

NATIONAL HISTORIC LANDMARK NOMINATION

NPS Form 10-900

USDI/NPS NRHP Registration Form (Rev. 8-86)

OMB No. 1024-0018

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

Page 1
National Register of Historic Places Registration Form

1. NAME OF PROPERTY

Historic Name: J. PETER LESLEY HOUSE

Other Name/Site Number:

2. LOCATION

Street & Number: 1008 Clinton Street

Not for publication: ___

City/Town: Philadelphia

Vicinity: ___

State: PA County: Philadelphia

Code: 101

Zip Code: 19107

3. CLASSIFICATION

Ownership of Property

Private: X

Public-Local: ___

Public-State: ___

Public-Federal: ___

Category of Property

Building(s): X

District: ___

Site: ___

Structure: ___

Object: ___

Number of Resources within Property

Contributing

1

1

Noncontributing

___ buildings

___ sites

___ structures

___ objects

0 Total

Number of Contributing Resources Previously Listed in the National Register: 1

Name of Related Multiple Property Listing:

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

National Register of Historic Places Registration Form

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this _____ nomination _____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property _____ meets _____ does not meet the National Register Criteria.

Signature of Certifying Official

Date

State or Federal Agency and Bureau

In my opinion, the property _____ meets _____ does not meet the National Register criteria.

Signature of Commenting or Other Official

Date

State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

- ____ Entered in the National Register _____
- ____ Determined eligible for the National Register _____
- ____ Determined not eligible for the National Register _____
- ____ Removed from the National Register _____
- ____ Other (explain): _____

Signature of Keeper

Date of Action

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

6. FUNCTION OR USE

Historic: Domestic

Sub: Single Dwelling

Current: Domestic

Sub: Single Dwelling

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION:

Mid-19th Century Greek Revival

MATERIALS:

Foundation:

Walls: Brick, Marble

Roof: Tin

Other: Iron (grillwork)

Describe Present and Historic Physical Appearance.

The first reference to a building at this location was in the record of transfer dated September 29, 1836 from Andrew D. Cash to Aristides Monges. Cash had purchased the land on July 25, 1835, from Charles F. Lex and John Grigg, prominent real estate developers in the area. At that time, there was no mention of a house on the the property. Thus, the house would have been built between July 25, 1835 and September 29, 1836.

At the time of Monges' purchase, the building was described as a "three-story brick message or tenement."¹ A two-story addition for the second and third floors extends over a walkway and attaches to the house to the east. That addition is 7'8" wide and 28' long. A brick arched passageway on the east side leads to the addition which is set back from the front of the house by approximately nine feet. Two later additions to the second and third floors extend toward the rear of the house with the west wall of the addition running flush with the west wall of the main house. That rear extension is 16'2" by 8'6", with the shorter side running east-west across the back side of the house. The original house appears to have been 22'6" on the front and 40'8" in depth.² The size of the original lot was 30' wide and 128' deep, extending from the south side of Clinton Street to the north side of Pine Street.³ As of 1895, the size of the lot had been reduced to 64 feet in depth, creating a separate lot on Pine Street. With the side addition noted above, both east and west walls adjoin the houses on either side and take up the entire front of the lot.

The Clinton Street facade consists of three and one half stories of Flemish bond brickwork, with three windows on each of the second and third floors with louvered shutters and two windows with paneled shutters on the first floor. There are no shutters on the 4th floor. All windows are 6/6 light and double hung. The front door is paneled with a semicircular fanlight with radiating members above. While the basic style of the house is Greek revival, the fanlight is more characteristic of the Federal style. There are two windows at the basement level, each with modern iron grilles. Similar grillwork extends over the arched brick passageway between 1008 and the house to the east. White marble covers the facade at the basement level, matching the entrance door sill and entrance steps. A wrought iron rail is attached to one side of the entrance steps.

The facade of 1008 Clinton Street, like most of its neighbors on the two-block street running from South 9th Street to South 11th Street, remains much as it was when the structure was built. All of the houses on this street were built between 1835-1850.⁴ In front of the house is a large ginkgo tree, which is very much in character with the other houses on the street that is known for the elegance of its tree-lined appearance.⁵

The house has been recognized, for architectural reasons, as contributing to two National Register of Historic Places Historic Districts: Clinton Street Historic District and

¹ 1008 Clinton Street File, Philadelphia Historical Commission.

² *Ibid.*

³ *Ibid.*

⁴ Clinton Street Historic District, National Register of Historic Places form, January 17, 1972.

⁵ Washington Square West Historic District, National Register of Historic Places Form, September 20, 1984.

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

National Register of Historic Places Registration Form
Page 5

Washington Square West Historic District.⁶ Residential structures in both districts have been largely converted to multi-family usage. Presently, the house is used as a single-family residence. It has been altered since the Lesley occupancy to accommodate up to three apartments. Nevertheless, much of the interior spaces from the Lesley period remain unaltered.⁷

While it is known that the Lesleys made extensive use of the Clinton Street house for social and business purposes, it is not known what parts of the house, other than the two parlors on the first floor, were used for which specific purposes. The parlor was often referred to in the Lesleys' correspondence. Writing to her daughter Margaret, Susan Lesley reveals something of her appreciation of the house:

I am sitting by our front parlor fire, the sun shining in at the back windows so prettily, the rooms always so full of associations of my dear girlies, Henry's beautiful bust of you placed on the mantel just the right angle, and how I look at all your pictures from Mr. Fraley to Felix and from that to the sweet pathos of the old wool-carder!⁸

A good record of what the front parlor looked like during the later years of the Lesley occupancy is presented in an 1890 photograph appearing in Mary Lesley Ames' *Life and Letters of Peter and Susan Lesley*. That photograph shows both parlors well enough to determine the architectural style and relative placement of the two parlors, but only the front parlor is depicted with sufficient sharpness to get a sense of the room's richly furnished contents.

The house appears in excellent condition. Since 1982, the Philadelphia Historic Preservation Corporation has held a facade easement on it.⁹ As a result, the Philadelphia Historic Preservation Corporation conducts an annual inspection of the property to insure that the terms of the easement are being carried out.

⁶ Clinton Street Historic District, *op. cit.*; Washington Square West Historic District, *op. cit.*

⁷ Richard Wolfington, Telephone Conversation with John W. Bond, March 14, 1994. Mr. Wolfington and his wife, Mary, are owners of 1008 Clinton Street.

⁸ Ames, *op. cit.* p. 369. Margaret, an accomplished painter, was married to Henry Kirke Bush-Brown, a noted sculptor.

⁹ Facade Easement File, 1008 Clinton Street, Philadelphia Historical Commission.

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:

Nationally: ___ Statewide: ___ Locally: ___

Applicable National Register Criteria:

A ___ B X C ___ D ___

Criteria Considerations (Exceptions):

A ___ B ___ C ___ D ___ E ___ F ___ G ___

NHL Criteria: 2

NHL Theme(s): XIII. Science
B. Earth Science
2. Geology

Areas of Significance: Science

Period(s) of Significance: 1869-1896

Significant Dates: 1874

Significant Person(s): J. Peter Lesley

Cultural Affiliation: N/A

Architect/Builder: U/I

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

National Register of Historic Places Registration Form
Page 7**State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.****SUMMARY**

From 1869 until 1896, the building located at 1008 Clinton Street was the rented residence and office of J. Peter Lesley (1819-1903), one of America's foremost geologists of that day. It served as the headquarters/office of Mr. Lesley, who was the Geologist for the State of Pennsylvania and Director of the Second Geological Survey of Pennsylvania from 1874 to 1896. It was here that he did considerable scientific writing and drawing related to the survey and reviewed and edited all of the reports, amounting to 120 volumes, produced by his assistants over a 20 year period.

Although he was the house's most notable occupant, Lesley never owned it. After having spent two years in Europe, 1866-1868, recovering from a nervous breakdown brought on by overwork, he returned with his wife Susan to Philadelphia, resuming his professional work in January 1869. It was about this time that they moved into the Clinton Street house.

Before going to Europe Lesley had been extremely busy as a consultant to coal and iron producers in the State and had written two very important books dealing with mineral extraction: *A Manual of Coal and its Topography*, in 1856, and *The Iron Manufacturer's Guide*, in 1859. Lesley's *Manual of Coal* was "in geology, an epoch-making book of the highest importance and novelty; for it was the first to show how clearly and strongly the topography often indicates the geological structure." That book did much to establish his reputation as a geologist of the first rank, even "in view of the whole world," as perceived by one of his assistants. He had already become favorably known personally to the foremost scientific men of America, through his regular attendance at the yearly meetings of the American Association for the Advancement of Science which he had begun attending in 1849. In the fall of 1856, Lesley became Secretary of the American Iron Association at a salary of \$1200 per year. He held that position in the strongly-managed organization of iron-masters for the promotion of American iron manufacture until 1864. His *Iron Manufacturer's Guide*, a volume of 800 pages, contained a discussion of each of the iron manufacturing sites in the country and an indepth treatment of the geological occurrence of the ores. Both *A Manual of Coal* and *The Iron Manufacturer's Guide* were much used by geologists and entrepreneurs in developing coal and iron operations and helped to establish his national stature as a geologist.¹

A present day assessment of Lesley's national stature is ably summarized by Clifford H. Dodge, staff geologist, Pennsylvania Department of Environmental Resources and Topographic and Geologic Survey:

¹ Benjamin Smith Lyman, "Biographical Notice of J. Peter Lesley," *Transactions of the American Institute of Mining Engineers*, October, 1903, pp. 13-15.

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

National Register of Historic Places Registration Form **Page 8**

Lesley was one of the most prominent geologists of the nineteenth century. He was a master topographer and principal early worker in the field of geomorphology. He was one of the first to recognize the important role of subaerial erosion and the influence of lithology and structure on topography. He pioneered the use of topographic and structure contouring and strongly advocated the employment of aneroid altimeters (as well as helped design them) in fieldwork. He was a foremost expert on the geology of coal, iron, and petroleum in Pennsylvania and adjacent states.²

Lesley's professional reputation in the field of geology had become so well known that he was much in demand as a consultant in this country and in Canada. During the Civil War there was a great increase in the demand for coal and iron, necessitating the production of accurate surveys to determine their most probable locations. Lesley was quick to respond to that need, "and he was hardworked to the extreme, with handsome results to his pocket, but exhaustion of his strength and health."³

During 1863 and 1864, Lesley was busily engaged in providing survey services to the greatly expanded Pennsylvania oil industry. Regarding oil production, he was "probably the first professional geologist to be required to investigate its mode of occurrence, and was certainly the first to form rational views on the subject." He was a frequent contributor to scientific journals and to government publications, such as his article on "Coal Oil" in the Department of Agriculture's Report of 1862. In that article he presents the fact that "rock-oil had its origin in the decomposition of organisms, and that it was by no means confined to anticlinal summits, nor to the valleys of streams." Indicative of the level of accuracy in Lesley's predictions about the location of oil deposits was his calculation that oil would be found at about 1100 feet below the Allegheny River at Brady's Bend in Pennsylvania and the actual discovery in 1866 of oil at that location at a depth of 1080 feet.⁴

It was Lesley's work as the Director of the Second Geological Survey of Pennsylvania, serving concurrently as the State Geologist, that brought him the greatest national and international recognition. Hence, it is primarily for that reason that he is recognized as being of national importance in the history of science, although at the time he was already known as one of the foremost authorities on oil, iron ore, and coal.

² Clifford H. Dodge, Ltr. to Donald M. Hoskins, Director and State Geologist, April 24, 1990. Also see, Clifford H. Dodge, "The Second Geological Survey of Pennsylvania: The Golden Years," *Pennsylvania Geology*, v. 18, no. 1, February, 1987.

³ Lyman, *op. cit.*, p. 21.

⁴ *Ibid.*, pp. 19-21.

HISTORY

At the time Lesley was selected as Director of the Second Geological Survey of Pennsylvania on June 5, 1874, he was fifty-four years old with 35 years of exceptional experience as a geologist.⁵

In addition to his extensive private practice over those many years, he had been intimately involved in the First Geological Survey of Pennsylvania which had been directed by Professor Henry D. Rogers. In 1839, he was appointed by Rogers to be a sub-assistant on the Survey. During his first year with Rogers he was the principal innovator in giving birth to topographical geology.⁶

He continued work on the Survey into 1841, at which time he began study for the ministry at Princeton Theological Seminary. He continued his studies there until 1844, and worked for Rogers during the summers. In 1844 he was licensed to preach by the Presbytery of Philadelphia. From May of 1844 until May of 1845, he traveled throughout much of western Europe studying the geology of the area. That experience would later be of value as he studied the geology of Pennsylvania and other areas in the United States and Canada. During the winter of 1846 and spring of 1847, he worked for Rogers, who had moved to Boston, doing considerable map work as well as completing reports which the assistants had not brought to final form.⁷

In the fall of 1847, he accepted the call as pastor to a Congregationalist Church in Milton, Massachusetts, remaining in that capacity until 1850. He rejoined Rogers in the summer of 1850 to undertake a topographical survey of the Shamokin Coal Field in Pennsylvania. By this time his theological perspectives were at such variance with those held by the governing body of the church that he was unable to meet the standards for ordination. He gave up the ministry and began his full-time career as a professional geologist in 1851.⁸

By the late 1860s, it was clear that in order to develop the State of Pennsylvania's mineral wealth more specific geological information was needed than that provided in the First Geological Survey of Pennsylvania. That Survey, though published in 1858, had been essentially finished in 1841 and was in need of updating.

⁵ *Ibid.*, p. 26.

⁶ Helen L. Delano, "J. Peter Lesley," *Pennsylvania Geology*, v. 19, no. 5, October, 1988, p. 16.

⁷ Lesley, "Outline of Autobiography," Lesley Papers.

⁸ *Ibid.*; Ames, *op. cit.*, v. 2, pp. 445-446.

As early as 1870, Lesley prepared language for the governor to present to the State Legislature to create the Second Geological Survey of Pennsylvania. This kind of informational support to the governor was made by Lesley in the three succeeding years.⁹ In 1873 Lesley gave the governor directions on selecting the best talent for the survey:

It is no economy to employ inferior talent. Mistakes committed by inexperienced and incompetent persons produce not only waste, but permanent mischief. Men of the best standing in the science would be eager and proud to take part in so great a work.

The State should pay well for the best talent, where so much mischief might be done by incompetent persons.¹⁰

Finally, on May 14, 1874, the Pennsylvania State Legislature passed legislation ordering the Second Geological Survey of Pennsylvania and creating a Board of Commissioners to select a director and to oversee work of the Survey.¹¹ Lesley was a prime candidate for the directorship, not only because of his having worked closely with the governor, but because of the esteem with which he was held by his fellow geologists. Representative of that peer support was the letter written by James Hall, noted geologist from New York State who had directed that state's First Geological Survey, to a member of the Board of Commissioners:

And without disparagement to anyone else, whether an applicant for the place or otherwise, I would beg to leave to say that Prof. Lesley's abilities and qualifications for the position are so far superior to those of anyone of whom I know that I could not for a moment entertain doubt of his selection to the place were the matter referred to a number of scientific men.¹²

The Commissioners held their first meeting on June 5, 1874, at which time Lesley was chosen as the Director of the Survey.¹³

The Commissioners' second meeting was on June 26, 1874. At that time, the rules and regulations of the Board were adopted, salaries were fixed, appointments of assistants confirmed, the plan of the Director of the Survey approved, and appropriations made to meet survey expenses.¹⁴ Lesley's salary was set at \$250 per month, plus expenses, beginning in

⁹ J. Peter Lesley, "Private Diary of J. P. Lesley, relating to the Second Geological Survey of Pennsylvania, 1874-1876," p. 11, Lesley Papers, American Philosophical Society, Philadelphia, Pennsylvania.

¹⁰ Clifford H. Dodge, "The Second Geological Survey-An Original Supporter of the Geological Society of America," *Pennsylvania Geology*, v. 19, no. 5, October, 1988, p. 3.

¹¹ J. P. Lesley, *Second Geological Survey of Pennsylvania 1874-5-6, Historical Sketch of Geological Explorations in Pennsylvania and Other States* (Harrisburg, Pennsylvania: Board of Commissioners, 1876), A, p. i.

¹² Dodge, "The Second Geological Survey-An Original Supporter of the Geological Society of America," p. 3.

¹³ Lesley, "Private Diary," p. 134.

¹⁴ Lesley, *The Second Geological Survey of Pennsylvania*, A p. i.

June 1874. Assistants were paid \$125 per month, plus expenses.¹⁵ Lesley was fortunate in selecting a very able staff of assistants, many of whom had studied under him at the University of Pennsylvania. In fact, his assistants went on to achieve major recognition in their own right, being collectively described as a "Who's Who in late nineteenth century American geology."¹⁶ Lesley believed it very important that his staff include civil engineers because of the close relationship of their work to that of geologists. Thus, he made certain that each assistant geologist in charge of a district had an engineer working with him. The engineers had been mainly trained on the various railroad lines of the state to the use of instruments. They were good draughtsmen, accustomed to reducing their field-notes to the form of the required maps, profiles, and cross-sections.¹⁷

The plan which Lesley laid out for the Survey revealed the thoroughness with which he intended to pursue the work. The plan, outlined to the Commissioners and approved by them, was basically followed throughout the duration of the Survey. It provided for:

1. The occupation of five specially important and hitherto little studied districts of the State, requiring immediate attention.
2. The postponement for the present of work in the best known anthracite and bituminous coal regions.
3. The postponement for the present of systematic study of fossil forms, on a large scale.
4. The establishment of a special laboratory at Harrisburg for the analysis of irons, steels, iron ores and other blast-furnace stock.
5. A special report on the mineralogy of the state, as at present known.
6. The publication of the season's work early in the winter and spring, in a series of separate, portable and cheap volumes, so as to make them practically useful to the largest number of persons, each volume containing the illustrations of its own text, in the shape of maps and wood-cuts, and printed from stereotype plates for future use; and finally,
7. The exhibition of type specimens of the collections of the survey in a cabinet, in the rooms of the Board, at Harrisburg.¹⁸

While Lesley was complimentary of the First Survey, giving it a well deserved recognition in his first major report to the Commissioners, he fully recognized its limitations. The First Survey was essentially a reconnaissance, with the geologists working without precision instruments. The Second Survey would take up where the First Survey left off, but with more scientific instruments, some of which Lesley had developed. Methodology developed

¹⁵ Lesley, "Private Diary," p. 134.

¹⁶ Dodge, "The Second Geological Survey of Pennsylvania: The Golden Years," p. 11. See Lesley, *Second Geological Survey of Pennsylvania*, A, pp. ii-iii, for complete lists of assistants and aids.

¹⁷ Lesley, *Second Geological Survey*, A, p. xviii.

¹⁸ *Ibid.*, A, pp. i, ii.

since the earlier survey enabled Lesley's staff to be more exact in their measurements and to be more definitive in their scientific description of what they were recording.¹⁹

Lesley recognized not only the accomplishments of the First Survey, he also learned what not to do in managing a survey. Perhaps foremost on his list of "do not's" was failure to give credit to the assistants for their contributions, such as had been the case with Rogers and the First Survey. That omission in Roger's final report completed the professional and personal break between him and Lesley.²⁰ Another significant "do not" was not to hold the draft reports for the final definitive writings. Lesley published reports from each district or project as soon as the material could be assembled and edited.²¹ The results of the Survey were made available to the public in a very timely manner, but getting the reports in their final form and ready for publication required a great deal of Lesley's personal attention. He read every report and, wherever necessary, made changes in order to make them completely accurate and practical, sometimes almost completely rewriting them. Most of the reports contained "long elucidating prefaces" in Lesley's "usual vigorous, lively, clear, straightforward, trenchant style."²²

The level of attention Lesley gave to the work of the survey produced a great strain on his physical and mental health. He agreed with the adopted policy of the Board of:

1. Publishing results as fast as obtained;
2. Publishing district reports separately;
3. Publishing illustrations with each report; and
4. Stereotyping for future use.

But, the advantages, he noted, were not without drawback:

It imposes on the State Geologist unceasing labor as an editor, every day of the entire year. Every sentence of every report must be revised; the proper illustrations provided in advance; proofs and revises [revisions] passed between

¹⁹ *Ibid.*, A, p. ix.

²⁰ Ames, *op. cit.*, v. 1, pp. 284-285.

²¹ Dodge, "The Second Geological Survey: The Golden Years," p. 12.

²² Lyman, *op. cit.*, p. 27.

author, editor and printer, artist and photo-lithographer; and much of the finishing all of the final correcting done by the editor. In no other way can the work be carried on satisfactorily.²³

Lesley confided in his diary that the demands the Survey imposed upon his time were overwhelming, making it necessary, for example, to work all of Christmas Day 1874 on his first report to the governor.²⁴ Lesley's work on the Survey involved a seven day a week commitment. In March 1886, he wrote a friend regarding his exhausting schedule: "I work every day from nine to four, seven days in every week of the year. I have no holiday."²⁵ He did, however, try to get to his club, the Union League, as much as possible, and he made seven extended trips to Europe during the time of the Survey.²⁶

It must be remembered that during the first four years of the Survey he was also professor of mining and geology and dean of the Towne Scientific School at the University of Pennsylvania. For a longer period of time he was the librarian, secretary, and vice-president of the American Philosophical Society. In 1885, for example, he edited the *Early Proceedings of the American Philosophical Society from the Original Records, 1744-1838*.²⁷

The Survey and the other activities, such as teaching, which made heavy demands on Lesley's time concerned Mrs. Lesley. She wrote her husband on June 27, 1877: "I hope that yesterday was your last university day! What pleasure I have thinking that it is over, and that now you will have for a time only the Survey! Only the survey; what a great work it looks to me!"²⁸ He did not quit teaching at that time, for he wrote to his wife in September 1877: "In another week I must begin my one hundred and twenty lectures at the university."²⁹ His teaching schedule involved four lectures each week. At the end of that academic year he did give up his work at the university,³⁰ but continued to write scientific articles presented through the *Proceedings of the American Philosophical Society*³¹ and books such as *Man's Origin and Destiny* (1881).

²³ Lesley, *Second Geological Survey*, A xx.

²⁴ Lesley, "Private Diary," v. 2, p. 202.

²⁵ Ames, *op. cit.*, v. 2, p. 321. J. P. Lesley to P. W. Shaffer, March 25, 1886.

²⁶ Davis, *op. cit.*, p. 226.

²⁷ Lyman, *op. cit.*, p. 31.

²⁸ Ames, *op. cit.*, v. 2, p. 177.

²⁹ *Ibid.*, p. 185.

³⁰ Lyman, *op. cit.*, p. 31.

³¹ He continued as Librarian until 1884; as Secretary until he was elected Vice-President in 1887; and after that Vice-President until he declined re-election in 1897. See Lyman, *op. cit.*, p. 16.

Lesley was so committed to completing the Survey that he spent his own money at times. Writing to his friend, P.W. Shaffer, in March 1886, he spoke of severe funding difficulties:

I have gone into fossils-what a job it is! We have good collections, but I have no State money for draughtsmen. I do not dare to divert a dollar of the appropriation. I am spending from \$1000 to \$1500 a year of my own salary to accomplish some long-delayed objects.³²

Lesley's three volume *Dictionary of the Fossils of Pennsylvania*, compiled by himself, was issued as Part 4 of his 1889-1890 report to the Board of Commissioners.³³

There was continual uncertainty of State funding with each session of the State Legislature. Lesley's daughter Mary wrote of funding problems and the stress they produced: "The anxiety at the end of every two years, lest his work should be stopped and his corps of workers dispersed, made these periods hard to get through."³⁴ Funding difficulties reached the crisis level in 1885 when the governor, "who privately assured Lesley that he was a friend of the Survey, attacked it on account of the vast number of its publications."³⁵ By this time it was apparent to Lesley that a comprehensive summary was needed for the entire work of the Survey. This project, *A Summary Description of the Geology of Pennsylvania*, consisting of a condensation and methodical rearrangement of the results of all the previous reports, he undertook himself, starting in 1885.³⁶

The end of Survey was in sight in March of 1889 as reflected in Mrs. Lesley's letter to her daughter Margaret:

It [the survey] comes to an end in its present form, the 1st of June. But your father has saved \$8,000 from the last appropriation, and therefore he can have his salary a few months longer after that and keep 2 or 3 assistants so as to finish up his work properly. Moreover the survey is not wiped out.

She expressed hope that the State Legislature would renew the funding at its next session. Most of the assistants would have to be terminated in June. Mrs. Lesley noted, "he will still keep the office [in downtown Philadelphia for Survey staff] a few months longer, and finish up the publications."³⁷ The Legislature did not renew the funding in 1891 as Mrs. Lesley had hoped. "While the last of the reports of the Second Survey were published in 1895, the essential end of the Survey occurred in 1889 with the Act of the State Legislature officially ordering it to cease."³⁸ When the total cost of the Survey was added up it came to \$1.6 million, with about two-thirds going to publishing and the remainder going for office and field expenses and salaries.³⁹

³² Ames, *op. cit.*, v. 2, p. 321.

³³ Lyman, *op. cit.*, p. 28.

³⁴ Ames, *op. cit.*, v.2, p. 283.

³⁵ Davis, *op. cit.*, p. 231.

³⁶ *Ibid.*, p. 232.

³⁷ Ames, *Op. cit.*, v. 2, p. 373.

³⁸ *Ibid.*, p. 9.

³⁹ Dodge, "The Second Geological Survey: The Golden Years," p. 14.

Most of the field work for the Survey had been completed in 1887, but some continued intermittently, using geologists on a contractual basis, through 1890 and beyond.

Lesley continued his personal involvement with the *Summary* until ill health forced him to give it up in 1893. By that time, he had completed two and one-half volumes of the eventual three-volume work. He had been struggling for the previous three years to complete it, constantly fighting physical and mental fatigue. Yet, he felt compelled to finish it, for as he wrote:

No gentleman can fail of his promise. I have pledged my honor to do a work in which my heart has no concern. I must finish my book. But how different is my interest in it from that which I once felt in every piece of scientific work which came under my hand.... I am buried in my big book.⁴⁰

Lesley's periodic expression of doubts about the value of his work on the Survey was communicated to his fellow geologists. A strong letter of encouragement was written to him from Archibald Geikie, at the time Director-General of the Geological Survey of the United Kingdom and Director of the Museum of Practical Geology, London:

Surely you cannot be in any real and permanent doubt of the value and interest of the great Survey which you have brought to so successful a conclusion. It is in my opinion a monument of patient skill, thoughtfully organized, sympathetically carried on, and admirably coordinated through all the branches in progress. I think it will be of the utmost value industrially to the State of Pennsylvania, for you have supplied an accurate geological ground work for all mining operations. Your reports bristle with geological observations of general significance, and they must aid in furthering the progress of geology in the State.⁴¹

Geikie was especially complimentary of the quality of the work Lesley had done on the *Summary*:

⁴⁰ Davis, *op. cit.*, p. 234.

⁴¹ Ames, *op. cit.*, v. 2, pp. 425-426. Archibald Geikie to J. P. Lesley, January 30, 1893.

The introductory part of Volume I is capital reading and will, I am sure, carry many a reader onward, to explore the rest and more technical parts of the book. The vigorous writing especially delights me, for geologists, as a rule, never cultivate literature, but express themselves in the most slovenly way.⁴²

Such an endorsement from one so notable as Geikie in the field of geology did much to reassure Lesley about the *Summary* and about the Survey in general, the crowning achievement of his life's work. Geikie and Lesley were acquainted with each other through their professional writings and through their membership in the Geological Society of London, to which Lesley had been elected in 1885.⁴³ In a 1904 memorial tribute to Lesley read before the Society, Geikie referred to him as "J.P. Lesley, one of the most distinguished and lovable men of science in the United States."⁴⁴

Finally, the long-continued strain caught up with Lesley. Regarding his ill health while trying to finish the *Summary*, his daughter Mary wrote:

Sometimes he was really ill, and had to desist for a short time, but until 1893 he always recovered, and returned to work; with less and less power and greater hopelessness.... Finally, one day, after several months of illness and a partial return to work, he broke down completely. The pen fell from his hand, and he never again lifted it for anything but the slightest uses.⁴⁵

Completion of the *Summary* had to be picked up by two of Lesley's assistants, E.V. d'Invilliers and A.D.W. Smith.⁴⁶

The publications which resulted from the Second Geological Survey of Pennsylvania were described by G.P. Merrill in his book, *The first one hundred years of American Geology* (1924), as "the most remarkable series of reports ever issued by any survey."⁴⁷ Altogether, the publications amounting to 120 volumes of reports and atlases and an index volume, have been described by one of his assistants, Benjamin Smith Lyman, as Lesley's great "monument more lasting than brass."⁴⁸ The reports reflected one of the principal guidelines set down by Lesley, that they be practical:

simple descriptions of work done, records of facts observed, and explanations of the local geology of each district within the limits of what is known by geologists; avoiding the discussion of abstruse questions, which do not concern the inhabitants, and are still the subjects of speculation among

⁴² Davis, *op. cit.*, p. 235.

⁴³ Ames, *op. cit.*, v. 2, 334. At the time of Lesley's election to membership, that honor had been given to only two other foreigners.

⁴⁴ Delano, "J. Peter Lesley," p. 16.

⁴⁵ Ames, *op. cit.*, v. 2, p. 388.

⁴⁶ Lyman, *op. cit.*, p. 29.

⁴⁷ Dodge, "Second Geological Survey: The Golden Years," p. 12. Taken from G. P. Merrill, *The first one hundred years of American Geology* (New Haven: Yale University Press, 1924), p. 495.

⁴⁸ Lyman, *op. cit.*, p. 29.

geologists.⁴⁹

The publications well illustrated Lesley's constant aim to gather knowledge that would have a useful bearing upon the working of the coal, iron, oil, gas, and other minerals of the State. Especially noteworthy was the quality of the survey of the anthracite region under the direction of Charles A. Ashburner and Frank A. Hill.⁵⁰ The quality of the geologic maps of this region are well described by Geologist Clifford H. Dodge:

Some of the most striking, yet accurate geologic maps of the Second Survey were prepared for the anthracite coal fields.... The use of multiple colors on these maps to distinguish surface and subsurface features was unsurpassed at that time by any other State surveys or the newly formed U.S. Geological Survey.

According to Dodge, the Survey achieved:

international acclaim for its unprecedented detail and precision in mapping the geology of the anthracite mining districts. During its anthracite studies... it began the first large-scale, systematic use of structure contours... and it constructed a large number of topographic base maps on which to compile the extent of deep mining.⁵¹

Additional successes of the Second Survey were its correlation studies in the coal and oil regions of western Pennsylvania and the geologic maps it produced for each of the 67 counties in the State.

Lesley's objective of having the results of the Survey reported in language that was simple, clear, and readily understood was achieved to a great degree through his careful editing and the manner in which he instructed his assistants.⁵² He acquired the reputation as an outstanding administrator for the direction he gave to the Survey.⁵³

One of Lesley's assistants and former students at the University of Pennsylvania, Henry M. Chance, complimented Lesley's proclivity to learn from every situation:

And even when after years of successful work he became one of the foremost living geologists, he was still ready to listen thoughtfully and appreciatively to the laborer, miner or artisan, hoping thereby to learn something that might have escaped his own observation.⁵⁴

⁴⁹ Lesley, *Second Geological Survey*, A, xxii.

⁵⁰ Lyman, *op. cit.*, pp. 29-30.

⁵¹ Dodge, "Second Geological Survey: The Golden Years," p. 14.

⁵² Lyman, *op. cit.*, p. 30.

⁵³ Clifford H. Dodge, Letter to Donald M. Hoskins, April 24, 1990. Dodge is a geologist on the staff of Dr. Hoskins, Director of the Geological Survey of Pennsylvania and State Geologist.

⁵⁴ Henry M. Chance, "A Biographical Notice of J. Peter Lesley," *Proceedings of the American Philosophical Society held at Philadelphia for Promoting Useful Knowledge*, v. xlv, 1906, p. ix.

Aside from Lesley's work as State Geologist of Pennsylvania and his directing of the Second Geological Survey of Pennsylvania, Chance considered that his most valuable contribution to the world of science was:

the discovery and enunciation of the principles governing the relation of structural geology to topography. He was the father of the science of topographic geology to which he early directed attention by illustrations prepared for the reports of the First Geological Survey of Pennsylvania.⁵⁵

Recognition came to Lesley in many forms; some by way of membership in prestigious scientific organizations and others through special honors by foreign governments or foreign learned institutions. The list of honors and distinctions during his lifetime is impressive:

He was one of the fifty original members of the National Academy of Sciences.... He received a gold medal from Paris for original investigation in 1889.... He was a fellow of the American Association for the Advancement of Science and its President in 1884-85; ...original member of the Geological Society of America; honorary member of the American Institute of Mining Engineers; ...member of the Moscow Imperial Society of Naturalists, of the Sweden and the Neuchatel Academies of Science, and of the Lille Academy of Natural Science; associate member of the Geological Society of the North at Lille, and foreign member of the Geological Society of London. In 1878 the degree of LL.D. was conferred upon him by Trinity College Dublin.⁵⁶

The Lesleys used the Clinton Street house as their year-round residence until 1885, at which time Mrs. Lesley's brother, Edward Lyman, and her cousin, John M. Forbes, built a house in Milton, Massachusetts, and presented it to Mrs. Lesley as a gift. Nieces and nephews completely furnished the house.⁵⁷ After that day, Mrs. Lesley spent much of her summers there, with Mr. Lesley joining from time to time. Winters continued to be spent in Philadelphia until 1896, by which time Peter Lesley's health had deteriorated to the point that he could no longer work, and they moved to Massachusetts permanently.⁵⁸

⁵⁵ *Ibid.*, p. xiii.

⁵⁶ Davis, *op. cit.*, p. 235.

⁵⁷ Ames, *op. cit.*, v. 2, p. 314.

⁵⁸ *Ibid.*, p. 388.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Ames, Mary Lesley. *Life and Letters of Peter and Susan Lesley*. New York and London: G. P. Putnam and Sons, 1909, 2 vols.

Chance, Henry M. "A Biographical Notice of J. Peter Lesley," *Proceedings of the American Philosophical Society held at Philadelphia for Promoting Useful Knowledge*, v. xiv, 1906.

1008 Clinton Street File, Philadelphia Historical Commission.

Clinton Street Historic District, National Register of Historic Places Form, January 17, 1972.

Davis, W. M. "Biographical Memoir of Peter Lesley, 1819-1903, Presented to the National Academy of Sciences at the Autumn Meeting, 1913," National Academy of Sciences, 1915.

Delano, Helen L. "J. Peter Lesley," *Pennsylvania Geology*, v. 19, no. 5, October, 1988.

Dodge, Clifford H. Letter to Donald M. Hoskins, April 24, 1990.

_____. "The Second Geological Survey of Pennsylvania: The Golden Years," *Pennsylvania Geology*, v. 18, no. 1, February, 1987.

_____. "The Second Geological Survey-An Original Supporter of the Geological Society of America," *Pennsylvania Geology*, v. 19, no. 5, October, 1988.

Facade Easement File, 1008 Clinton Street, Philadelphia Historical Commission.

Gillispie, Charles Coulston ed. *Dictionary of Scientific Biography*. New York: Charles Scribners Sons, 1973.

Lesley, J. Peter. "Outline of Autobiography," J. Peter Lesley Papers, American Philosophical Society, Philadelphia.

_____. "Private Diary of J. P. Lesley, relating to the Second Geological Survey of Pennsylvania, 1874-1876," J. Peter Lesley Papers, American Philosophical Society, Philadelphia.

_____. *Second Geological Survey of Pennsylvania 1874-5-6, Historical Sketch of Geological Explorations in Pennsylvania and Other States, Report A*. Harrisburg, Pennsylvania: Board of Commissioners, 1876.

Lyman, Benjamin Smith. "Biographical Notice of J. Peter Lesley," *Transactions of the American Institute of Mining Engineers*, October, 1903.

Washington Square West Historic District, National Register of Historic Places Form, September 20, 1984.

Wolfington, Richard. Telephone Conversation with John W. Bond, March 14, 1994. Mr. Wolfington and wife, Mary, are owners of 1008 Clinton Street.

Previous documentation on file (NPS):

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

Page 20

National Register of Historic Places Registration Form

Preliminary Determination of Individual Listing (36 CFR 67) has been requested.

Previously Listed in the National Register.

Previously Determined Eligible by the National Register.

Designated a National Historic Landmark.

Recorded by Historic American Buildings Survey: #

Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

State Historic Preservation Office

Other State Agency: State Geologist

Federal Agency

Local Government

University

Other (Specify Repository): American Philosophical Society

J. PETER LESLEY HOUSE

United States Department of the Interior, National Park Service

Page 21

National Register of Historic Places Registration Form

10. GEOGRAPHICAL DATA

Acreage of Property: Less than one (1) acre

UTM References: Zone Easting Northing
A 18 486500 4421400

Verbal Boundary Description:

The boundary includes the single-family dwelling at 1008 Clinton Street and grounds as located on lot number 142, Philadelphia, Pennsylvania, 19107. The boundary begins 110' from the west side of South 10th Street and continues along the south side of Clinton Street for 30'3" west toward South 11th Street and runs south toward Pine Street for 64', thence 30'3" east toward South 10th Street, thence 64' north to point of beginning.

Boundary Justification:

The boundary proposed is that which comprised lot 142 at the time the J. Peter Lesley family lived there from 1869 until 1896. The lot is the same size today as it was when the Lesleys moved from the area.

11. FORM PREPARED BYName/Title: Mr. John W. Bond, Historical Consultant
309 Old Orchard Road
Cherry Hill, New Jersey 08003-1216
Telephone: 609/424-4653
Date: March 23, 1994