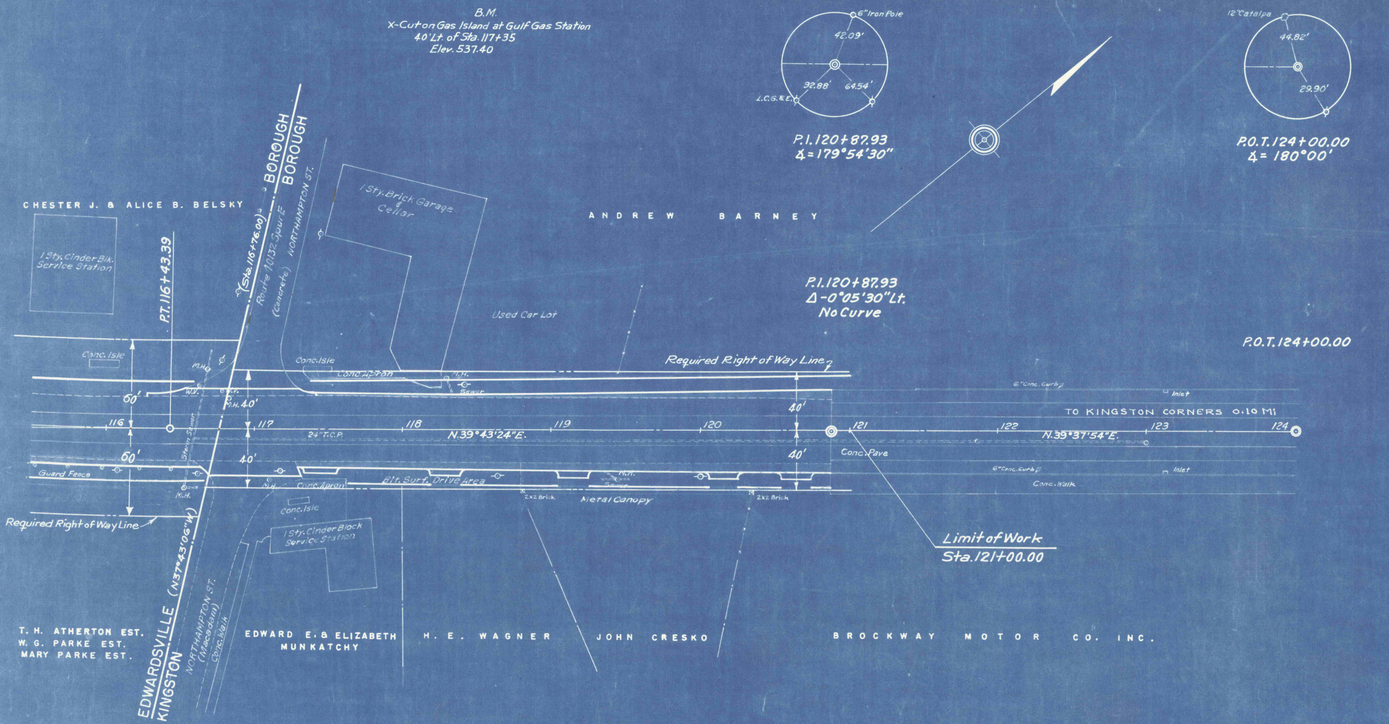
FORM 4228

| DISTRICT | COUNTY | ROUTE | SEC. | SHEET |
|---|---|---|---|---|
| 4-0 | LUZERNE | 4Spur | 4 | 13 of 13 |

Edwardsville and Kingston Boroughs




## TEST HOLES FOR BRIDGE OVER TOBY'S CREEK — See Sheet № 10

**Test Hole No. 1**
22' Lt. of Near Abut.
Old Ground ____ Elev. 532.42
Clay & Rock ____ " 531.42
Sand & Gravel ____ " 529.92
Clay & Stones ____ " 525.92

| | |
|---|---|
| 1.52 per 10 Blows | " 524.40 |
| 1.04 " " " " | " 523.36 |
| .28 " " " " | " 523.08 |
| .82 " " " " | " 522.46 |
| .83 " " " " | " 521.63 |
| .97 " " " " | " 520.66 |
| .81 " " " " | " 519.85 |
| .65 " " " " | " 519.20 |
| .61 " " " " | " 518.59 |
| .54 " " " " | " 518.05 |
| .55 " " " " | " 517.50 |
| .53 " " " " | " 516.97 |
| .49 " " " " | " 516.48 |
| .52 " " " " | " 515.96 |
| .58 " " " " | " 515.38 |
| .55 " " " " | " 514.83 |
| .53 " " " " | " 514.30 |
| .53 " " " " | " 513.77 |
| .42 " " " " | " 513.35 |
| .26 " " " " | " 513.09 |
| .36 " " " " | " 512.73 |
| .39 " " " " | " 512.34 |
| .28 " " " " | " 512.06 |
| .17 " " " " | " 511.89 |
| 1.31 " 50 " " | " 510.58 |
| .94 " 100 " " | " 509.64 |
| .00 " 20 " " | " 509.64 |

**Test Hole No. 2**
20' Lt. of 1st Pier
Old Ground ____ Elev. 516.50
Bottom of Rod ____ " 513.05

| | |
|---|---|
| 0.22 per 10 Blows | " 512.77 |
| 0.22 " " " | " 512.55 |
| 1.81 " " " | " 510.74 |
| 1.42 " " " | " 509.32 |
| 1.12 " " " | " 508.20 |
| .81 " " " | " 507.39 |
| .90 " " " | " 506.49 |
| .75 " " " | " 505.74 |
| .75 " " " | " 504.99 |
| .43 " " " | " 504.56 |
| .42 " " " | " 504.14 |
| .49 " " " | " 503.65 |
| .42 " " " | " 503.23 |
| .40 " " " | " 502.83 |
| .34 " " " | " 502.49 |
| .36 " " " | " 502.13 |
| 1.07 " 50 " | " 501.06 |
| 1.29 " 100 " | " 499.77 |
| 1.20 " " " | " 498.57 |
| 1.38 " " " | " 497.19 |
| 1.10 " " " | " 496.09 |
| 1.10 " " " | " 494.99 |
| 1.05 " " " | " 493.94 |
| 1.26 " " " | " 492.68 |
| 0.83 " " " | " 491.85 |
| 0.56 " " " | " 491.29 |
| 0.49 " " " | " 490.80 |
| 0.00 " " " | " 490.80 |
| 0.00 " " " | " 490.80 |

**Test Hole No. 3**
22' Lt. of 2nd Pier
Old Ground ____ Elev. 513.97
Bottom of Rod ____ " 512.54

| | |
|---|---|
| 2.80 per 10 Blows | " 510.04 |
| 1.64 " " " | " 508.40 |
| 1.62 " " " | " 506.75 |
| 1.58 " " " | " 505.20 |
| 1.25 " " " | " 503.95 |
| 0.98 " " " | " 502.97 |
| 0.92 " " " | " 502.05 |
| 1.11 " " " | " 500.94 |
| .58 " " " | " 500.36 |
| .43 " " " | " 499.93 |
| .22 " " " | " 499.71 |
| .25 " " " | " 499.46 |
| .22 " " " | " 499.24 |
| .23 " " " | " 499.01 |
| .25 " " " | " 498.76 |
| .42 " " " | " 498.34 |
| .34 " " " | " 498.00 |
| .13 " " " | " 497.87 |
| .13 " " " | " 497.74 |
| .18 " " " | " 497.56 |
| .23 " " " | " 497.33 |
| .25 " " " | " 497.08 |
| .27 " " " | " 496.81 |
| .34 " " " | " 496.47 |
| .24 " " " | " 496.23 |
| .22 " " " | " 496.01 |
| .21 " " " | " 495.80 |
| .21 " " " | " 495.59 |
| .14 " " " | " 495.45 |
| .28 " " " | " 495.17 |
| .25 " " " | " 494.92 |
| .17 " " " | " 494.75 |
| .19 " " " | " 494.56 |
| .18 " " " | " 494.38 |
| .21 " " " | " 494.17 |
| .23 " " " | " 493.94 |
| .27 " " " | " 493.67 |
| .15 " " " | " 493.52 |
| .25 " " " | " 493.27 |
| .27 " " " | " 493.00 |
| .45 " " " | " 492.55 |
| .38 " " " | " 492.17 |
| .29 " " " | " 491.88 |
| .26 " " " | " 491.62 |
| .23 " " " | " 491.39 |
| .20 " " " | " 491.19 |
| .29 " " " | " 490.90 |
| 1.08 " 50 " | " 489.82 |
| .80 " " " | " 489.02 |
| .59 " " " | " 488.43 |
| 0.00 " 20 " | " 488.43 |

**Test Hole No. 4**
22' Lt. of Far Abutment
Old Ground ____ Elev. 527.77
Bottom of Rod ____ " 524.09

| | |
|---|---|
| 1.32 per 10 Blows | " 522.27 |
| .60 " " " | " 522.17 |
| 1.42 " " " | " 520.75 |
| 1.42 " " " | " 519.33 |
| 1.45 " " " | " 517.88 |
| 1.46 " " " | " 516.42 |
| .85 " " " | " 515.57 |
| 1.15 " " " | " 514.42 |
| 1.33 " " " | " 513.09 |
| 1.06 " " " | " 512.03 |
| .86 " " " | " 511.17 |
| 1.00 " " " | " 510.17 |
| .75 " " " | " 509.42 |
| 1.15 " " " | " 508.27 |
| .93 " " " | " 507.34 |
| .90 " " " | " 506.44 |
| .82 " " " | " 505.62 |
| .73 " " " | " 504.89 |
| .57 " " " | " 504.32 |
| .53 " " " | " 503.79 |
| .25 " " " | " 503.54 |
| .17 " " " | " 503.37 |
| .18 " " " | " 503.19 |
| .19 " " " | " 503.00 |
| .18 " " " | " 502.82 |
| .16 " " " | " 502.66 |
| .04 " " " | " 502.62 |
| .15 " 50 " | " 502.47 |
| 0.00 " 20 " | " 502.47 |

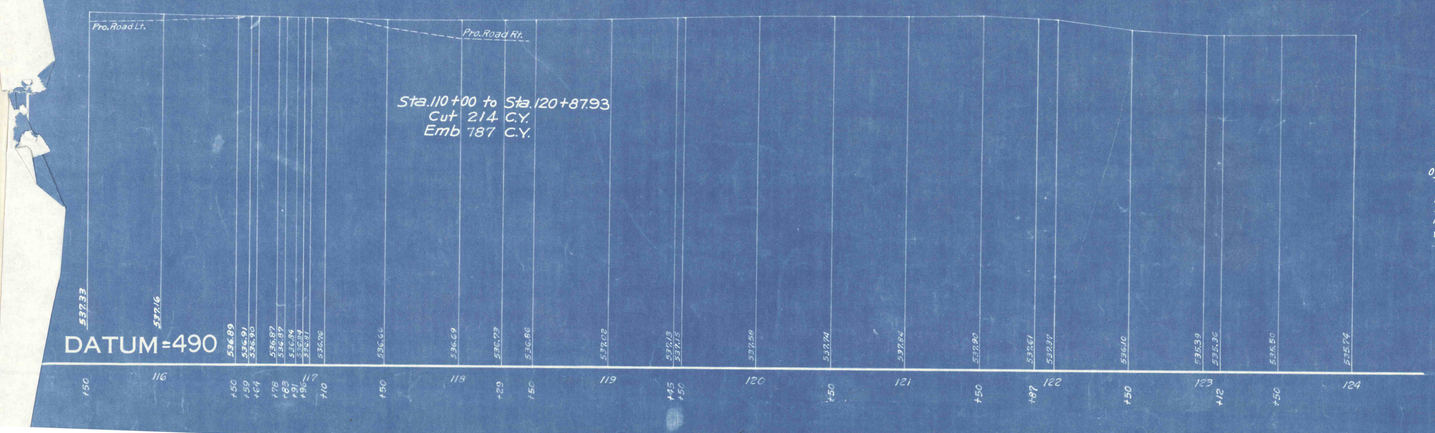
These Tests were made with P.D.H.
Standard Test Sounding Device SK 301
Wt. of Ram 50#, Average Drop 30", Rod used 3/4" ϕ

## REQUIRED LIST

Sta. 116+53 Rt.
2.0 Vert. Ft. Rebuilt Manhole

Sta. 116+82 Lt.
1 Set Reset Manhole Castings

## TEST HOLES FOR BRIDGE OVER D.L.&W.R.R. TRACKS — See Sheet № 9




**Test Hole № 1**
98' Lt. of Sta. 75+44
Survey ℄ Dug Test Hole to solid rock.
Old Ground ____ Elev. 568.64
Top of Rock ____ " 566.14
2.5' Clay eroded Shale
85' Lt. of Sta. 75+44 is face of Rock Cut for R.R.

**Test Hole № 2**
63' Lt. of Sta. 75+44 on Survey ℄
Old Ground ____ Elev. 540.30
Bottom of Rod ____ " 538.75

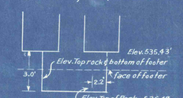
| | |
|---|---|
| 1.02 per 10 Blows | " 537.73 |
| .88 " " " | " 536.85 |
| .28 " " " | " 536.57 |
| .31 " " " | " 536.26 |
| .43 " " " | " 535.83 |
| .15 " " " | " 535.68 |
| .10 " " " | " 535.58 |
| .13 " " " | " 535.45 |
| .18 " " " | " 535.27 |
| .26 " " " | " 535.01 |
| .23 " " " | " 534.78 |
| .18 " " " | " 534.60 |
| .43 " " " | " 534.17 |
| .31 " " " | " 533.86 |
| .66 " " " | " 533.20 |
| .57 " " " | " 532.63 |
| .60 " " " | " 532.03 |
| .47 " " " | " 531.56 |
| .75 " " " | " 530.81 |
| .65 " " " | " 530.16 |
| .43 " " " | " 529.73 |
| 0.00 " 20 " | " 529.73 |

Test pit dug after hole was put down 4.5' culm & cinders R.R. fill, 4.5' Eroded shale
Rod showed cinders & culm with Clay near point.

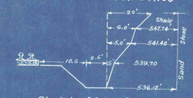
**Test Hole № 3**
18.5' Lt. of Sta. 74+74 Sur. ℄
Old Ground ____ Elev. 540.68
Bottom of Rod ____ " 536.25

| | |
|---|---|
| 0.27 per 10 Blows | " 535.98 |
| .28 " " " | " 535.70 |
| .12 " " " | " 535.58 |
| 0.00 " 20 " Rock | " 535.58 |

Test Pit 5.10 Culm & Cinders
Dug test along face of pier nearest R.R. 3' out front face of pier
Old Ground ____ Elev. 540.68
Top of footer ____ " 538.41
Bottom of footer ____ " 535.43
R.R. fill, culm & Cinders




**Test Hole № 4**
6.5 Rt. of Sta. 74+11
Test Pit only
Old Ground Elev. 541.00




**Test Hole № 5**
30.5' Rt. of Sta. 73+12
Test Pit only
Old Ground Elev. 575.00
Bottom Pit & Top Rock " 568.80
Loom - Clay 1.0'
Loose Shale & Clay 5.2'

These Test were made with P.D.H.
Standard Test Sounding Device SK 301
Wt. of Ram 50#, Average Drop 30" Rod used 3/4" ϕ

**Test Hole № 6**
91' Lt. of Sta. 77+11.5 on Sur. ℄
Old Ground ____ Elev. 534.56
Bottom of Rod ____ " 531.53

| | |
|---|---|
| 1.65 per 10 Blows | " 529.88 |
| .62 " " " | " 529.26 |
| .59 " " " | " 528.67 |
| .82 " " " | " 527.85 |
| 1.03 " " " | " 526.82 |
| .70 " " " | " 526.12 |
| .47 " " " | " 525.65 |
| .29 " " " | " 525.36 |
| .16 " " " | " 525.20 |
| .10 " " " | " 525.10 |
| .10 " " " | " 525.00 |
| .17 " " " | " 524.83 |
| .18 " " " | " 524.65 |
| .08 " " " | " 524.57 |
| .14 " " " | " 524.43 |
| .27 " " " | " 524.16 |
| .45 " " " | " 523.71 |
| .37 " " " | " 523.34 |
| .33 " " " | " 523.01 |
| .58 " " " | " 522.43 |
| .50 " " " | " 521.93 |
| .53 " " " | " 521.40 |
| .62 " " " | " 520.78 |
| .57 " " " | " 520.21 |
| .55 " " " | " 519.66 |
| .33 " " " | " 519.33 |
| .52 " " " | " 518.81 |
| .50 " " " | " 518.31 |
| .67 " " " | " 517.64 |
| .74 " " " | " 516.90 |
| .39 " " " | " 516.51 |
| .83 " " " | " 515.68 |
| .34 " " " | " 515.34 |
| .24 " " " | " 515.10 |
| .18 " " " | " 514.92 |
| .24 " " " | " 514.68 |
| .21 " " " | " 514.47 |
| 2.16 " 100 " | " 512.31 |
| 1.27 " " " | " 511.04 |
| 1.04 " " " | " 510.00 |
| .65 " " " | " 509.35 |
| .61 " " " | " 508.74 |
| .40 " " " | " 508.34 |
| .40 " " " | " 507.94 |
| 0.00 " 10 " | " 507.94 |
| 0.00 " " " | " 507.94 |

Rod shows cinders & culm with dark clay or Hard Pan on point.
Test pit adjacent to Hole № 6
.5 Cinders
2.5 Eroded Shale
1.5 Eroded Shale & Stone
3.0 Med Gravel & Coarse Sand

**Test Hole № 7**
70' Lt. of Sta. 76+55 on Sur. ℄
Old Ground ____ Elev. 541.28
Bottom of Rod ____ " 535.29

| | |
|---|---|
| 1.50 per 10 Blows | " 533.73 |
| .75 " " " | " 532.98 |
| .25 " " " | " 532.73 |
| .65 " " " | " 532.08 |
| .87 " " " | " 531.21 |
| .63 " " " | " 530.28 |
| .65 " " " | " 529.93 |
| .21 " " " | " 529.72 |
| .39 " " " | " 529.33 |
| .56 " " " | " 528.77 |
| .62 " " " | " 528.15 |
| .75 " " " | " 527.40 |
| .57 " " " | " 526.83 |
| .54 " " " | " 526.29 |
| .50 " " " | " 525.79 |
| .67 " " " | " 525.12 |
| .68 " " " | " 524.44 |
| .68 " " " | " 523.76 |
| .60 " " " | " 523.16 |
| .53 " " " | " 522.63 |
| .53 " " " | " 522.10 |
| .79 " " " | " 521.31 |
| .81 " " " | " 520.50 |
| .60 " " " | " 519.90 |
| .71 " " " | " 519.19 |
| .39 " " " | " 518.80 |
| .40 " " " | " 518.40 |
| .45 " " " | " 517.95 |
| .56 " " " | " 517.39 |
| .46 " " " | " 516.93 |
| .59 " " " | " 516.34 |
| .57 " " " | " 515.77 |
| .37 " " " | " 515.40 |
| .30 " " " | " 515.10 |
| .25 " " " | " 514.85 |
| .26 " " " | " 514.59 |
| .21 " " " | " 514.38 |
| .22 " " " | " 514.16 |
| 1.38 " 100 " | " 512.78 |
| .92 " " " | " 511.86 |
| .80 " " " | " 511.26 |
| .70 " " " | " 510.56 |
| 0.00 " 10 " | " 510.56 |
| 0.00 " " " | " 510.56 |

Rod showed Cinders, Culm & Clay
Test Pit adjacent to Hole № 7
Fill { 3.0' Clay, Culm & Stone
4.0' Loose Shale & Clay

**Test Hole № 8**
25' Lt. of Sta. 75+88 on Sur. ℄
Old Ground ____ Elev. 531.10
Bottom of Rod ____ " 525.70

| | |
|---|---|
| 1.66 per 5 Blows | " 523.34 |
| 1.40 " " " | " 522.94 |
| 1.10 " " " | " 521.84 |
| .85 " " " | " 520.99 |
| .66 " " " | " 520.33 |
| 1.20 " " " | " 519.13 |
| 1.32 " 10 " | " 517.81 |
| 1.44 " " " | " 516.37 |
| .78 " " " | " 515.59 |
| .74 " " " | " 514.85 |
| .44 " " " | " 514.41 |
| .54 " " " | " 513.87 |
| .49 " " " | " 513.38 |
| .39 " " " | " 512.99 |
| .23 " " " | " 512.76 |
| .21 " " " | " 512.55 |
| .14 " " " | " 512.41 |
| .06 " " " | " 512.35 |
| .47 " 100 " | " 511.88 |

Rod showed Silt with a little Clay & Sand near point.
Test Pit adjacent to Hole № 8
1.5' Clay, Shale & Cinders
6.0' Coal from Breaker runs in size from Stove to № 4 Buck

**Test Hole № 9**
5' Rt of Sta. 75+27 on Sur. ℄
Old Ground ____ Elev. 538.50
Bottom of Rod ____ " 528.61

| | |
|---|---|
| 1.72 per 5 Blows | " 526.89 |
| 1.90 " 7 " | " 524.99 |
| 1.00 " 5 " | " 523.99 |
| .56 " 10 " | " 523.43 |
| .73 " " " | " 522.70 |
| .74 " " " | " 521.96 |
| .30 " " " | " 521.66 |
| .29 " " " | " 521.37 |
| .36 " " " | " 521.01 |
| .50 " " " | " 520.46 |
| .84 " " " | " 519.62 |
| .88 " " " | " 518.74 |
| 1.07 " " " | " 517.67 |
| 1.08 " " " | " 516.59 |
| 1.05 " " " | " 515.54 |
| .85 " " " | " 514.69 |
| .78 " " " | " 513.91 |
| .57 " " " | " 513.34 |
| .46 " " " | " 512.88 |
| .48 " " " | " 512.40 |
| .26 " " " | " 512.14 |
| .22 " " " | " 511.92 |
| .13 " " " | " 511.79 |
| .16 " " " | " 511.63 |
| .15 " " " | " 511.48 |
| .20 " " " | " 511.28 |
| 1.28 " " " | " 510.00 |

No Test Pit dug as R.R. embankment is 15' high.
Rod showed Cinders & Culm.

**Test Hole № 10**
30' Rt. of Sta. 75+27 on Sur. ℄
Old Ground ____ Elev. 524.00
Bottom of Rod ____ " 519.23

| | |
|---|---|
| 2.00 per 5 Blows | " 517.23 |
| 2.22 " 10 " | " 515.01 |
| 0.77 " 5 " | " 514.24 |
| 1.00 " 10 " | " 513.24 |
| .45 " " " | " 512.79 |
| .37 " " " | " 512.42 |
| .16 " " " | " 512.26 |
| .17 " " " | " 512.09 |
| .20 " " " | " 511.89 |
| .18 " " " | " 511.71 |
| .21 " " " | " 511.58 |
| .05 " " " | " 511.45 |
| 0.00 " 20 " | " 511.45 |

Rod showed muck with a little very fine sand.