3:30	18	271	290	290	58					Cloudy
4:00	16½	261	288	288	56					Clear
4:30	16	250	286	286	54					Clear
5:00	16	250	286	286	54					Close valv .155
5:30	16+	258	287	287	55					Clear
6:00	7+	174	264	264	32					Clear
6:30	7	172	265	265	33					
7:00	7	172	265	265	33					Shut valve
7:30	6	160	261	261	29					

VARNER WELL & PUMP CO.
DUBUQUE, IOWA

WELL TEST DATA SHEET

Job City Well
Location Sully, Iowa

Date tested December 21, 1964
Tested by

Dia. of well 8"
Depth of well 2241'
Length of airline 310'
Non-pumping level 232'
Orifice size 4" x 6"

Pump used: Driver
Column and shaft 310'
Bowls
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Serial No.

TIME	PIZOMETER READING (IN.)	G. P. M.	AIR GAUGE READING (FEET)	PUMPING LEVEL	DRAWDOWN	DISCH. PRESSURE LBS.	DISCH. PRESSURE FEET	TOTAL PUMPING HEAD	TEMP.	REMARKS
	0	0			0		0			START OF TEST
8:00PM	6	160	261	261	29					
8:30	6	160	261	261	29					
		RETURN			December 18, 1964					
	1 Min.	251			Clean up, develope and preliminary					
		248			test well 4 hours @ 200 gpm to					
		240			425 gpm.					
		235								
	5 Min.	235								
	10 Min.	234								
	15 Min.	233								
	20 Min.	234								
	25 Min.	233								
12/22/64		232								
	Ph	7.8								
	Iron	.6								
	Hardness	19-20 grain								

GW Sully Gen Data
Jasper Co. 1

MEMORANDUM

December 22, 1964

TO: Dr. H. G. Hershey

FROM: D. L. Koch

RE: Pumping Test, Sully, Iowa - 12-21-64

Survey representatives: Bob Hansen, D. L. Koch
T. D. 2241
SWL 230' (12-18-64); 240' (12-21-64)
Casing Record: 614' of 10"
1132' of 8" set into 10" string;
cement grouted w/ 1,492 sacks of cement
Pump setting: 310' (top of bowls)
Discharge pipe: 6" pipe; 4" orifice
Water sample: collected at 12:30 p.m.; water temp. 71°F.; collected 208' from pump

Test Data as recorded by Art Brunikool:

Time	Air Line (feet)	DD (feet)	Head (inches)	Remarks
10:30	240			
10:40	278	38	10	Adjust valve
11:00	270	30	10	Cloudy
11:30	269	29	10	Clear
12:00	308	68	28	Clear
12:30	309	69	28	
1:00	309	69	28	
1:30	308	68	27½	
2:00	308	68	27	
2:30	310	70	27	

Remarks: The test was started before we arrived. An attempt was made to check the airline as to accuracy of readings, but we could not get an electric line to the water level; an airline had been set Friday, Dec. 18, but during installation it had been pinched at a depth of 180'; another line was set Dec. 21, but was not tied down. The remaining pumping schedule after 2:30 p.m. as set by Art Brunikool follows:

1. Drop back to 250 gpm, wait for well to level off.

2. Drop back to 150 gpm, wait for well to level off.

3. Turn off pump, take recovery readings.

4. Mail data to Survey.

DLK/l

H. GARLAND HERSHEY
Director and State Geologist

CHARLES N. BROWN
Assistant State Geologist

STATE OF IOWA

IOWA GEOLOGICAL SURVEY

GEOLOGICAL SURVEY BUILDING
IOWA CITY, IOWA 52240

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GW Sully Geo Data
Jasper Co

M E M O

September 3, 1963

To: Dr. H. G. Hershey
From: Richard C. Northup
Re: New well at Sully

Art Bruinekool stopped briefly on his way to Hopkinton last week and reported that the new well at Sully just got under way. Varner was awarded the contract, and spudded the well in with rotary tools to top of bedrock. They will now move in a cable tool rig. As you may remember, the town of Sully has retained Art to act in advisory capacity while the well is being drilled to advise them on casing program, where to collect water samples, or to help out if mechanical troubles develop. Art will see that we get a sample of the St. Peter water and from any other zones we may ask for while drilling is in progress.

RCN/m

THREE GENERATIONS OF UNINTERRUPTED SERVICE

THORPE WELL COMPANY

We dig for our business

WELLS • WATER TREATMENT EQUIPMENT • PUMPS

CHerry 3-6107

Des Moines 13, Iowa
P. O. Box 1376

May 3, 1963

IOWA GEOLOGICAL SURVEY
MAY 6 – 1963

Iowa Geological Survey
Geology Annex
Iowa City, Iowa

Gentlemen:

We have been asked by the City of Sully, Iowa, to do some investigating into the possibilities of drilling a Jordan well for municipal use.

We would appreciate very much having a forecast as to the ground water conditions in the Sully, Iowa area.

Thanking you very much, we remain

Sincerely yours,

THORPE WELL COMPANY

Bill Faust

Bill Faust
Field Representative

BF/map

GW Sully town well folder

INVENTORY OF VISITORS phone call

Name Harry Lewis Date 10/19/64

Affiliation Varner Well Co.

Address Dubuque.

Information Requested Sully Town Well. Will probably call to-morrow afternoon for sundown on tops - what they can determine placement of 12" liner through Maquoketa.

Art Bruinekel is now drilling the well.

Information Obtained at Survey Office

The samples will be ready to run first thing in the morning (Tuesday)

M. Parker

Survey Contact