

9. HISTORICAL DATA

1. County Venango
 2. Municipality Cornplanter & President Twp.
 3. Structure No. 60046
 4. Survey Code S-60
 5. Present Name Pithole Stone Arch
 6. Other name (historic name if any) n/a
 7. Crossing IR 60046 over Pithole Creek

8. USGS QUAD. President

UTM's: Zone 17
 E 6 1 7 2 5 0
 N 4 5 9 3 5 5 0
 E
 N

Designer/Engineer:

Unknown

Builder/Contractor:

R.A. Bigley

Bridge Company:

Unknown

Date(s): 1897 ; basis Form #433

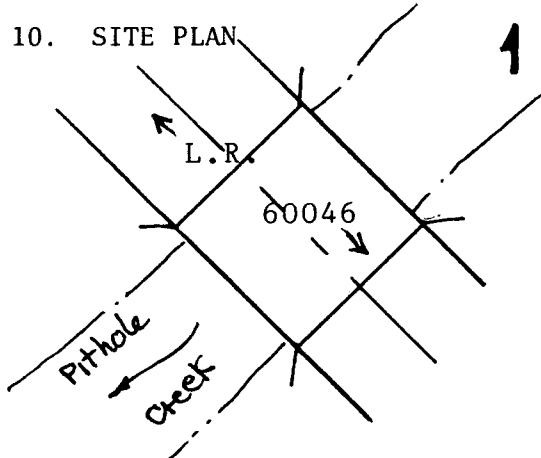
_____ ; basis

_____ ; basis

_____ ; basis

Use: Vehicular present; Vehicular original.

10. SITE PLAN



11. INTEGRITY

altered; 1974
 unaltered; _____
 moved; _____

Explain:

1974- replaced wingwall and constructed false footer

12. VIEW

no.

PHOTO

13. COMMENTS

Unusual features:

Large stones; well built for a back road

Locale/environment: Rural

Machinery (describe/identify type/equipment):

14. DIMENSIONS

spans: 1 no., 34 ft. O/A
 main: 1 no., 34 ft.
 secondary: ___ no., ___ ft.
 approach: ___ no., ___ ft.
 piers: ___ no.
 towers: ___ no., ___ ft.

15. TYPE

CHARACTERISTICS

Truss: continuous/cantilever:

- webbing: _____.
- anchor span: _____.
- cantilever span: _____.
- suspended span: _____.
- thru/deck/low (pony): full-slope/half-hip.
- connections: pin/riveted.
- eyebars: loop welded/die forged.
- railing: downstream metal railing(evidence of _____.
- columns: _____ earlier railing).

Arch: masonry/metal:

- thru/deck/1/2-thru.
- fixed (hingeless) /1/2/3-hinged.
- ribs: solid/braced; crescent/parallel.
- spandrels: open/solid/braced.
- intrados/vault; ribbed/solid.
- shape: semi-circular/elliptical/segmental; stilted.
- skew

Suspension:

- stiffening: braced-chain (1/2/3-hinged) /suspended truss.
- wire cable: twisted/parallel.
- eyebar chain.
- back-stay: straight/curved.

Bascule:

- single/double leaf.
- rolling lift: Schertzer.
- trunnion: simple (Chicago) /multiple (Strauss).
- counterweights: heel/overhead.
- Page/Rail.
- semi-lift/direct lift.

Swing:

- bearing: center/rim/combination.
- (see Truss above).

Vertical Lift:

- (see Truss above).

Other:

- other: _____.

16. MATERIALS (primary)

Superstructure	type	treatment/finish	source
main span:	<u>coarsed ashlar</u>	<u>rough w/ quarry marks</u>	_____.
towers:	_____	_____	_____.
railings:	<u>guardrail & a</u>	_____	_____.
Substructure	channel & angle railing on downstream side		
piers:	_____	_____	_____.
abutments:	<u>coursed ashlar</u>	<u>rough w/ quarry marks</u>	_____.
wings:	<u>coursed ashlar</u>	<u>rough w/ quarry marks</u>	_____.
intrados/ribs:	<u>coursed ashlar</u>	<u>smoother w/ vermiculated</u>	_____.
voussoirs:	<u>coursed ashlar</u>	<u>rough w/ quarry margins</u>	_____.
		marks	

17. PHOTO NO's.

Roll 1 #1-12 01-01(1-13)

18. PREPARED BY:

AGENCY/ORGANIZATION: PennDOT
; DATE: August 1982.

Survey Number: S-60
Bridge Name and Address: Pithole Stone Arch
L.R. 60046 over Pithole Creek
Venango County
Owner: Commonwealth of Pennsylvania
Department of Transportation
Transportation & Safety Building
Harrisburg, Pennsylvania 17120

Statement of Significance: The Pithole Stone Arch Bridge is a very fine example of a late nineteenth century stone arch bridge. This unusually shallow stone arch bridge was built in 1897 by R. A. Bigler. The Pithole Stone Arch Bridge, made of coursed ashlar, shows high quality craftsmanship in its construction. Stone arch bridges were generally built in semi-circular or segmental shapes. Stone arches of low rise-span ratio, like the Pithole Stone Arch, were not commonly built. The lateral force exerted by a low-rise arch (horizontal thrust) is much higher than for semi-circular arches. This large thrust required massive abutments and introduced risks of excessive bridge settlement. The Pithole Bridge arch ring, spandrel walls, and wingwalls were all constructed of large, cut stones which were similarly dressed. The road rests on the arch ring, accentuating the shallow appearance of the Pithole Stone Arch Bridge. There are no stone parapet walls topping this arch bridge, thus reducing the bridge's dead load. Instead of a parapet wall, the arch is capped by a slightly projecting course of stone, like a cornice.

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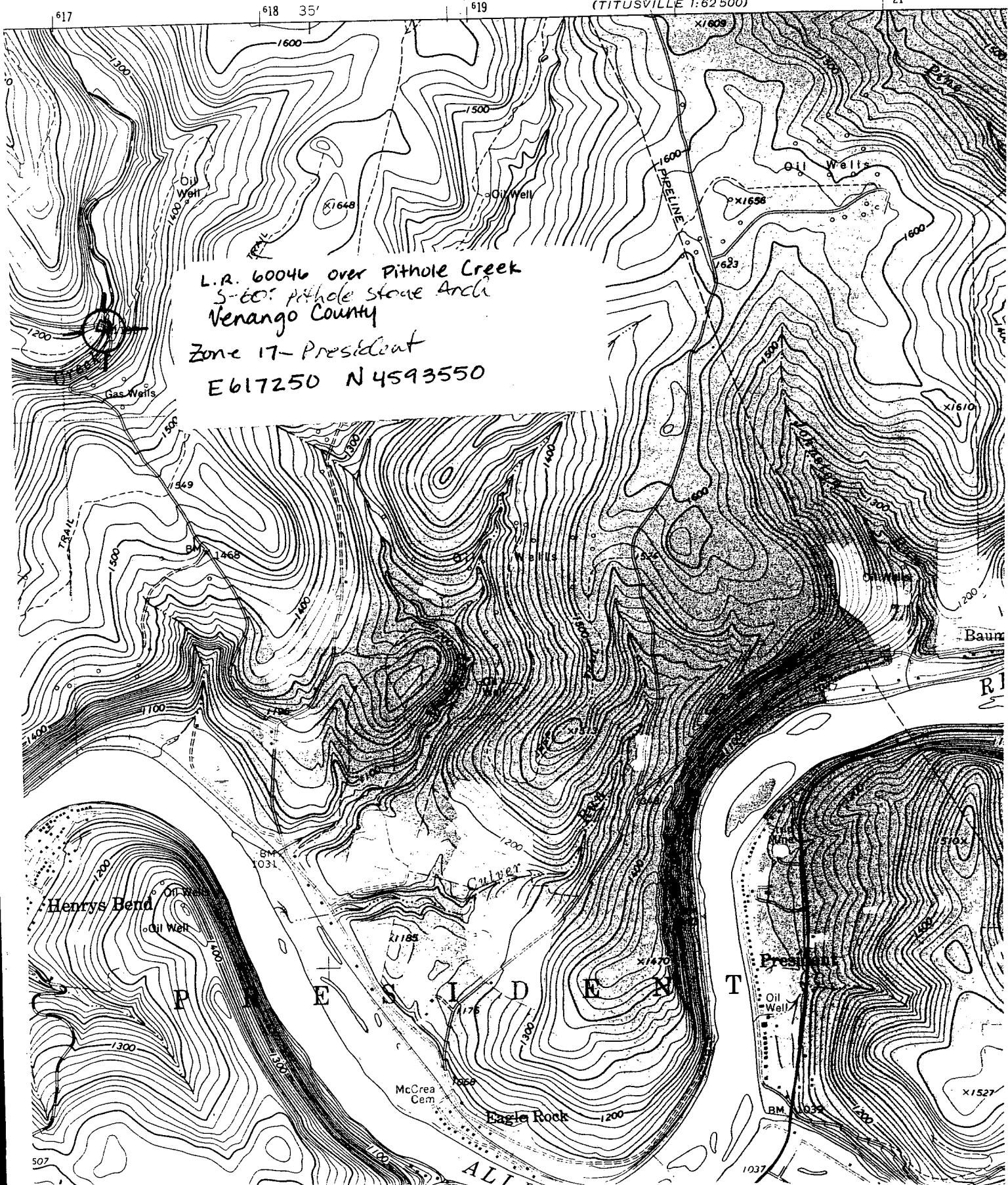
Area of Significance: Engineering.

Boundary Description: The nominated property consists of a 100 feet long by 35 feet wide rectangle whose vertices coincide with the outside corners of the bridge's wing walls, and includes only bridge superstructure and substructure.

Acreage of Nominated Property: Less than one acre.

Pennsylvania D.O.T. Owned Highway Bridges
Pithole Stone Arch S-60

STATE OF PENNSYLVANIA
DEPARTMENT OF INTERNAL AFFAIRS
TOPOGRAPHIC AND GEOLOGIC SURVEY
PLEASANTVILLE 7 MI. 5067 II
(TITUSVILLE 1:62 500)



L.R. 60046 over Pithole Creek
S-60: Pithole Stone Arch
Venango County
Zone 17- President
E 617250 N 4593550

Henry's Bend

P E S I D E N T

President

ALT