

Layne-Western Company, Inc.

WATER SUPPLY CONTRACTORS

705 SO. DUFF AVE.

AMES, IOWA 50010

Phone 515 232-3563

| Name of Job City of Lehigh | Date September 18, 1978 |
|---|---|
| CityLehigh | State_Iowa |
| Well No: 4 Drillers: Darrell Aldrich and Mark | Evans |
| Well Location: 750 ft. (W) and 800 ft. (S |) of the NE corner of |
| the SI: 1/4 of Section 12, Twp. 87 (N), Range 28 (W |) Webster County. |
| Otherwise located as 12' East Of Existing No. 3 Well | |
| | |
| Moving In 6/15/78 Work Began: Drilling 7/10/78 Work Completed: | |
| Casing Record: | |
| Amount Dia. Wt. or Thickness Material | |
| 75' 16" Steel with Weld joint | s from <u>0</u> to <u>75'</u> |
| 575' 10" .365" Steel with Weld joint | s from 0 to 575† |
| 995' 8" .322" Steel with Weld joint | s from 575 to 1,570' |
| with joint | s from to |
| Hole Record: | |
| inch from 0 to 75 | 1 |
| 15" inch from 75' to 575 | 1 |
| 12½" inch from 575' to 1,570 | 1 |
| 7 7/8" inch from 1,570' to 1,923 | |
| inch from to | bottom of hole |
| Cementing Record: Pressure Grouted 16" Surface Casing | |
| 10" And 8" Casing As Continuous String | |
| Well Test Data: Static Level 29; pumping level 181 after 24 | hours numping at 299 gram |
| Length of test 24 hrs. See Well Test Data Sheet Dated Septem | |
| Septem | ber 12, 1978 |
| Remarks: | * - *********************************** |
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WELL LOG

| Feet | Feet | Description |
|----------------|------------|--|
| 0 | 25 | Sand, Gravel |
| 25 | to | Sand, Gravel, Coal |
| 40 | 55 | Gray Clay, Sand, Coal |
| 55 | 85 | Black Clay |
| 85 | 95 | Coal, Gray Clay |
| 95 | 140 | Gray Slate, Some Coal |
| 140 | 170 | Brown Shale, Slate |
| 170 | 10185 | Blue, Gray Shale |
| 185 | 190 | Blue, Gray Shale With Limestone Streaks |
| 190 | to 200 | Blue, Gray Shale |
| 200 | 205 | Sandy Shale With Limestone Streaks |
| 205 | 215 | Shale, Limestone (Brown) |
| 215 | 220 | Hard Limestone |
| 220 | 10255 | Limestone (White) |
| 255 | to 295 | _Hard Limestone (White) |
| 295 | to 325 | Limestone With Shale, Chert |
| 325 350 | to 350 | Sandy Limestone |
| 375 | to 375 | Hard Limestone (White) |
| 505 | to - 303 | Limestone With Shale Streaks Shaly Limestone |
| 670 | to 685 | Shale (Soft) |
| 685 | to 815 | Shaly Limestone |
| 815 | to 830 | Hard Limestone With Shale Seams |
| 830 | 860 | Hard Limestone With Hard Shale |
| 860 | 880 | Hard Limestone |
| 880 | 915 | Limestone With Hard Shale |
| 915 | 945 | Limestone With Shale Seams |
| 945 | 10 1.070 | Limestone With Shale Seams |
| 1,070 | 10 1,130 | Very Hard Limestone |
| 1,130 | to 1,345 | Shaly Limestone |
| 1,345 | to 1,420 | Limestone, Dolomite, Chert |
| 1,420 1,430 | to 1,430 | Limestone Green Shale |
| 1,440 | to 1,440 | Green Shale Limestone, Soft Shale |
| 1,445 | 1,480 | Shale With Sandstone, Limestone |
| 1,480 | to 1,530 | Sandstone With Shale Seams |
| 1,530 | 1,570 | Cherty Dolomite |
| 1,570 | 1,750 | Cherty Dolomite Cemented Sandstone |
| 1,750 | 1,845 | Sandy Dolomite, Hard Shale |
| 1,845 | 10 1,905 | Jordan Sandstone 1,849' (Start),1,905! |
| 1,905 | | Cemented Sandy Dolomite |
| 1,920 | to _1.923_ | .1,923 Bottom of Well |
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