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Header 1

 List View

General Information | Contact | Default Values | Discount | Document Information

Procurement Folder: 564543

SO Doc Code: CRFQ

Procurement Type: Central Master Agreement

SO Dept: 0702

Vendor ID: VS0000003275 

SO Doc ID: TAX1900000010

Legal Name: RTC GIS INC

Published Date: 3/26/19

Alias/DBA:

Close Date: 4/5/19

Total Bid: \$264,400.00

Close Time: 13:30

Response Date: 04/04/2019 

Status: Closed

Response Time: 11:13

Solicitation Description: Valuation of Reserve/Producing Coal Property & Gas Property

Total of Header Attachments: 1

Total of All Attachments: 1



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder : 564543

Solicitation Description : Valuation of Reserve/Producing Coal Property & Gas Property

Proc Type : Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-04-05 13:30:00	SR 0702 ESR04041900000004566	1

VENDOR
VS0000003275 RTC GIS INC

Solicitation Number: CRFQ 0702 TAX1900000010

Total Bid : \$264,400.00 **Response Date:** 2019-04-04 **Response Time:** 11:13:38

Comments:

FOR INFORMATION CONTACT THE BUYER
 Brittany E Ingraham
 (304) 558-2157
 brittany.e.ingraham@wv.gov

Signature on File	FEIN #	DATE
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Valuation Services	160.00000	HOUR	\$300.000000	\$48,000.00

Comm Code	Manufacturer	Specification	Model #
94131501			

Extended Description : Valuation Services as described in section 4.1.1 of the RFQ.
 The Pricing Pages contain a list of the Contract positions and estimated hours. The estimated hours for each position represent the approximate volume of hours only. No future use of the Contract or any individual item is guaranteed or implied.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Geotechnical Services	656.00000	HOUR	\$275.000000	\$180,400.00

Comm Code	Manufacturer	Specification	Model #
94131501			

Extended Description : Geotechnical Services as described in section 4.1.2 of the RFQ.
 The Pricing Pages contain a list of the Contract positions and estimated hours. The estimated hours for each position represent the approximate volume of hours only. No future use of the Contract or any individual item is guaranteed or implied.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Pre-Trial Preparation	120.00000	HOUR	\$300.000000	\$36,000.00

Comm Code	Manufacturer	Specification	Model #
94131603			

Extended Description : Pre-Trial Preparation as described in section 4.1.3 of the RFQ.
 The Pricing Pages contain a list of the Contract positions and estimated hours. The estimated hours for each position represent the approximate volume of hours only. No future use of the Contract or any individual item is guaranteed or implied.



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 27 — Miscellaneous

Proc Folder: 564543

Doc Description: Valuation of Reserve/Producing Coal Property & Gas Property

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2019-03-26	2019-04-05 13:30:00	CRFQ 0702 TAX1900000010	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Name, Address and Telephone Number:

RTC GIS Inc dba Resource Technologies Corporation
 P.O. Box 242, State College, PA 16804
 814-237-4009

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham
 (304) 558-2157
 brittany.e.ingraham@wv.gov

Signature

FEIN # 25-1850143

DATE 04/04/2019

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

The West Virginia Purchasing Division is soliciting bids on behalf of State Tax Department - Property Tax Division to establish an open-end contract to provide assistance with the valuation of reserve and producing coal properties and reserve oil & gas properties for property tax purposes, per the bid requirements, specifications, terms and conditions attached to this solicitation.

INVOICE TO		SHIP TO	
OPERATIONS DIVISION TAX DIVISION OF PO BOX 11748		PROPERTY TAX DIVISION TAX DIVISION OF ALBERT T SUMMERS CENTER	
CHARLESTON WV25339-1748		1124 SMITH ST CHARLESTON WV 25301	
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Valuation Services	160.00000	HOUR	\$ 300	\$ 48,000

Comm Code	Manufacturer	Specification	Model #
94131501			

Extended Description :

Valuation Services as described in section 4.1.1 of the RFQ.

The Pricing Pages contain a list of the Contract positions and estimated hours. The estimated hours for each position represent the approximate volume of hours only. No future use of the Contract or any individual item is guaranteed or implied.

INVOICE TO		SHIP TO	
OPERATIONS DIVISION TAX DIVISION OF PO BOX 11748		PROPERTY TAX DIVISION TAX DIVISION OF ALBERT T SUMMERS CENTER	
CHARLESTON WV25339-1748		1124 SMITH ST CHARLESTON WV 25301	
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Geotechnical Services	656.00000	HOUR	\$ 275	\$ 180,400

Comm Code	Manufacturer	Specification	Model #
94131501			

Extended Description :

Geotechnical Services as described in section 4.1.2 of the RFQ.

The Pricing Pages contain a list of the Contract positions and estimated hours. The estimated hours for each position represent the approximate volume of hours only. No future use of the Contract or any individual item is guaranteed or implied.

INVOICE TO		SHIP TO	
OPERATIONS DIVISION TAX DIVISION OF PO BOX 11748		PROPERTY TAX DIVISION TAX DIVISION OF ALBERT T SUMMERS CENTER	
CHARLESTON	WV25339-1748	1124 SMITH ST CHARLESTON	WV 25301
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Pre-Trial Preparation	120.00000	HOUR	\$ 300	\$ 36,000

Comm Code	Manufacturer	Specification	Model #
94131603			

Extended Description :

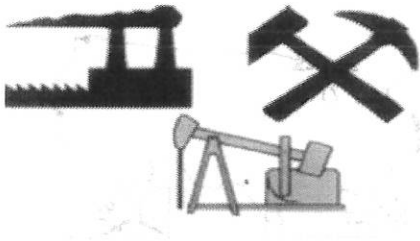
Pre-Trial Preparation as described in section 4.1.3 of the RFQ.

The Pricing Pages contain a list of the Contract positions and estimated hours. The estimated hours for each position represent the approximate volume of hours only. No future use of the Contract or any individual item is guaranteed or implied.

TAX1900000010	Document Phase Final	Document Description Valuation of Reserve/Producing Coal Property & Gas Property	Page 4 of 4
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ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions



RESOURCE TECHNOLOGIES CORPORATION

204 E Calder Way, Suite 205, State College, PA 16801
PO Box 242, State College, PA 16804

814-237-4009 f: 814-237-1769
www.resourcetec.com

**PROPOSAL FOR CRFQ 0702 TAX1900000010
VALUATION OF RESERVE/PRODUCING COAL PROPERTY
& GAS PROPERTY**

Description: Valuation of Reserve/Producing Coal Property
& Gas Property

Solicitation Number: CRFQ 0702 TAX19000000010

Bid Submission Date: April 4, 2019

Contact Manager: April Saldaña
RTC GIS, Inc.
dba Resource Technologies Corporation

Vendor Address: Mailing - P.O. Box 242, State College, PA 16804
Physical - 204 East Calder Way, Suite 205
State College, PA 16801

Phone Number: 814-237-4009

Fax Number: 814-237-1769

Email Address: april@resourcetec.com

TABLE OF CONTENTS

1.0	QUALIFICATIONS	<u>1</u>
1.1	<u>RTC's Staff & Proposed Staffing Plan</u>	<u>1</u>
1.2	<u>RTC's References</u>	<u>3</u>
1.3	<u>Experience in the Valuation of Coal & Other Natural Resources</u>	<u>4</u>
1.4	<u>Experience with Mass-Appraisal Systems</u>	<u>5</u>
1.5	<u>Experienced Licensed Mineral Appraiser</u>	<u>5</u>
1.6	<u>Experienced WV Licensed Appraiser</u>	<u>6</u>
1.7	<u>Experience in Database Management</u>	<u>6</u>
1.8	<u>Experience in Oil and Gas Appraisals</u>	<u>7</u>
1.9	<u>Experience with Multi-Layer GIS Mineral & Economic Analysis</u>	<u>8</u>
2.0	MANDATORY REQUIREMENTS	<u>10</u>
2.1	<u>Mandatory Contract Service Requirements & Deliverables</u>	<u>10</u>
	2.1.1 Valuation Services	<u>10</u>
	2.1.2 Geotechnical Services	<u>11</u>
	2.1.3 Pre-Trial Preparation	<u>12</u>
3.0	CONTRACT AWARD PRICING	<u>15</u>

1.0 QUALIFICATIONS

1.1 RTC's Staff & Proposed Staffing Plan

RTC GIS, Inc.'s (dba Resource Technologies Corporation (RTC)) professional staff includes Licensed Appraisers, Professional Geologists, Mapping and Title Specialists, and Certified Property Evaluators.

Since the implementation of the West Virginia's Reserve Coal Valuation model in 1999, RTC has provided on-going consulting, staff support, testimony, mapping, data processing, technical assistance, and management as required by the state. The contract has varied from year to year based on the states' staffing and professional requirements. RTC guarantees that it will have sufficient professional staff available for Board of Review and Equalization (BRE) hearings throughout the state. RTC also provides the tools needed by the state personnel to complete hearing requests.

Jeffrey Kern is a tested and re-certified senior member of the American Society of Appraisers (ASA) and is a Certified General Appraiser in numerous states including West Virginia. Mr. Kern has taught appraisal and assessment courses to professionals requiring continuing education credits. These courses have included:

- Mineral Valuation
- Oil and Gas Valuation
- The use of Geographic Information Systems Technology in Assessment
- Aerial Imagery and Mine Operations Monitoring
- Statistics and Ratio Studies for Assessors
- Appraisal of Forest Resources
- Uniform Standards of Professional Appraisal Practice.

He is a Certified Mineral Appraiser (CMA) as designated by the International Institute of Mineral Appraisers, a Senior Member of the American Society of Appraisers (ASA) (designated in Mines, Oil and Gas, and Business Appraisal), and a member of the Royal Institute of Chartered Surveyors (MRICS), the International Association of Assessing Officers (IAAO), and the National Association of Independent Fee Appraisers. He previously served on the Board of Directors for the International Mineral Economics and Management Society. He is certified in Pennsylvania as an Ad Valorem Property Tax Evaluator. Mr. Kern is licensed as a Certified General Appraiser in West Virginia, Kentucky, Arkansas, Florida, New York, New Jersey, Pennsylvania, Ohio, Indiana, Georgia, Maryland, Delaware, and Virginia.

Mr. Kern authored the chapters on Mineral Appraisal and Mineral Taxation in the 3rd Edition of "Property Taxation for Professionals". He authored the USGS textbook entitled "Use of Aerial Imagery for Surface Mine Evaluation and Monitoring". He has authored numerous articles and provided presentations on Mineral Valuation and Mineral Markets. Mr. Kern has testified in front of various legislative committees and in various state and federal courts. His article concerning the "Development and Use of the Discount Rate in Mineral Appraisals" will be used as a chapter in the upcoming Appraisal Manual to be published by the International Institute of Mineral Appraisers. He serves as a peer reviewer for the Society for Mining, Metallurgy, and Exploration.

Mr. Kern has served as the Project Director on the current “Reserve Coal Valuation Model” development, implementation, and support effort for the State of West Virginia, Department of Tax and Revenue, Property Tax Division. He served as the Project Director for a project for the Commonwealth of Pennsylvania designed to determine the financial effect of longwall mining on surface land uses. He served as Project Manager on a review of Kentucky mineral property tax assessment strategies and procedures. He served as the Principal on a recent review of the statewide Arkansas Mineral, Oil, and Gas property assessment system. He is currently providing expert services to the County of Wellington, Ontario, Canada concerning the assessment of mineral producing properties. Mr. Kern has also served as a Consultant to CLT, Manatron, and 21st Century (mass appraisal companies) on matters of mineral, oil and gas, and farmland valuation.

David Falkenstern (Professional Geologist - PA, PG004612 and Certified Mineral Appraiser 2018-03) has over 20 years experience assisting with the valuation of coal and aggregate mining operations and reserve properties. Mr. Falkenstern specializes in mineral pricing, market review, and mine plan review. He also develops large scale mineral valuation systems using Geographic Information Systems and Database Management Systems to link mineral market conditions, mineral quality, and environmental concerns.

Mr. Falkenstern has served as the Key Technical Consultant on the current “Reserve Coal Valuation Model” development, implementation, and support effort for the State of West Virginia, Department of Tax and Revenue, Property Tax Division. He served as the Senior Director Consultant on a project designed to determine the financial effect of longwall mining on surface land uses for the Commonwealth of Pennsylvania. He served as Technical Associate on a review of Kentucky mineral property tax assessment strategies and procedures. He was the Lead Technical Participant to examine the effect of mountaintop removal on the environment completed for the USGS and the EPA. Mr. Falkenstern has provided testimony in court.

Jeffrey Kern:

- B.S. Geology and Political Science, Dickinson College
- MRP, Pennsylvania State University
- Graduate work in Public Administration, Pennsylvania State University
- Graduate work in Mineral Appraisal and Computer Modeling, Colorado School of Mines
- Licensed Certified General Appraiser
- Licensed Certified Evaluator
- Certified Mineral Appraiser

David Falkenstern:

- B.S. Geoscience, Pennsylvania State University
- M.S. Engineering Geology, Radford University
- Licensed Professional Geologist
- Certified Mineral Appraiser

RTC's professional staff includes Certified Professional Geologists, Professional Engineers, Mapping and Title Specialists, GIS Specialists, Data Processing and Database Administration Specialists, and Certified Property Evaluators. Professional staff are assigned as needed. This project will be managed by two senior staff who will each perform a significant quantity of the work:

- Jeffrey Kern will serve as Project Manager and will conduct all valuation services. He will be responsible for the entire effort. As the West Virginia Certified General Appraiser, he is responsible for valuation.
- David Falkenstern will lead all coal-related activities (economic data research, coal quantity and quality research, and valuation appeals). As the Lead Technical Specialist in the use of GIS technology and GIS modeling, he will be responsible for the operation of the coal and oil and gas models.
- Qualified support staff will assist in these activities as supervised.

1.2 RTC's References

RTC is currently providing ongoing mineral valuation services for the Pennsylvania Counties of Cambria, Centre, Fayette, Greene, Indiana, and Schuylkill. The firm has provided on-going consulting and assistance to the West Virginia Department of Tax and Revenue concerning mineral assessment and taxation since 1999. RTC has provided similar consulting services to the Commonwealth of Kentucky (coal and oil and gas assessments), Buchanan County, Virginia (coal and oil & gas), the State of Arkansas (oil and gas and other minerals assessment), Wellington County, Ontario, Canada, and the State of Wyoming (oil and gas assessment).

RTC has provided mineral appraisal services for the United States Department of Justice. These valuations involved properties or estates acquired or owned by the Army Corps of Engineers, Federal Bureau of Prisons, and for tax and estate issues involving the IRS. RTC completes mineral appraisals for various financial institutions including Bank of America, Fifth Third Bank, Wells Fargo, Key Bank, SunTrust, and M&T Bank as well as others. RTC also provides appraisals of oil and gas and other mineral related interests to numerous private clients and law firms. References include:

- Lou Lewis, Chief Assessor, County of Greene, 93 East High Street, Room 201, Waynesburg, PA 15370 (724-852-5240) llewis@co.greene.pa.us
- Brad Boni, Chief Assessor, County of Washington, 100 West Beau Street, Suite 205, Washington, PA 15301 (724-288-6767), bonibrad@co.washington.pa.us
- Tim Kocher, Senior Vice President, Wells Fargo Bank, N.A., 90 South 7th Street, Floor 19, MAC N9305-191, Minneapolis, MN 55402 (612-316-1619) timothy.a.kocher@wellsfargo.com
- Jill Cade, Assistant Vice President, Real Estate Relationship Manager, Commercial Real Estate Services, Wells Fargo Bank, N.A., 90 South 7th Street, Floor 19, MAC N9305-191, Minneapolis, MN 55402 (612-316-4147) jill.m.cade@wellsfargo.com

- David Sharp, SunTrust Robinson Humphrey, 3333 Peachtree Rd, NE, 3rd Floor, Mail Code GA-ATL-1980, Atlanta, GA 30326 (404-439-7627) david.sharp@suntrust.com
- Jeff Amburgey, Director, Property Tax Division, West Virginia Department of Tax and Revenue, Greenbrooke Building, Charleston, WV 25301 (304-558-0792) jeff.a.amburgey@wv.gov
- Brian Iannarone, MAI, CCIM, Corestates Regional Director, Wells Fargo RETECHS, 190 River Road, 3rd Floor NJ3410, Summit, NJ 07901 (908-598-3680) brian.iannarone@wellsfargo.com
- Bear Chaney, Director, Arkansas Assessment Coordination Department, 1614 West Third Street, Little Rock, Arkansas 72201 (501-324-9100) bear.chaney@acd.state.ar.us
- Lori Detwiler, Assistant Director, Minerals Taxation and GIS Services Division, Department of Revenue/Finance Cabinet, 501 High Street, Frankfort, Kentucky 40601 (502-564-3226) loridetwiler@ky.gov
- Craig Miller, Fifth Third Bank, Real Estate Valuation Group, 201 East Kennedy Boulevard, Suite 2000, Tampa, FL 33602 (813-306-2419) craig.miller@53.com
- LeAnne Martin, Commercial Banker, M&T Bank, 114 South Atherton Street, State College, PA 16801 (814-234-5195) lmartin@mtb.com
- Ed Bettwy, Right-of-Way Administrator, PennDOT District 9, 1598 North Juniata Street, Hollidaysburg, PA 16648 (814-696-7210) ebettwy@pa.gov

1.3 Experience in the Valuation of Coal & Other Natural Resources

Incorporated in 1980, RTC has specialized in the valuation of coal and other natural resources for 39 years. More specifically, RTC has appraised mineral, unique commercial, environmental, and industrial businesses and assets including:

- Coal mines and reserves
- Oil & gas wells and reserves
- Aggregate, lime, sand, & other mineral reserves & mines
- Hard rock reserves & operations
- Mineral processing & shipping facilities
- Industrial facilities
- Agricultural properties
- Forest lands
- Nature preserves & park areas
- Environmentally degraded sites
- Rail, barge, & other transport facilities
- Industrial mineral properties & operations
- Rural properties

Major clients have included:

- Banking concerns such as Wells Fargo Bank, SunTrust, Bank of America, M&T Bank, Fifth Third Bank, PNC, and various private investment banks.
- Federal agencies such as: U.S. Departments of Justice, Defense, Interior, and General Administration
- State governmental institutions located in Arkansas, Indiana, Kentucky, New Jersey, New York, Ohio, Pennsylvania, Virginia, West Virginia, and Wyoming.
- Local governments located in Greene, Fayette, Schuylkill, Centre, Clinton, Cambria, Indiana, and Washington Counties in Pennsylvania and Campbell and Buchanan Counties in Virginia.

- Various non-profit entities including the Natural Resource Defense Council and Common Cause.
- Numerous private firms and law firms.

Since 1982, our personnel have testified in various federal and state courts as recognized experts in mineral valuation including:

- Federal District Court, Northern District of West Virginia, Middle District of Pennsylvania, Western District of Pennsylvania, and Eastern District of Kentucky
- Superior Court of New Jersey, Monmouth County and Gloucester County
- Commonwealth Court of Pennsylvania, Allegheny County, Centre County, Greene County, and Schuylkill County
- County Courts In Ohio
- Federal Bankruptcy Court, Pennsylvania.

1.4 Experience with Mass-Appraisal Systems

RTC has created and maintained mass-appraisal systems to value mineral estates in:

- Greene County, PA
- Fayette County, PA
- Schuylkill County, PA
- Centre County, PA
- Washington County, PA.

In each of these systems, the mineral records are Mass-Appraised, using GIS technology, based on location, mineral quality and mineral activity (active mining).

RTC has consulted with and improved valuation methods in standing data systems in:

- Indiana County, PA (8,000 mineral records)
- Buchanan County, VA (45,000 mineral records)
- State of West Virginia, Property Tax Department (850,000 mineral records)
- Arkansas Assessment Coordination Department (State Agency providing assistance to County Assessment Offices)
- Kentucky Department of Revenue, Minerals Taxation and GIS Services (40,000 records)

RTC is familiar with Tyler's IAS System, Vision's Mass Appraisal System, Harris/Govern's Software Tax Assessment system, Evaluation and Technical Services' Mass Appraisal System, 21st Century's Valuation System, and the system developed by Manatron. RTC has developed system modules for these using Citrix and Microsoft platforms.

1.5 Experienced Licensed Mineral Appraiser

Jeffrey Kern is a Mineral Appraiser certified by the International Institute of Mineral Appraisers, member number 1999-3. Mr. Kern was tested and re-certified as a Mines and Quarries Expert for the American Society of Appraisers. Mr. Kern has taught accredited Continuing Education courses for the Appraisal Institute, Institute of Certified Public

Accountants, The Bar Association, The Pennsylvania Assessors Association, and The Virginia Assessors Association.

David Falkenstern is a Mineral Appraiser certified by the International Institute of Mineral Appraisers, member number 2018-3. He is licensed as a Professional Geologist with the state of Pennsylvania and is a member of the American Institute of Professional Geologists.

1.6 Experienced WV Licensed Appraiser

Jeffrey Kern is licensed as a Certified General Appraiser with the state of West Virginia (license number CG 226).

1.7 Experience in Database Management

RTC has significant experience in database management since the inception of the company in 1980. RTC's database management projects are listed below.

- **West Virginia Reserve Coal Valuation Model:** Since 1999, RTC has served as West Virginia's Property Tax Division's mineral technical expert. RTC was first appointed to the project as the result of a West Virginia Supreme Court decision requiring the state to revise its coal strategies and procedures. Until 1999, the state's valuations lacked credibility, uniformity, and fairness. They did not assign a relative fair-market value to the coal resources as assessed. The goal as defined by the court order, the state's constitution, and the secretary of revenues guidance was to develop a procedure that would allow the state to assess coal fairly and equitably using a mass appraisal system.

RTC worked with personnel from the Department of Tax and Revenue, the West Virginia Geologic and Economic Survey, the Department of Environment Protection, the West Virginia Coal Association, the University of West Virginia, and members of the legislature to develop a fair and efficient system of mass appraisal for coal taxation. To complete the project, RTC developed the formulas, procedures, forms, and factors used to assess the relative value of more than 850,000 coal records annually.

RTC developed the initial digital geologic maps used by the system; mapped a large portion of the properties addressed by the system; and collected much of the original lease, price, mining, and other data used by the system. RTC provided testimony to various legislative review committees and the legislature as a whole.

This project was managed by Mr. Jeffrey Amburgey, Director, Property Tax Division, West Virginia Department of Tax and Revenue, Greenbrooke Building, Charleston, WV 25301 (304-558-0792) jeff.a.amburgey@wv.gov.

- **Analysis of the Effect of Longwall Mining on Surface Land Values:** Completed in 2001, this project was funded by the Pennsylvania

Department of Environmental Protection. The purpose of the project was to determine what, if any, financial effect longwall mining had on overlying and nearby land values and communities. The state was required to address highly politicized competing claims concerning the potential detrimental effects of longwall mining on the surface community.

RTC used advanced GIS and database modeling to examine ten-years worth of land sales and assessment records in multiple counties in Pennsylvania. Using GIS technology, dynamic maps of longwall panel timing was matched to land sales records, assessment appeal records, and confidential damage payments. The process allowed RTC to quantify mining's effect on land values. The report was incorporated into procedures adopted by the state and is available through the state's web service.

This project was managed by Mr. Lawrence Ruane, Pennsylvania Department of Protection, Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA 17101 (717-783-8845) lruane@state.pa.us.

- **Greene County, Pennsylvania, Mineral Valuation for Tax Assessment:** RTC performs annual tax assessments of all mineral properties in Greene County, Pennsylvania. RTC collects and processes all data, develops all values, updates and maintains the County's tax assessment database, and provides support at all appeal hearings. Minerals comprise nearly \$1 billion in value in this County. Since minerals comprise a large portion of the County's tax base, RTC is entrusted with managing the identification and enumeration of more than one third of the County, municipal, and School Districts' income.

RTC began this effort in 1990 and has continuously provided the service for 20 years. This project was managed by Mr. H. John Frazier, Chief Assessor, County of Greene, 93 East High Street, Room 201, Waynesburg, PA (retired). Lou Lewis, current Chief Assessor, (724-852-5240) llewis@co.greene.pa.us.

1.8 Experience in Oil and Gas Appraisals

Oil and Gas Property Valuations: RTC completes the appraisal of oil and gas estates and oil and gas operations throughout Pennsylvania, New York, Texas, Ohio, and West Virginia. These valuations involve reserves or resources in oil and gas fields, leased reserves in producing regions, and producing properties. With the advent of the Marcellus and the Utica plays, RTC has completed well over 1,200 of these appraisals for a number of firms specializing in estate planning, individuals, and major banking institutions. The projects require knowledge of the oil and gas industry, familiarity with the oil and gas market, statistical examination of the drilling and development activity, experience in the geology of the oil and gas plays, and knowledge of SEC and IRS requirements. RTC completes each appraisal within 30 to 60 business days, including site visits. The list below shows the level of this activity since 2010.

Year	Oil & Gas Reports Completed
2010	343
2011	220
2012	226
2013	121
2014	167
2015	157
2016	56
2017	59
2018	37
	1386

1.9 Experience with Multi-Layer GIS Mineral & Economic Analysis

RTC designs and develops sophisticated GIS systems to not only estimate coal reserves but also track and predict market conditions. The projects listed above require multi-layer GIS systems to develop credible appraisal results. For example, the West Virginia Reserve Coal Valuation Model requires the input of at least 20 different geographic based data tables including:

- Mineral Parcels
- Mineral Parcels with contiguous owners
- Incorporated Areas
- Coal Thickness
- Coal Outcrop
- Mined-out Coal
- Coal Quality
 - BTU
 - Sulfur
 - Ash
 - Volatility
 - Environmental Influences
- Coal Leasing Activity
- Oil & Gas Well Activity
- Coal Mines
 - Active
 - Recently Closed
 - Historical
- FERC Coal Sales
- WVPSC Coal Sales
- Coal Royalty
- Coal Production.

Each GIS layer contains data that influences the value of every mineral parcel across the state. It is important that creation, maintenance, quality control, and analysis are correct because it could lead to varying tax rates for West Virginia's mineral owners.

Another example of using a multi-layer GIS to assess property is Pennsylvania's Clean and Green program. Rather than property value being based on market analysis, Pennsylvania allows farmland to be valued based on the productivity of that land, thus saving farmers a considerable tax burden. Input layers include:

- Agricultural Parcels
- Department of Agriculture Soil Maps
- Forest Cover Maps
- Department of Agriculture Productive Rate Maps.

Using a GIS program created in-house, the area of each separate soil type on each agricultural parcel is calculated. Additionally, forested acres are also calculated because they are not productive for farming. The productivity rate maps, which provide a \$/acre value for each soil type, are then applied to determine the total value of the parcel (see image below).

RTC has performed this service for:

- Washington County
- Fayette County
- Bedford County
- Centre County
- Lycoming County.

While much simpler than West Virginia's Reserve Coal Valuation Model, RTC's Clean and Green program is an elegant example of a multi-layer GIS analysis to value property.



2.0 MANDATORY REQUIREMENTS

2.1 Mandatory Contract Service Requirements & Deliverables

2.1.1 Valuation Services

Coal production in West Virginia has generally declined from 2011-2016, with a slight up-tick in 2017 (see table below). This has resulted in the reduction of an overall coal reserve tax base. Also, the loss of production has significantly affected the southern coalfields. This highlights the need for a responsive mineral valuation system.

2011	138,123,881
2012	123,207,841
2013	115,950,702
2014	116,599,908
2015	99,030,440
2016	83,967,960
2017	96,564,350

West Virginia Legislative Rule §110-11, *Valuation of Active and Reserve Coal Property for Ad Valorem Property Tax Purposes*, describes the economic data research necessary to value reserve and producing coal properties. These include:

- Coal prices using WVPSC and EIA datasets, discount rate, sales and leases
- Completion of coal and market pricing research and delivery of report
- Statistical analysis and review of coal market factors (T-Factors)
- Market interest factor (relative location of transactions)
- Market mineability factor (relative location of mines)
- Prime coal bed factor (coal bed most likely to be mined)
- Environmental factor (property specific and regional issues)
- Use conflict factor (location oil and gas wells)
- Volatility factor
- Review of coal quality information
- Thickness, BTU, sulfur, volatility, washability
- Review of digital mapping
- Property and ownership records
- Coal bed mapping.

The following tasks are required to develop the economic valuation variables:

- RTC will review the Tax Year 2019 variables to establish basis for Tax Year 2020. The examination includes:
 - geographic analysis
 - consistency with actual market rates (mineral property sales analysis).
- RTC will complete a T-Factor analysis to be used as base factors and default values in Tax Year 2020. This task must be completed by May of 2019 in order to meet the new legislative deadlines.
- The regional price for coal (by type) as developed from FERC and WVPSC data must also be published in time for public comment before the Tax Year 2020 values

are estimated. This must also be completed by the end of May 2019 in order to meet legislative deadlines.

- A survey of current royalty rates must also be completed within the same time frame.
- RTC will complete and test integrated geospatial analysis including adjacency analysis, proximity of transactions, new transaction basis, new environmental conflict basis, etc.
- RTC will assist the State in running the reserve coal valuation model in a timely fashion.
- RTC will assist the State in reviewing results for accuracy, consistency, and compliance with the legislative mandates.

2.1.2 Geotechnical Services

The Geotechnical Services section of this contract refers to applying the datasets mentioned above to all coal properties in the state to develop an appraised value for each property. The above-mentioned variables will be utilized to estimate the assessments of coal properties throughout the state.

RTC will rewrite or modify and test software to comply with new T-factors and revised procedures mandated by legislature. RTC will rewrite or modify and test software and develop new procedure manuals for revisions including:

- Parcel assemblage
- Prime seam revision
- Threshold, spot market input
- Adapt model to the West Virginia Integrated Assessment System (IAS)
- New/revised coal maps
- New property maps and ownership data
- New economic factors.

RTC plans to complete a test valuation run at least one month before the data is to be transferred to the IAS system. To better assist the State, RTC will:

- Provide technical and hardware assistance with actual model run and analysis
- Complete an "Audit" process of selected properties
- Compare the anticipated 2020 values to the Tax Year 2019 results to examine the effect of the Board of Review and other adjustments.

The State has also embarked on a significant number of data updates. RTC will assist in these efforts as required:

- The agency continuing to improve mapping of all coal
- Update the environmental factor tables
- Continued improvement to the property maps and ownership database
- Audit the declared mineable acres of coal when compared to the State's mapping of coal
- Update data collection and reporting forms
- Assist in the implementation of a new mapping server.

2.1.3 Pre-Trial Preparation

RTC will work with the Department's professional staff in all tasks. RTC will participate in staff training as required. RTC will participate in hearings, public presentations, interdepartmental efforts, and legislative efforts as required.

RTC will defend all values and the valuation process in front of hearing boards and in courts of law. For each of the past 19 years, prior to the February Board of Review and Equalization (BRE), RTC has reviewed and prepared statistics, documents, and presentations to legislative and administrative taxing entities. RTC has reviewed specific appeals, responded to news articles, and participated in legislative hearings regarding coal valuation.

RTC has represented the West Virginia Property Tax Division at Board of Review and Equalization (BRE) hearings in various counties. Recently, RTC as participated in the October BRE Hearing as well as the February Hearings. Additionally RTC has participated in Circuit Hearing and Supreme Court filings. Additionally, RTC staff regularly participates in Pennsylvania County Commission Tax Hearings regarding mineral valuation as well as appearing in Federal Bankruptcy Court.

At BRE's, RTC serves as the State Tax Department's expert and assists County Commissioners in answering taxpayer questions. Additionally, RTC will assist with reports, analysis, and testimony required by the West Virginia State Legislature. Testimony may also be required in West Virginia Circuit Court if the BRE's are unable to satisfy valuation grievances. RTC will participate in Task Force & Committee meetings.

For reserve oil and gas properties, RTC will appear at BRE's when oil & gas questions arise. At BRE's, RTC serves as the State Tax Department's expert and assists County Commissioners in answering taxpayer questions. Additionally, RTC will assist with reports, analysis, and testimony required by the West Virginia State Legislature. Testimony may also be required in West Virginia Circuit Court if the BRE's are unable to satisfy valuation grievances.

A synopsis of the tasks required is listed below:

1. Data Analysis on Tax Years 2018 and 2019.
 - a) Review of tax to establish basis for next year (geographic, consistency, and t-factor analysis - to be used as base factors and default values in Tax Year 2020
 - b) Review coal mapping, coal assignments, and recorded acres of coal to establish statistical basis for t-factors
 - c) Model of Tax Year 2019 to examine effect of Board of Review and other adjustments
2. Development of New Baseline Parameters for T-factors.
 - a) Statistical analysis and testing of T-factors: Wells, Environmental, Mines, Vol, Trans, Coal Quality, Royalty, Prices, etc.
 - b) Complete and test integrated geo-spacial analysis including adjacency analysis, proximity of transactions, new transaction basis, new environmental conflict basis, etc.
3. Assistance with Board of Review and Legislative Matters.
 - a) Assist in legislative reports, analysis, and testimony

- b) Provide testimony
4. Complete and Implement Electronic Filing if Required.
5. Complete and Implement Revised Data Collection Forms.
6. Parcel Mapping.
7. Property and Ownership Mapping and Records.
 - a) Develop and implement procedures
 - b) Train and monitor staff
 - c) Merge and test data
8. Develop and Implement Training Program for New Staff.
9. Complete "Audit" process of selected properties.
10. Complete and Implement Electronic Reporting/Editing.
11. Assist with Geology, Property Records, Databases, and Preparation for this Year's Model Run. Review of comparative sales and leases - BTU, Sulfur, Ash, Thickness, Drainage, splits.
12. Rewrite and Test Software to Comply with New T-Factors and Revised Procedures Mandated by Legislature.
 - a) Rewrite and test software and develop new procedure manuals for revisions including parcel assemblage, prime seam revision, threshold, spot market input, etc.
 - b) Develop base for IAS report or develop report output.
 - c) Complete a total test run(s) at least 30 days before revised tax deadlines to ensure results.
13. Complete Coal and Market Pricing Research and Deliver Report.
14. Assist with Actual Valuation Model Run and Analysis.
15. Participate In and Prepare for any Task Force & Committee Meetings.
16. Assist with Board of Review.

Oil & Gas Services:

Reserve oil and gas valuation will follow West Virginia Legislative Rule §110-1J, *Valuation of Producing and Reserve Oil and Natural Gas for Ad Valorem Property Tax Purposes*.

The State has been exploring various options for improving the assessment of oil and gas reserve properties. Currently, by statute, the reserve value is based on delay rental lease rates which is believed to be below market value. RTC will assist the State in developing equitable market responsive valuation measures that can be applied to the appraisal of currently undeveloped oil and gas properties.

West Virginia Legislative Rule §110-1J *Valuation of Producing and Reserve Oil & Natural Gas for Ad Valorem Property Tax Purposes*, describes the economic data research necessary to value producing oil and gas properties. These include assisting in the development of:

- Capitalization factor
- Determining the net value of oil & gas (gross less (royalties + operations + maintenance costs))
- Estimating industry operating expenses

- Developing industry production decline rates based on:
 - Formation
 - Region

RTC will assist the State in developing appropriate ultimate recovery estimates and decline curves for each producing horizon. The analysis will look at oil wells, oil and gas wells, dry-gas wells, and wet-gas wells. Significant emphasis will be placed on the geotechnical and market factors that delineate the recovery potential of reserve properties. RTC will work with the Geologic and Economic Survey, Tax Department personnel, and industry personnel to ensure that estimates are accurate, equitable, and consistent with the law.

As required, RTC will assist in the valuation of active wells as:

- Home use only wells
- Industrial use wells
- Non-producing acreage
- Plugged and abandoned acreage
- Barren oil & natural gas areas
- Wells that produce oil & natural gas
- Storage area wells
- Farm properties
- Pre-production/permit leaseholds - chattel real accounts
- Flat rate royalty accounts.

Oil and gas tasks will be defined by the Department as determined by the Tax Commissioner.

RTC will assist with annual reports that state the variables.

3.0 CONTRACT AWARD PRICING

It has been RTC's experience that staff commitment is related to the particular needs of the Department at any given time. These are defined by legislative, management, public, and industry requirements. The particular expertise required in a consultant arrangement is also defined by the expertise resident within the Department. RTC will endeavor to assign the most appropriate personnel to the tasks as they occur during the length of the contract. Therefore, the costs listed in the required cost summary chart are estimates based on current and planned staffing within the Department.

The hours and costs shown below are estimates based on previous years' activities for a twelve-month contract.

Category	Hours in RFQ	2020 Fee Schedule	Estimated Total Cost
1 Valuation	160	\$300	\$48,000
2 Geotech Services	656	\$275	\$180,400
3 Pre Trial Services	120	\$300	\$36,000
	936	\$282	\$264,400

Under this contract, RTC will NOT charge separately for travel and other expenses. Those expenses are included in the proposed hourly rate. As this represents a substantial discount, these rates are intended **only** for this West Virginia contract.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: RTC GIS Inc. dba Resource Technologies Corporation

Authorized Signature: [Signature] Date: 04/04/2019

State of Pennsylvania

County of Centre, to-wit:

Taken, subscribed, and sworn to before me this 4 day of April, 2019.

My Commission expires January 04, 2022.

[Signature]

AFFIX SEAL HERE

Commonwealth of Pennsylvania - Notary Seal
April J. Saldana, Notary Public
Centre County
My Commission Expires January 04, 2022
Commission Number 1143715

NOTARY PUBLIC

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

April Saldana, Office Manager
(Name, Title)

P.O. Box 242, State College PA 16804
(Address)

814-237-4009 / 814-237-1769 (FAX)
(Phone Number) / (Fax Number)

April@resource tec. com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

RIC BIS, Inc, dba Resource Technologies Corp.
(Company)

[Signature]
(Authorized Signature) (Representative Name, Title)

Jeffrey Kern President
(Printed Name and Title of Authorized Representative)

04/04/2019
(Date)

814-237-4009 / 814-237-1769
(Phone Number) (Fax Number)