#17920

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

Location:

Town: Grimes (NE)(SW) County Polk

NE NW NW Sec. 5, T. 79, N. ___, R. 25 (E)(W) ___ Twp.

Well name and number #5

Owner Town of Grimes Address Grimes

Tenant ___ Address ___

Contractor Layne Western Address Ames

Drillers John Masters

Drilling dates SEPT. 1965 – AUG. 9, 1966

Well data:
Altitudes: Drilling curb ___ feet; Land surface ___ feet 964

Determined by ___

Topographic position ___

Total depth: Reported 2602' feet; Measured ___ feet ___

Drilling method cable tools

Hole and casing data 50' OF 26" CSG.
428' OF 24" CSG.
100' OF 22" LINER 745'-845'
846' OF 18" CSG. 0-846'

Original depth to water ___ feet. above/below ___ Date ___

Source of data ___

Sources of water: Principal Prairie du Chien, Jordan

Others

PRODUCTION DATA

Date

Static water level 215'

Pumping water level 230'

Yield (g.p.m.) 820

Measuring point

Duration of pumping 24 Hours

Specific capacity 27.3

LABORATORY DATA

Well No. #17920 Sample range 0-2600 No.of samples 510

No. of dupls. and cond. 510F Washed range 345-2600

Samples prepared by Dennis LaPoint Date 8/15/66.

Logged by Northup Date 1965-1966

Correlations by " Date "

GW Grimes Gen Data
Polk Co.

June 11, 1965

MEMORANDUM

TO: Dr. H. G. Hershey

FROM: Richard C. Northup

RE: New well for city of Grimes

Layne-Western has been awarded the contract for a new Jordan well for the city of Grimes just northwest of Des Moines. After several years of attempting to develop an adequate supply from Pleistocene sand or gravel the city council decided on a Jordan well. Thorpe and Layne-Western drilled several series of shallow test holes in the last ten years or so, and none have improved the water situation materially. Actually they have been "mining the water" from glacial outwash which had insufficient or no recharge. The rig which has just completed the Coralville well will be moved to Grimes in the near future, although they intend to drill to the top of the Mississipian with rotary tools.



Layne-Western Company

WATER WELL DRILLING
EXPLORATION BORINGS AND TEST SURVEYS
LAYNE TURBINE PUMPS

TELEPHONE AC 515-232-3563

August 25, 1965

OFFICES
KANSAS CITY, MISSOURI
WICHITA, KANSAS
OMAHA, NEBRASKA
AMES, IOWA
AURORA, ILLINOIS
ST. LOUIS, MISSOURI
DENVER, COLORADO

705 SOUTH DUFF AVENUE
AMES, IOWA
50010

IOWA GEOLOGICAL SURVEY
AUG 26 1965

Iowa Geological Survey
Geological Survey Building
Iowa City, Iowa

Gentlemen:

We have now started construction of the Jordan Well for the Town of Grimes.

We understand you prepared a forecast on this job for the Engineers, Veenstra & Kimm.

We would appreciate receiving a copy of this forecast for our use during the progress of this job.

We would also appreciate your forwarding a supply of sample sacks as out stock is almost exhausted.

Very truly yours,

LAYNE-WESTERN COMPANY

Frank H. Flores

FHF/blo

GW Grimes Gen Data
Polk Co.

August 26, 1965

Mr. Frank Flores
Layne-Western
705 South Duff
Ames, Iowa

Dear Mr. Flores:

Enclosed is a copy of our forecast on the ground-water situation at the town of Grimes, Iowa.

We are glad to hear you have started construction on this project and will look forward to examining the sample cuttings.

Under separate cover we are mailing a supply of sample sacks and driller's notebooks.

Yours very truly,

H. G. Hershey

HGH-PJH/l

GW Grimes well #2
Polk Co.

October 14, 1965

Mr. Frank Flores
Layne-Western Well Company
South Duff Avenue
Ames, Iowa

Dear Mr. Flores:

As you requested, we are pleased to verify the fact that the new well at Grimes has reached the Mississippian. Top of the Mississippian appears to be somewhere in the 390'-395' interval, probably at about 393 feet. The samples from there to 428 feet look like the Lower St. Louis, or Spergen, Formation, a partly sandy cream to brown colored dolomite.

We trust that the string of 24-inch casing has now been set without difficulty and we will be looking for further samples as drilling progresses.

Please let us know if we can be of further service.

Very truly yours,

H. G. Hershey

RCN:t

MEMORANDUM NOVEMBER 3, 1965

TO: Dr. H. G. Hershey & Dick Northup

FROM: D. L. Koch

RE: Grimes Town Well

John Masters phoned to inquire about a reddish-brown shale he encountered at 750'. He had not encountered this material in any previous drilling at this depth in central Iowa.

I suggested that it was probably the weathered top of the Maple Mill. Where present, this zone usually contains an abundance of discoid limonite concretions from 1-2 mm in diameter.

Mr. Masters may bring samples to the office on Saturday, November 6, (we currently have samples to 425'), and will contact Dick Northup or myself so that they can be put inside the building.

DLK/v

I STOPPED AT THE WELL ON MY RETURN FROM VISITING THE OIL TEST AT THURMAN, AND CONCUR WITH DON'S FINDINGS AND THINKING REGARDING THE SHALE. AT THE TIME I STOPPED AT THE WELL, DRILLING HAD REACHED WHAT I BELIEVE IS THE APLINGTON, AND SUGGESTED THAT THEY BE SURE TO DRILL THROUGH IT AND THE UNDERLYING SHEFFIELD SHALE, IF IT IS PRESENT, BEFORE SETTING THEIR NEXT STRING OF CASING.

R.C.N. 10/8/65

GW Waukee Dep. well folder 1966

January 26, 1966

Mr. Frank Flores
Layne-Western Company
South Duff Avenue
Ames, Iowa

Dear Mr. Flores:

As requested by phone this morning, we are enclosing a copy of our geologic log of the Waukee town well, to include the section from the basal Mississippian to the top of the Galena (Ordovician Age), which we hope will be useful to you in interpreting the section at Grimes.

You will note that no chert is present in the Devonian Section where you reported the hard drilling, and so it may be that you are in an ususually hard dolomite. To get a complete picture, we would like to request again that the remaining samples to date be sent in, so that we can bring our log up to date.

Please let us know if we can be of further service.

Very truly yours,

H. G. Hershey

HGH/RCN/v
Enclosure

GW Grimes town well folder

February 16, 1966

MEMORANDUM

TO: Dr. H.G. Hershey

FROM: Richard C. Northup

RE: Grimes Town Well

The Grimes Town Well has reached a depth of 1535 feet. John Masters, driller for Layne-Western, phoned Wednesday morning to advise that they hit the Maquoketa at 1520 feet, and that the hole is caving badly. He wanted me to check the anticipated thickness of the Brainerd member. If possible they want to continue drilling until they reach the Fort Atkinson before running a 16" liner, as originally planned, but as drilling is becoming increasingly difficult, they may be forced to do so now. They do have some leeway, as the specifications call for a string of 10" casing through the St. Peter, and this would enable them to reduce three times if necessary. From a comparison with the Waukee and other wells in the general area, it looks like they should reach the Fort Atkinson at about 1600 feet. I advised Mr. Masters to keep on as far as he could before setting a liner, as there is no way of telling how well the lower part of the Brainerd will hold up. Mr. Masters has sent the samples from 1350' to 1535' (present total depth), and I will run them as soon as they are prepared for study. Log is complete to 1350' as of now.

July 26, 1966

MEMORANDUM

TO: H. G. Hershey

FROM: Mary C. Parker

RE: Grimes Town Well

John Masters, driller for Layne-Western called to report he was drilling at 2500 feet and had not reached the Jordan. He encountered a 40 foot sandstone at 2300 feet and wondered if that could have been the Jordan.

From the log of the well which has been studied to 2015 (35' into the Prairie du Chien) and other wells in ø the area, it would appear that the sandstone at 2300 is the Root Valley and that the Jordan should be øø encountered about 2515'.

noted okay 7/26/66 Mary

Note from Dick Northrup 8/8/66

Grimes

Total Depth 2602'

SWL 215'

PL 230' @ 820 PM.

Reports Jordan 2504-2535'

Good Sandstone and well Developm

Bud will stop By The well Today on His Way To Northwest Iowa To pick up a Water Sample and The Remainder of The cuttings

54.88 sp. cap.

15/820
75
70
60
100
90

GW Grimes City well
folder Polk Co.

December 16, 1966

City Clerk
Grimes, Iowa

Dear Sir:

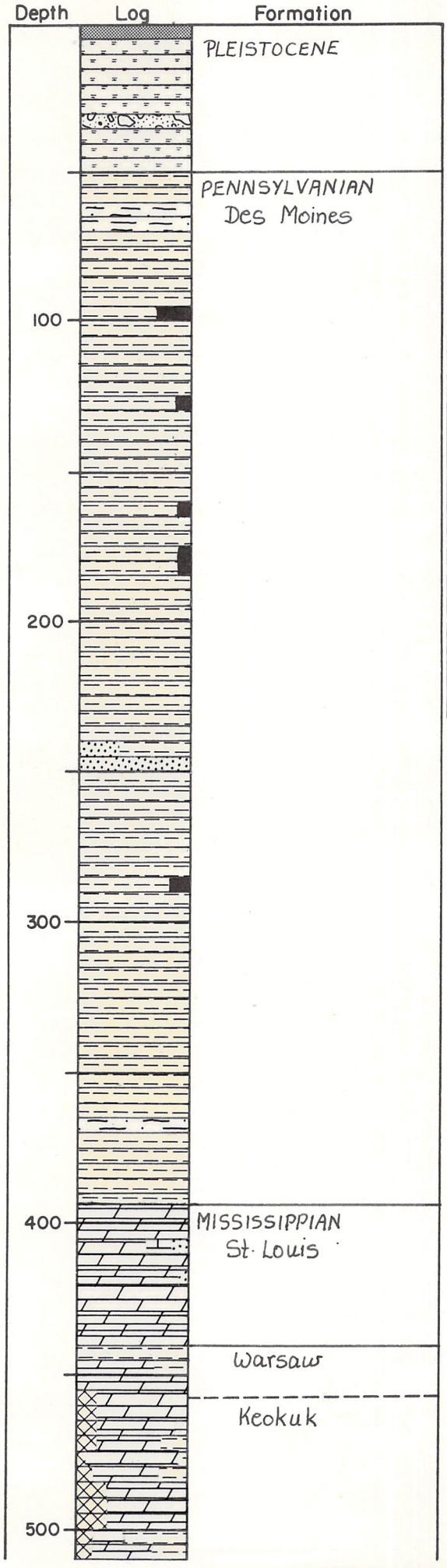
Enclosed is a report on the mineral analysis of water from the Grimes City well about 200' from pump in Polk County as shown by a sample collected by Mr. Scheetz, of our staff, on August 8, 1966.

If you have any questions concerning this report, please do not hesitate to let me hear from you.

Very truly yours,

H. G. Hershey

HGH/1
Enclosure

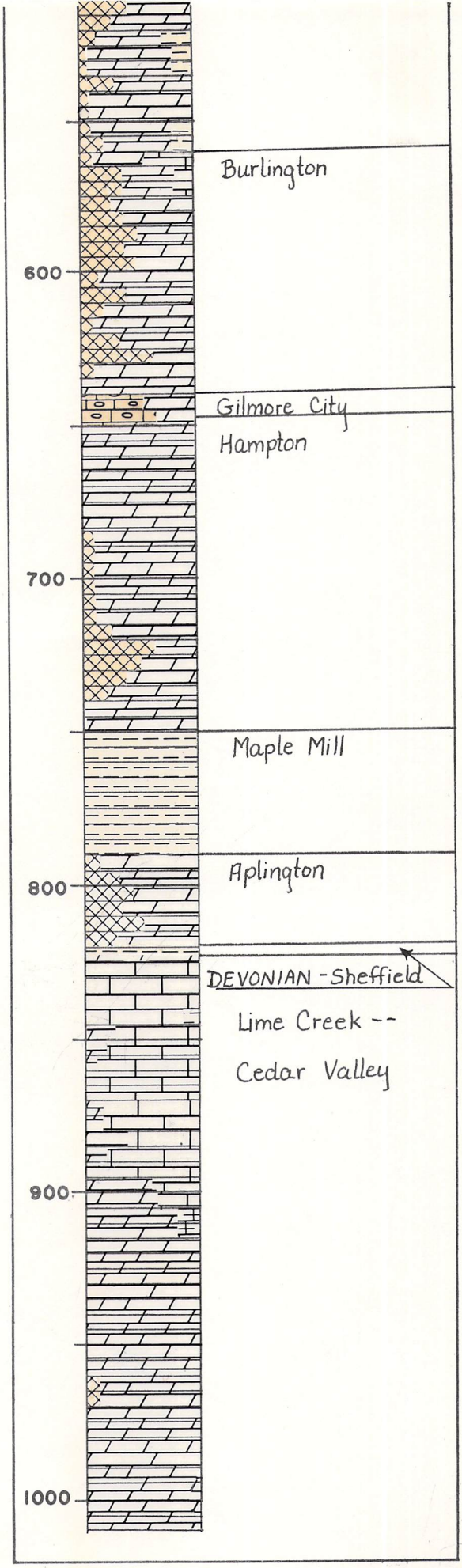


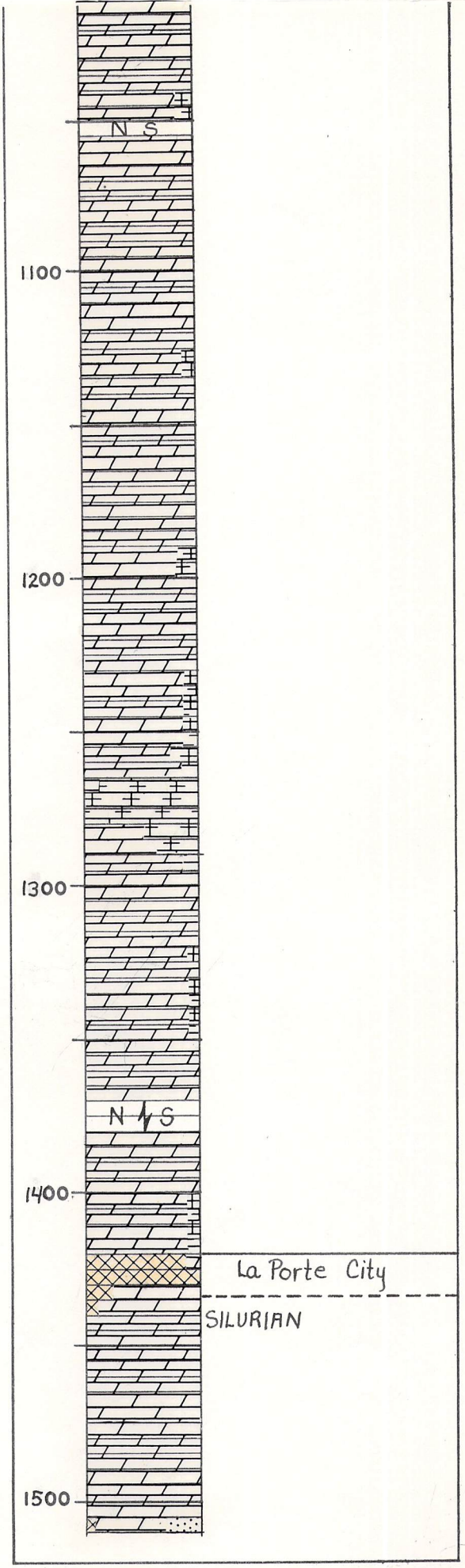
IOWA GEOLOGICAL SURVEY
In Cooperation with
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Iowa City, Iowa

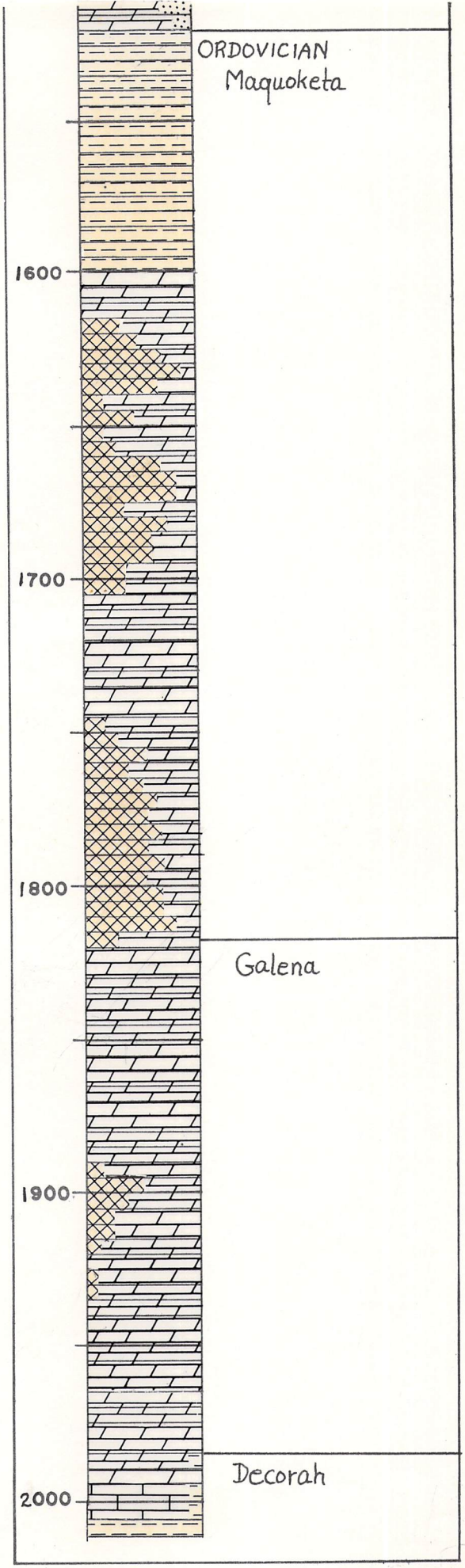
Name: Grimes Town Well (1966)	State: Iowa
Town: Grimes; County: Polk	Loc.: NE NW NW
Contractor: Layne-Western Co.; Driller:	Sec.: 5
Drilling Dates: Sept. 1965 - August 9, 1966	T. 79 N., R. 25 W.
Casing Record: 50' of 26" csg. 0-50' 428' of 24" csg. 0-428' 100' of 22" liner 745'-845' 846' of 18" csg. 0-846' 1305' of 8" csg. 800'-2105' cemented in 13 1/4" hole	
S.W.L.: 215'; G.P.M.: 820; D.D.: 15'	
Remarks	Elev.: 964'
	T.D.: 2602'
Logged By: Northup 1965-1966	I.G.S. No.: W-17920

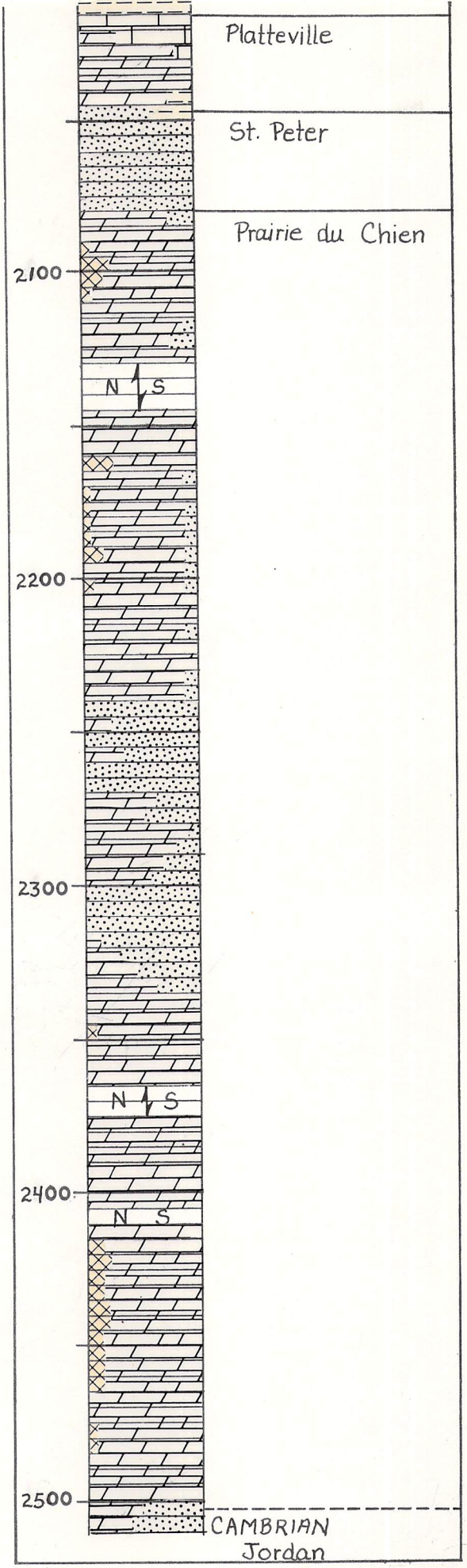
Explanation of Colors

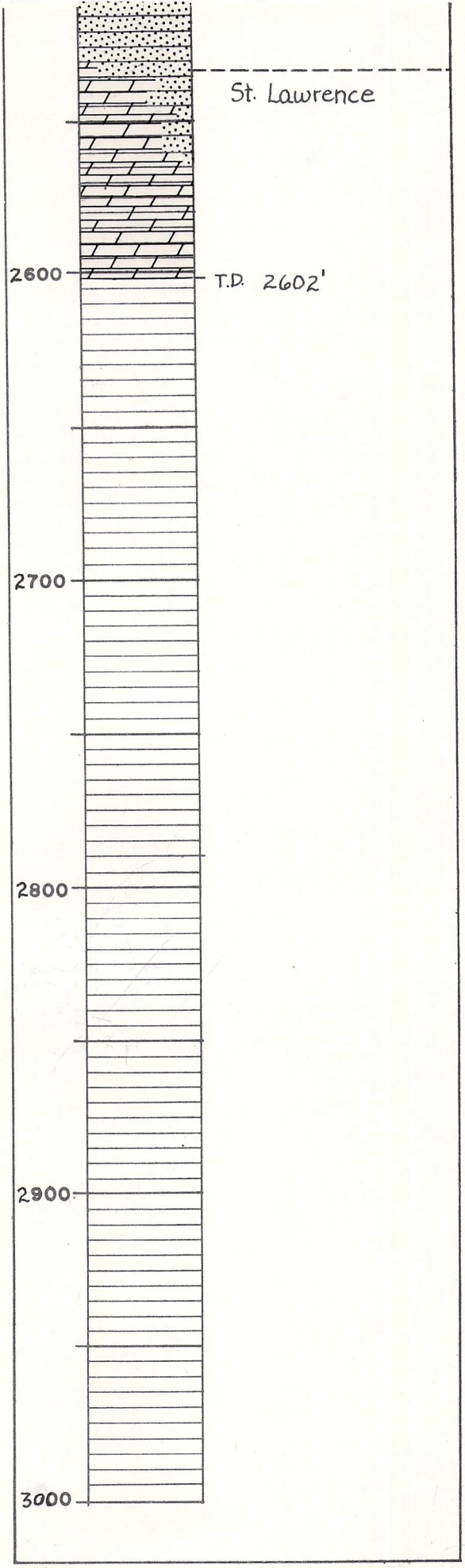
- Soil
- ~~Loess~~, Silt or Siltstone
- Drift
- Sand & Gravel
- Shale
- Sandstone
- Limestone
- Dolomite
- Chert
- Gypsum or Anhydrite
- Coal
- N!S No Samples

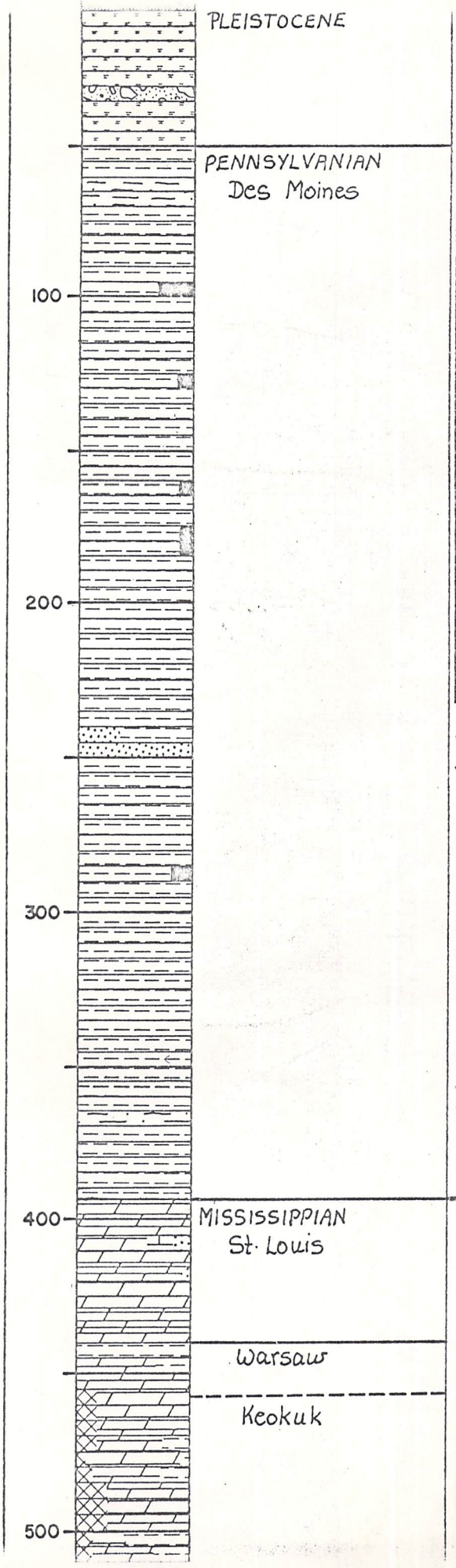

Burlington
600
Gilmore City
Hampton
700
Maple Mill
Aplington
800
DEVONIAN - Sheffield
Lime Creek --
Cedar Valley
900
1000


N S
1100
1200
1300
N S
1400
La Porte City
SILURIAN
1500


ORDOVICIAN
Maquoketa
1600
1700
1800
Galena
1900
Decorah
2000


Platteville
St. Peter
Prairie du Chien
2100
N S
2200
2300
N S
2400
N S
2500
CAMBRIAN
Jordan


St. Lawrence
2600
T.D. 2602'
2700
2800
2900
3000



IOWA GEOLOGICAL SURVEY
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Iowa City, Iowa

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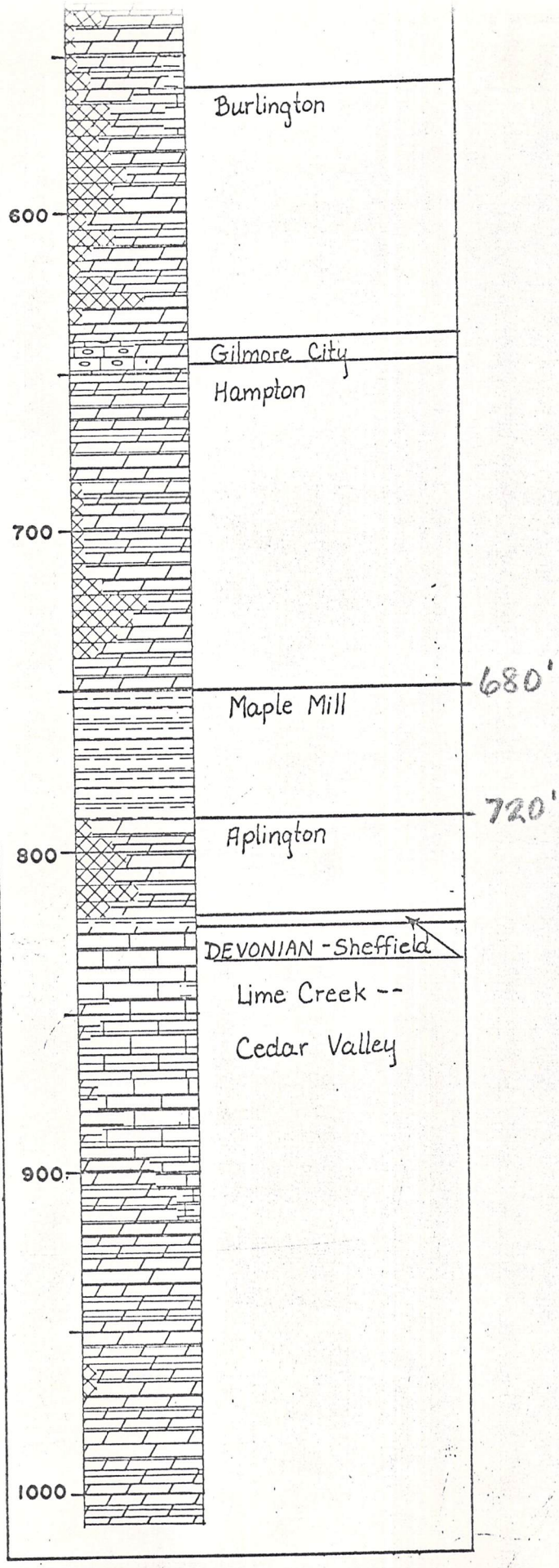
Jester Park
forecast
surface elev.
940' a.s.l.

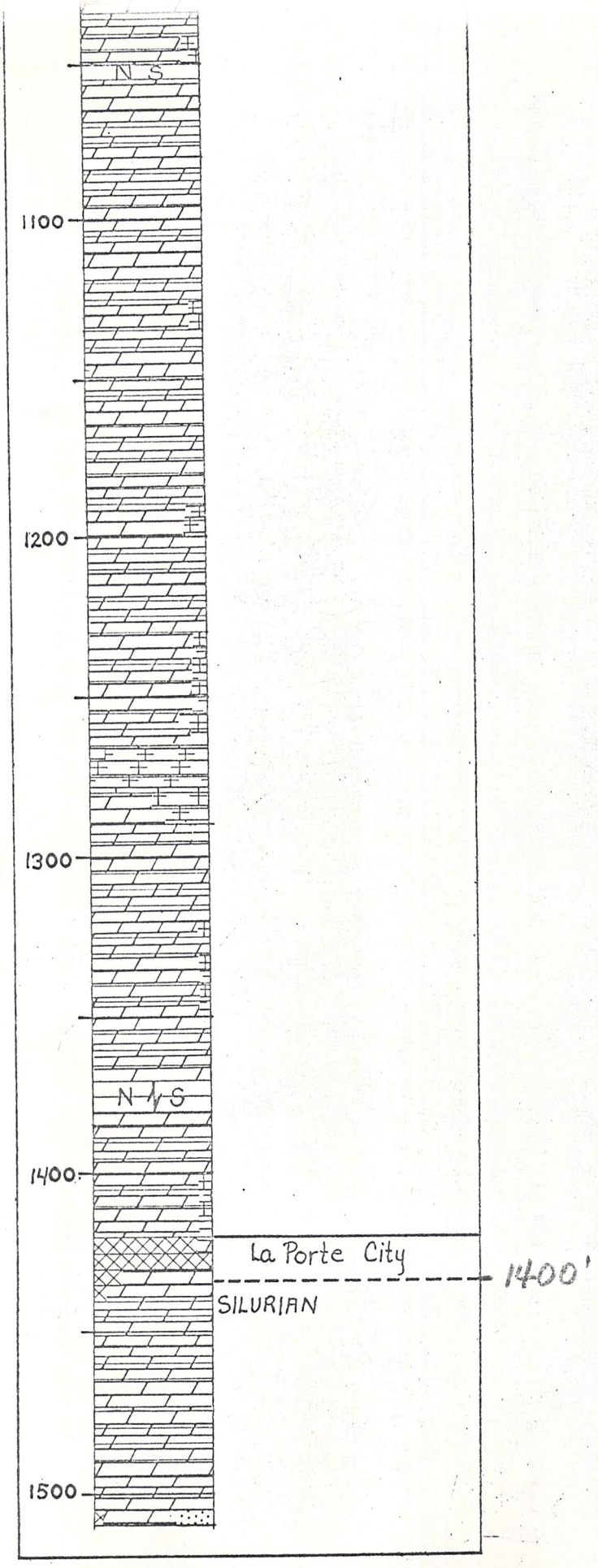
Depths

360'

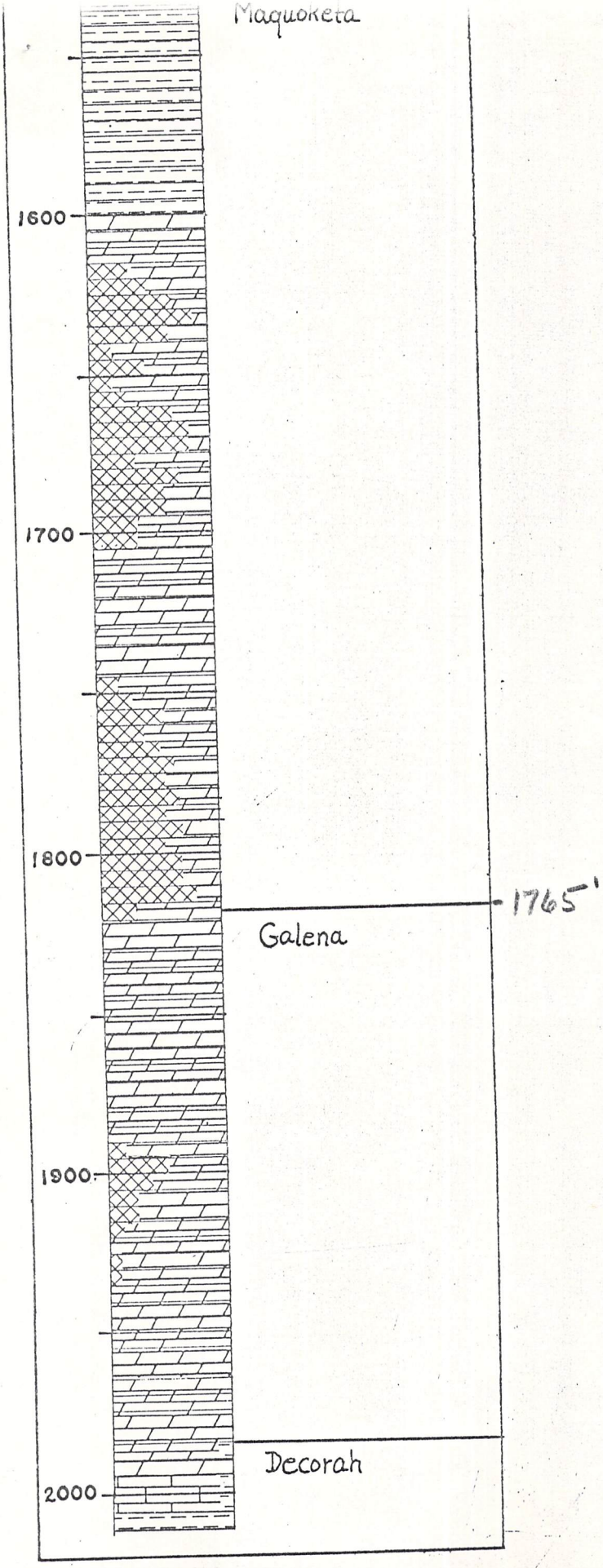
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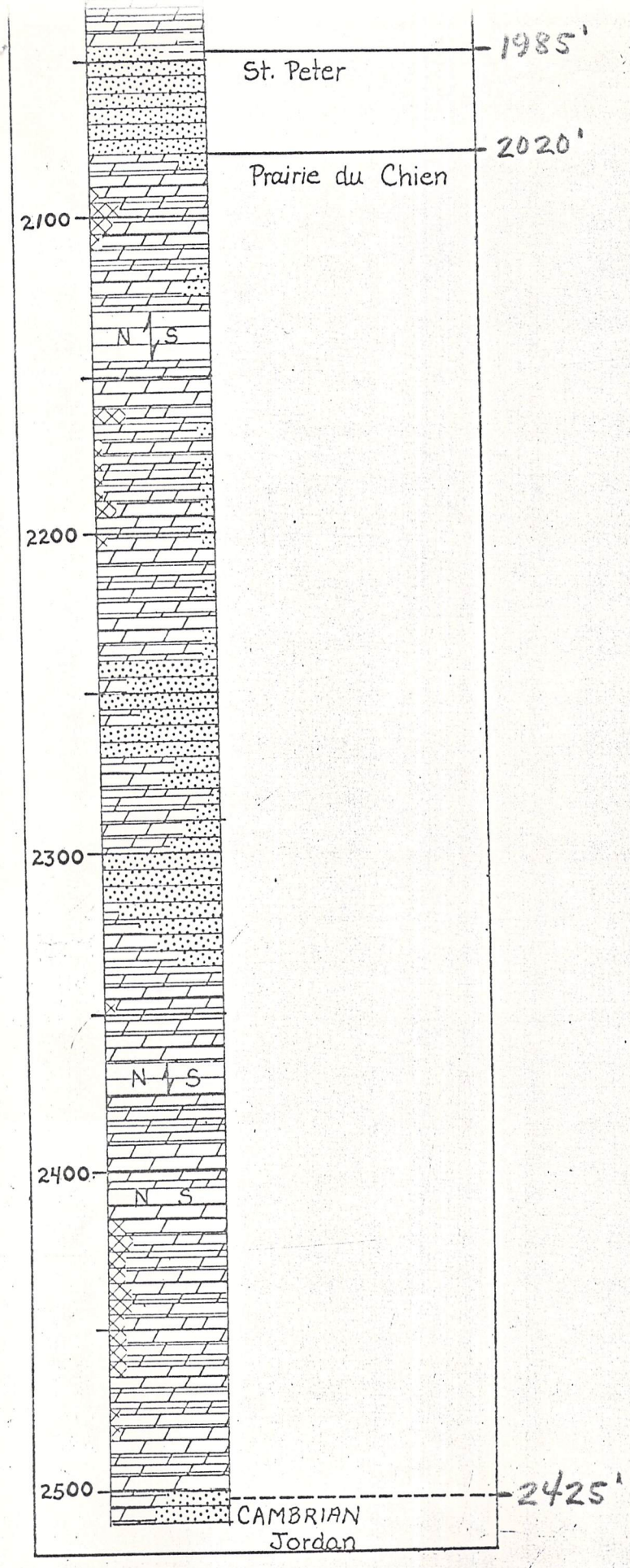
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- Dolomite
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- Gypsum or Anhydrite
- Coal
- N.S. No Samples


Burlington
600
Gilmore City
Hampton
700
680'
Maple Mill
720'
Aplington
800
DEVONIAN - Sheffield
Lime Creek --
Cedar Valley
900
1000


N S
1100
1200
1300
N ½ S
1400
La Porte City
1400'
SILURIAN
1500

- 1440




1985'
St. Peter
2020'
Prairie du Chien
2100
N S
2200
2300
N S
2400
N S
2500
2425'
CAMBRIAN
Jordan

2455'

