Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

June 19, 2008

CHANGE NOTICE NO. 1
TO
CONTRACT NO. 071B8200078

(Supercedes Contract #071B5200285)

between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR **Nordic Interactive LLC** **432 N. Saginaw Street, Suite 700** **Flint, MI 48502** **cathyk@nordictechnologies.com**	TELEPHONE: (810) 424-1430 **Catherine M. Kowicki** VENDOR NUMBER/MAIL CODE BUYER/CA (517) 241-1916 **Jim Wilson**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – Department of Environmental Quality**	
CONTRACT PERIOD: From: **December 12, 2007** To: **May 16, 2009**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	

NATURE OF CHANGE(S):

Effective immediately, this Contract is EXTENDED through May 16, 2009, and INCREASED by $15,000.00. All other terms, conditions, specifications, and pricing remain unchanged.

AUTHORITY/REASON:

Per DEQ request, Ad Board approval on 6/17/08, and DMB/Purchasing Operations' approval.

REVISED CURRENT AUTHORIZED SPEND LIMIT: $20,457.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

December 18, 2007

NOTICE
TO
CONTRACT NO. 071B8200078

(Supercedes Contract #071B5200285)

between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR **Nordic Interactive LLC** **432 N. Saginaw Street, Suite 700** **Flint, MI 48502** **cathyk@nordictechnologies.com**	TELEPHONE: (810) 424-1430 **Catherine M. Kowicki** VENDOR NUMBER/MAIL CODE BUYER/CA (517) 241-1916 **Jim Wilson**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – Department of Environmental Quality**	
CONTRACT PERIOD: From: **December 12, 2007** To: **May 16, 2008**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	

The terms and conditions of this Contract are those of ITB 071I5200139 this Contract Agreement and the vendor's quote dated March 3, 2005. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.

Estimated Contract Value: $5,457.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CONTRACT NO. 071B8200078

(Supercedes Contract #071B5200285)

between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR **Nordic Interactive LLC** **432 N. Saginaw Street, Suite 700** **Flint, MI 48502** **cathyk@nordictechnologies.com**	TELEPHONE: (810) 424-1430 **Catherine M. Kowicki** VENDOR NUMBER/MAIL CODE BUYER/CA (517) 241-1916 **Jim Wilson**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – Department of Environmental Quality**	
CONTRACT PERIOD: From: **December 12, 2007** To: **May 16, 2008**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	
MISCELLANEOUS INFORMATION: **The terms and conditions of this Contract are those of ITB 071I5200139 this Contract Agreement and the vendor's quote dated March 3, 2005. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.** **Estimated Contract Value: $5,457.00**	

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the ITB No.071I5200139. Orders for delivery of equipment will be issued directly by the Department of Environmental Quality through the issuance of a Purchase Order Form.

All terms and conditions of the invitation to bid are made a part hereof.

FOR THE VENDOR:	**FOR THE STATE:**
Nordic Interactive LLC Firm Name	Signature
Authorized Agent Signature	**Melissa Castro, Purchasing Operations** Name/Title
Authorized Agent (Print or Type)	**Services Division, Purchasing Operations** Division
Date	Date

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

December 11, 2007

CHANGE NOTICE NO. 3
to
CONTRACT NO. 071B5200285
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR	TELEPHONE: Cathy Kowicki **(810) 299-6611**
Nordic Technologies, Inc. **10559 Citation Dr. Suite 300** **Brighton, MI 48116**	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-1916 **Jim Wilson**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – DEQ**	
CONTRACT PERIOD: From: **May 16, 2005**	To: **December 12, 2007**
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	

NATURE OF CHANGE (S):

Effective immediately, this Contract is hereby CANCELLED and REPLACED with Contract #071B8200078 due to Vendor name and FEIN change.

AUTHORITY/REASON:

Per agency and vendor agreement and DMB/Purchasing Operations' approval.

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
PURCHASING OPERATIONS
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

November 26, 2007

CHANGE NOTICE NO. 2
to
CONTRACT NO. 071B5200285
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR	TELEPHONE: Cathy Kowicki **(810) 299-6611**
Nordic Technologies, Inc. **10559 Citation Dr. Suite 300** **Brighton, MI 48116**	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-1916 **Jim Wilson**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – DEQ**	
CONTRACT PERIOD: From: **May 16, 2005**	To: **May 16, 2008**
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	

NATURE OF CHANGE (S):

Effective August 1, 2006 this Contract is hereby INCREASED by $20,801.20. All other terms, conditions, specifications and pricing remain unchanged.

Please note: the buyer has been changed to Jim Wilson.

AUTHORITY/REASON:

Per agency and vendor agreement and DMB/Purchasing Operations approval.

INCREASE: $20,801.20

TOTAL REVISED ESTIMATED CONTRACT VALUE: $194,881.20

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
ACQUISITION SERVICES
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

August 1, 2006

CHANGE NOTICE NO. 1
to
CONTRACT NO. 071B5200285
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR	TELEPHONE: Cathy Kowicki **(810) 299-6611**
Nordic Technologies, Inc. **10559 Citation Dr. Suite 300** **Brighton, MI 48116**	VENDOR NUMBER/MAIL CODE
	BUYER/CA (517) 241-1916 **Jim Wilson**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – DEQ**	
CONTRACT PERIOD: From: **May 16, 2005**	To: **May 16, 2008**
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	

NATURE OF CHANGE (S):

Effective August 1, 2006 this Contract is hereby INCREASED by $20,801.20. All other terms, conditions, specifications and pricing remain unchanged.

Please note: the buyer has been changed to Jim Wilson.

AUTHORITY/REASON:

Per agency and vendor agreement and DMB/Purchasing Operations approval.

INCREASE: $20,801.20

TOTAL REVISED ESTIMATED CONTRACT VALUE: $194,881.20

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
ACQUISITION SERVICES
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

May 20, 2005

NOTICE
OF
CONTRACT NO. 071B5200285
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR **Nordic Technologies, Inc.** **10559 Citation Dr. Suite 300** **Brighton, MI 48116**	TELEPHONE: Cathy Kowicki **(810) 299-6611** VENDOR NUMBER/MAIL CODE BUYER/CA (517) 373-1455 **Laura Gyorkos**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – DEQ**	
CONTRACT PERIOD: From: **May 16, 2005**	To: **May 16, 2008**
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	

The terms and conditions of this Contract are those of ITB 071I5200139 this Contract Agreement and the vendor's quote dated March 3, 2005. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.

Estimated Contract Value: $174,080.00

Form No. DMB 234 (Rev. 1/96)
AUTHORITY: Act 431 of 1984
COMPLETION: Required
PENALTY: Contract will not be executed unless form is filed

STATE OF MICHIGAN
DEPARTMENT OF MANAGEMENT AND BUDGET
ACQUISITION SERVICES
P.O. BOX 30026, LANSING, MI 48909
OR
530 W. ALLEGAN, LANSING, MI 48933

CONTRACT NO. 071B5200285
between
THE STATE OF MICHIGAN
and

NAME & ADDRESS OF VENDOR **Nordic Technologies, Inc.** **10559 Citation Dr. Suite 300** **Brighton, MI 48116**	TELEPHONE: Cathy Kowicki **(810) 299-6611** VENDOR NUMBER/MAIL CODE BUYER/CA (517) 373-1455 **Laura Gyorkos**
Contract Compliance Inspector: D. Michael Bricker **Wireline Log Conversion to Digital Image – DEQ**	
CONTRACT PERIOD: From: **May 16, 2005** To: **May 16, 2008**	
TERMS **N/A**	SHIPMENT **N/A**
F.O.B. **N/A**	SHIPPED FROM **N/A**
MINIMUM DELIVERY REQUIREMENTS **N/A**	
MISCELLANEOUS INFORMATION: **The terms and conditions of this Contract are those of ITB 071I5200139 this Contract Agreement and the vendor's quote dated March 3, 2005. In the event of any conflicts between the specifications, terms and conditions indicated by the State and those indicated by the vendor, those of the State take precedence.** **Estimated Contract Value: $174,080.00**	

THIS IS NOT AN ORDER: This Contract Agreement is awarded on the basis of our inquiry bearing the ITB No.071I5200139. Orders for delivery of equipment will be issued directly by the Department of Environmental Quality through the issuance of a Purchase Order Form.

All terms and conditions of the invitation to bid are made a part hereof.

FOR THE VENDOR:	**FOR THE STATE:**
Nordic Technologies, Inc. Firm Name	Signature
Authorized Agent Signature	**Laura Gyorkos, CPPB** Name/Title
Authorized Agent (Print or Type)	**Commodities Division, Acquisition Services** Division
Date	Date

STATE OF MICHIGAN
Department of Management and Budget
Acquisition Services

Contract No. 071B5200285
WIRELINE LOG CONVERSION TO DIGITAL IMAGE

Buyer Name: Laura Gyorkos
Telephone Number: 517-373-1455
E-Mail Address: gyorkosl@michigan.gov

WIRELINE LOG CONVERSION TO DIGITAL IMAGE

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Appendix A

Log codes FOR SCANNING

Article 1 – Statement of Work (SOW)

1.0 Project Identification

1.001 PROJECT REQUEST

Over 50,000 oil and gas wells have been drilled in the State of Michigan since the 1920's. Beginning in the 1940's, a record of the subsurface rock layers penetrated by most of these wells was recorded in the form of one or more wireline logs. These logs represent an analog chart record of the physical properties of the subsurface rock formations and their contained fluids (oil, gas, or water) plotted against depth from the surface of the ground downward. Logs of this type are used extensively by oil and gas professionals to interpret a well's potential for oil or gas production. They may also be used to generate local or regional maps of a wide array of geological features.

Contemporary oil and gas exploration and development as well as general subsurface geological studies have come to rely on digital data. These wireline logs are virtually inaccessible in a digital format since they are all paper copies. For maximal utilization and efficiency of handling this valuable data resource, it is proposed that existing paper copies of these wireline logs be scanned and archived as digital raster images.

1.002 BACKGROUND

The Department of Environmental Quality (DEQ) Office of Geological Survey (OGS) is storing "wireline logs", paper strips charts similar in appearance to EKG graphs, provided by the Michigan oil and gas industry as required by law. These wireline logs currently occupy twenty-seven 5-drawer lateral files. The OGS wishes to convert the paper files to raster digital image TIFF format files. This is the first step toward the ultimate goal of providing these wireline logs via the Internet to customers.

There are approximately 50,000 wireline logs currently in the backfile (logs dating back 40 + years). The wireline logs are folded and placed inside manila envelopes which are labeled with specific identifying information. Each wireline log is typically 8.5 inches wide, (but can vary from five to eleven inches wide) and varies in length from 10 to 70 feet, with an average of about 30 feet long. It is estimated that there is a total of 1,550,000 feet of wireline logs currently on file. Some wireline logs may be as much as 40 years old, but the condition of the paper can be described as very good to excellent. Monthly (day-forward) additions to the files are about 40 wireline logs with an estimated total length of 1000 feet.

Scanning these logs will achieve several important objectives:

1. Paper copies will be preserved in an easily archived format that occupies a small space and allows for reproduction of the copies if the paper copy should be damaged or lost.
2. Public distribution (Freedom of Information requests) of copies for these logs will be easier and more efficient compared to photocopying paper copies of the logs.
3. Digital versions can be distributed electronically through the Internet, e-mail, or other digital means.
4. Using analog-to-digital conversion software, these scanned raster images can be converted to vector digital images for quantitative analysis, which is becoming more frequently used in evaluation of geological data.
5. Many other State Geological Surveys with similar types of data have already created digital archives. This has generated widespread expectation by users across the country for digital archives of such types of data.

1.1 Scope of Work and Deliverables

1.101 IN SCOPE

A petroleum geologist, wireline logging engineer, or other technically qualified person familiar with wireline logs, as qualified by the OGS after a review of the candidate's education and experience, will be required to:

1. **Wireline Log Backfiles**: 180+ different kinds of wireline logs in the backfile collection consisting of 50,000 wireline logs. MDEQ OGS will pull the logs to scan and file them after they are scanned.

   a) **Identify** - Inspect and identify each type of log. It is important to note that in many cases the title blocks do not clearly identify the generic log type to be used in the coding process and therefore must not be used as the sole identifying factor for the wireline log. The stamp is the Geological Survey permit number for the well. The ID of the log type in captured in the name itself. The category of log type is a moving target. It varies by type i.e. multiple sonic logs for a different well.

   b) **Code –** Document accurately to reflect the wireline log type. Well identification must be included and exactly conform to the state's (M_ I_ R_) MIR oil and gas well database. Each raster image is to be coded with the well's fourteen-digit API number, a generic log type code, and the actual title of the log. The following is an example of file #/naming convention:

      The code represents the following:

      First 2 digits: State
      Next 3 digits: County
      Next 5 digits: Permit number

      All three parts are required

      21101356960000 FRACID Fracture Identification Log

   c) **Classification** – this refers to the 180+ different generic types of wireline logs. A list of these generic type codes is attached as Appendix A. There are approximately 50 generic log types in Appendix A. Over time, as new logs are developed, additional generic log types will need to be created.

   d) **Indexing** will be incorporated in the file name of each file. Each image will have a separate and unique file name. The file name shall consist of a (1) fourteen-digit API number, space, then (2) "n" character alphabetic wireline log classification code, space, and (3) the actual title of the log. As needed a sequential numeric suffix can be added for replicate wireline logs for a given well. (4) File name is to be neatly and clearly written on the envelope containing the wireline log after it has been indexed. This is the same coding used in the example in (b) above. In order to obtain the rest of the 14-character index it is necessary to refer to another database. However, there may be errors in the information contained in the database. The database is located on the Internet at http://www.deq.state.mi.us/mir/. The permit number is the key piece of information. In the absence of the permit number, the State will provide an indexing convention. It is estimated that there are approximately 250 logs that lack a permit number.

   e) **Scanning** - Each wireline log shall be scanned as a single continuous image using a Neuralog™ scanner or similar scanner to create the desired end-product. The wireline log shall not be scanned as a series of pages. Back file logs will be scanned in permit number sequence.

      State standards require image files to have a resolution of not less than 200 DPI and be produced in a Type III or IV compressed TIFF graphic image format. Prior to awarding the contract, the contractor shall create set of test images for approval by the State. The

contractor will advise the State as to the best resolution and scanning techniques in order to obtain the best possible images for the purpose they intend to serve. It is believed that most files will be scanned as black and white images while some logs (1980 to present) may need to be scanned as grayscale images.

The scanned image must have the exact dimensions and orientation of the log margins and log traces that occur in the original. Skewed images relative to vertical or horizontal dimensions are not acceptable. Since these scanned wireline logs will likely be used at a later date to develop precise and quantitative data, the highest possible quality of scanned image is required.

Quality control must be exercised on each image so that the scanned image quality is comparable to the original, that is, header information must be as readable as on the original and all log tracks must be clear and as distinctive as the original. There is no acceptable error rate. Scanned images that do not duplicate the quality of the original wireline log will have to be re-scanned.

A petroleum geologist, wireline logging engineer, or other technically qualified person familiar with wireline logs, as qualified by the OGS after a review of the candidate's education and experience, shall review each wireline log after it is scanned to determine if it is of the required quality as stated herein. Quality review will be conducted for both the backfile and day-forward materials by OGS. If a scanned wireline log does not meet the required standards it must be re-scanned using different scanner settings. OGS will notify the contractor of any deficiencies within 30 days of receipt of delivery of the scanned product. Failure to achieve the required quality standards may cause the DEQ to cancel the contract. Electronic files are to be written to CD-R disks and delivered in jewel cases, with the naming convention described above. There is no splitting of files. The file cannot be split on 2 CD's or DVD's.

CD-R disks shall be labeled with the following:

State of Michigan
Department of Environmental Quality
Office of Geological Survey
"record title"
"range of file names"
"delivery date"

All logs provided to the contractor are required to be scanned except for copyrighted material. Some logs are different sizes. There is a gray scale option for scanning that is intended to incorporate all types of logs. The back file logs are due within one week. Wireline logs should be picked up for scanning on a particular day of the week and returned the same day the following week (both the original wireline logs and the scanned product). MDEQ OGS will provide the contractor with at least 1100 logs per week. If the contractor's scanning capacity can accommodate more logs per week, MDEQ OGC will provide a quantity sufficient to match the contractor's scanning capacity.

Tasks are to be performed at the vendor's site and the site must be located in Michigan.

2. **Day-forward Wireline Logs** : 180+ different kinds of wireline logs similar to #1 above which are filed by oil and gas operators on a daily basis. The day-forward records average 35 feet per log. MDEQ OGS will pull the logs to scan and file them after they are scanned. MDEQ OGS will pull the logs to scan and file them after they are scanned.

   a) **Identify** - Inspect and identify each type of log. It is important to note that in many cases the title blocks do not clearly identify the generic log type to be used in the coding process and therefore must not be used as the sole identifying factor for the wireline log. The stamp is the Geological Survey permit number for the well. The ID of the log type in captured in the name itself. The category of log type is a moving target. It varies by type i.e. multiple sonic logs for a different well.

b) **Code –** Document accurately to reflect the wireline log type. Well identification must be included and exactly conform to the state's (M_ I_ R_) MIR oil and gas well database. Each raster image is to be coded with the well's fourteen-digit API number, a generic log type code, and the actual title of the log. The following is an example of file #/naming convention:

21101356960000 FRACID Fracture Identification Log

The code represents the following:

First 2 digits: State
Next 3 digits: County
Next 5 digits: Permit number

All three parts are required

c) **Classification** – this refers to the 180+ different generic types of wireline logs. A list of these generic type codes is attached as Appendix A.

d) **Indexing** will be incorporated in the file name of each file. Each image will have a separate and unique file name. The file name shall consist of a (1) fourteen-digit API number, space, then (2) "n" character alphabetic wireline log classification code, space, and (3) the actual title of the log. As needed a sequential numeric suffix can be added for replicate wireline logs for a given well. (4) File name is to be neatly and clearly written on the envelope containing the wireline log after it has been indexed. This is the same coding as the example used in (b) above. In order to obtain the rest of the 14-character index it is necessary to refer to another database. However, there may be errors in the information contained in the database. The database is located on the Internet at http://www.deq.state.mi.us/mir/. The permit number is the key piece of information. In the absence of the permit number, the State will provide an indexing convention. It is estimated that there are approximately 250 logs that lack a permit number.

e) **Scanning** - Each wireline log shall be scanned as a single continuous image using a Neuralog™ scanner or similar scanner to create the desired end-product. The wireline log shall not be scanned as a series of pages.

State standards require image files to have a resolution of not less than 200 DPI and be produced in a Type III or IV compressed TIFF graphic image format. Prior to awarding the contract, the contractor shall create set of test images for approval by the State. The contractor will advise the State as to the best resolution and scanning techniques in order to obtain the best possible images for the purpose they intend to serve. It is believed that most files will be scanned as black and white images while some logs (1980 to present) may need to be scanned as grayscale images.

The scanned image must have the exact dimensions and orientation of the log margins and log traces that occur in the original. Skewed images relative to vertical or horizontal dimensions are not acceptable. Since these scanned wireline logs will likely be used at a later date to develop precise and quantitative data, the highest possible quality of scanned image is required.

Quality control must be exercised on each image so that the scanned image quality is comparable to the original, that is, header information must be as readable as on the original and all log tracks must be clear and as distinctive as the original. There is no acceptable error rate. Scanned images that do not duplicate the quality of the original wireline log will have to be re-scanned.

A petroleum geologist, wireline logging engineer, or other technically qualified person familiar with wireline logs, as qualified by the OGS after a review of the candidate's education and experience, shall review each wireline log after it is scanned to determine if it is of the required quality as stated herein. Quality review will be conducted for both the backfile and day-forward materials. If a scanned wireline log does not meet the required standards it must be re-scanned using different scanner settings. OGS will notify the contractor of any deficiencies within 30 days of receipt of delivery of the scanned product. Failure to achieve the required quality standards may cause the DEQ to cancel the contract.

Electronic files are to be written to CD-R disks and delivered in jewel cases, with the naming convention described above. CD-R disks shall be labeled with the following:

State of Michigan
Department of Environmental Quality
Office of Geological Survey
"record title"
"range of file names"
"delivery date"

Wireline logs should be picked up for scanning on the last day of each month and returned the same day the following month (both the original wireline logs and the scanned product).

Tasks are to be performed at the vendor's site and the site must be located in Michigan. Scanning could be conducted with a combination of both on site and off site facilities. Scanning on site is an option, but the hours would be limited to Monday through Friday, 8:00 am to 5:00 p.m. Work areas cannot be created at the start of the contract but the contractor could use the visitor's area.

Scanning of the backfiles and day-forward files will take place concurrently.

All wireline logs must be scanned and completed within 12 months.

Work Plan

1. The contractor will pick up paper wireline logs from OGS once a week, scan them at its Brighton office using a Neuralog Turbo Neurascanner, and convert the logs into raster images in TIFF format at 200 dots per inch (DPI) resolution in a Type III or IV compressed graphic image format.

2. Each wireline log will be scanned as a single continuous image.

3. The contractor will review the quality of the scanned images to determine if they duplicate the quality of the original wireline log and rescan any images that fail this test. In addition, images that are skewed, disproportionate to the log margins and traces of the original log file, or illegible, will be rescanned.

4. The contractor will return the wireline paper logs to OGS in their original condition the following week when it picks up the next batch of logs.

5. The contractor will transfer the scanned images to the subcontractor.

6. The sub-contractor will review the TIFF images of the logs and assign appropriate indexes to each file.

7. The scanned TIFF files will be indexed using a naming convention specified in section 1.101 (1) and (2).

8. The contractor will return to OGS either a CD or DVD with a label affixed that contains an index or table of contents in a Microsoft Excel file that will provide reference information about the raster files contained thereon. The raster TIFF files will be indexed in accordance with the provisions of 1.101(1) and 1.101(2). In addition, the contractor will be responsible for retrieving this information from the database. In the absence of the permit number, the State will provide an indexing convention. It is estimated that there are approximately 250 logs that lack a permit number.

9. Each CD/DVD will be returned in a jewel case or other protective, non-abrasive, archival quality storage container. The storage container will be suitable for conveyance and storage so as to protect the CD/DVD.

10. The contractor will return the CD/DVD separately from return of the wireline logs.

11. The contractor will scan and index an estimated 50,000 wireline logs that are backfiled and approximately 1,200 day forward logs within 12 months of the start of the contract. For a more detailed timeline for scanning and indexing, please see the project plan.

12. The contractor will also scan approximately 40 to 60 day forward logs a month that are submitted to the OGS as a result of current logging activities in the state.

1.102 OUT OF SCOPE

Mudlogs and color scanning are not included in the scope of the project.

1.103 TECHNICAL ENVIRONMENT

Only TIFF files are required. Files must be virus/worm/spyware/adware/malevolent intent programs free or the files are prohibited. OS (Windows/Mac) is moot. The vendor will scan paper wireline logs to convert them to computer readable TIFF format and provide them to the OGS. The resulting scanned files should be on one or more CD-Rs or DVD-Rs. CD-R's used for product delivery shall meet all applicable ISO standards. Each CD/DVD shall be contained in a jewel case or other protective, non-abrasive, archival quality storage container.

The contractor will use a Neuralog Turbo Neurascanner and place it in its Brighton office. All logs will be scanned in the contractor's Brighton office by the contractor's employees. The contractor's annual service agreement for the scanner guarantees a hot swap within 24 hours should the scanner fail.

The turbo scanner is capable of scanning wireline logs at 4 inches per second. It produces a Type III or IV raster TIFF graphic image with output of 200 dots per inch (DPI). In addition, the scanner is capable of creating a batch sequential order for naming the TIFF files produced.

The contractor will provide its subcontractor with online access to the scanned images for both quality review and indexing purposes. Scanned images that do not meet the quality review standards spelled out in Section 1.101(e) will be rescanned.

As an alternative to CD/DVD archives, the contractor could push the scanned and indexed TIFF files up to MDEQ using its VPN connection with the State of Michigan.

1.104 WORK AND DELIVERABLE

Contractor shall provide Services and staff, and otherwise do all things necessary for or incidental to the performance of work, as set forth below:

Tasks:

1. Vendor will pick up paper wireline logs from OGS, scan the logs and return the wireline logs to OGS, in original condition, as well as provide raster images in TIFF format on CDs/DVDs.

2. Each CD/DVD will have a label affixed that contains an index or table of contents file (Microsoft Word or Microsoft Excel) that will provide reference information about the raster files contained thereon. Specifics of this index or table of contents are presented in 1.101(1) and 1.101(2).

3. Each CD/DVD shall be contained in a jewel case or other protective, non-abrasive, archival quality storage container. The storage container will be suitable for conveyance and storage so as to protect the CD/DVD.

4. Approximately 50,000 wireline logs are to be scanned in a 12-month period.

Start-up Activities
Upon contract award, and within 30 days of contract execution, the contractor will prepare its Brighton office to support this project. While the contractor has Document Imaging equipment in place, the contractor plans to acquire scanning equipment that conforms to the contract technical requirements. Startup preparations will include the following:

- Lease and install one Neuralog Turbo Scanner (see Brochure in Appendix A)
- Train existing Scanning and Imaging Technicians on equipment and software operations specific to this project.
- Conduct tests of both the scanning and indexing processes in the first month under the review of

MDEQ's Office of Geology Survey.

The contractor will accomplish these tasks listed above within 30 days in order to complete the scanning and indexing within the contract year.

Production Work Flow Process and Deliverables
The contractor will implement the following workflow process for this project as described below.

1. **Weekly Courier Service.** The contractor will send an employee to Lansing weekly to pick up and deliver at least 1000 wireline backfile logs to MDEQ OGS. Wireline logs must be picked up by 8:00 a.m. each Monday in order to accomplish media imaging between the hours of 8:00 a.m. and 5:00 p.m. Once a month, the contractor will also pick up a combination of backlog and day forward logs. The following volumes will be handled per log type during the course of the project:

    a. Backfile – 50,000 wireline logs (~50 weeks)
    b. Day Forward – 1200 (~11 months)

2. **Media Imaging.** The contractor will conduct scanning operations daily between the hours of 8:00 a.m. and 5:00 p.m. All images will be scanned to 200 dpi. The TIFF files will be assigned a name based upon the date they are run, the batch that contains them and the order in which they are scanned in the batch. The Neuralog scanner can be defaulted to use this naming convention.

3. **Quality Review.** The contractor will review the scanned images to assure compliance with the quality standard of log replication in the image with no degradation of the image due to log set up and scanning at 200 DPI.

4. **Rescanning.** The contractor staff will be available between the hours of 8:00 a.m. and 5:00 p.m. to rescan logs where the TIFF image does not meet MDEQ's quality standard.

5. **Image publication.** The contractor will make the TIFF files containing the scanned logs accessible online to its subcontractor for additional quality review and indexing.

6. **Indexing.** The subcontractor will examine the TIFF files containing the scanned logs, identify the log type, code the log type using classifications contained in Appendix A, and rename the files. They will assign names to each TIFF file using the indexing convention specified in Sections 101(1)(b)- (d) and 101(2)(b)-(d) and 101. This process will most likely be done remotely via the contractor's web-server. The indexing workflow is approximately as follows:

    * Log images will be viewed sequentially on a web based application. If the image contains a permit number, the permit will be looked up in a database reference table derived from the OGS well database that includes Permit number, API number, Well Name & Number, and location information.
    * Via the permit number the correct API is established from the database reference table. Other information from the database reference table, such a well name, location, etc., is compared to the log header to verify the correct assignment of API number.
    * If the log image does not contain a permit number, then the well is located by searching the database reference by well name, etc. The well is located and verified by comparison of information in the image of the log header with that in the database reference. The correct API is then assigned to the image.

* The log type is selected from a drop-down list that contains the log type codes contained in Appendix A. The log type will be determined by not only the log title but by examination of enough of the log to determine the log curves which are present. For example: a log entitled "Neutron Density" may also contain a gamma-ray tract. According to the appendix, the scan code will be GRN for a Neutron Density/Gamma Ray log.
* The log title is entered in a text-box field.
* If there is more than one log run for the same log type, a suffix number is entered into another text box.
* The API number, log-type from the drop-down list, and text boxes are concatenated by the web-application to form the file name. This name is written to a table that contains the original FileID (filename) assigned by the scanner at the time of the scan and the new file name which will be assigned to that same file.

7. **Create Image/Index Archive.** The contractor will burn to CDs or DVDs, the TIFF files after they have been indexed and renamed by Boyd Parker. The CD/DVD will contain an Excel file that provides reference information about the files contained on the media. The media will be labeled with a reference to this file that is burned on the CD/DVD.

8. **Image/Index Archive Delivery.** The contractor will return the CD/DVD archives to MDEQ OGS twice a month when it picks up the wireline logs for scanning. The archives will be on media that meets ISO standards and in a jewel case.

9. **Alternative Image/Index Delivery.** The contractor currently has a Virtual Private Network (VPN) connection to the State's network which facilitates Medicaid claims image and index transfer to the MDCH Information Processing area. This is option available to DEQ if they choose this method.

1.2 Roles and Responsibilities

1.201 CONTRACTOR STAFF, ROLES, AND RESPONSIBILITIES

Key Personnel:

A petroleum geologist, wireline logging engineer, or other technically qualified person familiar with wireline logs, as qualified by the after a review of the candidate's education and experience, will be required to perform the tasks under item 1.101. The OGS will maintain and keep available for inspection a list of the names of those key personnel so qualified.

Additional staff proposed by the contractor required for the scope of work must be technically qualified and familiar with wireline logs.

Key Personnel Contact Information:
Catherine Kowicki, MCSD, President, will be the overall Project Leader and will provide project management and quality assurance oversight to the project.

Catherine M. Kowicki, MCSD
President
Nordic Technologies, Inc.
10559 Citation Drive, Suite 300
Brighton, MI 48116
cathyk@nordictechnologies.com
Voice: 810-299-6611
Fax: 810-227-3171

Subcontractors
Boyd Parker, Petroleum Geologist, M.Sc. Geological Sciences, will be responsible for indexing.

1.202 STATE STAFF, ROLES, AND RESPONSIBILITIES

The agency Project Manager is responsible for quality control of indexing, coding, and scanned logs.

Project Manager:
Ron Elowski
Department of Environmental Quality

In addition to the project manager listed, DEQ will provide a staff person(s) that will coordinate with the contractor for the pick-up and delivery of the wireline logs.

1.203 OTHER ROLES AND RESPONSIBILITIES

The vendor will scan paper wireline logs to convert them to computer readable TIFF format and provide them to the OGS. In addition to DEQ, OGS will conduct a quality review for both the backfile and day-forward materials. If a scanned wireline log does not meet the required standards it must be re-scanned using different scanner settings. OGS will notify the contractor of any deficiencies within 30 days of receipt of delivery of the scanned product.

1.301 PROJECT PLAN MANAGEMENT

a. The Contractor will carry out this project under the direction and control of the Project Manager.

b. Although there will be continuous liaison with the Contractor team, the client agency's project manager will meet weekly as a minimum, with the Contractor's project manager for the purpose of reviewing progress and providing necessary guidance to the Contractor in solving problems which arise. Weekly project management meetings will be telephonic unless circumstances warrant otherwise

c. The Contractor will submit brief written biweekly summaries of progress which outline the work accomplished during the reporting period; work to be accomplished during the subsequent reporting period; problems, real or anticipated, which should be brought to the attention of the client agency's project director; and notification of any significant deviation from previously agreed-upon work plans. A copy of this report will be forwarded to the named buyer in Acquisition Services.

d. The Contractor will submit to the project manager for final approval a work plan. This final implementation plan must be in agreement with the contractor’s proposal by and accepted by the State for Contract, and must include the following:

   1) The Contractor's project organizational structure.

   2) The Contractor's staffing table with names and title of personnel assigned to the project. This must be in agreement with staffing of accepted proposal. Necessary substitutions due to change of employment status and other unforeseen circumstances may only be made with prior approval of the State.

   3) The project breakdown showing sub-projects, activities and tasks, and resources required and allocated to each.

   4) The time-phased plan in the form of a graphic display, showing each event, task, and decision point in your work plan.

The contractor will carry out this project under the direction and control of the MDEQ Project Manager. The contractor will meet at least weekly with the Project Manager to review the progress of the project and solicit necessary guidance in solving problems that arise, such as those identified in Section 1.401 (Issue Management) and Section 1.402 (Risk Management). The contractor assumes that these meetings can be conducted via telephone conference unless circumstances warrant a face to face meeting.

The contractor will prepare biweekly reports for the Project Manager that will form the basis of the monthly production reports as well. These biweekly reports will include:

- an accounting of the logs scanned and indexed to date by log type,
- the number of logs that were rescanned due as a result of substandard quality,
- the number of outstanding logs to be scanned by type,
- a projected weekly schedule of logs to be pulled and scanned in the following month,
- deviations from the project timeline set forth in the project work plan, and
- status of critical issues that MDEQ or the contractor identify as impacting the project workflow or project completion.

Within 15 days of the award of contract, the contractor will provide the project manager a work plan for final approval. The work plan will include all of the following:

- The contractor's project organizational structure.
- The contractor's staffing table with names and title of personnel assigned to the project.
- The project breakdown showing the subprojects associated with scanning and indexing, activities and tasks for each subproject, and resources allocated for each.
- A graphic display of the time-phased plan.

This work plan will be reviewed regularly and the bi-weekly status and monthly production reports will identify any deviations from this plan.

1.302 REPORTS

The contractor will submit a monthly production report to the agency. The monthly report will itemize all work produced during that month, and invoices will be prepared by the contractor.

The production report will consist of

- an accounting of the logs scanned and indexed to date by log type,
- the number of logs that were rescanned due as a result of substandard quality,
- the number of outstanding logs to be scanned by type,
- a projected weekly schedule of logs to be pulled and scanned in the following month,
- deviations from the project timeline set forth in the project work plan, and
- status of critical issues that MDEQ or the contractor identify as impacting the project workflow or project completion.

1.4 Project Management

1.401 ISSUE MANAGEMENT

If there are disagreements during the Contract during the contractual period, the State's Project Manager will bring the matter to the attention of the contractor's Project Manger. If resolution cannot be agreed upon, the issue will then be addressed by the Contract Administrator, with final resolution to be determined by the Director of Acquisition services. The Contractor agrees to keep a problem resolution log that he/she will provide to the State's Project Manager/Contract Administrator as requested.

There are two issues that would impact the successful completion of the contract. Nordic's price proposal is built on the assumption that the production of TIFF images at 200 DPI using a Neuralog scanner that is properly configured and operated by a trained technician will meet the state's image quality standard for this project. Should the state determine that they require an image with a higher resolution, Nordic would not be able to offer the scanning service at its current price.

The other issue that can affect the contract and its successful completion arises when changes in key personnel are made on either side of the contract. When Nordic has experienced changes in the state's key personnel managing our contracts, we have been able to adjust without any significant disruption in our process. We don't anticipate any problems should the state's contract manager or staff assigned to work with Nordic on this project change, but we raise this issue as one that will need to be managed collaboratively to achieve the desired outcome for the state in the time allowed.

1.402 RISK MANAGEMENT

If wireline logs are missed or incorrectly indexed in the scanning process, there is risk that an unnecessary well(s) might be drilled at a cost of tens of thousand to millions of dollars. This is possible because if the wireline log run in a dry hole is missed, it is conceivable that, years later, another oil company could drill another dry hole within a few feet of the well which was missed.

In addition to the MDEQ project manager monitoring the timeline for completion by the established due date, Nordic will automate the indexing convention so that the professional judgment regarding the type of each wireline log is accurately reflected in the file name. MDEQ OGS will also be positioned to sample the indexing of the TIFF images returned to the state. As part of Nordic's monthly project management meetings with MDEQ, OGS's sampling of the indexing will be reviewed and, if need be, a plan to mitigate the state's concerns about the indexing function in this process will be developed.

1.403 CHANGE MANAGEMENT

Any proposed changes to the scanning techniques or scanned images must receive the OGS Project Manager's written approval.

1.5 Acceptance

1.501 CRITERIA

The following criteria will be used by the State to determine Acceptance of the Services and/or Deliverables provided under this SOW.

State standards require image files to have a resolution of not less than 200 DPI and be produced in a Type III or IV compressed TIFF graphic image format. The contractor will advise the State as to the best resolution and scanning techniques in order to obtain the best possible images for the purpose they intend to serve. It is believed that most files will be scanned as black and white images while some of the logs (1980 to present) may need to be scanned as grayscale images.

Quality review will be conducted for both the backfile and day-forward materials. If a scanned wireline log does not meet the required standards it must be re-scanned using different scanner settings. There is no acceptable error rate. Scanned images that do not duplicate the quality of the original wireline log will have to be re-scanned. OGS will notify the contractor of any deficiencies within 30 days of receipt of delivery of the scanned product. Failure to achieve the required quality standards may cause the OGS to cancel the contract.

1.502 FINAL ACCEPTANCE

Final acceptance of project will be upon receipt and acceptance by DEQ of all projects listed in 1.1.

1.6 Compensation and Payment

Wireline Logs to Scanned images	Estimated Number of Logs	Est. number of Linear Feet	Indexing price per log	Scanning price per log	Total cost per log	Total Project Cost
1. **Backfiles**	50,000	1,550,000	$1.90	$1.50	$3.40	$170,000.00
2. **Day-Forward**	1,200	Unable to Determine	$1.90	$1.50	$3.40	$ 4,080.00
Grand Total						**$174,080.00**

Article 2 – General Terms and Conditions

2.0 Introduction

2.001 GENERAL PURPOSE

The Contract is for wireline log conversion to digital image for the Department of Environmental Quality (DEQ) for the State of Michigan. Orders will be issued directly to the Contractor by DEQ on the Purchase Order Contract Release Form.

2.002 ISSUING OFFICE AND CONTRACT ADMINISTRATOR

The Contract is issued by Acquisition Services, State of Michigan, Department of Management and Budget, hereinafter known as Acquisition Services, for the Department of Environmental Quality (/DEQ), hereinafter known *as DEQ.* Where actions are a combination of those of Acquisition Services and the State agencies, the authority will be known as the State.

Acquisition Services is the sole point of contact in the State with regard to all procurement and contractual matters relating to the commodities and/or services described herein. Acquisition Services is the only office authorized to negotiate, change, modify, amend, alter, clarify, etc., the specifications, terms, and conditions of the Contract. Acquisition Services will remain the SOLE POINT OF CONTACT throughout the procurement process.

Contractor proceeds at its own risk if it takes negotiation, changes, modification, alterations, amendments, clarification, etc., of the specifications, terms, or conditions of the contract from any individual or office other than Acquisition Services and the listed contract administrator

All communications covering this procurement must be addressed to contract administrator indicated below:

Department of Management and Budget
Acquisition Services
Attn: Laura Gyorkos
2nd Floor, Mason Building
P.O. Box 30026
Lansing, Michigan 48909
(517) 373-1455
gyorkosl@michigan.gov

2.003 NOTICE

Any notice given to a party under this Contract must be written and shall be deemed effective, if addressed to such party as addressed below upon (i) delivery, if hand delivered; (ii) receipt of a confirmed transmission by facsimile if a copy of the notice is sent by another means specified in this section; (iii) the third (3rd) Business Day after being sent by U.S. mail, postage pre-paid, return receipt requested; or (iv) the next Business Day after being sent by a nationally recognized overnight express courier with a reliable tracking system.

2.004 CONTRACT TERM

The term of this Contract will be for three (3) years and will commence with the issuance of a Contract. This will be approximately 5/15/2005 through 5/15/2008.

Option. The State reserves the right to exercise two (2) one-year options, at the sole option of the State. Contractor performance, quality of products, price, cost savings, and the contractor's ability to deliver on time are some of the criteria that will be used as a basis for any decision by Acquisition Services to exercise an option year.

Extension. At the sole option of the State, the contract may also be extended. Contractor performance, quality of products, price, cost savings, and the contractor's ability to deliver on time are some of the criteria that will be used as a basis for any decision by Acquisition Services to exercise an option year.

Written notice will be provided to the Contractor within 30 days, provided that the State gives the Contractor a preliminary written notice of its intent to extend at least 30 days before the contract expires. The preliminary notice does not commit the Government to an extension. If the Government exercises this option, the extended contract shall be considered to include this option clause.

2.005 GOVERNING LAW

The Contract shall in all respects be governed by, and construed in accordance with, the laws of the State of Michigan. By signing this agreement, vendor consents to personal jurisdiction in the state of Michigan. Any dispute arising herein shall be resolved in the State of Michigan.

2.006 APPLICABLE STATUTES

The following statutes, rules, and laws are applicable to the performance of this contract; some statutes are reflected in the clauses of this contract. This list is NOT exhaustive.

MI Uniform Commercial Code (MIUCC) MCL 440. (All sections unless otherwise altered by agreement)
MI OSHA MCL §§ 408.1001 – 408.1094
Freedom of Information Act (FIOA) MCL §§ 15.231, et seq.
Natural Resources and Environmental Protection Act MCL §§ 324.101, et seq.
MI Consumer Protection Act MCL §§ 445.901 – 445.922
Laws relating to wages, payments of wages, and fringe benefits on state projects MCL §§ 408.551 – 408.558, 408.471 – 408.490, 1965 PA 390.
Department of Civil Service Rules and regulations
Elliot Larsen Civil Rights Act MCL §§ 37.2201, et seq.
Persons with disabilities Civil Rights Act MCL §§ 37.1101, et seq.
MCL §§ 423.321, et seq.
MCL § 18.1264 (law regarding debarment)
Davis-Bacon Act (DBA) 40 USCU §§ 276(a), et seq.
Contract Work Hours and Safety Standards Act (CWHSAA) 40 USCS § 327, et seq.
Business Opportunity Act for Persons with Disabilities MCL §§ 450.791 – 450.795
Rules and regulations of the Environmental Protection Agency
Internal Revenue Code
Rules and regulations of the Equal Employment Opportunity Commission (EEOC)
The Civil Rights Act of 1964, USCS Chapter 42
Title VII, 42 USCS §§ 2000e et seq.
The Americans with Disabilities Act (ADA), 42 USCS §§ 12101 et seq.
The Age Discrimination in Employment Act of 1967 (ADEA), 29 USCS §§ 621, 623 et seq.
The Old Workers Benefit and Protection Act of 1990 (OWBPA), 29 USCS §§ 626, et seq.
The Family Medical Leave Act of 1993 (FMLA), 29 USC §§ 651 et seq.
The Fair Labor Standards Act (FLSA), 29 USC §§ 201 et seq.
Pollution Prevention Act of 1990 (PPA) 42 U.S.C. §13106
Sherman Act, 15 U.S.C.S. § 1 et seq.
Robinson-Patman Act, 15 U.S.C.S. § 13 et. seq.
Clayton Act, 15 U.S.C.S. § 14 et seq.

2.007 RELATIONSHIP OF THE PARTIES

The relationship between the State and the Contractor is that of client and independent Contractor. No agent, employee, or servant of the Contractor or any of its subcontractors shall be or shall be deemed to be an employee, agent, or servant of the State for any reason. The Contractor will be solely and entirely responsible for its acts and the acts of its agents, employees, servants and subcontractors during the performance of this Contract.

2.008 HEADINGS

Captions and headings used in the Contract are for information and organization purposes. Captions and headings, including inaccurate references, do not, in any way, define or limit the requirements or terms and conditions of this Contract.

2.009 MERGER

This document constitutes the complete, final, and exclusive agreement between the parties. All other prior writings and negotiations are ineffective.

2.010 SEVERABILITY

Each provision of the Contract shall be deemed to be severable from all other provisions of the Contract and, if one or more of the provisions of the Contract shall be declared invalid, the remaining provisions of the Contract shall remain in full force and effect.

2.011 SURVIVORSHIP

Any provisions of the Contract that impose continuing obligations on the parties including, but not limited to the Contractor's indemnity and other obligations shall survive the expiration or cancellation of the Contract for any reason.

2.012 NO WAIVER OF DEFAULT

The failure of a party to insist upon strict adherence to any term of the Contract shall not be considered a waiver or deprive the party of the right thereafter to insist upon strict adherence to that term or any other term of the Contract.

2.013 PURCHASE ORDERS

Orders for delivery of commodities and/or services may be issued directly by the State Departments through the issuance of a Purchase Order Form referencing this Contract (Blanket Purchase Order) agreement and the terms and conditions contained herein. Contractor is asked to reference the Purchase Order Number on all invoices for payment.

2.1 Vendor/Contractor Obligations

2.101 ACCOUNTING RECORDS

The Contractor and all subcontractors shall maintain all pertinent financial and accounting records and evidence pertaining to the Contract in accordance with generally accepted principles of accounting and other procedures specified by the State of Michigan. Financial and accounting records shall be made available, upon request, to the State of Michigan, its designees, or the Michigan Auditor General at any time during the Contract period and any extension thereof, and for three years from expiration date and final payment on the Contract or extension thereof.

2.102 NOTIFICATION OF OWNERSHIP

The Contractor shall make the following notifications in writing:

1. When the Contractor becomes aware that a change in its ownership or officers has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify Acquisition Services within 30 days.

2. The Contractor shall also notify the Acquisition Services within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership or officers.

The Contractor shall:

1. Maintain current, accurate, and complete inventory records of assets and their costs;

2. Provide Acquisition Services or designated representative ready access to the records upon request;

3. Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership or officer changes; and

4. Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership or officer change.

2.103 SOFTWARE COMPLIANCE

The vendor warrants that all software for which the vendor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

The software design, to insure year 2000 compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

2.104 IT STANDARDS

1. EXISTING TECHNOLOGY STANDARDS. The Contractor will adhere to all existing standards as described within the comprehensive listing of the State's existing technology standards at http://michigan.gov/dit.

2. PM METHODOLOGY STANDARDS. The State has adopted a standard documented Project Management Methodology (PMM) for use on all Information Technology (IT) based projects. This policy is referenced in the document titled "Project Management Methodology" – DMB Administrative Guide Procedure 1380.02 issued June 2000. Vendors may obtain a copy of this procedure, as well as the State of Michigan Project Management Methodology, from the Department of Information Technology's website at http://www.michigan.gov/projectmanagement.

   The contractor shall use the State's PPM to manage State of Michigan Information Technology (IT) based projects. The Requesting agency will provide the applicable documentation and internal agency processes for the methodology. If the vendor requires training on the methodology, those costs shall be the responsibility of the vendor, unless otherwise stated.

3. ADHERENCE TO PORTAL TECHNOLOGY TOOLS. The State of Michigan, Department of Information Technology, has adopted the following tools as its Portal Technology development efforts:

   - Vignette Content Management and personalization Tool
   - Inktomi Search Engine
   - E-Pay Payment Processing Module
   - Websphere Commerce Suite for e-Store applications

Vendors must use the Portal Technology Tools to implement web content management and deployment efforts for agencies. Tools used for web-based application development must work in conjunction with Vignette and Inktomi. The interaction with Vignette and Inktomi must be coordinated with the Department of Information Technology, Enterprise Application Services Office, e-Michigan Web Development team.

Under special circumstances vendors that are compelled to use alternate tools must submit an exception request to the Department of Information Technology, Enterprise Application Services Office, e-Michigan Web Development team, for evaluation and approval of each alternate tool prior to proposal evaluation by the State.

2.105 PERFORMANCE AND RELIABILTIY EVALUATION (PARE)

Reserved

2.106 PREVAILING WAGE

The rates of wages and fringe benefits to be paid each class of individuals employed by the Contractor, its subcontractors, their subcontractors, and all persons involved with the performance of this contract in privity of contract with the Contractor shall not be less than the wage rates and fringe benefits established by the Michigan Department of Consumer and Industry Service, Bureau of Safety and Regulation, Wage/Hour Division schedule of occupational classification and wage rates and fringe benefits for the local where the work is to be performed. The term Contractor shall include all general contractors, prime contractors, project managers, trade contractors, and all of their contractors or subcontractors and persons in privity of contract with them.

The Contractor, its subcontractors, their subcontractors, and all persons involved with the performance of this contract in privity of contract with the Contractor shall keep posted on the work site, in a conspicuous place, a copy of all wage rates and fringe benefits as prescribed in the contract. You must also post, in a conspicuous place, the address and telephone number of the Michigan Department of Consumer and Industry Services, the office responsible for enforcement of the wage rates and fringe benefits. You shall keep an accurate record showing the name and occupation of the actual wage and benefits paid to each individual employed in connection with this contract. This record shall be available to the State upon request for reasonable inspection.

If any trade is omitted from the list of wage rates and fringe benefits to be paid to each class of individuals by the Contractor, it is understood that the trades omitted shall also be paid not less than the wage rate and fringe benefits prevailing in the local where the work is to be performed.

2.107 PAYROLL AND BASIC RECORDS

Payrolls and basic records relating to the performance of this contract shall be maintained by the Contractor during the course of the work and preserved for a period of 3 years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

The Contractor shall submit a copy of all payrolls to the Contract Administrator upon request. The payrolls submitted shall set out accurately and completely all of the information required to be maintained as indicated above.

The Prime Contractor is responsible for the submission of copies of payrolls by all subcontractors upon request from the Contract Administrator

The Contractor or subcontractor shall permit the Contract Administrator or representatives of the Contract Administrator or the State of Michigan to interview employees during working hours on the job.

If the Contractor or subcontractor fails to submit required records or to make them available, the Contract Administrator may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment.

2.108 COMPETITION IN SUB-CONTRACTING

The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

2.109 CALL CENTER DISCLOSURE

Vendor and/or all subcontractors involved in the performance of this contract providing call or contact center services to the State of Michigan must disclose the location of its call or contact center services to inbound callers. Failure to disclose this information shall be a material breach of this agreement.

2.2 Contract Performance

2.201 TIME IS OF THE ESSENCE

Contractor/Vendor is on notice that time is of the essence in the performance of this contract. Late performance will be considered a material breach of this contract, giving the State a right to invoke all remedies available to it under this contract.

2.202 CONTRACT PAYMENT SCHEDULE

Contractor shall only bill for work that has been fully completed and returned for each pickup. Mid-production billings are not acceptable. OGS will create job order forms, if the contractor does not use its own, describing the records in each shipment.

Payments will be made on a per wireline log indexed and scanned basis for wireline logs that are received each month, subject to product meeting quality control. As a general policy, statements shall be forwarded to the designated representative by the 15th day of the month following the indexing and scanning of the wireline logs.

The contractor will submit monthly invoices for payment of scanned and indexed wireline log files that are returned to the state in an approved digital format. Payment will be based upon the number of scanned and indexed logs returned to the state during the month times the total cost per log by log type.

2.203 POSSIBLE PROGRESS PAYMENTS

The Government may make progress payments to the Contractor when requested as work progresses, but not more frequently than monthly, in amounts approved by the Contract Administrator, after negotiation. Contractor must show verification of measurable progress at the time of requesting progress payments.

2.204 POSSIBLE PERFORMANCE-BASED PAYMENTS (Actual performance rendered)

Reserved.

2.205 ELECTRONIC PAYMENT AVAILABILITY

Electronic transfer of funds is available to State contractors. Vendors are encouraged to register with the State of Michigan Office of Financial Management so the State can make payments related to this Contract electronically at www.cpexpress.state.mi.us.

2.206 PERFORMANCE OF WORK BY CONTRACTOR

Reserved.

2.3 Contract Rights and Obligations

2.301 INCURRING COSTS

The State of Michigan is not liable for any cost incurred by the Contractor prior to signing of the Contract. The State fiscal year is October 1st through September 30th. The Contractor(s) should realize that payments in any given fiscal year are contingent upon enactment of legislative appropriations. Total liability of the State is limited to terms and conditions of the Contract.

2.302 CONTRACTOR RESPONSIBILITIES

The Contractor will be required to assume responsibility for all contractual activities, whether or not that Contractor performs them. Further, the State will consider the Contractor to be the sole point of contact with regard to contractual matters, including payment of any and all charges resulting from the anticipated Contract. If any part of the work is to be subcontracted, the Contract must include a list of subcontractors, including firm name and address, contact person and a complete description of work to be subcontracted. The State reserves the right to approve subcontractors and to require the Contractor to replace subcontractors found to be unacceptable. The Contractor is totally responsible for adherence by the subcontractor to all provisions of the Contract. Any change in subcontractors must be approved by the State, in writing, prior to such change.

2.303 ASSIGNMENT AND DELEGATION

The Contractor shall not have the right to assign this Contract, to assign its rights under this contract, or delegate any of its duties or obligations under the Contract to any other party (whether by operation of law or otherwise), without the prior written consent of the State. Any purported assignment in violation of this Section shall be null and void. Further, the Contractor may not assign the right to receive money due under the Contract without the prior written consent of the Director of Acquisition Services.

The Contractor shall not delegate any duties or obligations under the Contract to a subcontractor other than a subcontractor named and approved in the contract unless the Director of Acquisition Services has given written consent to the delegation.

The contractor must obtain the approval of the Director of Acquisition Services before using a place of performance that is different from the address that the contractor provided in the bid.

2.304 TAXES

Sales Tax: For purchases made directly by the State of Michigan, the State is exempt from State and Local Sales Tax. Prices shall not include such taxes. Exemption Certificates for State Sales Tax will be furnished upon request.

Federal Excise Tax: The State of Michigan may be exempt for Federal Excise Tax, or such taxes may be reimbursable, if articles purchased under this Contract are used for the State's exclusive use. Certificates exclusive use for the purposes of substantiating a tax-free, or tax-reimbursable sale will be sent to the Contractor upon request. If a sale is tax exempt or tax reimbursable under the Internal Revenue Code, prices shall not include the Federal Excise Tax.

The State's Tax Exempt Certification is available for vendor viewing upon request to the Contract Administrator.

2.305 INDEMNIFICATION

General Indemnification

To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State, its departments, divisions, agencies, sections, commissions, officers, employees and agents,

from and against all losses, liabilities, penalties, fines, damages and claims (including taxes), and all related costs and expenses (including reasonable attorneys' fees and disbursements and costs of investigation, litigation, settlement, judgments, interest and penalties), arising from or in connection with any of the following:

1. Any claim, demand, action, citation or legal proceeding against the State, its employees and agents arising out of or resulting from (1) the product provided or (2) performance of the work, duties, responsibilities, actions or omissions of the Contractor or any of its subcontractors under this Contract.

2. Any claim, demand, action, citation or legal proceeding against the State, its employees and agents arising out of or resulting from a breach by the Contractor of any representation or warranty made by the Contractor in the Contract;

3. Any claim, demand, action, citation or legal proceeding against the State, its employees and agents arising out of or related to occurrences that the Contractor is required to insure against as provided for in this Contract;

4. Any claim, demand, action, citation or legal proceeding against the State, its employees and agents arising out of or resulting from the death or bodily injury of any person, or the damage, loss or destruction of any real or tangible personal property, in connection with the performance of services by the Contractor, by any of its subcontractors, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable; provided, however, that this indemnification obligation shall not apply to the extent, if any, that such death, bodily injury or property damage is caused solely by the negligence or reckless or intentional wrongful conduct of the State;

5. Any claim, demand, action, citation or legal proceeding against the State, its employees and agents which results from an act or omission of the Contractor or any of its subcontractors in its or their capacity as an employer of a person.

Patent/Copyright Infringement Indemnification

To the fullest extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State, its employees and agents from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and disbursements and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Contractor or its subcontractors, or the operation of such equipment, software, commodity or service, or the use or reproduction of any documentation provided with such equipment, software, commodity or service infringes any United States or foreign patent, copyright, trade secret or other proprietary right of any person or entity, which right is enforceable under the laws of the United States. In addition, should the equipment, software, commodity, or service, or the operation thereof, become or in the Contractor's opinion be likely to become the subject of a claim of infringement, the Contractor shall at the Contractor's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the Contractor, (ii) replace or modify the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to Contractor, (iii) accept its return by the State with appropriate credits to the State against the Contractor's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Code Indemnification

To the extent permitted by law, the Contractor shall indemnify, defend and hold harmless the State from any claim, loss, or expense arising from Contractor’s breach of the No Surreptitious Code Warranty.

Indemnification Obligation Not Limited

In any and all claims against the State of Michigan, or any of its agents or employees, by any employee of the Contractor or any of its subcontractors, the indemnification obligation under the Contract shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Contractor or any of its subcontractors under worker's disability compensation acts, disability benefits acts, or other employee benefits acts. This indemnification clause is intended to be comprehensive. Any overlap in sub clauses, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other sub clause.

Continuation of Indemnification Obligation

The duty to indemnify will continue in full force and affect not withstanding the expiration or early termination of the Contract with respect to any claims based on facts or conditions, which occurred prior to termination.

Indemnification Procedures

The procedures set forth below shall apply to all indemnity obligations under this Contract.

(a) After receipt by the State of notice of the action or proceeding involving a claim in respect of which it will seek indemnification, the State shall promptly notify Contractor of such claim in writing and take or assist Contractor in taking, as the case may be, any reasonable action to avoid the imposition of a default judgment against Contractor. No failure to so notify Contractor shall relieve Contractor of its indemnification obligations except to the extent that Contractor can demonstrate damages attributable to such failure. Within ten (10) days following receipt of written notice from the State relating to any claim, Contractor shall notify the State in writing whether Contractor agrees to assume control of the defense and settlement of that claim (a "Notice of Election"). After notifying Contractor of a claim and prior to the State receiving Contractor's Notice of Election, the State shall be entitled to defend against the claim, at Contractor's expense, and Contractor will be responsible for any reasonable costs incurred by the State in defending against the claim during such period.

(b) If Contractor delivers a Notice of Election relating to any claim: (i) the State shall be entitled to participate in the defense of such claim and to employ counsel at its own expense to assist in the handling of such claim and to monitor and advise the State about the status and progress of the Defense; (ii) Contractor shall, at the request of the State, demonstrate to the reasonable satisfaction of the State, Contractor's financial ability to carry out its defense and indemnity obligations under this Contract; (iii) Contractor shall periodically advise the State about the status and progress of the defense and shall obtain the prior written approval of the State before entering into any settlement of such claim or ceasing to defend against such claim and (iv) to the extent that any principles of Michigan governmental or public law may be involved or challenged, the State shall have the right, at its own expense, to control the defense of that portion of such claim involving the principles of Michigan governmental or public law. Notwithstanding the foregoing, the State may retain control of the defense and settlement of a claim by written notice to Contractor given within ten (10) days after the State's receipt of Contractor' s information requested by the State pursuant to clause (ii) of this paragraph if the State determines that Contractor has failed to demonstrate to the reasonable satisfaction of the State Contractor's financial ability to carry out its defense and indemnity obligations under this Section. Any litigation activity on behalf of the State of Michigan, or any of its subdivisions pursuant to this Section, must be coordinated with the Department of Attorney General. In the event the insurer's attorney represents the State pursuant to this Section, the insurer's attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

(c) If Contractor does not deliver a Notice of Election relating to any claim of which it is notified by the State as provided above, the State shall have the right to defend the claim in such manner as it may deem appropriate, at the cost and expense of Contractor. If it is determined that the claim was one against which Contractor was required to indemnify the State, upon request of the State, Contractor shall promptly reimburse the State for all such reasonable costs and expenses.

2.306 LIMITATION OF LIABILITY

Except as set forth herein, neither the Contractor nor the State shall be liable to the other party for indirect or consequential damages, even if such party has been advised of the possibility of such damages. Such limitation as to indirect or consequential damages shall not apply to claims for infringement of United States patent, copyright, trademarks or trade secrets; to claims for personal injury or damage to property caused by the gross negligence or willful misconduct of the Contractor; to claims covered by other specific provisions of this Contract calling for liquidated damages; to Contractor's indemnification obligations (2.305); or to court costs or attorney's fees awarded by a court in addition to damages after litigation based on this Contract.

The State's liability for damages to the Contractor shall be limited to the value of the Contract.

2.307 CONTRACT DISTRIBUTION

Acquisition Services shall retain the sole right of Contract distribution to all State agencies and local units of government unless other arrangements are authorized by Acquisition Services.

2.308 FORM, FUNCTION, AND UTILITY

If the Contract is for use of more than one State agency and if the good or service provided under this Contract do not the meet the form, function, and utility required by a State agency, that agency may, subject to State purchasing policies, procure the good or service from another source.

2.309 ASSIGNMENT OF ANTITRUST CAUSE OF ACTION

For and in consideration of the opportunity to submit a quotation and other good and valuable consideration, the contractor hereby assigns, sells and transfers to the State of Michigan all rights, title and interest in and to all causes of action it may have under the antitrust laws of the United States or this State for price fixing, which causes of action have accrued prior to the date of payment and which relate solely to the particular goods, commodities, or services purchased or procured by this State pursuant to this transaction.

2.310 RESERVED

2.311 TRANSITION ASSISTANCE

If this Contract is not renewed at the end of this term, or is canceled prior to its expiration, for any reason, the Contractor must provide for up to *90 days* after the expiration or cancellation of this Contract, all reasonable transition assistance requested by the State, to allow for the expired or canceled portion of the Services to continue without interruption or adverse effect, and to facilitate the orderly transfer of such services to the State or its designees. Such transition assistance will be deemed by the parties to be governed by the terms and conditions of this Contract, (notwithstanding this expiration or cancellation) except for those Contract terms or conditions that do not reasonably apply to such transition assistance. The State shall pay the Contractor for any resources utilized in performing such transition assistance at the most current rates provided by the Contract for Contract performance.

2.312 WORK PRODUCT

Work Products shall be considered works made by the Contractor for hire by the State and shall belong exclusively to the State and its designees, unless specifically provided otherwise by mutual agreement of the Contractor and the State. If by operation of law any of the Work Product, including all related intellectual property rights, is not owned in its entirety by the State automatically upon creation thereof, the Contractor agrees to assign, and hereby assigns to the State and its designees the ownership of such Work Product, including all related intellectual property rights. The Contractor agrees to provide, at no additional charge, any assistance and to execute any action reasonably required for the State to perfect its intellectual property rights with respect to the aforementioned Work Product.

Notwithstanding any provision of this Contract to the contrary, any preexisting work or materials including, but not limited to, any routines, libraries, tools, methodologies, processes or technologies (collectively, the "Development Tools") created, adapted or used by the Contractor in its business generally, including any

and all associated intellectual property rights, shall be and remain the sole property of the Contractor, and the State shall have no interest in or claim to such preexisting work, materials or Development Tools, except as necessary to exercise its rights in the Work Product. Such rights belonging to the State shall include, but not be limited to, the right to use, execute, reproduce, display, perform and distribute copies of and prepare derivative works based upon the Work Product, and the right to authorize others to do any of the foregoing, irrespective of the existence therein of preexisting work, materials and Development Tools, except as specifically limited herein.

The Contractor and its subcontractors shall be free to use and employ their general skills, knowledge and expertise, and to use, disclose, and employ any generalized ideas, concepts, knowledge, methods, techniques or skills gained or learned during the course of performing the services under this Contract, so long as the Contractor or its subcontractors acquire and apply such information without disclosure of any confidential or proprietary information of the State, and without any unauthorized use or disclosure of any Work Product resulting from this Contract.

2.313 PROPRIETARY RIGHTS

Reserved

2.314 WEBSITE INCORPORATION

State expressly states that it will not be bound by any content on the Contractor's website, even if the Contractor's documentation specifically referenced that content and attempts to incorporate it into any other communication, unless the State has actual knowledge of such content and has expressly agreed to be bound by it in a writing that has been manually signed by an authorized representation of the State.

2.4 Contract Review and Evaluation

2.401 CONTRACT COMPLIANCE INSPECTOR

Upon receipt at Acquisition Services of the properly executed Contract Agreement(s), the person named below will be allowed to oversee the Contract performance on a day-to-day basis during the term of the Contract. However, overseeing the Contract implies **no authority to negotiate, change, modify, clarify, amend, or otherwise alter the terms, conditions, and specifications of such Contract(s). That authority is retained by Acquisition Services**. The Contract Compliance Inspector for this project is:

D. Michael Bricker
Department of Environmental Quality
Office of Geological Survey
525 West Allegan Street
P.O. Box 30256
Lansing, MI 48909-7756

Telephone: 517-241-1504

E-mail: brickerm@michigan.gov

2.402 PERFORMANCE REVIEWS

Acquisition Services in conjunction with the Department of Environmental Quality may review with the Contractor their performance under the Contract. Performance reviews shall be conducted quarterly, semi-annually or annually depending on Contractor's past performance with the State. Performance reviews shall include, but not limited to, quality of products/services being delivered and provided, timeliness of delivery, percentage of completion of orders, the amount of back orders, status of such orders, accuracy of billings, customer service, completion and submission of required paperwork, the number of substitutions and the reasons for substitutions, and other requirements of the Contract.

Upon a finding of poor performance, which has been documented by Acquisition Services, the Contractor shall be given an opportunity to respond and take corrective action. If corrective action is not taken in a reasonable amount of time as determined by Acquisition Services, the Contract may be canceled for default. Delivery by the Contractor of unsafe and/or adulterated or off-condition products to any State agency is considered a material breach of Contract subject to the cancellation provisions contained herein.

2.403 AUDIT OF CONTRACT COMPLIANCE/ RECORDS AND INSPECTIONS

The Contractor agrees that the State may, upon 24-hour notice, perform an audit at Contractor's location(s) to determine if the Contractor is complying with the requirements of the Contract. The Contractor agrees to cooperate with the State during the audit and produce all records and documentation that verifies compliance with the Contract requirements.

2.5 Quality and Warranties

2.501 PROHIBITED PRODUCTS

The State will not accept salvage, distressed, outdated or discontinued merchandise. Shipping of such merchandise to any State agency, as a result of an order placed against the Contract, shall be considered default by the Contractor of the terms and conditions of the Contract and may result in cancellation of the Contract by the State. The brand and product number offered for all items shall remain consistent for the term of the Contract, unless Acquisition Services has approved a change.

2.502 RESERVED

2.503 RESERVED

2.504 GENERAL WARRANTIES (goods)

Warranty of Merchantability – Goods provided by vendor under this agreement shall be merchantable. All goods provided under this contract shall be of good quality within the description given by the State, shall be fit for their ordinary purpose, shall be adequately contained and packaged within the description given by the State, shall conform to the agreed upon specifications, and shall conform to the affirmations of fact made by the vendor or on the container or label.

Warranty of fitness for a particular purpose – When vendor has reason to know or knows any particular purpose for which the goods are required, and the State is relying on the vendor's skill or judgment to select or furnish suitable goods, there is a warranty that the goods are fit for such purpose.

Warranty of title – Vendor shall, in providing goods to the State, convey good title in those goods, whose transfer is right and lawful. All goods provided by vendor shall be delivered free from any security interest, lien, or encumbrance of which the State, at the time of contracting, has no knowledge. Goods provided by vendor, under this agreement, shall be delivered free of any rightful claim of any third person by of infringement or the like.

2.505 CONTRACTOR WARRANTIES

The Contract will contain customary representations and warranties by the Contractor, including, without limitation, the following:

1. The Contractor will perform all services in accordance with high professional standards in the industry;

2. The Contractor will use adequate numbers of qualified individuals with suitable training, education, experience and skill to perform the services;

3. The Contractor will use its best efforts to use efficiently any resources or services necessary to provide the services that are separately chargeable to the State;

4. The Contractor will use its best efforts to perform the services in the most cost effective manner consistent with the required level of quality and performance;

5. The Contractor will perform the services in a manner that does not infringe the proprietary rights of any third party;

6. The Contractor will perform the services in a manner that complies with all applicable laws and regulations;

7. The Contractor has duly authorized the execution, delivery and performance of the Contract;

8. The Contractor is capable in all respects of fulfilling and shall fulfill all of its obligations under this contract.

9. The contract appendices, attachments, and exhibits identify all equipment and software services necessary for the deliverable(s) to perform and operate in compliance with the contract's requirements.

10. The Contractor is the lawful owner or licensee of any Deliverable licensed or sold to the state by Contractor or developed by Contractor under this contract, and Contractor has all of the rights necessary to convey to the state the ownership rights or license use, as applicable, of any and all Deliverables.

11. If, under this Contract, Contractor procures any equipment, software or other Deliverable for the State (including equipment, software and other Deliverables manufactured, re-marketed or otherwise sold by Contractor under Contractor's name), then in addition to Contractor's other responsibilities with respect to such items as set forth in this Contract, Contractor shall assign or otherwise transfer to the State or its designees, or afford the State the benefits of, any manufacturer's warranty for the Deliverable.

12. The contract signatory has the power and authority, including any necessary corporate authorizations, necessary to enter this contract, on behalf of Contractor.

13. The Contractor is qualified and registered to transact business in all locations where required.

14. Neither the Contractor nor any Affiliates, nor any employee of either, has, shall have, or shall acquire, any contractual, financial, business, or other interest, direct or indirect, that would conflict in any manner or degree with Contractor's performance of its duties and responsibilities to the State under this Contract or otherwise create an appearance of impropriety with respect to the award or performance of this Agreement. Contractor shall notify the State within two (2) days of any such interest that may be incompatible with the interests of the State.

15. All financial statements, reports, and other information furnished by Contractor to the State as part of its response to the ITB or otherwise in connection with the award of this Contract fairly and accurately represent the business, properties, financial condition, and results of operations of Contractor as of the respective dates, or for the respective periods, covered by such financial statements, reports, other information. Since the respective dates or periods covered by such financial statements, reports, or other information, there have been no material adverse changes in the business, properties, financial condition, or results of operations of Contractor. All written information furnished to the State by or behalf of Contractor in connection with this Contract, including its bid, it true, accurate, and complete, and contains no untrue statement of material fact or omits any material fact necessary to make such information not misleading.

2.506 STAFF

The State reserves the right to approve the Contractor's assignment of Key Personnel to this project and to recommend reassignment of personnel deemed unsatisfactory by the State.

The Contractor shall not remove or reassign, without the State's prior written approval any of the Key Personnel until such time as the Key Personnel have completed all of their planned and assigned responsibilities in connection with performance of the Contractor's obligations under this Contract. The Contractor agrees that the continuity of Key Personnel is critical and agrees to the continuity of Key Personnel. Removal of Key Personnel without the written consent of the State may be considered by the State to be a material breach of this Contract. The prohibition against removal or reassignment shall not apply where Key Personnel must be replaced for reasons beyond the reasonable control of the Contractor including but not limited to illness, disability, resignation or termination of the Key Personnel's employment.

2.507 SOFTWARE WARRANTIES

(a) Performance Warranty

The Contractor represents and warrants that Deliverables, after Final Acceptance, will perform and operate in compliance with the requirements and other standards of performance contained in this Contract (including all descriptions, specifications and drawings made a part of the Contract) for a period of ninety (90) days. In the event of a breach of this warranty, Contractor will promptly correct the affected Deliverable(s) at no charge to the State.

(b) No Surreptitious Code Warranty

The Contractor represents and warrants that no copy of licensed Software provided to the State contains or will contain in any Self-Help Code or any Unauthorized Code as defined below. This warranty is referred to in this Contract as the "No Surreptitious Code Warranty."

As used in this Contract, "Self-Help Code" means any back door, time bomb, drop dead device, or other software routine designed to disable a computer program automatically with the passage of time or under the positive control of a person other than the licensee of the software. Self-Help Code does not include Software routines in a computer program, if any, designed to permit an owner of the computer program (or other person acting by authority of the owner) to obtain access to a licensee's computer system(s) (e.g. remote access via modem) for purposes of maintenance or technical support.

As used in this Contract, "Unauthorized Code" means any virus, Trojan horse, spyware, worm or other Software routines or components designed to permit unauthorized access to disable, erase, or otherwise harm software, equipment, or data; or to perform any other such actions. The term Unauthorized Code does not include Self-Help Code.

In addition, Contractor will use up-to-date commercial virus detection software to detect and remove any viruses from any software prior to delivering it to the State.

(c) Calendar Warranty

The Contractor represents and warrants that all software for which the Contractor either sells or licenses to the State of Michigan and used by the State prior to, during or after the calendar year 2000, includes or shall include, at no added cost to the State, design and performance so the State shall not experience software abnormality and/or the generation of incorrect results from the software, due to date oriented processing, in the operation of the business of the State of Michigan.

The software design, to insure calendar year rollover compatibility, shall include, but is not limited to: data structures (databases, data files, etc.) that provide 4-digit date century; stored data that contain date century recognition, including, but not limited to, data stored in databases and hardware device internal system dates; calculations and program logic (e.g., sort algorithms, calendar generation, event recognition, and all processing actions that use or produce date values) that accommodates same century and multi-century formulas and date values; interfaces that supply data to and receive data from other systems or organizations that prevent non-compliant dates and data from entering any State system; user interfaces (i.e., screens, reports, etc.) that accurately show 4 digit years; and assurance that the year 2000 shall be correctly treated as a leap year within all calculation and calendar logic.

(d) Third-party Software Warranty

The Contractor represents and warrants that it will disclose the use or incorporation of any third-party software into the Deliverables. At the time of Delivery, the Contractor shall provide in writing the name and use of any Third-party Software, including information regarding the Contractor's authorization to include and utilize such software. The notice shall include a copy of any ownership agreement or license that authorizes the Contractor to use the Third-party Software.

2.508 EQUIPMENT WARRANTY

Reserved.

2.509 PHYSICAL MEDIA WARRANTY

Contractor represents and warrants that each licensed copy of the Software provided by the Contractor is free from physical defects in the media that tangibly embodies the copy. This warranty does not apply to defects discovered more than thirty (30) days after that date of Final Acceptance of the Software by the State. This warranty does not apply to defects arising from acts of Excusable Failure. If the Contractor breaches this warranty, then the State shall be entitled to replacement of the non-compliant copy by Contractor, at Contractor's expense (including shipping and handling).

2.6 Breach of Contract

2.601 BREACH DEFINED

Failure to comply with articles, sections, or subsections of this agreement, or making any false statement in this agreement will be considered a material breach of this agreement giving the state authority to invoke any and all remedies available to it under this agreement.

In addition to any remedies available in law and by the terms of this contract, if the Contractor breaches Sections 2.508, 2.509, or 2.510, such a breach may be considered as a default in the performance of a material obligation of this contract.

2.602 NOTICE AND THE RIGHT TO CURE

In the event of a curable breach by the Contractor, the State shall provide the Contractor written notice of the breach and a time period to cure said breach described in the notice. This section requiring notice and an opportunity to cure shall not be applicable in the event of successive or repeated breaches of the same nature or if the State determines in its sole discretion that the breach poses a serious and imminent threat to the health or safety of any person or the imminent loss, damage or destruction of any real or tangible personal property.

2.603 EXCUSABLE FAILURE

1. Neither party shall be liable for any default or delay in the performance of its obligations under the Contract if and to the extent such default or delay is caused, directly or indirectly, by: fire, flood, earthquake, elements of nature or acts of God; riots, civil disorders, rebellions or revolutions in any country; the failure of the other party to perform its material responsibilities under the Contract (either itself or through another contractor); injunctions (provided the injunction was not issued as a result of any fault or negligence of the party seeking to have its default or delay excused); or any other cause beyond the reasonable control of such party; provided the non-performing party and its subcontractors are without fault in causing such default or delay, and such default or delay could not have been prevented by reasonable precautions and cannot reasonably be circumvented by the non-performing party through the use of alternate sources, workaround plans or other means, including disaster recovery plans. In such event, the non-performing party will be excused from any further performance or observance of the obligation(s) so affected for as long as such circumstances prevail and such party continues to use its best efforts to recommence performance or observance whenever and to whatever extent possible without delay provided such party promptly notifies the other party in writing of the inception of the excusable failure occurrence, and also of its abatement or cessation.

2. If any of the above enumerated circumstances substantially prevent, hinder, or delay performance of the services necessary for the performance of the State's functions for more than 14 consecutive days, and the State determines that performance is not likely to be resumed within a period of time that is satisfactory to the State in its reasonable discretion, then at the State's option: (a) the State may procure the affected services from an alternate source, and the State shall not be liable for payments for the unperformed services under the Contract for so long as the delay in performance shall continue; (b) the State may cancel any portions of the Contract so affected and the charges payable hereunder shall be equitably adjusted to reflect those services canceled; or (c) the Contract will be canceled without liability of the State to the Contractor as of the date specified by the State in a

written notice of cancellation to the Contractor. The Contractor will not have the right to any additional payments from the State as a result of any excusable failure occurrence or to payments for services not rendered as a result of the excusable failure condition. Defaults or delays in performance by the Contractor which are caused by acts or omissions of its subcontractors will not relieve the Contractor of its obligations under the Contract except to the extent that a subcontractor is itself subject to any excusable failure condition described above and the Contractor cannot reasonably circumvent the effect of the subcontractor's default or delay in performance through the use of alternate sources, workaround plans or other means.

2.7 Remedies

2.701 CANCELLATION

The State may cancel this Contract without further liability or penalty to the State, its departments, divisions, agencies, offices, commissions, officers, agents, and employees for any of the following reasons:

1. Material Breach by the Contractor. In the event that the Contractor breaches any of its material duties or obligations under the Contract, which are either not capable of or subject to being cured, or are not cured within the time period specified in the written notice of breach provided by the State, or pose a serious and imminent threat to the health and safety of any person, or the imminent loss, damage or destruction of any real or tangible personal property, the State may, having provided written notice of cancellation to the Contractor, cancel this Contract in whole or in part, for cause, as of the date specified in the notice of cancellation.

   In the event that this Contract is cancelled for cause, in addition to any legal remedies otherwise available to the State by law or equity, the Contractor shall be responsible for all costs incurred by the State in canceling the Contract, including but not limited to, State administrative costs, attorneys fees and court costs, and any additional costs the State may incur to procure the services required by this Contract from other sources. All excess re-procurement costs and damages shall not be considered by the parties to be consequential, indirect or incidental, and shall not be excluded by any other terms otherwise included in the Contract.

   In the event the State chooses to partially cancel this Contract for cause charges payable under this Contract will be equitably adjusted to reflect those services that are cancelled.

   In the event this Contract is cancelled for cause pursuant to this section, and it is therefore determined, for any reason, that the Contractor was not in breach of contract pursuant to the provisions of this section, that cancellation for cause shall be deemed to have been a cancellation for convenience, effective as of the same date, and the rights and obligations of the parties shall be limited to that otherwise provided in the Contract for a cancellation for convenience.

2. Cancellation For Convenience By the State. The State may cancel this Contract for its convenience, in whole or part, if the State determines that such a cancellation is in the State's best interest. Reasons for such cancellation shall be left to the sole discretion of the State and may include, but not limited to (a) the State no longer needs the services or products specified in the Contract, (b) relocation of office, program changes, changes in laws, rules, or regulations make implementation of the Contract services no longer practical or feasible, and (c) unacceptable prices for additional services requested by the State. The State may cancel the Contract for its convenience, in whole or in part, by giving the Contractor written notice 30 days prior to the date of cancellation. If the State chooses to cancel this Contract in part, the charges payable under this Contract shall be equitably adjusted to reflect those services that are cancelled.

3. Non-Appropriation. In the event that funds to enable the State to effect continued payment under this Contract are not appropriated or otherwise made available. The Contractor acknowledges that, if this Contract extends for several fiscal years, continuation of this Contract is subject to appropriation or availability of funds for this project. If funds are not appropriated or otherwise made available, the State shall have the right to cancel this Contract at the end of the last period for which funds have been appropriated or otherwise made available by giving written notice of cancellation to the Contractor. The State shall give the Contractor written notice of such non-appropriation or unavailability within 30 days after it receives notice of such non-appropriation or unavailability.

4. Criminal Conviction. In the event the Contractor, an officer of the Contractor, or an owner of a 25% or greater share of the Contractor, is convicted of a criminal offense incident to the application for or performance of a State, public or private Contract or subcontract; or convicted of a criminal offense including but not limited to any of the following: embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, attempting to influence a public employee to breach the ethical conduct standards for State of Michigan employees; convicted under State or federal antitrust statutes; or convicted of any other criminal offense which in the sole discretion of the State, reflects upon the Contractor's business integrity.

5. Approvals Rescinded. The State may terminate this Contract without further liability or penalty in the event any final administrative or judicial decision or adjudication disapproves a previously approved request for purchase of personal services pursuant to Constitution 1963, Article 11, section 5, and Civil Service Rule 7. Termination may be in whole or in part and may be immediate as of the date of the written notice to Contractor or may be effective as of the date stated in such written notice.

2.702 RIGHTS UPON CANCELLATION

Termination Assistance. If this Contract (or any Statement of Work issued under it) is terminated for any reason prior to completion, Contractor agrees to provide for up to six (6) months after the termination all reasonable termination assistance requested by the State to facilitate the orderly transfer of such Services to the State or its designees in a manner designed to minimize interruption and adverse effect. Such termination assistance will be deemed by the parties to be governed by the terms and conditions of this Contract (notwithstanding its termination) other than any terms or conditions that do not reasonably apply to such termination assistance. Such termination assistance shall be at no additional charge to the State if the termination is for Contractor's Default pursuant to Section 2.602; otherwise the State shall compensate Contractor for such termination assistance on a time and materials basis in accordance with the Amendment Labor Rates identified within this Contract agreement.

2.703 LIQUIDATED DAMAGES

Reserved.

2.704 STOP WORK

1. The State may, at any time, by written stop work order to the Contractor, require that the Contractor stop all, or any part, of the work called for by this Contract for a period of up to 90 days after the stop work order is delivered to the Contractor, and for any further period to which the parties may agree. The stop work order shall be specifically identified as such and shall indicate that it is issued under this section. Upon receipt of the stop work order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the stop work order during the period of work stoppage. Within the period of the stop work order, the State shall either:

   a) Cancel the stop work order; or
   b) Cancel the work covered by the stop work order as provided in the cancellation section of this Contract.

2. If a stop work order issued under this section is canceled or the period of the stop work order or any extension thereof expires, the Contractor shall resume work. The State shall make an equitable adjustment in the delivery schedule, the contract price, or both, and the Contract shall be modified, in writing, accordingly, if:

   a) The stop work order results in an increase in the time required for, or in the Contractor's costs properly allocable to the performance of any part of this Contract; and
   b) The Contractor asserts its right to an equitable adjustment within 30 days after the end of the period of work stoppage; provided, that if the State decides the facts justify the action, the State may receive and act upon a proposal submitted at any time before final payment under this Contract.

3. If the stop work order is not canceled and the work covered by the stop work order is canceled for reasons other than material breach, the State shall allow reasonable costs resulting from the stop work order in arriving at the cancellation settlement.

4. If a stop work order is not canceled and the work covered by the stop work order is canceled for material breach, the State shall not allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop work order.

An appropriate equitable adjustment may be made in any related contract of the Contractor that provides for adjustment and is affected by any stop work order under this section. The State shall not be liable to the Contractor for loss of profits because of a stop work order issued under this section.

2.705 SUSPENSION OF WORK

The Contract Administrator may order the Contractor, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contract Administrator determines appropriate for the convenience of the Government.

If the performance of all or any part of the work is, for an unreasonable period of time, suspended, delayed, or interrupted (1) by an act of the Contract Administrator in the administration of this contract, or (2) by the Contract Administrator's failure to act within the time specified in this contract (or within a reasonable time if not specified), an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) necessarily caused by the unreasonable suspension, delay, or interruption, and the contract modified in writing accordingly. However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor, or for which an equitable adjustment is provided for or excluded under any other term or condition of this contract.

A claim under this clause shall not be allowed:

(1) For any costs incurred more than 20 days before the Contractor shall have notified the Contract Administrator in writing of the act or failure to act involved (but this requirement shall not apply as to a claim resulting from a suspension order); and
(2) Unless the claim, in an amount stated, is asserted in writing as soon as practicable after the termination of the suspension, delay, or interruption, but not later than the date of final payment under the contract.

2.8 Changes, Modifications, and Amendments

2.801 APPROVALS

The Contract may not be modified, amended, extended, or augmented except by a writing executed by the parties hereto, and any breach or default by a party shall not be waived or released other than in writing signed by the other party.

2.802 TIME EXTENTIONS

Time extensions for contract changes will depend upon the extent, if any, by which the changes cause delay in the completion of the various elements of performance as described in the statement of work. The change order granting the time extension may provide that the contract completion date will be extended only for those specific elements related to the changed work and that the remaining contract completion dates for all other portions of the work will not be altered. The change order also may provide an equitable readjustment of liquidated damages under the new completion schedule.

2.803 MODIFICATION

Acquisition Services reserves the right to modify this contract at any time during the contract term. Such modification may include changing the locations to be serviced, additional locations to be serviced, method or manner of performance of the work, number of days service is to be performed, addition or deletion of tasks to be performed, addition or deletion of items, and/or any other modifications deemed necessary. Any changes in pricing proposed by the Contractor resulting from the proposed changes are subject to

acceptance by the State. Changes may be increases or decreases. IN THE EVENT PRICES ARE NOT ACCEPTABLE TO THE STATE, THE CONTRACT SHALL BE SUBJECT TO COMPETITIVE BIDDING BASED UPON THE NEW SPECIFICATION.

The State reserves the right to add an item(s) that is not described on the item listing and is available from the Contract vendor. The item(s) may be included on the Contract, only if prior written approval has been granted by Acquisition Services.

2.804 AUDIT AND RECORDS UPON MODIFICATION

DEFINITION: records includes books, documents, accounting procedures and practices, and other data, regardless of whether such items are in written form, electronic form, or in any other form

Contractor shall be required to submit cost or pricing data with the pricing of any modification of this contract to the Contract Administrator in Acquisition Services. Data may include accounting records, payroll records, employee time sheets, and other information the state deems necessary to perform a fair evaluation of the modification proposal. Contract Administrator or authorized representative of the state shall have the right to examine and audit all of the contractor's records, including computations and projections, related to:

1. The proposal for modification;
2. The discussions conducted on the proposal, including those related to negotiation;
3. Pricing of the modification; or
4. Performance of the modification.

Contractor shall make available at its office at all reasonable times the materials described in the paragraphs above.

If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement.

2.805 CHANGES

(a) The Contract Administrator may, at any time, without notice to the sureties, if any, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including changes:

(1) In the specifications (including drawings and designs);
(2) In the method or manner of performance of the work;
(3) In the Government-furnished facilities, equipment, materials, services, or site; or
(4) Directing acceleration in the performance of the work.

(a) Any other written or oral order (which, as used in this paragraph (b), includes direction, instruction, interpretation, or determination) from the Contract Administrator that causes a change shall be treated as a change order under this clause; Provided, that the Contractor gives the Contract Administrator written notice stating:

(1) The date, circumstances, and source of the order; and
(2) That the Contractor regards the order as a change order.

(b) Except as provided in this clause, no order, statement, or conduct of the Contract Administrator shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment.

3.00 LIABILITY INSURANCE

A. Insurance

The Contractor is required to provide proof of the minimum levels of insurance coverage as indicated below. The purpose of this coverage shall be to protect the State from claims which may arise out of or result from the Contractor's performance of services under the terms of this Contract, whether such services are performed by the Contractor, or by any subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.

The Contractor waives all rights against the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents for recovery of damages to the extent these damages are covered by the insurance policies the Contractor is required to maintain pursuant to this Contract.

All insurance coverage provided relative to this Contract/Purchase Order is PRIMARY and NON-CONTRIBUTING to any comparable liability insurance (including self-insurances) carried by the State.

The insurance shall be written for not less than any minimum coverage specified in this Contract or required by law, whichever is greater.

The insurers selected by Contractor shall have an A.M. Best rating of A or better, or as otherwise approved in writing by the State, or if such ratings are no longer available, with a comparable rating from a recognized insurance rating agency. Companies that have been approved to do business in the State shall issue all policies of insurance required in this Contract.

See www.michigan.gov/cis

Where specific limits are shown, they are the minimum acceptable limits. If Contractor's policy contains higher limits, the State shall be entitled to coverage to the extent of such higher limits.

Before both parties sign the Contract or before the purchase order is issued by the State, the Contractor must furnish to the Director of Acquisition Services, certificate(s) of insurance verifying insurance coverage ("Certificates"). The Certificate must be on the standard "accord" form or equivalent. **THE CONTRACT OR PURCHASE ORDER NO. MUST BE SHOWN ON THE CERTIFICATE OF INSURANCE TO ASSURE CORRECT FILING.** All Certificate(s) are to be prepared and submitted by the Insurance Provider. All Certificate(s) shall contain a provision indicating that coverage afforded under the policies WILL NOT BE CANCELLED, MATERIALLY CHANGED, OR NOT RENEWED without THIRTY (30) days prior written notice, except for ten (10) days for non-payment of premium, having been given to the Director of Acquisition Services, Department of Management and Budget. The notice must include the Contract or Purchase Order number affected and be mailed to: Director, Acquisition Services, Department of Management and Budget, P.O. Box 30026, Lansing, Michigan 48909. Failure to provide evidence of coverage, may, at the State's sole option, result in this Contract's termination.

The Contractor is required to pay for and provide the type and amount of insurance checked **below**:

☑ 1. Commercial General Liability with the following minimum coverage:

$2,000,000	General Aggregate Limit other than Products/Completed Operations
$2,000,000	Products/Completed Operations Aggregate Limit
$1,000,000	Personal & Advertising Injury Limit
$1,000,000	Each Occurrence Limit
$500,000	Fire Damage Limit (any one fire)

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the Commercial General Liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

☑ 2. If a motor vehicle is used to provide services or products under this Contract, the Contractor must have vehicle liability insurance on any auto including owned, hired and non-owned vehicles used in Contractor's business for bodily injury and property damage as required by law.

The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees and agents as ADDITIONAL INSUREDS on the vehicle liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

☑ 3. Workers' compensation coverage must be provided in accordance with applicable laws governing the employees and employers work activities in the state of the Contractor's domicile. If a self-insurer provides the applicable coverage, proof must be provided of approved self-insured authority by the jurisdiction of domicile. For employees working outside of the state of qualification, Contractor must provide appropriate certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

Any certificates of insurance received must also provide a list of states where the coverage is applicable.

The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company. This provision shall not be applicable where prohibited or limited by the laws of the jurisdiction in which the work is to be performed.

☑ 4. Employers liability insurance with the following minimum limits:

$100,000	each accident
$100,000	each employee by disease
$500,000	aggregate disease

☑ 5. Employee Fidelity, including Computer Crimes, insurance naming the State as a loss payee, providing coverage for direct loss to the State and any legal liability of the State arising out of or related to fraudulent or dishonest acts committed by the employees of Contractor or its Subcontractors, acting alone or in collusion with others, in a minimum amount of $25,000.

B. <u>Subcontractors</u>

Except where the State has approved in writing a Contractor subcontract with other insurance provisions, Contractor shall require all of its Subcontractors under this Contract to purchase and maintain the insurance coverage as described in this Section for the Contractor in connection with the performance of work by those Subcontractors. Alternatively, Contractor may include any Subcontractors under Contractor's insurance on the coverage required in this Section. Subcontractor(s) shall fully comply with the insurance coverage required in this Section. Failure of Subcontractor(s) to comply with insurance requirements does not limit Contractor's liability or responsibility.

C. <u>Certificates of Insurance and Other Requirements</u>

Contractor shall furnish to the Office of Acquisition Services certificate(s) of insurance verifying insurance coverage or providing satisfactory evidence of self-insurance as required in this Section (the "Certificates"). Before the Contract is signed, and not less than 20 days before the insurance expiration date every year thereafter, the Contractor shall provide evidence that the State and its agents, officers and employees are listed as additional insureds, but only to the extent of liabilities assumed by Contractor as set forth in Indemnification Section of this Contract, under each commercial general liability and commercial automobile liability policy. In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Attorney General of the State of Michigan.

Contractor shall maintain all required insurance coverage throughout the term of the Contract and any extensions thereto and, in the case of claims-made Commercial General Liability policies, shall secure tail coverage for at least three (3) years following the expiration or termination for any reason of this Contract. The minimum limits of coverage specified above are not intended, and shall not be construed, to limit any liability or indemnity of Contractor under this Contract to any indemnified party or other persons. Contractor shall be responsible for all deductibles with regard to such insurance. If Contractor fails to pay any premium for required insurance as specified in this Contract, or if any insurer cancels or significantly reduces any required insurance as specified in this Contract without the State's written consent, at the State's election (but without any obligation to do so) after the State has given Contractor at least thirty (30) days written notice, the State may pay such premium or procure similar insurance coverage from another company or companies; and at the State's election, the State may deduct the entire cost (or part thereof) from any payment due Contractor, or Contractor shall pay the entire cost (or any part thereof) upon demand by the State.

4.00 WORKPLACE DISCRIMINATION

The Contractor represents and warrants that in performing services for the State pursuant to this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment, with respect to their hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, ancestry, age, sex, height, weight, marital status, physical or mental handicap or disability. The Contractor further agrees that every subcontract entered into for the performance of any Contract or purchase order resulting here from will contain a provision requiring non-discrimination in employment, as herein specified, binding upon each subcontractor. This covenant is required pursuant to the Elliot Larsen Civil Rights Act, 1976 Public Act 453, as amended, MCL 37.2201, et seq., and the Persons With Disabilities Civil Rights Act, 1976 Public Act 220, as amended, MCL 37.1101, et seq., and any breach thereof may be regarded as a material breach of the Contract or purchase order.

Vendor hereby represents that in performing this contract it will not violate The Civil Rights Act of 1964, USCS Chapter 42, including, but not limited to, Title VII, 42 USCS §§ 2000e et seq.; the Americans with Disabilities Act (ADA), 42 USCS §§ 12101 et seq.; or The Age Discrimination in Employment Act of 1967 (ADEA), 29 USCS §§ 621, 623 et seq.; the Old Workers Benefit and Protection Act of 1990 (OWBPA), 29 USCS §§ 626 et seq.; the Family Medical Leave Act of 1993 (FMLA), 29 USC §§ 651 et seq.; or the Fair Labor Standards Act (FLSA), 29 USC §§ 201 et seq.

_____ (Initial)

5.00 LABOR RELATIONS

Pursuant to 1980 Public Act 278, as amended, MCL 423.231, et seq., the State shall not award a Contract or subcontract to an employer whose name appears in the current register of employers failing to correct an **unfair labor practice** compiled pursuant to Section 2 of the Act. A Contractor of the State, in relation to the Contract, shall not enter into a Contract with a subcontractor, manufacturer, or supplier whose name appears in this register. Pursuant to Section 4 of 1980 Public Act 278, MCL 423.324, the State may void any Contract if, subsequent to award of the Contract, the name of the Contractor as an employer, or the name of the subcontractor, manufacturer or supplier of the Contractor appears in the register.

The Contractor represents and warrants that the company does not appear in the current register of employers failing to correct an unfair labor practice.

_____ (Initial)

APPENDIX A

Log codes FOR SCANNING

StateCode	ScanCode	Definition	Tag
ACBG	CB	Acoustic Cement Bond Gamma Ray	ACOUSTIC CEMENT BOND GAMMA RAY
ACB	CB	Acoustic Cement Bond Log	ACOUSTIC CEMENT BOND LOG
ACBGR	CB	Acoustic Cement Bond Log Gamma Ray	ACOUSTIC CEMENT BOND LOG GAMMA RAY
ELAN	ELAN	Advanced Synergetic Log	ADVANCED SYNERGETIC LOG
AIRHO	AIRHO	Air Hole Cntg/Fdc	AIR HOLE CNTG/FDC
ARG	GR	Array Induction Gamma Ray	ARRAY INDUCTION GAMMA RAY
ARI	ARI	Asimuthal Resistivity Imager Dual Laterl	ASIMUTHAL RESISTIVITY IMAGER DUAL LATERL
BGR	GR	Barefoot Gamma Ray	BAREFOOT GAMMA RAY
BHCA	SON	Bhc Acoustilog	BHC ACOUSTILOG
BHCGR	SON	Bhc Sonic/Gamma Ray	BHC SONIC/GAMMA RAY
BHCTV	SON	Bhc True Vertical Depth-Sonic	BHC TRUE VERTICAL DEPTH-SONIC
BCS	SON	Borehole Compensated Sonic	BOREHOLE COMPENSATED SONIC
BCSG	SON	Borehole Compensated Sonic/Gamma Ray	BOREHOLE COMPENSATED SONIC/GAMMA RAY
BDP	BDP	Borehole Deviation Plot	BOREHOLE DEVIATION PLOT
BTV	BTV	Borehole Televiewer	BOREHOLE TELEVIEWER
CALIP	CALI	Caliper Log	CALIPER LOG
CALBV	CALI	Caliper Log W/Borehole Volume	CALIPER LOG W/BOREHOLE VOLUME
C/GR	GR	Caliper/Gamma Ray	CALIPER/GAMMA RAY
CB	CB	Cement Bond	CEMENT BOND
CB/GA	CB	Cement Bond/Gamma-Ray Log	CEMENT BOND/GAMMA-RAY LOG
CBVDL	CB	Cement Bond/Variable Density Log	CEMENT BOND/VARIABLE DENSITY LOG
CBVDG	CB	Cement Bond/Variable Density Log/Gamma R	CEMENT BOND/VARIABLE DENSITY LOG/GAMMA R
CEL	CB	Cement Evaluation Log	CEMENT EVALUATION LOG
CEGRC	CB	Cement Evaluation Log/Gamma Ray/Ccl	CEMENT EVALUATION LOG/GAMMA RAY/CCL
CS	CB	Cement Scan	CEMENT SCAN
GAS	CAS	Circumferential Acousic Scan Log	CIRCUMFERENTIAL ACOUSIC SCAN LOG
CLG	CLG	Collar Log	COLLAR LOG
CDDSN	CNLDT	Compensated Density Dual Spaced Neut/Gr	COMPENSATED DENSITY DUAL SPACED NEUT/GR
CDGR	CDGR	Compensated Density Gamma Ray Caliper	COMPENSATED DENSITY GAMMA RAY CALIPER
CDL	DENS	Compensated Density Log	COMPENSATED DENSITY LOG
CDR	DIPME	Compensated Dipmeter Results	COMPENSATED DIPMETER RESULTS
CN	CNL	Compensated Neutron	COMPENSATED NEUTRON
CNG	CNL	Compensated Neutron/Gamma Ray	COMPENSATED NEUTRON/GAMMA RAY
CSLOG	SON	Compensated Sonic Log	COMPENSATED SONIC LOG
CSLGR	SON	Compensated Sonic Log/Gamma Ray	COMPENSATED SONIC LOG/GAMMA RAY
SL/GA	SON	Compensated Sonic Log/Gamma Ray	COMPENSATED SONIC LOG/GAMMA RAY

StateCode	ScanCode	Definition	Tag
CSNGL	SGR	Compensated Spectral Natural Gamma Log	COMPENSATED SPECTRAL NATURAL GAMMA LOG
CSNGR	SGR	Compensated Spectral Natural Gamma Ray	COMPENSATED SPECTRAL NATURAL GAMMA RAY
COMLG	COMP	Computer Log	COMPUTER LOG
LD	COMP	Computer Log	COMPUTER LOG
LD/WL	COMP	Computer Log	COMPUTER LOG
CORLG	CORL	Correlation Log	CORRELATION LOG
CD	CYBR	Cyberdip	CYBERDIP
CL	CYBR	Cyberlook Log	CYBERLOOK LOG
CYS	CYBR	Cyberscan	CYBERSCAN
DIT	DIT	Deep Induction Tool	DEEP INDUCTION TOOL
DCL	CORL	Depth Control Log	DEPTH CONTROL LOG
DCORL	CORL	Depth Correlation Log	DEPTH CORRELATION LOG
DDL	CORL	Depth Determination Log	DEPTH DETERMINATION LOG
DDTGR	DDTGR	Digital Delta T Log/Gamma Ray	DIGITAL DELTA T LOG/GAMMA RAY
DSLGR	SON	Digital Sonic & Long Spaced Sonic Gr	DIGITAL SONIC & LONG SPACED SONIC GR
DSGR	SON	Digital Sonic/Gamma Ray	DIGITAL SONIC/GAMMA RAY
OCR	DIPME	Dipmeter Computed Result	DIPMETER COMPUTED RESULT
DML	DIPME	Dipmeter Monitor Log	DIPMETER MONITOR LOG
DSSI	DSSI	Dipole Shear Sonic Imagery	DIPOLE SHEAR SONIC IMAGERY
DS	DS	Directional Survey	DIRECTIONAL SURVEY
DBT	DBT	Dual Burst Tdtp	DUAL BURST TDTP
DBTDT	TDT	Dual Burst Thermal Decay Time Log	DUAL BURST THERMAL DECAY TIME LOG
DIPME	DIP	Dual Dipmeter	DUAL DIPMETER
DD	DIP	Dual Dipmeter Monitor Log	DUAL DIPMETER MONITOR LOG
DDGR	DIP	Dual Dipmeter/Gamma Ray	DUAL DIPMETER/GAMMA RAY
DILAT	DIL	Dual Induction Laterolog	DUAL INDUCTION LATEROLOG
DILGR	DIL	Dual Induction Laterolog/Gamma Ray	DUAL INDUCTION LATEROLOG/GAMMA RAY
DIG	DIL	Dual Induction/Gamma Ray	DUAL INDUCTION/GAMMA RAY
DISFL	DIL	Dual Induction-Sfl/Gamma Ray	DUAL INDUCTION-SFL/GAMMA RAY
DLL	DLL	Dual Laterolog	DUAL LATEROLOG
DLMSG	DLL	Dual Laterolog Micro Spec Focused Gamma	DUAL LATEROLOG MICRO SPEC FOCUSED GAMMA
DLLG	DLL	Dual Laterolog/Gamma Ray	DUAL LATEROLOG/GAMMA RAY
DLML	DLL	Dual Laterolog/Micro Laterolog	DUAL LATEROLOG/MICRO LATEROLOG
DLMLG	DLL	Dual Laterolog/Micro Laterolog/Gr	DUAL LATEROLOG/MICRO LATEROLOG/GR
DPSFL	DLL	Dual Phaser W/Sfl	DUAL PHASOR W/SFL
DSGNC	CRN	Dual Sp Gamma /Neutron/Cement Bond Log	DUAL SP GAMMA/NEUTRON/CEMENT/CEMENT BOND LOG
DSNG	CRN	Dual Spaced Neutron Gamma Ray	DUAL SPACED NEUTRON GAMMA RAY
EPT	EPT	Electromagnetic Propagation Tool Monitor	ELECTROMAGNETIC PROPAGATION TOOL MONITOR

StateCode	ScanCode	Definition	Tag
FMS	FMS	Fms Monitor	FMS MONITOR
FMS	FMS	Fms Monitor Log	FMS MONITOR LOG
FMS	FMS	Fms/Gamma Ray/Log	FMS/GAMMA RAY/LOG
FDC	FDC	Formation Density Compensated	FORMATION DENSITY COMPENSATED
FDCG	FDC	Formation Density Compensated/Gamma Ray	FORMATION DENSITY COMPENSATED/GAMMA RAY
FDCN	FDC	Formation Density/Compensated Neutron	FORMATION DENSITY/COMPENSATED NEUTRON
FDCNG	FDC	Formation Density/Compensated Neutron/Gr	FORMATION DENSITY/COMPENSATED NEUTRON/GR
FDGR	FDC	Formation Density/Gamma Ray	FORMATION DENSITY/GAMMA RAY
FMC	FMS	Formation Micro Scanner	FORMATION MICRO SCANNER
FTL	FTL	Formation Test Log	FORMATION TEST LOG
4ARMD	DIP	Four-Arm Dipmeter Log	FOUR-ARM DIPMETER LOG
HOT	DIP	Four-Arm High Resolution Cont. Dipmeter	FOUR-ARM HIGH RESOLUTION CONT. DIPMETER
DC	DIP	Four-Electrode Dipmeter Comp. Results	FOUR-ELECTRODE DIPMETER COMP. RESULTS
FBS	FRAC	Fracpressure Borehold Stress	FRACPRESSURE BOREHOLD STRESS
FFH	FRAC	Fracpressure Fracture Height	FRACPRESSURE FRACTURE HEIGHT
FRP	FRAC	Fracpressure Rock Properties	FRACPRESSURE ROCK PROPERTIES
FI6AR	DIP	Fracture Id Six Arm Dipmeter Survey	FRACTURE ID SIX ARM DIPMETER SURVEY
FI	FRAC ID	Fracture Identification	FRACTURE IDENTIFICATION
FWS	SON	Full Wave Sonic	FULL WAVE SON 1C
GR	GR	Gamma Ray	GAMMA RAY
GRDC	GR	Gamma Ray - Depth Control	GAMMA RAY - DEPTH CONTROL
GC	GR	Gamma Ray and Collar	GAMMA RAY AND COLLAR
GRCOR	GR	Gamma Ray Ccl Correlation Log	GAMMA RAY CCL CORRELATION LOG
CRN	GRN	Gamma Ray Neutron	GAMMA RAY NEUTRON
GRSPE	SGR	Gamma Ray Spectroscopy Log	GAMMA RAY SPECTROSCOPE ^OG
GRCORL	GR	Gamma Ray-Ccl & Correlation Log	GAMMA RAY-CCL & CORRELATION LOG
TEMGR	TEMP	Gamma Temperature Log	GAMMA TEMPERATURE LOG
GPL	GPL	Gas in Place Log	GAS IN PLACE LOG
HRIDF	INDUC	High Resolution Induction Digitally	HIGH RESOLUTION INDUCTION DIGITALLY
HRIGR	INDUC	High Resolution Induction Gamma Ray	HIGH RESOLUTION INDUCTION GAMMA RAY
I-DIP	DIP	Incline Dipmeter	INCLINE DIPMETER
	LGRN	Laterolog Gamma Ray Neutron	LATEROLOG GAMMA RAY NEUTRON
LDWEL	LDWEL	Ld/Wel	LD/WEL
LCDGR	CYBR	Litho Cyberlook/Gamma Ray	LITHO CYBERLOOK/GAMMA RAY
LDCN	CNLDT	JJtho Density/Compensated Neutron	LITHO DENSITY/COMPENSATED NEUTRON
LDCNG	CNLDT	Litho Density/Compensated Neutron/Gr	LITHO DENSITY/COMPENSATED NEUTRON/GR
LC	CYBR	Litho-Cyberlook	LITHO-CYBERLOOK
LCGR	CYBR	Lithology Cyberlook Gamma Ray	LITHOLOGY CYBERLOOK GAMMA RAY

StateCode	ScanCode	Definition	Tag
LDGA	LOT	Lithology Density/Gamma Ray	LITHOLOGY DENSITY/GAMMA RAY
L		Log	LOG
LSSGA	SON	Long Spaced Sonic/Gamma Ray	LONG SPACED SONIC/GAMMA RAY
LSSW	SON	Long Spacing Sonic/Waveforms	LONG SPACING SONIC/WAVEFORMS
MSD	MSD	Meansquaredip	MEANSQUAREDIP
MSCL	MSCL	Mechanical Sidewall Core Log	MECHANICAL SIDEWALL CORE LOG
MLL	MLL	Micro Laterolog	MICRO LATEROLOG
MLLG	MLL	Micro Laterolog/Gamma Ray	MICRO LATEROLOG/GAMMA RAY
ML	MUD	Mud Log	MUD LOG
VERT	VERT	Multi-Channel Vertilog	MULTI-CHANNEL VERTILOG
NGRSL	SGR	Natural Gamrna Ray Spectrometry Log	NATURAL GAMMA RAY SPECTROMETRY LOG
NGT	SGR	Natural Gamma Ray Spectroscopy	NATURAL GAMMA RAY SPECTROSCOPY
NORM	NORM	Natural Occuring Radioactive Materials	NATURAL OCCURING RADIOACTIVE MATERIALS
ND	NEUT	Neutron Density	NEUTRON DENSITY
NDG	GRN	Neutron Density/Gamma Ray	NEUTRON DENSITY/GAMMA RAY
NG	CRN	Neutron Gamma Ray	NEUTRON GAMMA RAY
NGCL	GRN	Neutron Gamma Ray & Collar Log	NEUTRON GAMMA RAY & COLLAR LOG
NGRN	GRN	Nuclear Gamma Ray Neutron	NUCLEAR GAMMA RAY NEUTRON
NL	GR	Nuclear Log	NUCLEAR LOG
OBLIT	LITH	Observed Lithology	OBSERVED LITHOLOGY
OTH	OTH	Other	OTHER
PF/CL	PERF	Perforating & Collar Log	PERFORATING & COLLAR LOG
PERF	PERF	Perforating Record Log	PERFORATING RECORD LOG
PIGR	INDUC	Phaser Induction/Gr/Ccl	PHASER INDUCTION/GR/CCL
PEAL	LAT	Platform Express Azimuthal Laterolog	PLATFORM EXPRESS AZIMUTHAL LATEROLOG
PEC	CYBR	Platform Express Cyberlook	PLATFORM EXPRESS CYBERLOOK
PELMC	MLL	Platform Express Laterolog Micro-CFL	PLATFORM EXPRESS LATEROLOG MICRO-CFL
PELCN	CNLDT	Platform Express LithoDensity Comp Neutron	PLATFORM EXPRESS LITHODENSITY COMP NEUTRON
PETDN	CNL	Platform ExpTripleDetectDensityCompNeutron	PLATFORM EXP TRIPLEDETECTDENSITYCOMPNEUTRON
RFT	RFT	Repeat Formation Tester	REPEAT FORMATION TESTER
SBGR	CB	Segmented Bond Gamma Ray	SEGMENTED BOND GAMMA RAY
SBVDG	CB	Segmented Bond Var Dens Gamma Ray	SEGMENTED BOND VAR DENS GAMMA RAY
SML	SML	Seismic Monitor Log Css	SEISMIC MONITOR LOG CSS
SHOT	SHOT	Shdt Monitor	SHDT MONITOR
B6ARM	DIP	Shiva Comp/Borehole Deviation Six Arm Di	SHIVA COMP/BOREHOLE DEVIATION SIX ARM DI
SC6AR	DIP	Shiva Computation Six Arm Dip Survey	SHIVA COMPUTATION SIX ARM DIP SURVEY
SNP	SNP	Sidewall Neutron Porosity	SIDEWALL NEUTRON POROSITY
SINGR	SNP	Sidwell Neutron Gamma Ray	SIDWELL NEUTRON GAMMA RAY

StateCode	ScanCode	Definition	Tag
SON	CNL	Simultaneous Compensated Neutron	SIMULTANEOUS COMPENSATED NEUTRON
SDLM	DLL	Simultaneous Dual/Micro Laterolog, Gamma	SIMULTANEOUS DUAL/MICRO LATEROLOG, GAMMA
6ARMD	DIP	Six-Arm Dipmeter	SIX-ARM DIPMETER
SON	SON	Sonan	SONAN
SL	SON	Sonic Log	SONIC LOG
SPNGA	CNLDT	Spec. Density/Dual Sp/Neutron/Gamma Ray	SPEC. DENSITY/DUAL SP/NEUTRON/GAMMA RAY
SPECN	CNLDT	Spectral Density, Dual Spaced Neutron	SPECTRAL DENSITY, DUAL SPACED NEUTRON
SPEC	CNLDT	Spectral Density, Neutron, Gamma Ray	SPECTRAL DENSITY, NEUTRON, GAMMA RAY
SPECD	DENS	Spectral Density/Gamma Ray	SPECTRAL DENSITY/GAMMA RAY
SPECT	SGR	Spectralog	SPECTRALOG
SFL	SFL	Spherically Focused Log	SPHERICALLY FOCUSED LOG
SGH	SGH	Spinner Gradio Hp	SPINNER GRADIO HP
SDR	DIP	Stratigraphic Dip Removal	STRATIGRAPHIC DIP REMOVAL
SDM	DIP	Stratigraphic Dipmeter Monitor	STRATIGRAPHIC DIPMETER MONITOR
SHRD	DIP	Stratigraphic High Resolution Dipmeter	STRATIGRAPHIC HIGH RESOLUTION DIPMETER
SGR	GR	Synthetic Gamma Ray	SYNTHETIC GAMMA RAY
SGRN	CRN	Synthetic Gamma Ray Neutron	SYNTHETIC GAMMA RAY NEUTRON
SNGR	GRN	Synthetic Neutron/Gamma Ray	SYNTHETIC NEUTRON/GAMMA RAY
TEMPL	TEMP	Temperature Log	TEMPERATURE LOG
THERM	TDT	Thermal Decay Time	THERMAL DECAY TIME
TVDLC	CYBR	True Vert Depth Lithology Cyberlook	TRUE VERT DEPTH LITHOLOGY CYBERLOOK
TVD	TVD	True Vertical Depth DII/MII	TRUE VERTICAL DEPTH DLL7MLL
TVDLD	CNLDT	True Vertical Depth Ldt/Cnl	TRUE VERTICAL DEPTH LDT/CNk
TVDS	SON	True Vertical Depth Sonic	TRUE VERTICAL DEPTH SONIC
UIT	SON	Ultra Sonic Imaging Tool	ULTRA SONIC IMAGING TOOL
UBIG	CIBL	Ultrasonic Borehole Imager Gamma Ray	ULTRASONIC BOREHOLE IMAGER GAMMA RAY
VDL	DENS	Variable Density Log	VARIABLE DENSITY LOG
VEL	SON	Velocity	VELOCITY
VERTi	VERT	Vertilog	VERTILOG
WELLG		Wel Log	WEL LOG