WRD Exp. (GW)
Aug. 1964

Verified PMJ

U. S. DEPARTMENT OF THE INTERIOR — GEOLOGICAL SURVEY

Water Resources Division Well Schedule Form

MASTER CARD

COUNTY NWY

Record by D. AARONSON | Source of data FILE | Date 8/3/65 | Map 1:63,360

State IOWA (16) | County (or town) TAYLOR (087)

Latitude: 40 46 50 N | Longitude: 094 55 10 | Sequential number: 1

Lat-long accuracy: 3 | T 69 N, R 35 W | Sec 18, NE ¼, NW ¼, ¼, 5

Local well number: 069 35W 18 ba | Other number: B & M W-1273

Local use: 01273 | Owner or name: W.O. SMYTHE #1 HOOK

Owner or name: SMYTHE HOOK 1 | Address: NEW MARKET, IA

Ownership: (C) County, (F) Fed Gov't, (M) City, (N) Corp or Co, (P) Private, (S) State Agency, (W) Water Dist — P

Use of water: (A) Air cond, (C) Comm, (D) Dewatering, (F) Fire, (H) Dom, (I) Irr, (N) Ind, (P) S, (S) Stock, (T) Instit, (U) Unused — U

Use of well: (A) Anode, (D) Drain, (G) Seismic, (O) Obs, (P) Oil-gas, (R) Recharge, (S) Spring, (T) Test, (U) Unused, (W) Withdraw, (X) Waste, (Z) Destroyed — P

DATA AVAILABLE: Well data 5 | Freq. W/L meas.: | Field aquifer char.

Hyd. lab. data:

Qual. water data; type:

Freq. sampling: | Pumpage inventory: yes / no; period:

Aperture cards: yes

Log data: GEOLOGIST LOG — G

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD | Depth well: 1010 ft | 1010 Meas. rep't | accuracy 6

Depth cased: (first perf.) ft | Casing type: ; Diam. in

Finish: (C) porous concrete, (F) gravel w. (perf.), (G) gravel w. (screen), (H) horiz. gallery, (O) open end, (P) perf., (S) screen, (T) sd. pt., (W) shored, (X) open hole, (Z) other

Method Drilled: (A) air rot., (B) bored, (C) cable, (D) dug, (H) hyd rot., (J) jetted, (P) air percussion, (R) reverse rotary, (T) trenching, (V) driven, (W) drive wash, (Z) other

Date Drilled: SEPT 1940 (9 40) | Pump intake setting: ft

Driller: HERNDON DRLG CO. | TULSA, OKLAHOMA (name, address)

Lift (type): (A) air, (B) bucket, (C) cent, jet, (J) multiple (cent.), (M) multiple (turb.), (N) none, (P) piston, (R) rot, (S) submerg, (T) turb, (Z) other | Deep / Shallow D

Power (type): diesel, elec, gas, gasoline, hand, gas, wind; nat, LPG, H.P. | Trans. or meter no.

Descrip. MP: LSD | above / below lsd, Alt. MP 1035.8

Alt. LSD: 1035.8 | 1036 | Accuracy: (source) ALTIMETER — 7

Water Level ft above / below MP; Ft above / below lsd | Accuracy:

Date meas: | Yield: gpm | Method determined

Drawdown: ft | Accuracy: | Pumping period hrs

QUALITY OF WATER DATA: Iron ppm | Sulfate ppm | Chloride ppm | Hard. ppm

Sp. Conduct x 10^6 | Temp. °F | Date sampled

Taste, color, etc.

069-35W-18 ba

Well Number 40 46 50 (W) 039 55 10
d m s (S) d m s

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD (1–19) Physiographic Province: CENTRAL LOWLAND [1 2] (20–21) Section: DISSECTED TILL PLAIN [E] (22) Drainage Basin: NODAWAY [3 1 B] (23–25) Subbasin: [ ] (26)

Topo of well site: local depression, flat surface, hilltop, hillside, terrace, valley flat. (D) (F) (H) (S) (T) (V) VALLEY [V] (27)

MAJOR AQUIFER: _____ system, _____ series [ ] (28–29) _____ aquifer, formation, group [ ] (30–31)

Lithology: _____ [ ] (32–33) Origin: _____ [ ] (34) Aquifer Thickness: _____ ft

[ ] (35–37) Length of well open to: _____ ft [ ] (38–42) Depth to top of: _____ ft [ ] (43–45)

MINOR AQUIFER: _____ system, _____ series [ ] (44–45) _____ aquifer, formation, group [ ] (46–47)

Lithology: _____ [ ] (48–49) Origin: _____ [ ] (50) Aquifer Thickness: _____ ft

[ ] (51–53) Length of well open to: _____ ft [ ] (54–56) Depth to top of: _____ ft [ ] (57–59)

Intervals Screened: _____

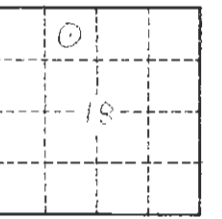
Depth to consolidated rock: _____ ft [ ] (60–62) Source of data: _____ [ ] (64)

Depth to basement: _____ ft [ ] (65–68) Source of data: _____ [ ] (69)

Surficial material: _____ [ ] (70–71) Infiltration characteristics: POOR [4] (72)

Coefficient Trans: _____ gpd/ft [ ] (73–75) Coefficient Storage: _____ [ ] (76–78)

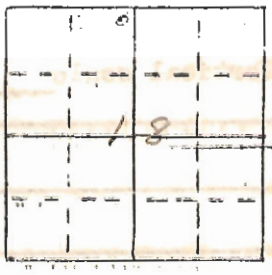
Coefficient Perm: _____ gpd/ft^2; Spec cap: _____ gpm/ft; Number of geologic cards: _____ [ ] (79)



W-1223

IOWA GEOLOGICAL SURVEY
In Cooperation with U. S. Geological Survey

RECORD OF WELL



Location:

Town: New Market (N E / S W):County Taylor

NE-NE-NW sec. 18 T 69 N., R. 35 W. Dallas Twp.

Well name and number W.O. Smythe et al No 1 Hicks

Owner _____ Address _____

Tenant _____ Address _____

_____

Contractor _____ Address _____

Drillers _____

Drilling dates May 14, 1940

Well data:

Elevations: Drilling curb 1037 feet; Land surface _____ feet

_____

_____

Determined by _____

Topographic position _____

Total depth: Reported 1010 feet, Measured _____ feet

_____

Drilling method _____

Hole and casing data _____

_____

_____

_____

_____

Original depth to water _____ ft. above/below _____ Date _____

Original elevation of water level _____ ft.; Source of data _____

_____

Sources of water: Principal _____; Others _____

_____

Production data: Date _____

Static depth to water _____ Measuring point _____
Pumping level _____ at _____ g.p.m.

_____ _____

_____ _____

_____ _____

Specific capacity _____ g.p.m. per ft. drawdown; Temperature _____ °F.

Pump data; Type pump _____ Column Dia. _____ Length _____
Cylinder or bowls: Dia. _____ Length _____ Suction pipe _____

Power _____ Airline _____

Estimated rate of production: _____ g.p.m. for _____ hrs. a day
Use of water _____

WATER ANALYSES (in parts per million)

Date samples				
Sampled by				
Total solids				
Insoluble matter				
Alkalinity (Meo)				
Alkalinity (Phn)				
pH				
Fe_2O_3+ Mn_2O_3 +Al_2O_3				
Alkali as sodium				
Calcium				
Magnesium				
Iron (unfiltered)				
Manganese				
Nitrate				
Fluoride				
Chloride				
Sulfate				
Bicarbonate				
Hardness (ppm)				
Hardness (gpg)				

Remarks _____

Laboratory data: Sample storage location _____

Sample range G1-1010 No. spls. 181 No. dupls. & cond. 175 + 6 and
Spls. prepared by Sunnyfel Washed range -1010 by _____
Driller's log and cond. I _____
Insoluble residues: Prepared by _____ Studied by _____ Strip log _____
Microscopic study Ellis strip log Ellis
Gen. log _____ Correl. by Ellis

W.O. Smythe, et al
Hawleyville
Driller's log

Sept. 26, 1940

50

		Depth	
Soil black	71	71	
Gravel water	3	74	
Shale	9	83	actual depth water 85'
Lime	5	88	
Shale	22	110	
Lime	1	111	
Shale gray	9	120	
Lime	2	122	
Sand water	13	132	
Shale sandy	10	142	
Shale dark	42	184	
Shale sandy	12	196	
Shale dark	11	207	
Shale dark-lite	10	217	
Lime	6	223	Kerford
Shale dark	6	229	
Lime sandy	23	252	U. Oriad
Shale black	3	255	
Lime	3	258	Mid Oriad
Shale lite	17	275	
Lime white	4	279	L. Oriad
Shale lite	4	283	
Red bed	17	300	
Shale white S	20	320	
Shale light		340	Water 345
Shale Sandy lime		345	
Lime	6	351	
Shale	62	413	
Lime			

Sheet No. 1 Name of Well Smythe et al Survey No. W-1273

Location New Maket Date Drilled Sept 1940 Analyst Elias

00

10

20

30

40

50

60

61 Sh. calc. [illegible] lam. [illegible] frags., [illegible] med. [illegible]

70

70 Ls. [illegible] med. drabish gray, spotted with med. gray, v. fn. to sub-lith., crinoids trace pyrite

73 [illegible] in part, fusulinid frags. brach. but ostracodes (Tonosina ?) coal frag.

78 [illegible] med. brownish drab, v. fn., foss - (large white) fusulinid frags. 5% blk. sh. slightly calc.

80

83 ditto but 15% blk. sh.

87 brownish drab, v. fn. [illegible] fusulinids (large) brachs. + crinoids 10% ls. v. arg. lt. drab, v. fn. 10% blk. sh.

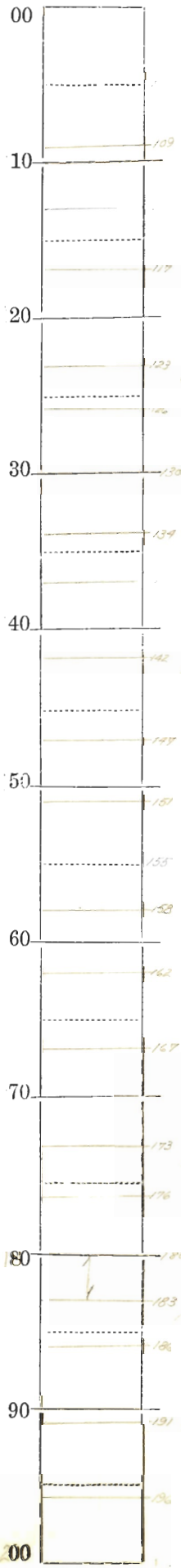
90

94 Ls. arg. (& sl.) lt. buff gray, floury or lith., streaks clear brown calc. xls. 25% sh. v. calc. lt. greenish gray soft poor. lam.

100

Sheet No. 2 Name of Well. Smythe et al Survey No. W-1273

Location New Market Date Drilled Sept. 1910 Analyst Elias



Sheet No. 3 Name of Well. Smythe et al Survey No. W-4273

Location Mesa Market Date Drilled Sept. 1940 Analyst Elias

00
10
20
30
40
50
60
70
80
90
00

Sheet No. 4 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Sept. 1940 Analyst Elias

00 300 Sh. silty, v.f. gray, micac., part lam.

304 Sandstone, calc., v.fn., micac. 25% sh. calc. lt green-gray, non

45% sh. lt med green gray, lam., micac., non

20% sh. med. maroon

10 310 Sandstone, calc., v.fn., micac. 25% sh. calc. lt green-gray, non

20% maroon sh - cave?

315 Ss as 25%

20 320 Sh. ca med gray to greenish gray, part lam. 5% maroon sh.

329 (greenish from green grains mica?)

30 Sh. & sh. calc. in pa med green gr non-lam. 30% ss. calc. lt gray, slightly greenish v.fn. micac

335 lam.

40 35% v. little fn. micac.

343 "

348 (slightly greenish)

50 Ss. calc. lt gr. v.fn. little fn, hard, micac. blk specks (also in coarse samples)

10% sh. lt med gray lam. micac.

355 "

60 360 Ss. as in 348-50' 60% sh lt med gray, lam. micac., silty in part

364 Ss. as in 346-50' 5%

Sh. lt. to med gray, part lam. 5% maroon, 50% silt-stone to ss. v.fn., calc. in part, lt gray micac.

70

373 Sh. lt. to lt med gray, greenish in part, lam. to part lam. micac., 50% "

378 Sls. shaly, sandy (v.fn.) calc. in part, lt gray, slightly greenish, micac.

80 380 Sls. sandy (v.fn.) 45% sh. lt. sl greenish gray, lam. micac, sl calc.

10% sh. sl calc. blk. well lam.

385 70% sh. 30% sh. as in 380-85

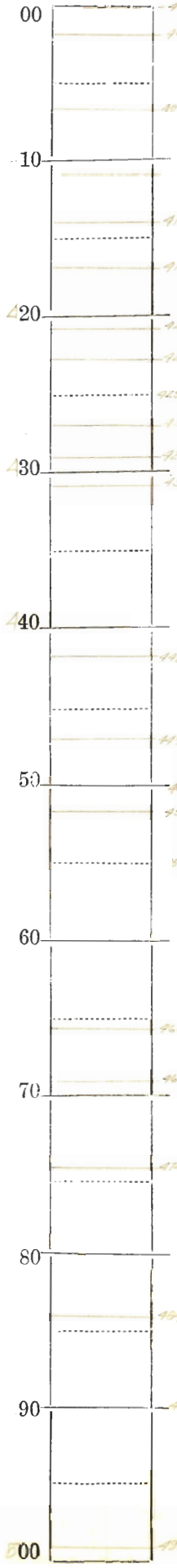
90

395 Ls., dolomitic, pale buffish gray, almost white, showing to med (brownish)

00 400

Sheet No. 5 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Sept 1940 Analyst Elias



Sheet No. 6 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Sept. 1940 Analyst Elias Oct. 10, 1910

500

499 — Sh. v. calc. dk gray to blk. non lam. hd.

505 — poor lam. med. hd. brachs.; 15% sh. v. calc. blk

25% ls. pale to lt. buffish gray, v. fn. to fn. few coarse buff clear xl streaks

510

510 — Ls. pale gray, sl. buffish or drabish in part, sublith. to v. fn. few ... aks, crinoids, bryozoa, brachs. trace p

515 — 510-15' little lt. med.

520

522 — Ls. pale to lt. little lt. med. gray, buff in part, v. fn. bra

528 — No sam

530

533 — Sh. calc. lt. gray poor lam. ... to med. hd. 20% sh. calc. blk ... drab 20% ls. silty in part, lt. med ... v. fn. foss. - brachs. crinoids

540

539 — calc. lt. sl. greenish gray, non lam. med. hd. 15% ls. pale gray v. fn. flong crinoids

15% ls. arg. in part, med. to dk., gray + drab, v. foss. v. fn. 5% sh. v. calc. blk.

545 — Ls. pale to lt. buffish gray, v. fn. crinoids + brachs. little lt. brown lith.

10% ls. arg. lt. sl. greenish gray.

550

550 — Ls. pa ... lt. sh. gray and lt. med. brown, v. fn., fusulinids fusiform

15% sh. calc. med. gray, poor lam. hd.

555 — Ls. pale to lt. med. ... gray to brown, v. fn. few Osagia numerous fusulinids

560

560 — 555-60 more Osagia fewer fusulinids 15% sh. calc. med. gray lam. med. hd.

565 — Sh. calc. med. gray, poor lam. med. hd.; 20% sh. calc. blk. little lt. green gray mottling;

20% ls. as in 560-65

570

571 — Sh. v. calc. med. (to dk.) gray, poor lam. med. h... ds; 40% ls. arg. dk. gray, v. fn. to fn. foss. - brachs. crinoids fusulinids(?)

576 — Ls. dk. gray, drabish in part, v. fn. to fn. foss. 25% ls. lt. to lt. med. buffish + brownish gray sublith. to v. fn.

15% sh. v. calc. med. to dk. gray, green in part

80

582 — Ls. pale to lt. buffish gray, sublith. to v. fn. pale ... fusulinids 10% dk. gray ls. as in 576-82

in bag are large ... of sh. sl. calc. med. maroon, which make up at least 30% of the sample - cave 2% sh. calc. blk.

590

590 — Ls. lt. drabish + brownish gray v. fn. large fat fusulinids, brachs 3% sh. calc. blk.

little Osagia or clastic frags.

595 — Ls. pale to lt. drabish + brownish gray, v. fn. large fat fusulinids, brachs.

600

600

Sheet No. 7 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Sept. 1940 Analyst Elias Oct. 10 '40

Depth	Description
600	Sh. calc. lt. to med. gray, non [illegible] hd. 25% sh. [illegible] calc. blk. 15% ls. as [illegible] cave?
606	Sh. v. sl. calc. [illegible] to med. gray, poor lam. hd. 30% sh. non calc. blk
610	Ls. [illegible] g[illegible] [illegible] sh. blk.
615	Ls. pale [illegible]
620	[illegible] rare small ostracods
625	
631	[illegible] pale [illegible] drabish gray, v. fn. gran. 5% chert lt. to lt. med. buffish gray [illegible] tra[illegible]
636	Sh. [illegible] blk. hd.; 25% ls. [illegible] 631-36 1% chert 3% sh. pale grayish green lam. soft + small clastic frags of med. brown ls.
641	Sh. [illegible] gray, drabish in part [illegible] hd. [illegible]% sh. blk. non calc. lt. med. drabish gray [illegible] blk. foss [illegible] wh. Cornuspira
648	Ls. dolomitic, pale buffish gray, v. fn. [illegible] gran. 15% ls. dk. med. gray brown to drab, full of Cornuspira 15% sh. as in 641-48
654	Dolo. calc., silty in part, pale to lt., gray to buffish gray, v. fn. to fn. gran. brachs.
659	Ls. sl. dolo. pale [illegible] lt. buffish + brownish gray,
664	Ls. pale to lt. buffish gray, v. fn. brachs., silty in v. small part; 3% Cornuspira ls. as in 648-54 cave trace che[illegible] lt. gray [illegible] [illegible]paque mottling.
669	Sh. lt. greenish gray, non lam. [illegible] hd. 15% sh. sl. calc. dk. gray; 15% sh. non calc. blk.
674	green[illegible] to med. gray, non lam. hd.; 50% ls. lt. drabish gray, v. fn. brachs. many ostracods [illegible]% sh. v. sl. calc. blk. sl. pyritic 2% coal
679	Ls. [illegible] to med., drabish and brownish gray, v. fn. to fn. brachs. blk. foss. including gast. 1% coal
684	[illegible]ed. brown to drab gray, v. fn. to fn. streaks clear med. Xls., crinoids
689	[illegible] brachs.
693	Sh. calc. lt. greenish gray non lam. hd. 15% sh. non calc. dk. maroon, mottled with med. green gray, med. hd.
697	Sh. v. sl. calc. lt. green gray non lam. hd. Pecten mold + other indistinguishable molds. 15% sh. variegated maroon + green gray, dk. gray ls. clastic frags. (sample marked 697)
700	

Sheet No. 8 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Analyst Elias Oct. 10 '40

00 — 700

Sh. calc. lt. to med. gray, greenish in part, non lam. hd. 3% maroon

704

Sh. lt. [illegible] variegated maroon and green; 40% ls. arg lt. to med. gray to browngray, v.fn. [illegible] v. little red stain

10 — 710

Ls. pale to lt. [illegible] [illegible], brachs crinoids 20% sh. sl. calc. lt. med. green gray poor lam. med. hd.

716

Ss. lt. greenish gray, fn. little [illegible] green specks few red specks, arg., hard, coherent.
25% sh. dk. maroon, mottle [illegible] v. sl. calc. med. green, non lam. med. hd.

20

726

Ss. as in 716-26'; 20% sh. calc. lt. med. gray green non lam. hd. 10% sh. dk. maroon non lam.

30

736

[illegible] 716-26' micac.; 50 [illegible] lt. med. sl. greenish gray, little maroon & brown, non lam. hd.

40

742

silty calc. lt. green gray; 10% ss. v. fn. lt. gray coherent, micac

746

Sh. calc. silty in part, non lam. micac. soft trace maroon

50

751

Sh. calc. silty in small part, micac. soft; 50% sh. non calc. med. gray. non lam. hd.

756

Sh. v. sl. calc. [illegible] to lt. med. gray, non lam. hd

60

762

calc. [illegible] gray, sl. greenish in part, non lam. med. hd. 15% coal

768

Sh. sl. calc [illegible] gray, med. hd.; 30% sh. variegated dk. maroon and lt. greenish and yellowish gray [illegible] non lam. hd.

70

15% ls. [illegible] gray & drabish gray [illegible]
10% coal

773

[illegible] sl. calc. [illegible] gray, v. fn. [illegible] micac 30% sh. sl. calc. [illegible] gray non lam. med. hd.
20% ls. [illegible] to lt. med. gray [illegible] sublith. to v. fn. brachs. Fusulinid trace coal.

777

No sample

80

781

Ss. as in 773-77 (shale); 35% sh. med. to dk. gray non lam. med. hd. 5% ls. as in 773-77 no fusulinid

786

Sh. med. to dk. gray, lam. micac. med. hd.

90

791

Sh. med. to dk. gray, lam. to poor lam. med. [illegible] hd. 15% sh. blk. hd.
5% sls. sl. calc. lt. gray, micac

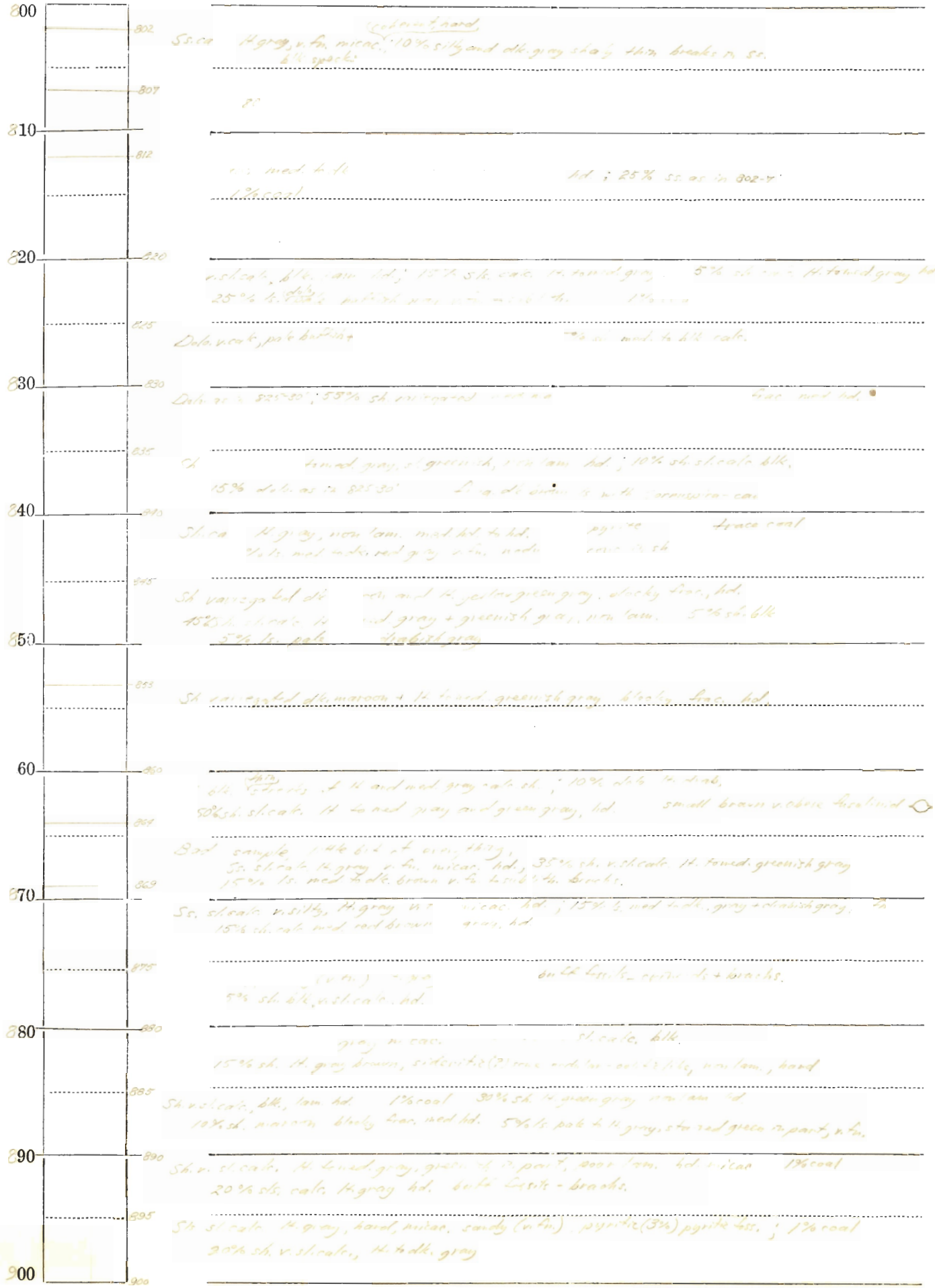
796

Ss. v. sl. calc., silty, lt. gray v. fn. coherent, micac. 25% sh. dk. gray to blk.
15% ls. lt. to med. brownish gray, v. fn., brach. frags.

800

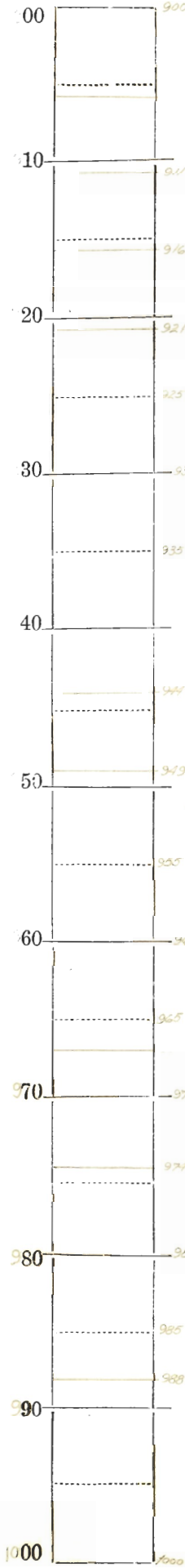
Sheet No. 9 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Analyst Elias Oct. 10 '40



Sheet No. 12 Name of Well Smythe et al Survey No. W-1273

Location New Market Date Drilled Analyst Elias Oct. 11, 1940



00 Sls. v. sl. calc., sandy (v. fn.) lt. gray, micac. 20% sh. lt. brn. gray non calc. pass into
10% ls. lt. drab gray v. fn. nodular - as core in sh. 1% pyrite

Sh. lt. to dk. gray, greenish olive in part, non lam. fn.

10 Sh. sl. calc. lt. gray hd.; 5% coal

5% lt. gray trace

Sls. breaks, grading into sh. v. fn. to fn. 3% coa
10% sh. mic. calc. mottling; 10% sh. med. dk. gray, lam. to med gray poor

20 Sls. sandy, lt. gray, calc., 5% sh. blk. sl. calc. 15%

925 50% sh. med. gray, lam. to poor lam., micac. 10% sh. blk. sl. calc.

30 Sh. med. gray to blk, lam. to poor lam.

933 LS. dolo., med. dk. gray, v. fn. brach. 5 ag. 40% sh. dk. med. maroon lam., micac.
10% sh. med. to dk. gray, poor lam.

40

944 Do calc., med. drab, v. fn. brach. frags

949

50 Do 944-49 ostracods dk. gray to blk.

955 Sh. blk. non lam. hd.; 25% dolo. as in 944-49 15% sh. lt. to med. olive gray, non lam. sl. calc.

60 960 Sh. blk. non lam. hd.; 10% sh. lt. olive green, non lam. hd. 10% dolo. as a

965 20% dolo. dk. drab, v. fn. 5% sh. calc. lt. gray

Sh. blk.; 25% sh. lt. blue green to green gray, non lam. 30% sh. sl. calc. med. to dk. gray
10% sh. sl. calc. maroon trace coal

970 70 Sls. sandy (v. fn.) lt. gray, micac. hd. calc. cement and grading into nodular dolo. lt. drab, v. fn.
15% sh. blk. 5% sh. maroon trace coal

974 Sh. calc. lt. to med. gray, green in part non lam. mod. hd. 10% sh. blk.
30% dolo. to sls. as in 970-74

980 80 Sh. med. to dk. gray, lam. med. hd. 3% sh. maroon non lam. 5% dolo. lt. drab, v. fn.
large clear xl. streaks

985 Sh. calc. med. gray, green sh. in small part, lam. med. hd. 50% sh. v. sl. calc. blk. lam.
med. hd.

988 Sh. sl. calc. lt. to med. olive gray; 8% dolo. med. to dk. drab, v. fn.
5% blk.

990 90

1000 00

Sheet No. 11 Name of Well. Smythe et al. Survey No. W-1233

Location New Market Date Drilled Analyst Elias Oct. 11, 1940

1000 1000 Sh. lt. tomed. olive gray, poor lam. med. hd. 5% dolo. dk. drab v. fn.

1000 Sh. lt. gray green, non lam. slickens. sod, med. hd. small brown gray siderite concs.

20% sh. dk gray to blk. trace coal

1010 1010

1020

1030

1040

1050

1060

1070

1080

1090

1100

October 29, 1940

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa

Dear Mr. Smythe:

Under separate cover we are sending you copies of our strip log of the old Clarinda well showing the formations from the surface to a depth of 2042 feet and the strip log of your well to a depth of 1000 feet.

On the strips the formation names are to the left of the colored column and a general description of the important beds to the right. A small strip included with the logs describes the meaning of the colors and symbols used.

The top of the Hunton limestone in the Clarinda well is shown at a depth of 2016 feet overlain by Kinderhook Maple Mill shale containing a strip of cherty limestone.

If you will return the copy of the strip log of your well to us when you send in the next batch of samples we will add the additional data and send it back to you. If you want additional information plotted on the old Clarinda well please let me know.

I am sorry that there has been a delay in getting these strip logs to you.

Very truly yours,

H. G. Hershey

HGH:N

October 14, 1940

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa

Dear Mr. Smythe:

We have received and studied samples from your well to a depth of 1010 feet.

According to our interpretation a depth of 955 feet in your well corresponds to a depth of 928 feet in the old Clarinda well and on this basis a depth of 1010 feet in your well would correspond to a depth of 983 feet in the old Clarinda well.

Below a depth of approximately 1015 feet in your well there should occur a sandstone, one or more thin limestones separated by dark shales, and a coal at approximately 1080 feet. The limestone should make a good point of correlation. According to the log of the Clarinda well this will be the last important limestone until the top of the Mississippian is reached. According to the log of the Clarinda well the formations below the coal at approximately 1080 feet will consist chiefly of dark shales with an occasional thin bed of sandstone and several coal horizons.

If water is encountered in any large quantity it should be sampled for mineral analysis.

I hope that your drilling operations will continue to move along smoothly.

Very truly yours,

H. G. Hershey

HGH:N

Clarinda

Smythe

923' ls. = 955' dolo.

937-43' trace coal = Mystic(?) = trace coal 967-74'

October 12, 1940

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa

Dear Mr. Smythe:

We have studied the samples from your well to a depth of 921 feet, a depth which represents all of the samples which we have received to date.

We find that the rocks from a depth of 825 feet in your well correspond to those at a depth of 792 feet in the old Clarinda well. Below a depth of 825 feet in your well the rocks are of such character that a definite correlation with the old Clarinda well is not possible with any degree of accuracy. Beds which can be correlated from one well to another will be encountered, of course, with deeper drilling.

Very truly yours,

H. G. Hershey

HGH:N

Clarinda

792'

dolomite - Fort Scott(?

Smythe et al

825'

CLARINDA
OCT 9
5 PM
1940
IOWA

THIS SIDE OF CARD IS FOR ADDRESS

Mr. H. G. Hershey,
% Iowa Geological Survey,
Iowa City
Iowa.

W. O. SMYTHE,

Test

N E, N W, 18 - 69 - 35, Taylor Co., Iowa

DRILLING 970 Ft IN Sand from 970 - Two Small Streaks of Shale

CLARINDA CHAMBER of COMMERCE

LEE FILSON, Pres.

October 11, 1940.

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa .

Dear Mr. Smythe:

Your letter of October 8 and your card of October 9 have been received and I am glad to hear that you are making such good drilling time.

Under separate cover we have sent you a supply of 200 sample bags. When you need more please let me know.

Enclosed is a report on the analysis of the water which you collected when your well was 85 feet deep. The chlorine, sodium and sulphate content of this water is somewhat higher than I expected, but as expected, it does not approach a normal oil field water in mineral content. I expect the other reports on the samples that we collected to be along in the near future.

We have studied the samples to a depth of 810 feet. According to our interpretation a depth of 710 feet in your well is equivalent to a depth of 680 feet in the old Clarinda well and a depth of 775 feet in the core of a New Market test; a depth of 773 feet in your well corresponds to a depth of 745 feet in the old Clarinda well.

We should be ready to report on the remainder of the samples which you sent us by tomorrow.

Please excuse this typing job which I did in the absence of our secretary.

Very truly yours,

H. G. Hershey

Thru Iowa with

Boss Hotels

RANDOLPH
DES MOINES

ELLIS
WATERLOO

WARDEN
FORT DODGE

WHITNEY
ATLANTIC

MEALEY
OELWEIN

ANTHES
FORT MADISON

HOLST
BOONE

BRADFORD
STORM LAKE

NEW WILLSON
WEBSTER CITY

ALGONA
ALGONA

WINNESHEIK
DECORAH

GARDSTON
ESTHERVILLE

ORLEANS
ESTHERVILLE

GEDNEY
INDEPENDENCE

LINDERMAN
CLARINDA

CASTLE
OMAHA, NEB.

LA FAYETTE
ROCKFORD, ILL.

HILTON
BELOIT, WIS.

Oct 8-24
Clarinda Iowa

Mc Hershey.

We are drilling at 920- Sent Samples Yesterday and Today.

Expect you will should Send us more samples Soon.

Sincerely.

W. C. Smyth

Clarinda		Smythe et al		Curb 1129' New Market Coal
680' Fragmental (?)	=	710'	=	775'
735' coal	=	762' coal		
745' Worland (?)	=	773'	=	838'

Dear Mr Smythe:

Your letter of October 8 has just been received and I am glad to hear that you are making such good drilling time.

Under separate cover we are sending you a supply of 200 sample sacks. When you need more please let me know.

Enclosed is a report on the analysis of the water from a depth of 85 feet in your well. The chlorine, sodium and sulphate contents are ~~very high~~ higher that I would have expected ~~for~~ ~~and~~ a water from this depth.

It has occurred to me ~~that~~ a somewhat different method of handling the samples may ~~not be~~ ~~a better~~ save time for you.

Thank you for your card giving the elevation of your well & the old Clandeboy test they will be very helpful to us. Apparently my instrument is ~~slog~~ out of adjustment.

IOWA GEOLOGICAL SURVEY
Water Analysis Report
PRELIMINARY

County Taylor Date Sampled Sept. 10, 1940 193

Town New Market (3N, 1W) Sampled by W.O.Smythe for H.G.Hershey

Location of Well NE¼ NE¼, NW ¼, Sec. 18, T. 69 N., R 35 W.

Dallas Twp.

Owner W. O. Smythe et al Well No. 1 : Drlg. T.D. 85 ft.

Type of Well Drilled Static Level 12 ft. Curb Elevation 1035.7 ft.

Producing Formation(s) Depth range

Remarks on Condition of Well, Casing or Formations

Constituents	Parts Per Million	Constituents	Parts Per Million
Total Solids	1664.	Magnesium (Mg)	36.9
Dissolved Solids	.	Iron(Fe) (unfiltered) (filtered)	0.0
Insoluble Matter	7.0	Manganese (Mn)	0.0
pH	8.2	Aluminum (Al)	.
Alkalinity (MeO)	316.	Fluorine (F)	1.5
Alkalinity (Phn)	0.0	Chlorine (Cl)	120.0
R_2O_3	2.0	Sulphate (SO_4)	767.7
Nitrogen as Ammonia(NH_4)	.	Bicarbonate (HCO_3)	385.5
Nitrogen as Nitrite(NO_2)	.	Phosphate (PO_4)	.
Nitrogen as Nitrate(NO_3)	0.0	Borate (BO_3)	.
Alkalies as Sodium(Na)	410.3	Calculated Hardness	373.
Calcium (Ca)	88.6	Hardness Grains per U. S. Gallon	21.81

Temperature: Water °F. Air °F. Measured at

Remarks: Sampled by bailer

Analysis by State Water Analysis Laboratory, Prof. J. J. Hinman, Jr., Director, Iowa City, Iowa. Lab. No. 152561, Date Oct. 8, 1940, 193.
Sent to:
Date:

IOWA GEOLOGICAL SURVEY
Well or Water Sample Data Bottle No. _____

TOWN New Market (3N, 1W) COUNTY Taylor

LOCATION NE¼ NE¼ NW¼ Sec. 10 T. 67 N. R. 35 W. Dallas Twp.

OWNER OF WELL W. O. Smythe et al Well No. No 1

USE OF WATER: City Supply ( ); Private-Domestic ( ): Public Drinking ( ); Livestock ( ); Industrial ( ); School Supply ( ); Air Conditioning ( ); Cooling ( ); _____ ( ).

CONSTRUCTION OF WELL: Drilled (X); Gravel-Pack type ( ); Driven ( ); Dug ( ); Bored ( ); Jetted ( ) _____ ( ).

DATE STARTED May 14, 1940

CONTRACTOR _____ DATE FINISHED _____

CASING OR CURBING DATA: (Show by diagram on opposite side of sheet the kind, length and depth of top and bottom of each size of pipe, the amount of overlaps, position of seals or packers, pipe perforation and screens, etc.) 30' of 15" [check dia]

WELL DATA

Curb Elevation 1035.7 Ft. Present Depth 85 Ft. Final Depth _____ Ft.

Ground Elevation 1035 Ft. Topographic Position Small valley

Static Level (Depth to Water (~~Above~~) (Below) Curb) 12' Ft. Pumping Level _____ Ft.

Amount of Drawdown _____ Ft. pumping at _____ g.p.m. in ___ hours ___ minutes.

Calculated gals. per ft. drawdown ____ g.p.m.

Type of Pump _____. Power _____.

Depth of Bottom of Pump _____ ft. with ____ ft. of suction pipe.

TEMPERATURE: Air ____ °F.; Water ____ °F., measured after well had pumped _____ hrs. ____ mins. at _____ g.p.m.; _____ ft. from pump after waterhhad passed through the following pipe _____ Time _____ (A.M.) (P.M.)

SOURCE OF WATER: Recent (Type and Depth) _____

Glacial Formations (Type) _____ at ____ ft. to _____ ft.

Limestone or Dolomite (Age) _____ at ____ ft. to _____ ft.

Sandstone (Age) _____ at ____ ft. to _____ ft.

Principal Producing Formation _____

REMARKS Sampled by bailer

Sample taken for: Mineral Analysis ( ); Sanitary Analysis ( ).

Data Collected by W. O. Smythe for H. G. Hershey; Date Sept. 10, 1940

Report Analysis to H. G. Hershey, Iowa Geological Survey, Iowa City

2

No. 1/52 561

85 P D

Preliminary?

T.S. 1664

Ph 8.2

Alk 316.

Phn 0.0

Ins 7.6

R_2O_3 2.0

Na 410.3

Ca 88.6

Mg 36.9

Fe 0.0

Mn 0.0

Nitrate 0.0

F 1.5

Cl 120.0

SO4 767.7

Bic 385.5

Hard 373.

KN.

IOWA GEOLOGICAL SURVEY
Water Well Data Sheet

Survey Number W-1273
E

Town New Market County Taylor T. 69 N., R. 35 W.

Name W.O. Smythe et al. Location NE¼ NE¼ ¼ NW ¼, Sec. 18

Contractor _____ Driller _____ Use _____

Construction Drilled Drilling Dates May. 12, 1940* Drilling Depth _____

Topog. Valley Curb Elev. 1037 Ref. _____ Total Depth 1010'

Final Static Level _____ above / below curb Pumping Level _____ Draw down _____ gpm _____ Time pumped _____ Date _____

Depth to bot. pump _____ ft. with _____ ft. suction pipe. Calc. g/ft. drawdown _____ Prin. Prod. _____

Producing Horizons _____

Water levels and pumping tests on various horizons during drilling:

Depth Range	Stat. Level	Pump Level	Draw down	gpm.	Temp.	Producing horizons	Producing formations	Formations cased out

*Delay after spudding.

Additional information _____

Laboratory Data

Sample range 61 - 1010 Number samples 181 Number Duplicates 175 Cond. Fair To Good

Log Yes / No, Cond. _____ Boxed Summerford 61 - 429 Date Sept. 30, 1940
Summerford 429 - 455 Oct 4, 1940
Summerford 455 - 1010 Oct 1940

Remarks _____

Microscopic Study Range _____	Strip Log _____	Gen. Log _____	Blue Print _____	Samples Washed 61 - 429	
Insol. Res. Study Range _____	Strip Log _____	Gen. Log _____	Insol. Res. Prepared _____	Well Corel. _____	

October 5, 1940

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa

Dear Mr. Smythe:

The samples from your well arrived late yesterday afternoon and have now been studied. The formation at 455 feet is correlated as the Bonner Springs shale. A depth of 442 feet in your well appears to be equivalent to a depth of 392 feet in the old Clarinda well. The formation at that point is correlated as the Plattsburg limestone.

Have you located the samples from the upper portion of your well? If so, we would be very glad to have them since they will be important in fitting the top formations into the structure contour map.

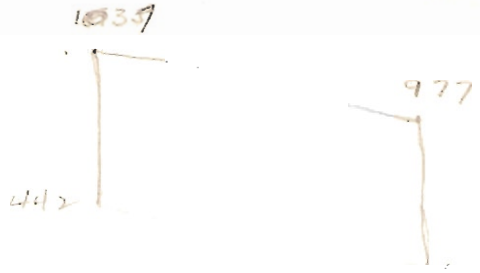
Inclosed is the map of the Forest City basin showing contours on the base of the Pennsylvanian which you loaned to me when I was in Clarinda. We have made a photostatic copy of it for our own use. Thank you very much for it.

Very truly yours,

H. H. Hershey

HGH:N

Inc.



Smythe et al

442' (in Plattsburg ls.) = 392'

Clarinda

bottom at 455' is in the Banner Springs shale

October 3, 1940

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa

Dear Mr. Smythe:

Your card of October 2 reached me today and I am glad to learn that you are drilling again.

We have studied the samples from your well to a depth of 429 feet. According to our present interpretation, the rocks at a depth of 155 feet in your well correspond with those at a depth of 150 feet in the Clarinda well and 359 feet in the L. O. Wise well northeast of Hepburn; those at a depth of 210 feet in your well appear to correspond with those at 425 feet in the Wise well, and those at 407 feet in your well with a depth of 353 feet in the old Clarinda well. All depth figures used are those appearing on the sample sacks.

We will name the formations after a few more samples have been received, but it now appears that your driller is correct in making his calls on the Oread limestones.

A re-study of the Clarinda samples is being made, utilizing all recent data. This work should be completed in the near future and a colored strip log will then be made and sent to you. At the same time a colored strip of your well will be sent so that the two can be compared.

Inclosed is a copy of the Iowa law relating to oil and gas wells which you may wish to examine.

The additional samples mentioned in your card have not yet reached us, but just as soon as they arrive they will be studied and reported.

I hope that drilling continues to move along smoothly and that you have good luck with it.

Very truly yours,

M. G. Hershey

HGH:N
Enc. ✓

W. O. SMYTHE,

Oct 2 - 40

Test

N E, N W, 18 - 69 - 35 Taylor Co., Iowa

DRILLING 470 ft IN Shale

CLARINDA CHAMBER of COMMERCE

LEE FILSON, Pres.

12" casing set at 416 ft.

We did not get the 385 water in the old well. County engineer Newton, on this well 1035-7. Sending Samples today. Thanks for your letter

Bill Smythe

410

410

369'

353'

407

425'

September 30, 1940

Mr. W. O. Smythe
Hotel Linderman
Clarinda, Iowa

Dear Mr. Smythe:

We are sending under separate cover two one-gallon jugs for use in sampling the waters encountered in your well northeast of Hawleyville. When a sample has been collected, it may be sent to us by express collect.

The data which you requested while I was in Clarinda is being prepared and will be sent to you just as soon as possible.

Very truly yours,

H. G. Hershey

HGH:N

Oct 2-40

W. O. SMYTHE, et al

Test

N E, N W, 18 - 69 - 35 Taylor Co., Iowa

DRILLING 470 ft IN Shale

CLARINDA CHAMBER of COMMERCE
LEE FILSON, Pres.

12" Casing Set at 416 ft.
Thanks for your Mr Hussy's
Visit. Sincerely
W. O. Smythe

September 23, 1940

Mr. W. O. Smythe
Linderman Hotel
Clarinda, Iowa

Dear Mr. Smythe:

We are very glad to have your letter of September 12 announcing that drilling is about to start on the W. O. Smythe et al Oil and Gas Test in NE NW 18-69-35, Taylor County, Iowa. You may consider that by this letter you have complied with Sec. 3 of Senate File 328, an act relating to oil and gas wells passed by the 48th General Assembly.

As you know, we are much interested in this test and wish to do everything we can to be helpful as the drilling proceeds. Our Dr. H. G. Hershey plans to see you at Clarinda either late on September 26 or early on the 27th, especially in regard to the samples. I shall try to visit the drilling after it is well started.

Very sincerely yours,

A. C. Trowbridge

ACT:N

The 1st 60 ft of Samples have been carried off

W. O. SMYTHE,

Test

N E, N W, 18 - 69 - 35 Taylor Co., Iowa

DRILLING 820 ft IN Shale

CLARINDA CHAMBER of COMMERCE

LEE FILSON, Pres.

Our Elev 1035-80 - Old Well Elev - 966-83

from Page County Engineer, Sending Samples

Today. Thanks for your Letters.

Sincerely,

W. O. Smythe

Thru Iowa with

Boss Hotels

RANDOLPH
DES MOINES

ELLIS
WATERLOO

WARDEN
FORT DODGE

WHITNEY
ATLANTIC

MEALEY
OELWEIN

ANTHES
FORT MADISON

HOLST
BOONE

BRADFORD
STORM LAKE

NEW WILLSON
WEBSTER CITY

ALGONA
ALGONA

WINNESHEIK
DECORAH

GARDSTON
ESTHERVILLE

ORLEANS
ESTHERVILLE

GEDNEY
INDEPENDENCE

LINDERMAN
CLARINDA

CASTLE
OMAHA, NEB.

LA FAYETTE
ROCKFORD, ILL.

HILTON
BELOIT, WIS.

Sept 12-1940
Clarinda Iaw.

Mr A. C. Trowbridge,
Iowa City, Iowa.

Dear Sir-

We are going to
Start drilling a test
well for Gas or Oil
on E½ of NW¼. Sec 18-69N-
35W- Taylor County Iowa.
We are keeping
Samples as the well
and at Completion of
Same we will have
for you a Complete
Set of Samples together
with the drillers Log for
your files.
We will appreciate
any suggestions you

Thru Iowa with *Boss Hotels*

RANDOLPH
DES MOINES

ELLIS
WATERLOO

WARDEN
FORT DODGE

WHITNEY
ATLANTIC

MEALEY
OELWEIN

ANTHES
FORT MADISON

HOLST
BOONE

BRADFORD
STORM LAKE

NEW WILLSON
WEBSTER CITY

ALGONA
ALGONA

WINNESHEIK
DECORAH

GARDSTON
ESTHERVILLE

ORLEANS
ESTHERVILLE

GEDNEY
INDEPENDENCE

LINDERMAN
CLARINDA

CASTLE
OMAHA, NEB.

LA FAYETTE

Could give me a
Test Well will
be carried on.

W. O. SMYTHE, et al,

Test

N E, N W, 18 - 69 - 35, Taylor Co., Iowa

DRILLING..... IN.....

CLARINDA CHAMBER of COMMERCE
LEE FILSON, Pres.

Sincerely Yours
W. O. Smythe,
% Linderman Hotel,
Clarinda, Ia.

J. S. McLAUGHLIN & SONS
PAVING CONTRACTORS
710 WALNUT BLDG.
DES MOINES, IOWA

May 27, 1940

A. C. Trowbridge
State Geologist
Geology Annex
Iowa City, Iowa

Dear Mr. Trowbridge:

Your letter of May 23rd has been called to my attention. As yet I do not have the exact location of the well to be drilled near Hawleyville but it is on the same piece of land as you suggested to me, however the exact location will be given you very soon as I expect to see Mr. Smythe within the next day or two. Mr. Smythe has charge of the well.

I want you to know that we will appreciate having your cooperation and on the other hand we will cooperate fully with you and will make every possible arrangement to suit you for the gathering of information from this well. If you desire us to pick samples and forward to your office, we will do so or if you care to pick them directly through your own representative, it will be satisfactory with us.

As far as you and your office is concerned, there will be no mystery about this well and want you to have full information at all times.

As stated above, I will undertake to get the exact location and will also inform you as to when actual drilling will begin.

Thanking you for your cooperation, I am

Yours truly,

D. W. McLaughlin

DWM:jp

J. S. McLAUGHLIN & SONS

PAVING CONTRACTORS

710 WALNUT BLDG.

DES MOINES, IOWA

May 25, 1940

A. C. Trowbridge
State Geologist
Geology Annex
Iowa City, Iowa

Dear Mr. Trowbridge:

Your letter directed to Mr. McLaughlin has been opened by me in his absence. I have also communicated with Mr. Comfort/and find that he will be out of town for a few days so in the absence of these gentlemen, I will give you what information I have regarding the well to be drilled near Hollyville, Iowa. The well was spudded in on May 14th I believe. However, it will be several days before any active work is begun on it and by that time either Mr. McLaughlin or Mr. Comfort should be able to give you the definite information which should go to your office.

I know it would interest you to know that Mr. McLaughlin has discovered a fair quantity of oil in his second well in Jefferson County, Kansas, which is in the Forest City Basin. It has not yet been determined what the capacity of this well will be but we do know it will be a worth while venture.

Yours truly,

G. B. Willhoite

GBW: jp

May 23, 1940 Charles Carter

Mr. D. W. McLaughlin
710 Walnut Building
Des Moines, Iowa

Dear Mr. McLaughlin:

As stated in my letter of May 10 and in earlier correspondence and conversation we are anxious to be of as much use as possible to you during the drilling of your test well near Hawleyville. We are especially anxious not to interfere with this drilling or to slow it up in any way. I feel, however, that I should call your attention to Senate File 328, an act relating to oil and gas wells, passed by the 48th General Assembly and signed by the Governor. The provisions of this act may not be known to you and your attorneys. I wish to call your attention especially to Sec. 3 which provides that the State Geologist should be given five days notice in advance of the commencement of drilling and that the exact location of the well should accompany the notice.

Of course, I have known of your intention to drill and I had the required five days notice by phone so that this is a pure technicality. I suggest, however, that you ask Mr. Comfort, if he is serving as your attorney, to send to me an official notice giving the exact location.

If it meets with your approval, either I or Dr. H. G. Hershey should visit the drilling before it has proceeded very far and arrange, if possible, for the collection of drilling samples. I feel sure that we can be useful if we can have these samples for study as the drilling proceeds. Of course, any information derived from such study would be held strictly confidential until such time as the well is completed and the information is definitely and finally released by you.

Very sincerely yours,

A. C. Trowbridge

ACT:N

May 10, 1940 Charles Carter

Mr. D. W. McLaughlin
McLouth, Kansas

Dear Mr. McLaughlin:

Since talking to you on the phone less than an hour ago I have studied again Mr. Watson's map showing a structure near Hawleyville in Page and Taylor Counties, Iowa and I can report as promised.

If I were drilling a test on this structure as it has been mapped by Mr. Watson I would make the first location at or very close to the center of the SE¼ NW¼ Sec. 18, T.69 N., R.35 W. in Taylor County. This is about three-eighths of a mile east of the Page-Taylor County line and about three-quarters of a mile east and an eighth of a mile north of Hawleyville in Page County.

This location is based upon the idea of drilling on the highest part of the structure as mapped and where there is the greatest possible gathering ground. If this structure should be productive it would be better in the first test to drill too high on the structure and get gas than to drill too low and get water.

I am very glad to let you have my preference for a location and know that you will not misunderstand or misquote me.

After this test is started we should be able to be useful in connection with the study of cuttings and the determination of horizons as they are reached by the drill. We might also be able to make a forecast of the hole and check it and modify it as the drilling proceeds. In any case, we wish to be helpful.

Very sincerely yours,

A. C. Trowbridge

ACT:N

Park

February 10, 1940

Mr. Frank J. Comfort
Southern Surety Building
Des Moines, Iowa

Dear Mr. Comfort:

In reply to your letter of February 7:

No word has been received from the Securities Department. In case our advice is asked on this matter we shall, of course, be forced to give it as we see it.

As I believe you know, we have never been optimistic about the discovery of oil and gas in commercial quantities in Iowa. The results of recent exploratory work including drilling in Missouri do not improve the situation. All of the drillings so far completed in Missouri are dry holes. At least some of these were located on structures that seemed to be favorable. In these drillings the producing sands in the Illinois basin were either found to be missing or at least to contain no oil or gas in commercial quantities.

The Phillips test south of Creston is a critical one for Iowa. When it is finished and the results are known, we will have a somewhat better basis for judgment concerning the advisability of further investments of this sort. If a discovery well is brought in, certainly other good looking structures should be tested. If, on the other hand, this is a dry hole, I doubt if we could advise the Securities Department to permit the public financing of another test.

Certainly the Iowa Geological Survey cannot concur in the opinion of Mr. Smythe and Mr. McLaughlin that "They cannot fail in getting some kind of a well." Taking into consideration the present record of the Forest City basin, I should say the chances are not nearly so good as this.

We are still vitally interested in the thorough testing of the Iowa portion of the Forest City basin but still believe that the work should be financed largely or completely by well established, well financed, and experienced oil companies who know exactly how to proceed, and realize the risks they are running.

Very sincerely yours,

ACT:N

A. C. Trowbridge

LAW OFFICES
COMFORT, COMFORT & IRISH
SOUTHERN SURETY BUILDING
DES MOINES, IOWA

FRANK J. COMFORT
GEORGE P. COMFORT
JAMES P. IRISH
BERRY O. BURT

February 7, 1940

Mr. A. C. Trowbridge
Iowa Geological Survey
Iowa City, Iowa

Dear Mr. Trowbridge:

Mr. William Smythe of Oklahoma City and Mr. Dan Mc Laughlin of this city are contemplating drilling an oil well near Hawleyville on that acreage which they have leased in both Page and Taylor counties. They also contemplate the filing of an application asking for authority to do some public financing. They expect to raise $25,000, only $20,000 of which will be used in the event they fail to get oil in commercial quantities within three thousand feet. The money which they raise will be held by someone in Des Moines until the well has been completed to thirty-one hundred feet, or until they reach a sand which will produce in commercial quantities.

We discussed the matter with the Securities Department yesterday. Mr. Fisher is away on a winter vacation. He usually goes to Arizona during the cold weather each year because of his health. The Department may take this matter up with you because we told them that you had made some check of this territory.

Both Mr. Smythe and Mr. McLaughlin are of the opinion that they cannot fail in getting some kind of a well. Since talking with you in my office last fall, Mr. McLaughlin produced a gas well in in northeastern Kansas, in what they call the Forest City Basin. This well will produce close to ten million feet per day. I talked with Mr. McLaughlin last night over the telephone. He seems to think that there is a strong possibility that they might get oil in this same well, but has decided to abandon the thought of getting any oil in this particular well in view of the fact they have such good production in gas. He does, however, contemplate drilling another well promptly near his present gas well, with the thought in mind of trying to produce an oil well.

I am just dropping you this note because while I know it is impossible for you to urge any speculation, at the same time I know that you are interested in the idea that some day we may produce oil in this state.

Very truly yours,

Frank J. Comfort

FJC:MG

November 8, 1939

Mr. Frank J. Comfort
1107 So. Surety Bldg.
Des Moines, Iowa

Dear Mr. Comfort:

I am sorry not to have returned Mr. Watson's letter earlier in the week. When I returned to the office on Monday I found myself swamped with work that had piled up during my absence and today is the first opportunity I have had to have a copy of this letter made.

Please let me assure you and Mr. McLaughlin that we are anxious to cooperate with you in any bona fide attempt to find oil in commercial quantities in this state. When I have had a little more opportunity to study the situation and when Dr. H. G. Hershey, Assistant State Geologist returns from some field work in northwestern Iowa I will write you again in regard to the map. I hope we can spend a few days in the field in an attempt to check the map. There is really little doubt, however, that Mr. Watson has done a good job of it, and that the structure is at least somewhat as shown on the map.

You may expect to hear from me again next week.

Very sincerely yours,

A. C. Trowbridge

ACT:N

Inc.

C O P Y

J. D. WATSON

Geologist

1610 S. Norfolk
Tulsa, Oklahoma

November 2, 1939

Mr. W. O. Smythe
Oklahoma City, Oklahoma

Re: Hawleyville Anticline
Page & Taylor Counties,
Iowa .

Dear Mr. Smythe:

I read with interest the copy of the letter from Mr. A. C. Trowbridge to Mr. D. W. McLaughlin, dated October 26, 1939. The points brought up by Mr. Trowbridge are well taken and should be given careful consideration.

My map was made as the result of field work done in January 1924. I examined the country south of Clarinda, where the "Clarinda Well" was drilled a few years later, in the Southeast Quarter of the Southeast Quarter of Section 24, Township 68 North, Range 37 West. I reported adversely on this area because it appeared to be too far to the west of the anticlinal axis and also probably in a saddle between the fold at Braddyville to the south and the one I noticed to the northeast which I then worked. Since no topographic sheets are available, plane table elevations were run as control and all the known exposures were examined. Local residents were questioned over the entire area especially in reference to coal deposits and the data revealed by their water wells. I went down in several mine shafts and noted the local dips. The depths of the shafts were obtained from the operators. The results indicated an anticlinal fold as shown on my map.

Last winter I drove over to Iowa City with the intention of discussing this structure with Mr. Trowbridge in order to get his opinion on it and also to see if the State Survey had any information which might throw additional light on this fold. Due to delays caused by the weather, I was unable to discuss this with him but did secure all the available publications of the survey.

The description of the Nodaway coal as given in the publications conform very closely to the section as I found it, so I do not think there is likely to be any mistake in its correlation. The coal mined at New Market, at Clarinda and at Henshaw, are all identified as the Nodaway in the Survey reports and from its position in reference to certain fossils, this correlation appears to be correct. The only correlation which might be doubtful is that of the limestones at and north of Hawleyville. On page 624 of the 19th Annual Report, the latter is identified as the Braddyville, which appears to be correct. Both of these exposures indicate westward dip in general and any small change of correlation would not eliminate the presence of the fold, although it would make some changes in the shape near Hawleyville.

C O P Y

On the same page mentioned above, is the statement "The direction of this anticline is east of north and follows the course of the East Nodaway river. Exposures of the Braddyville limestone are found one mile north of Hawleyville and at Henshaw, where a dip of thirty-five feet in a quarter of a mile brings the Nodaway coal at the same level as the limestone. This anticline is often spoken of as the Hawleyville anticline." On page 626 it says: "The dip at Clarinda is on the west limb of the Hawleyville anticline and is very heavy to the west, amounting to sixty-five feet in two miles west of the Nodaway river."

I have talked with several geologists working for major companies on the Forrest City Basin play last winter, in regard to this area. They seemed to approve of it but were not able to persuade their executives to do any drilling in southwestern Iowa. However, you are better qualified to answer this point than I am.

At the north end the axis is rather definite, with steep west dip and also some north dip and some east dip. In 1924 the axis exposure was much better than it was last winter but it can still be observed. At New Market the dip in general is steep to the west. The elevation of 1010 feet on the Nodaway coal to which Mr. Trowbridge refers, is probably on one of the new mines near the center of the southwest of section 33. I have practically the same figure in that locality.

As to the matter of contouring this area, the control is meagre and each must contour the given data in the light of his own experience. There is no control directly to the east of Hawleyville, so it would be possible to contour the area as open to the east, but in view of the steep west or northwest dip at New Market, and the indications of an anticlinal axis at the north end, it seems to me that the logical way to contour this fold would be as an anticline; the dashed lines on the map indicating that it could be contoured in other ways.

I hope it will be possible for you to have Mr. Trowbridge look over this area in person. His opinion would be valuable and his high standing in his profession would carry considerable weight with any parties you wish to interest in your acreage.

Very truly yours,

(Signed) J. D. Watson

J. D. Watson

JDW:Hps

J. S. McLAUGHLIN & SONS
PAVING CONTRACTORS
710 WALNUT BLDG.
DES MOINES, IOWA

Oct 28-1939

Mr. A.C. Trombridge
Iowa City Ia.

Dear Sir

I want to thank you for your letter I am drilling a well in Kansas and expect to start one in Missouri and may be away, if I am not here I wish you would get in touch with Frank Comfort, and tell him what you think. I am interested in seeing a well drilled in a good looking spot some where in south west Ia. and would help on it if it was done right. I started to block up some acerage north of Lamoni. I put the U.S.G.S. elevation in on it but haven't run it out. there is quite a lot of out crop there and from what checking we did looks like some east dip in there, the parties that have this block in page Co were up here looking for help on it and I sent them to Mr Comfort their map looks rather to good but might be O.K. and if it is and they want to drill it on a no free ride basis I will help on it, where I am drilling in eastern Kansas in Jefferson Co. at the town of McLouth we are down about one thousand feet there has been several well drilled from 7 ~~to 20~~ miles north and south of us, we think we

J. S. McLAUGHLIN & SONS
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710 WALNUT BLDG.
DES MOINES, IOWA

are on a good big structure and spent enough money to run it out and get the acreage our formations are running from 225 to 300 hundred feet higher than the other wells did allowing for difference in elevation we should pick up some oil that high but there might not be any oil in that country it our's carry that high down and they should get higher with depth and we don't get some oil. I would not think so much of the Forest City Basin we are drilling a well or hope to be started soon about 20 miles south and ½ mile east of Hurtland, Mo. they have had several pretty good shows in that territory but that country is quite a guess no oil crop and as they are shallow we can drill the well cheaper than drilling a bunch of holes to the time to find a high. I will write you later and if here will be glad to talk to you, I am interested in Iowa and would be glad to help on a well in Iowa if I thought it had a chance. but I suppose I'd get a dry hole in Kansas, we will have our dry hole money pretty well spent I remain

Very Truly
D. W. McLaughlin

To HGH
Hold for reply then file
SW - to be done

April 27, 1940

file - general

Mr. John Fryer
Hotel Lindeman
Clarinda, Iowa

Engineer, was associated with Mr. McSmythe.

Dear Mr. Fryer:

In reply to yours of April 25 I am sending to you under separate cover "Deep Wells in Iowa, 1928-32," and "Additional Deep Wells".

You will find information concerning Wilson No. 1 oil prospect near Clarinda on pages 398 to 419. These pages contain all of the information we had concerning this well at the date of publication of Volume 36. Dr. H. G. Hershey who is in direct charge of such work as this for the Iowa Geological Survey is out of town at present. If he has additional material on this well he will write you concerning it next week.

If I am not mistaken, it is not possible to recognize the Bartlesville sand in this drilling. The "Mississippi lime" is designated in our record on page 402 as "Meramec and Osage". The Hunton is our Devonian, see page 403. The St. Peter is recorded on page 406. The Viola is our Galena as recorded on page 405.

We are anxious to be of use to you and I hope you will write me again if we can be of further service.

Very sincerely yours,

A. C. Trowbridge

ACT:N

Thru Iowa with Boss Hotels

April 25th 1940

RANDOLPH DES MOINES
ELLIS WATERLOO
WARDEN FORT DODGE
WHITNEY ATLANTIC
MEALEY OELWEIN
ANTHES FORT MADISON
HOLST BOONE
BRADFORD STORM LAKE
NEW WILLSON WEBSTER CITY
ALGONA ALGONA
WINNESHEIK DECORAH
GARDSTON ESTHERVILLE
ORLEANS ESTHERVILLE
GEDNEY INDEPENDENCE
LINDERMAN CLARINDA
CASTLE OMAHA, NEB.
LA FAYETTE ROCKFORD, ILL.
HILTON BELOIT, WIS.

Please refer to your letter of Oct. 26th 1939 to Mr. Dan W. McLaughlin - Des Moines regarding structure Northeast Clarinda —

Mr. McLaughlin may drill a test well on this block - He has asked that I write and request you to have your office mail me the shows of water - oil - gas encountered in the well drilled some ten years ago 3 miles South of Clarinda

Wilson #1, SE¼, SE¼ Sec 24 Twp 68N; Rge 37W - Page Co Iowa.

We understand the surveyman samples on this test - to identify formations etc. We are interested - Bartlesville sand - Miss Lime - Hunton - St. Peters - Viola etc with any shows that were revealed —

Thanking for your courtesy —

Dan Fryer

W. O. Smythe et. al. No. 2 Hooks
NE, NW, Sec. 18, T69N, R35W,
El. = 1038

	Ohio
Lansing	645 ?
B. K. C.	645 ?
Miss	1495