

**STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS**

**REQUEST FOR PROPOSALS
RFP 2013-1000-1890
ASP 10-13-058**

**Airborne Geophysical Survey of Parts of
Selected Mining Districts,
Southcentral and Interior Alaska**



Division of Geological & Geophysical Surveys
3354 College Road
Fairbanks, Alaska 99709-3707
(907) 451-5002

RFP ISSUE DATE: April 25, 2013

RFP 2013-1000-1890
ASP 10-13-058

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SECTION 1. INTRODUCTION AND INSTRUCTIONS

1.1 Purpose of this Request for Proposals (RFP)

The Department of Natural Resources is soliciting detailed proposals for helicopter-borne geophysical surveys for two or three areas in Southcentral and Interior Alaska. The East Styx survey is in the Tyonek, Talkeetna, Lime Hills, and McGrath quadrangles; the Wrangellia survey is in the Talkeetna Mountains, Healy, and Mt. Hayes quadrangles; and the "Eastern" survey is in the Mt. Hayes, Tanacross, and Nabesna quadrangles. All surveys require magnetic and frequency-domain electromagnetic data. The East Styx survey also includes gamma-ray spectrometry data. Besides acquisition, the work includes processing of the data, map and digital data preparation and documentation, and interpretation. Data and maps produced by the Contractor will then be published for both of these surveys through the Division of Geological & Geophysical Surveys (DGGS).

Please refer to Sections 1.2, 4.1, 4.2, 4.3, and 5.2; Appendix 4 of this RFP; and the ZIP file, RFP2013-1000-1890Blocks.ZIP, attached or adjacent to the Adobe Acrobat PDF, for more detailed descriptions of the areas, maps, and digital vector files of the survey areas.

1.2 Issuing Office

Mailing & Physical Address:

Department of Natural Resources
Division of Geological & Geophysical Surveys
3354 College Road
Fairbanks, AK 99709-3707

Telephone: (907) 451-5002, or 451-5021

Contact: Vickie Butherus, Shelly Showalter, or Laurel Burns

The Request for Proposals (RFP) will be posted on the State's Online Public Notice site <http://aws.state.ak.us/OnlinePublicNotices/>. A link to the RFP information on the Online Public Notice site will be provided on the DGGS Web site <http://www.dggs.alaska.gov/> under the "Headlines" section. The Adobe Acrobat PDF file, RFP2013-1000-1890_AirborneGeophysicalSurveys.PDF, contains the text and figures can be accessed using the Adobe Acrobat PDF reader (available at no cost from a link on the DGGS Web page). The 'zip' file 'RFP2013-1000-1890Blocks.ZIP' attachment contains ESRI shape files needed for this project. See more information about the zip file at the beginning of Appendix 4 in the RFP.

A package may be obtained in person at the address below during regular work hours of 8:00 a.m. to 4:30 p.m., Monday through Friday, except State holidays. If technical problems prevent downloading, one copy of the RFP will be sent on request. The State assumes no liability for incorrect addresses or delivery of RFP packages by public or private carriers or inability to download the RFP from the internet.

1.3 Mailing Address and Deadline for Receipt of Proposals

Offerors must submit four (4) copies of their proposal to the issuing office, in a sealed envelope(s) clearly labeled and marked on the envelope as a proposal:

From: Bidder's Return Address

To: State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys
Dr. Laurel Burns
3354 College Road
Fairbanks, AK 99709-3707

TITLE OF PROPOSAL: Airborne Geophysical Survey of Parts of Selected Mining Districts, Southcentral and Interior Alaska

OPENING: May 23, 2013

RFP 2013-1000-1890

Proposals must be received by the issuing office no later than 4:30 p.m., Alaska Daylight Saving Time, Thursday May 23, 2013. Failure to meet the deadline will result in disqualification of the proposal without review.

1.4 Questions About the RFP

Any technical or procedural questions regarding the RFP or contractual documents should be directed to the Procurement Officer listed below. All questions that require clarification or interpretation of this RFP that cannot be answered by careful review of the document must be received in writing by the Project Manager no later than ten (10) calendar days before the due date for proposals. The Project Manager will respond in writing if the question cannot be answered by directing the Offeror to the appropriate section of the RFP. Copies of any written response to questions will be made available to all parties that receive the RFP.

Any correspondence concerning protest of the content of the solicitation (See Section 2.2) should be addressed to:

Marlys Hagen, Procurement Officer
Department of Natural Resources
Administrative Support
550 W. 7th Ave. Ste. 1230
Anchorage, AK 99501-3564
Phone: (907) 269-8666
Fax: (907) 269-8909

1.5 Location of Work

The location of data acquisition will be the field area described in Section 4 and Appendix 4. It is expected that data reduction and map generation will be done in the Contractor's central processing facilities. However, associated activities such as photography may be done in other locations depending on the methodology described in the Offeror's proposal.

By signature on their proposal, the offeror certifies that:

- (a) the offeror is not established and headquartered or incorporated and headquartered, in a country recognized as Tier 3 in the most recent United States Department of State's Trafficking in Persons Report.

The most recent United States Department of State's Trafficking in Persons Report can be found at the following website: <http://www.state.gov/g/tip/>.

Failure to comply with this requirement will cause the state to reject the bid or proposal as non-responsive, or cancel the contract.

1.6 Funding of the Contract

A contract resulting from this RFP is subject to the availability of State appropriations for the purpose of the contract. A maximum of \$2,100,000 of State funding is expected to be available, pending final state administrative approval.

It is the intent of the State to survey in the Wrangellia survey area and in at least one of the other two other potential areas to survey.. This RFP solicits responses starting at a minimum of 936 sq miles by additional and different area increments as shown in Table 1 in Section 5.2, Section 6, and Appendix 4 of this RFP.

It is possible that additional funding may be available from other sources. If funding for areas in addition to those shown in the figures in Appendix 4 is acquired, the State will negotiate cost to add survey blocks, but the Contractor will not be obligated to these. These, if any, additional areas will be chosen by the State in line with the goals of this RFP.

1.7 Period of Performance

Period of performance is anticipated to be from June 15, 2013 through November 30, 2014. We intend to release the data and maps for the first set of deliverables for at least one area on or before January 27, 2014. Anticipated dates for other deliverables are listed in Section 5.13.A.

1.8 Solicitation and Advertising

Public notice has been provided in accordance with 2 AAC 12.220. Notices will also be sent to vendors whom we believe may be capable of responding.

1.9 RFP/Contract Management

The Commissioner of DNR or his designee, must approve the contract and any amendments prior to execution.

The State Project Manager, as defined by this RFP, operates under delegated authority from the Procurement Officer to receive proposals and assist in evaluation and final negotiations with direction and guidance from the procurement officer. The Project Manager is also the Procurement Officers representative for the agency in all aspects of Contract Administration.

The Procurement Officer, as defined by this RFP, is responsible for the solicitation and the contract, awards, claims, protests and other matters as required by regulation, statutes and Department of Administration policies and procedures.

1.10 News Releases

News releases pertaining to this RFP or the project to which it relates shall not be made without prior approval of the Project Manager. The Contractor will be required to coordinate with the Issuing Office of this RFP before making any response to a request for information regarding this project.

1.11 Assistance to Offerors with a Disability

Offerors with a disability may receive accommodation regarding the means of communicating this RFP or participating in the procurement process. For more information, contact the procurement officer no later than ten days prior to the deadline for receipt of proposals.

1.12 Federal Requirements

The offeror must identify all known federal requirements that apply to the proposal, the evaluation, or the contract.

SECTION 2. STANDARD PROPOSAL INFORMATION

2.1 Proposal Preparation Costs

The State will not pay any cost associated with the preparation, submittal, or presentation of any proposal.

2.2 Required Review - Protests Prior to Award

Offerors must carefully review the RFP for defects and questionable or objectionable material. Such defects must be reported to the contact person in writing and received at least ten days prior to the deadline for receipt of proposals. This will allow sufficient time for the Procurement Officer to issue an amendment, if one is required. That will help prevent the evaluation of proposals based on a defective RFP. Protests based on an omission, error, or the content of the RFP will be disallowed if notice of the defect is not made as set out above.

AS 36.30.560, Article 8, provides that an interested party may protest the content of a solicitation (RFP). If a potential Offeror wishes to protest the content of a solicitation, the protest must be received, in writing, by the Procurement Officer at least ten days prior to the deadline for receipt of proposals. The protest must include the same information noted in Section 2.25. Protests After Award.

2.3 Questions Received Prior to Opening of Proposals

All questions must be addressed to the Project Manager. Two types of questions generally arise. One may be answered by directing the questioner to a specific section of the RFP. These questions may be answered over the telephone. Other questions may be more complex and may require a written amendment to the RFP. The Project Manager will make that decision.

Telephone conversations that involve complex questions must be confirmed in writing by the interested party.

2.4 Addenda to the RFP

Addenda to this request for proposals may be issued at the State's option. An interested Offeror, however, may request modifications to the scope, specifications, or administrative requirements. Final acceptance or denial of the request is the decision of the Procurement Officer. Failure of the Procurement Officer to respond in writing to a request for addenda to the RFP shall be considered a rejection of the request. All addenda will be in writing and issued to all persons who receive copies of this RFP.

2.5 Correction, Modification, or Withdrawal of Proposals

A proposal may be corrected, modified or withdrawn by providing a written request from an authorized agent of the Offeror to the Project Manager before the time and date set for receipt of the proposals. After proposals are opened modifications may be allowed prior to completion of the evaluation process if the evaluation committee determines that it is in the best interest of the State to solicit modifications or best and final offers. Modifications to proposals or best and final offers will be solicited in accordance with AS 36.30.240 and 2 AAC 12.290.

The apparent successful Offeror may be requested to modify or correct his proposal during contract negotiations to the extent it is in the best interest of the State.

2.6 Authorized Signature

Proposals must be signed by an individual authorized to bind the Offeror to its provisions. The proposal must remain valid for at least ninety (90) days from the proposal receipt deadline.

In responding to this RFP the individual signing the response is certifying under penalty of perjury that the price submitted was independently arrived at without collusion.

2.7 Offeror's Certification

By signature on their proposal, Offerors certify that they are complying with:

- (a) the laws of the State of Alaska,
- (b) the applicable portion of the Federal Civil Rights Act of 1964,
- (c) the Equal Employment Opportunity Act and the regulations issued thereunder by the federal government,
- (d) the Americans with Disabilities Act of 1990 and the regulations issued thereunder by the federal government,
- (e) all terms and conditions set out in this RFP,
- (f) a condition that the proposal submitted was independently arrived at, without collusion, under penalty of perjury,
- (g) that the offers will remain open and valid for at least 90 days, and
- (h) that programs, services, and activities provided to the general public under the resulting contract conform with the Americans with Disabilities Act of 1990, and the regulations issued thereunder by the federal government.

If any Offeror fails to comply with [a] through [h] of this paragraph, the State reserves the right to disregard the proposal, terminate the contract, or consider the contractor in default.

2.8 Conflict of Interest

Each proposal shall include a statement indicating whether or not the firm or any individuals working on the contract has a possible conflict of interest (e.g., employed by the State of Alaska) and, if so, the nature of that conflict. The Commissioner, Department of Natural Resources, reserves the right to cancel the award if any interest disclosed from any source could either give the appearance of a conflict or cause speculation as to the objectivity of the program to be developed by the offeror. The Commissioner's determination regarding any questions of conflict of interest shall be final.

2.9 Licenses

At the time the proposals are opened, all offerors must hold a valid Alaska business license and any necessary applicable professional licenses required by Alaska Statute. Proposals must be submitted under the name as appearing on the person's current Alaska business license in order to be considered responsive. Offerors should contact the Department of Commerce, Community and Economic Development, Division of Corporations, Business, and Professional Licensing, P. O. Box 110806, Juneau, Alaska 99811-0806, for information on these licenses. Offerors must submit evidence of a valid Alaska business license with the proposal. An offeror's failure

to submit this evidence with the proposal will cause their proposal to be determined non-responsive. Acceptable evidence that the offeror possesses a valid Alaska business license may consist of any one of the following:

- (a) copy of an Alaska business license;
- (b) certification on the proposal that the offeror has a valid Alaska business license and has included the license number in the proposal;
- (c) a canceled check for the Alaska business license fee;
- (d) a copy of the Alaska business license application with a receipt stamp from the state's occupational licensing office; or
- (e) a sworn and notarized affidavit that the offeror has applied and paid for the Alaska business license.

You are not required to hold a valid Alaska business license at the time proposals are opened if you possess one of the following licenses and are offering services or supplies under that specific line of business:

- Fisheries business licenses issued by Alaska Department of Revenue or Alaska Department of Fish and Game.
- Liquor licenses issued by Alaska Department of Revenue for alcohol sales only.
- Insurance licenses issued by Alaska Department of Commerce, Community and Economic Development, Division of Insurance.
- Mining licenses issued by Alaska Department of Revenue.

2.10 Subcontractors

The Offerors may subcontract portions of the project tasks. Offerors are required to submit the names and addresses of all subcontractors and the type and percentage of work they will be providing on this project.

The successful Contractor must supply proof of all subcontractors' Alaska business licenses within a reasonable time after the Notice of Intent To Award is issued according to AS 36.30.210(a).

If the successful Contractor proposes to accomplish more than 50% of the work through subcontractors, they must provide a written statement that they are not operating as a joint venture with the other contractors and will be solely responsible for all work products, profits, and losses, as they relate to the performance of this contract. Failure to provide this statement may result in the proposal being declared a "joint venture" proposal for the purpose of calculating the Alaska proposer preference.

2.11 Joint Ventures

Joint Ventures will be acceptable for the performance of this contract. For a joint venture proposal to be considered responsive, the Offerors must provide the following information as it relates to the joint venture:

- A. Proof of a valid Alaska business license for the joint venture (Note: this must be a separate license for the joint venture for the purposes of this contract.) Refer to Section 2.9 for information regarding evidence of an Alaska business license;
- B. Documentation of the legal relationship of the parties to the agreement and a clear understanding of who will be responsible for appropriate portions of the contract;

In order for the Joint Venture to qualify for the Alaskan Proposer preference they must also provide evidence, as appropriate, that each party to the venture qualifies as an Alaska vendor in accordance with Section 2.16.1 of this RFP. Joint venture proposals that are offered by a combination of qualified Alaskan and non-Alaskan vendors can be responsive however they will not be entitled to the Alaska Proposer preference.

2.12 Disclosure of Proposal Contents

AS 36.30.230 requires that the Procurement Officer open proposals so as to avoid disclosure of contents to competing Offerors during the process of negotiations. To the extent that the Offeror designates and the Procurement Officer concurs, trade secrets and other proprietary data contained in proposals may be considered confidential. Any material considered confidential must be clearly noted in the proposal and include a brief statement as to the need for confidentiality. All proposals and related information will become public information after issuance of the notice of intent to award.

AS 36.30.510 requires that the contract files include a copy of each proposal submitted and be open to reasonable inspection by the public. All proposals and material submitted become the property of the State and may be returned only at the State's option. All proposals submitted will be kept on file by the Department of Natural Resources for a minimum of two years.

2.13 Multiple or Alternate Proposals

In accordance with 2 AAC 12.830, multiple or alternate proposals may be considered responsive and will be evaluated separately.

2.14 Right of Rejection

Offerors must comply with all of the terms of the RFP, with AS 36.30, the State Procurement Code, and all applicable local, state, and federal laws, codes, and regulations.

The Procurement Officer, based on recommendations of the evaluation committee, may reject any proposals that do not comply with all of the material and substantial terms, conditions, and performance requirements of the RFP.

Minor informalities, that do not affect responsiveness; that are merely a matter of form or format; that do not change the relative standing or otherwise prejudice other offers; that do not change the meaning or scope of the RFP; that are trivial, negligible, or immaterial in nature; that do not reflect a material change in the work; or, that do not constitute a substantial reservation against a requirement or provision may be waived by the Procurement Officer.

The State reserves the right to reject all proposals if it is determined that award would not be in the best interest of the State, in accordance with AS 36.30.350. If all proposals are rejected, they will be returned in accordance with AS 36.30.230(B).

2.15 Evaluation of Proposals

All proposals received will be reviewed and evaluated by a committee that will be made up of State employees. Other representatives may be added as appropriate, provided the evaluation committee is made up of at least the designated Procurement Officer and two employees of the purchasing agency in accordance with 2 AAC 12.260.

The evaluation will be based on the evaluation factors set out in Section 7 of this RFP.

2.16 Alaska Proposer's Preference

2 AAC 12.260 (e) provides Alaska Proposer's a 10 percent overall evaluation point preference. Alaska bidder's, as defined in AS 36.30.170, are eligible for the preference. This preference will be added to the overall evaluation score of each Alaska Proposer. Each Alaska Proposer will receive 10% of the total available points, added to their evaluation score, as a preference.

2.16.1 Qualifying as an Alaska Bidder / Proposer

AS 36.30.170 describes an Alaska bidder as one who;

[a] holds a current Alaska business license,

[b] submits a proposal for services under the name as appearing on the person's current Alaska business license,

[c] has maintained a place of business within the state staffed by the Offeror or an employee of the Offeror for a period of six months immediately preceding the date of the RFP,

[d] is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company organized under AS 10.50 and all members are residents of the state, or is a partnership and all partners are residents of the state, and,

[e] if a joint venture, is composed entirely of ventures that qualify under a. through d. of this subsection, if applicable, refer to 2.11.

It is the responsibility of the Offeror to include in its proposal a statement of their qualification for the Alaska Bidder/Proposer preference.

2.17 Application of Preferences

Certain preferences apply to all contracts for professional services, regardless of their dollar value. The Alaska bidder, Alaska veteran, and Alaska Offeror Preferences are the most common preferences involved in the RFP process. Additional preferences that may apply to this procurement are listed below. Guides that contain excerpts from the relevant statutes and codes, explain when the preferences apply and provide examples of how to calculate the preferences are available at the Department of Administration, Division of General Services' web site:

<http://doa.alaska.gov/dgs/policy.html>

Alaska Products Preference - AS 36.30.332

Recycled Products Preference - AS 36.30.337

Local Agriculture and Fisheries Products Preference - AS 36.15.050

Employment Program Preference - AS 36.30.170(c)

Alaskans with Disability Preference - AS 36.30.170 (e)

Employers of People with Disabilities Preference - AS 36.30.170 (f)

Alaska Veteran's Preference - AS 36.30.175

The Division of Vocational Rehabilitation in the Department of Labor and Workforce Development keeps a list of qualified employment programs; a list of individuals who qualify as persons with a disability; and a list of persons who qualify as employers with 50 percent or more of their employees being disabled. A person must be on this list at the time the bid is opened in order to qualify for a preference under this section.

As evidence of an individual's or a business' right to a certain preference, the Division of Vocational Rehabilitation will issue a certification letter. To take advantage of the employment program preference, Alaskans with Disability Preference or Employers of People with Disabilities Preference described above, an individual or business must be on the appropriate Division of Vocational Rehabilitation list at the time the proposal is opened, and must provide the procurement officer a copy of their certification letter. Offerors must attach a copy of their certification letter to the proposal. The offeror's failure to provide the certification letter mentioned above with the proposal will cause the state to disallow the preference.

2.18 Cost Evaluation Formula

The distribution of points based on cost must be determined as follows per AS 36.30.040, .210, .250, and 2 AAC 12.260 (d). The lowest priced proposal receives the maximum number of points allocated to price. Other allocations are determined by this formula:

$$\frac{(\text{Price of Lowest Cost Proposal}) \times (\text{Maximum Points for Cost})}{\text{Price of Each Higher Cost Proposal}} = \text{Points awarded for cost}$$

Cost proposals from Alaskan Offerors or proposals entitled to other preferences documented in section 2.17 will be reduced by the appropriate percentage for this calculation. (Reference 2 AAC 12.260 (d)).

2.19 Interviews for Clarification

The Evaluation Committee may require Offerors to provide clarification of certain points in their proposals prior to completion of the evaluation process. The purpose of these interviews is to ensure that the Evaluation Committee has a more complete understanding of the Offeror's proposal. Material changes to proposals or negotiations are not allowed in this process. Information requested for the purposes of clarification will be limited to verification of statements made in the Offeror's proposal. All Offerors will be given similar opportunities, as required, for clarification. Interviews will be conducted in such a manner that information derived from competing Offerors is not disclosed. Interviews will be scheduled at the convenience of the issuing office. AS 44.62.310 does not apply to meetings with Offerors conducted under this section. Interviews may be conducted by teleconference.

2.20 Discussions for Best and Final Offers

The State may require written or oral submittals from Offerors for the purpose of clarification in accordance with AS 36.30.240 and 2AAC 12.290. The purpose of these submittals will be to ensure the Offeror has a full understanding of the requirements of the RFP. Discussions will be limited to sections of the RFP identified by the Evaluation Committee. Discussions will be with Offerors who have submitted a proposal deemed reasonably susceptible for award by the Evaluation Committee. Discussions, if held, will be after the preliminary evaluation of proposals has been completed by the Evaluation Committee. If modifications are made as a result of these discussions they will be put in writing. Following discussions, the Evaluation Committee may set a time for best and final proposal submissions from those Offerors with whom discussions were held. Re-evaluation of the best and final proposals will be limited to the specific sections of the RFP opened to discussion by the Procurement Officer.

2.21 Contract Negotiations

Upon completion of the evaluation process contract negotiations will commence. It is anticipated that all contract negotiations will be held at the Department of Natural Resources, Division of Geological & Geophysical Surveys, 3354 College Road, Fairbanks, Alaska, or by teleconference.

2.22 Failure to Negotiate

If the selected Offeror fails to provide the necessary information for negotiations in a timely manner, negotiate in good faith, or cannot perform a substantial portion of the contract within the amount of budgeted funds available for the project, the State may terminate negotiations and negotiate with the next highest ranked Contractor, or terminate the award of the contract.

2.23 Notice of Intent to Award

After completion of the evaluation process and Contractor negotiations the issuing office will issue a Notice of Intent to Award to all Offerors. This notice will contain the names and addresses of all the Offerors including the intended recipient of the contract.

2.24 Informal Debriefing

Any unsuccessful Offeror may request and receive an informal debriefing either ten (10) working days after the Notice Intent to Award is mailed out or, if there is an appeal, upon completion of the appeal process. The debriefing shall be limited to the Offeror's proposal, concentrating on the areas considered deficient or inferior.

The merits of other proposals will not be discussed. A formal review may be requested by writing to Laurel Burns at the issuing office address.

2.25 Protests After Award

In accordance with AS 36.30.560 an interested party may protest an award of contract, or the proposed award of a contract, or a solicitation by an agency. The protest shall be received in writing at the following address within ten (10) calendar days after the Notice of Intent to Award is issued.

Marlys Hagen, Procurement Officer

Department of Natural Resources

Administrative Support

550 W. 7th Ave. Ste. 1230

Anchorage, AK 99501-3564

Phone: (907) 269-8666

Fax: (907) 269-8909

The protest must include the following information:

- A. The name, address, and telephone number of the protester;
- B. The signature of the protester or the protester's representative;
- C. Identification of the contracting agency and the solicitation or contract at issue;
- D. A detailed statement of the legal and factual grounds of the protest, including copies of relevant documents, and;
- E. The form of relief requested.

Protests filed by telex or telegram are not acceptable because they do not contain a signature. Fax copies of the protest containing a signature are acceptable.

All Offerors will be notified of any protests. Review of protests, decisions of the Procurement Officer, hearings and appeals will be conducted in accordance with AS 36.30, the State Procurement Code, and Article 8 "Legal and Contractual Remedies."

2.26 Supplemental Terms and Conditions

Proposals must comply with Section 2.14 Right of Rejection. However, if the state fails to identify or detect supplemental terms or conditions that conflict with those contained in this RFP or that diminish the State's rights under any contract resulting from the RFP, the term(s) or condition(s) will be considered null and void. After award of contract:

- a) if conflict arises between a supplemental term or condition included in the proposal and a term or condition of the RFP, the term or condition of the RFP will prevail; and
- b) if the State's rights would be diminished as a result of application of a supplemental term or condition included in the proposal, the supplemental term or condition will be considered null and void.

2.27 Prior Experience

In order for offers to be considered responsive offerors must meet these minimum prior experience requirements. Three years demonstrated experience in conducting similar surveys.

An offeror's failure to meet these minimum prior experience requirements will cause their proposal to be considered non-responsive and their proposal will be rejected.

2.28 Vendor Tax ID

A valid Vendor Tax ID must be submitted to the issuing office with the proposal or within five days of the State's request.

2.29 Qualified Bidders or Offerors

2 AAC 12.875.

- a. Unless provided for otherwise in the solicitation, to qualify as a bidder or offeror for award of a contract issued under AS 36.30, a bidder or offeror must
 - (1) add value in the contract by actually performing, controlling, managing, or supervising the services to be provided; or
 - (2) be in the business of selling and have actually sold on a regular basis the supplies that are the subject of the solicitation.
- b. If a bidder or offeror leases services or supplies or acts as a broker or agent in providing the services or supplies in order to meet the requirements of (a) of this section, the procurement officer may not accept the bidder or offeror as a qualified bidder or offeror under AS 36.30. (Eff. 10/3/02, Register 163)

Authority: AS 36.30.040

SECTION 3. STANDARD CONTRACT INFORMATION

3.1 Contract Type

The contract awarded as a result of this RFP will be a fixed price contract based on a fixed price for certain deliverables and a negotiated price schedule for variable items. The Contractor will be expected to complete the required tasks within the fixed costs negotiated in the contract.

3.2 Contract Approval

This RFP does not, by itself, obligate the State. The State's obligation will commence when the contract is approved by the Commissioner of the Department of Natural Resources; the commissioner's designee; or, the Procurement Officer. Upon written notice to the Contractor, the State may, if it wishes, set a different starting date for the contract. The State will not be responsible for any work done by the Contractor, even work done in good faith, if it occurs prior to the contract start date set by the State.

3.3 Insurance Requirements

The successful Offeror must secure satisfactory insurance coverage as required by the Department of Administration, Division of Risk Management. Failure to provide evidence of adequate coverage is a material breach and grounds for termination of the contract.

Offerors must review Appendix B1 to Form 02-093 for details on required coverages. A copy is included in the contract documents package for your reference.

3.4 Standard Contract Provisions

The successful Offeror will be required to sign the standard agreement form for professional services, Form 02-093. A copy is included in the contract documents package for your reference. The Contractor will also be required to comply with the general contract provisions of Appendix A to this form. Any alteration of these general provisions must be approved by the Department of Law before the contract can be accepted by the DNR Procurement Officer.

3.5 Proposal as Part of the Contract

All or part of the final proposal may be incorporated into the final negotiated contract.

3.6 Additional Terms and Conditions

The State reserves the right to include additional terms and conditions during the contract negotiations. These terms and conditions must be within the scope of the original RFP and contract documents, and will be limited to cost, clarification, definition, and administrative and legal requirements.

3.7 Payment Procedures

The State intends to pay the Contractor a negotiated sum based upon satisfactory completion of tasks, review of the required deliverables, and submission of an invoice from the Contractor. Up to 30 percent of each invoiced amount may be withheld pending completion of the project.

No payment shall be made until the invoice has been approved and authorized by the Project Manager.

Under no condition will the State be liable for the payment of any interest charges associated with the cost of the contract.

The State is not responsible for and will not pay any local, state, or federal taxes. All costs associated with the contract must be stated in U.S. currency. If a Contractor is delinquent on payment of State taxes the payment provisions of the contract may be subject to review and approval by the Department of Revenue prior to award.

3.8 Contract Personnel

The State reserves the right to approve or disapprove any change in the successful Offeror's project team members whose participation in the project is specifically offered in the proposal. Similarly, changes in the amount of participation by key project members will require State approval. This is to ensure that persons with vital experience and skill remain fully involved in the project.

Requests for any change in Contractor personnel shall be submitted in writing to the State for the State's review and sign-off before the change is made. Contractor personnel changes, not approved by the State, may be cause for the State to terminate the contract.

3.9 Subcontractors

The State must approve the use or replacement of subcontractors. Replacement of subcontractors may only be made in accordance with approval of the Project Manager and the terms of the final negotiated contract.

3.10 Ownership of Materials

The State intends to maintain ownership and/or use of all materials produced as a result of this contract.

3.11 Disputes

Any dispute associated with this RFP or the contract will be resolved under the laws of the State of Alaska.

3.12 Reimbursement to the State for Unacceptable Data or Deliverables

The Contractor is responsible for quality, accuracy and completion of all work identified by the contract. All work shall be subject to evaluation and inspection by the State at all times to assure satisfactory progress, to be certain that work is being performed in accordance with the contract specifications, terms and conditions, and to determine if corrections and modifications are necessary. Should such inspections indicate substantial failure on the part of the Contractor, the State may, depending on the situation, either terminate the contract for default or contract an outside vendor to verify the accuracy of the data or compliance with the contract specifications.

If the outside vendor determines the data is not within contract specifications, the State has the option to have the Contractor correct and finish all or part of the work or may terminate the contract as discussed in Section 3.14.

Furthermore, the State may require the Contractor to reimburse any monies paid (pro rata based on the identified proportion of unacceptable products received) and any associated damage costs. Damages assessed to the Contractor include but are not limited to such items as additional processing of the data to verify it's accuracy or compliance with the contract specifications, re-flying of flight lines, or properly formatting the data to produce the required deliverables.

3.13 Contract Invalidation

If any provision of the contract awarded as a result of this RFP is found to be invalid, such invalidation will not be construed to invalidate the entire contract.

3.14 Termination for Default

If the Contractor refuses, fails, or for any reason is unable to perform the work, or any separable part thereof, with such diligence or compliance with the contract requirements as will ensure its completion within the written contracted time frame and the technical requirements of the contract, the State may, by written notice to the Contractor, terminate the right to proceed with all work or only such part of the work as to which there have been delays or deficiencies in meeting the contract requirements. This work may include but it is not limited to such items as additional processing of the data to verify it's accuracy or compliance with the contract specifications, re-flying of flight lines, or properly formatting the data to produce the required deliverables.

If the Contractor is unable to proceed with the work in accordance with the contract specifications the state may contract directly with other sources for whatever work may be required to meet the terms of the original contract and deduct the fee for that work from any payments due the Contractor and require the Contractor to reimburse the state for any additional costs that may be incurred in completing the work in accordance with the terms of the original contract.

Termination of part of the contract for default does not exempt the Contractor from performance of the remainder of the work and delivery of work completed prior to issuance of the written notice.

This clause does not restrict State termination rights under the general contract provisions of Appendix A, which is attached to this RFP.

3.15 Liquidated Damages

Whether or not the Contractor's right to proceed with the work is terminated, he will be liable for damages resulting from his refusal or failure to complete the work within the timeframe specified in the contract.

Liquidated and actual damages for delay shall be paid by the Contractor to the department in the amount of \$500.00 for each calendar day the completion of work or any part thereof is delayed beyond the time required by the contract or any extension thereof.

The Contractor acknowledges that the liquidated damages established are not a penalty but rather constitute an estimate of damages that the department will sustain by reason of delayed completion.

These damages will continue to run both before and after termination in the event of default termination. The damages do not cover excess costs of completion or state costs, fees, and charges related to reprocurement. If a default termination occurs, the Contractor shall pay in addition to these damages, all excess costs and expenses related to completion as provided by section 3.14.

3.16 Assignment

The Contractor may not assign any portion of the contract without prior written approval from the Procurement Officer and the Project Manager.

3.17 Contract Changes

During the course of performing the work required by this contract, the Contractor may be requested to perform additional work within the general scope of the contract.

When additional work is required, the Project Manager shall forward to the Contractor a description of the work to be accomplished and request that a proposal be offered within a given time period.

No additional work shall commence by the Contractor without an approved written contract amendment by the Procurement Officer.

3.18 Right to Inspect Place of Business

At reasonable times, the State may inspect those areas of the Contractor's place of business that are related to the performance of a contract. If the State makes such an inspection, the Contractor must provide reasonable assistance.

3.19 Confidentiality and Ownership of Documents

All data, maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents, computer files and all other data compiled by or received by the Contractor under this Contract shall be the property of the State, shall be treated by the Contractor as confidential and shall be delivered only to the State Project Manager or other authorized officials as required in the contract. Their contents shall not be made known by the Contractor to any person other than personnel of the Contractor performing services under this Contract without written consent of the State.

3.20 Evaluation of Contractor and Subcontractor after Contract Completion

Upon completion of the contract, the State will complete an evaluation of the Contractor (and subcontractor if applicable) under this contract. The ability of the Contractor to manage confidential information will be one item included in the evaluation. This information may be used in evaluation of proposals for future work that the State may solicit.

SECTION 4. BACKGROUND INFORMATION

The airborne geophysical data being sought through this RFP are funded by the Alaska Geophysical/Geological Mineral Inventory Program (AGGMI) and the Strategic and Critical Minerals Assessment Capital Improvement Project (CIP), a subset of the Alaska Geophysical/Geological Mineral Inventory Program (AGGMI). The enhanced funding focuses on strategic and critical minerals. The Alaska AGGMI Program is designed to systematically acquire geophysical, and where necessary, ground-based geological data for state-owned lands having high perceived mineral potential and where information needed for mineral-based management decisions. The information acquired will be published by the State and is aimed at catalyzing new private sector exploration, discovery, and ultimate development/production. It is expected that the maps and data from these surveys will have wide distribution.

4.1 East Styx Survey area, Talkeetna, Tyonek, McGrath, and Lime Hills quadrangles, Southcentral Alaska

4.1.A East Styx survey area overview

The East Styx survey area is located mainly in the northwestern Tyonek and southeastern Talkeetna quadrangles (Appendix 4, Figures 1 and 2). The center of the survey area is about 95 miles NW of Anchorage. The survey area consists of State lands, almost all of which is in the Yentna mining district; minor amounts are in the Redoubt and McGrath mining districts.

Reconnaissance geologic mapping suggests the area consists mainly of Juro-Cretaceous sedimentary rocks, mafic volcanic rocks of uncertain age, and numerous plutons and hypabyssal rock. Tertiary coal-bearing sediments lie unconformably on the Juro-Cretaceous sedimentary rocks, and relatively recent volcanic ash from Mt. Spurr is also present. Older volcanic debris from Mt. Spurr may also be present. The sedimentary rocks are dominantly turbidites of the Kahiltna terrane. The mafic volcanic rocks are probably the Jurassic Talkeetna Formation of the Peninsular terrane. The sedimentary and volcanic rocks are juxtaposed either structurally and/or depositionally. The plutonic and hypabyssal rocks range from mafic to felsic and are considered to be Cretaceous and Tertiary. Small porphyritic intermediate plugs, dikes and sills are common in some areas, and typically formed contact metamorphism in the adjacent sedimentary rocks.

The structural history is complex and poorly known. Folds are present in the sedimentary rocks. Mapped faulting generally trends N40-70°W and N30-60°E. Extensive shearing is present in the bluffs along the Skwentna River.

Many prospects are in the potential survey area and are thought to represent several different deposit types, including polymetallic veins, epithermal veins, and porphyry copper deposits. Many prospects are near the plutonic rocks.

4.1.B Previously flown surveys connected to the East Styx Survey area

Three HFEM surveys recently flown or culminating this summer are spatially connected to the East Styx Survey area. These surveys produced grids of total or residual magnetic field, digital terrain model (DTM), and the following 3 coplanar apparent resistivity grids: 56,000 Hz, 7200 Hz, and 900 Hz in addition to other data and grids. Merged grids exist for the Styx River and the Middle Styx surveys for the residual magnetic field, DTM, and the 3 apparent resistivities. The merged Styx River and Middle Styx grids are expected to be merged with grids from the Farewell survey by early January 2014 (Appendix 4, Fig 4.1).

A DIGHEM^V EM system was used for all three previous surveys. The mean terrane clearance of the helicopter was 200 ft. and both the bird and the magnetometer were 100 ft AGL. All three surveys had ¼ mile line

spacing, with tie lines flown perpendicular to flight lines at nominal 3 mile spacing. Border lines are present if the border was not parallel to the traverse or tie lines.

The Styx River survey, flown in 2007 and 2008, and the Middle Styx survey, flown in 2012, used a traverse direction of N70°E. The Farewell survey, flown in 2012 and continuing in summer 2013, used a traverse direction of N60°W.

4.2 Wrangellia Survey area, Talkeetna Mtns., Healy, and Mt. Hayes quadrangles, Southcentral Alaska

4.2.A Wrangellia Survey Area Overview

The Wrangellia geophysical survey lies 150 miles north-northeast of Anchorage and is roughly centered on the Denali Highway crossing of the Susitna River (Appendix 4, Figures 4.1 and 4.3). The survey area encompasses portions of the Clearwater Mountains, the Talkeetna Mountains, and lowlands of the Susitna and Maclaren river valleys. It lies almost completely within the Valdez Creek mining district; a small area lies within the Delta River mining district. The survey area is composed mainly of State lands, with lesser areas of BLM-managed State selected land, and minor amounts of Native and Native selected land.

Existing geologic maps indicate that the region is underlain by late Paleozoic volcanic flows and tuffs of basaltic to andesitic composition. Thin interbeds of marble and lesser argillite occur locally in the section. The Paleozoic rocks are intruded by gabbroic to ultramafic dikes and sills of Triassic age and capped by the 3km thick Triassic Nikolai basalt. Regional metamorphism varies from prehnite-pumpellyite to amphibolites facies.

The major, high-angle Talkeetna Fault cuts along the northwestern margin of the survey area, juxtaposing Jurassic to Cretaceous flysch (argillite, lithic greywacke, and polymictic pebble conglomerate), pelitic schist, and phyllite (the Talkeetna terrane) against the rocks described above (Wrangellia). Both terranes are intruded by granodiorite to granite plutons of Cretaceous to early Tertiary age.

Mineralization in the survey area includes magmatic Cu-Ni-PGE mineralization hosted by Triassic-age mafic to ultramafic dikes and sills. Vein, porphyry, and skarn type mineralization occurs in association with late-Cretaceous to early Tertiary intrusions in the area, including the Zackly Au-Cu skarn and Au-bearing quartz veins in the headwaters of the Valdez Creek placer mine. Additionally, epigenetic Cu mineralization occurs with Nikolai basalt throughout the region.

4.2.B Previously Flown surveys Adjacent to the Wrangellia survey area

The Wrangellia survey will adjoin three existing airborne geophysical HFEM surveys. The Valdez Creek and Iron Creek surveys were flown in the 90s, and the third one, Delta River was flown in 2002, but incorporated 'Nikolai Project' data flown in 1995 for Alaska Copper & Nickel Co. (ACNC). Merging of the residual magnetic data for all the areas should be possible. Merging of the apparent resistivity and DTM data from the Wrangellia survey are probably only possible with the Delta River 2002 survey area. The coplanar apparent resistivity grids for the Delta River survey were produced using a DIGHEM^V EM system; the frequencies are 56,000 Hz, 7200 Hz, and 900 Hz.

Except for the Nikolai project data, all surveys were flown with ¼ mile line spacing, with tie lines perpendicular to flight lines at nominal 3 mile spacing. The older data was flown at 1/8 mile line spacing. Survey year, flight direction and magnetometer height for the previously flown surveys were the following: Iron Creek, 1997, N45°W, 40 m (~130 ft); Valdez Creek, 1993, N18°W, 40 m (~130 ft); Delta River, 2002, N20°E, 30 m (~100 ft); Nikolai Project, 1995, N30°E (1 block), N20°E (2 blocks), and 0 (2 blocks)°, 'slightly above 150 ft'. A merged total field magnetic grid exists for the Delta River and the Nikolai Project data.

4.3 "Eastern" Survey Area, Tanacross and Nabesna quadrangles, Interior Alaska

4.3.A Eastern Survey Area Overview

The Eastern survey is roughly centered about 35 miles WSW of Tok. Almost all the area is in the Tok mining district; a minor amount is in the Chistochina mining district. The area is a mixture of State land, State selected land, Native land, and U.S. Bureau of Land Management.

The Denali Fault, a major crustal scale strike-slip crustal plate boundary, lies to the southwest of the "Eastern" survey area. The survey area is composed of Paleozoic metamorphic and older (?) rocks that trend northwesterly, subparallel to the Denali Fault to the southwest. The metamorphic rocks have been intruded by Triassic gabbroic sills, late-Cretaceous biotite hornblende granite, and alkali mafic dikes. West of the survey area, the gabbroic sills are known to range from small un-mappable lenses to over 800 feet thick and traceable for 4 miles. Locally the sills have locally magnetite and pyrrhotite-rich border zones. The major metamorphic rock types include phyllite, quartzite, various quartz schists, calcareous schists, mafic metabasalts to metagabbro, mafic to intermediate metavolcanic, felsic metavolcanic, metavolcaniclastic rocks, and mylonite.

The survey area contains many copper, gold, and gold-silver-copper prospects. Many of these do not show up on the Alaska Resource Data Files (<http://ardf.wr.usgs.gov/>). The area immediately west of the survey area contains many important VMS deposits. Though the metamorphic rocks trend into the survey area, past exploration in the Eastern survey area have not found significant VMS prospects.

4.3.B Previously Flown surveys Adjacent to the Eastern survey area

The Alaska Highway Corridor survey, flown 2005 and 2006, borders the northern part of the Eastern survey. A RESOLVE EM system was used. Traverse direction was N10°W with ¼ mile line spacing. The bird and magnetometer were flown 30 m (!100 ft) AGL. The survey produced grids for total field magnetics, DTM, and apparent coplanar resistivity for 400, 1800, 8200, 40,000, and 140,000 Hz.

SECTION 5. SCOPE OF WORK

5.1 Project Goals and Objectives

The primary goal of all survey areas is to delineate prospective mineral zones and target areas through acquisition and timely publication of airborne geophysical data. These data are intended for subsequent use during detailed bedrock geologic mapping. The geophysical data and maps are expected to stimulate private sector activity and investment by providing insight into possible locations of intrusions and fault structure that could be related to mineralizing systems.

All surveys will consist of helicopter-borne aeromagnetics and frequency-domain electromagnetic data acquisition and processing. The East Styx survey will also require radiometric data acquisition and processing. All surveys will involve merging of magnetic, electromagnetic, and digital terrain data from previous surveys. Data and maps produced by the Contractor will then be published for both of these surveys through the Division of Geological & Geophysical Surveys (DGGS).

5.2 Areas to be Surveyed

The State intends to survey parts of at least two areas contingent on state administrative approval of funding and Offerors cost proposals. The areas in the document and figures are numbered from west to east. No preferences are meant by the numbering.

The survey areas are subdivided into potential blocks for surveying (Appendix 4, Figures 4.1, 4.2, 4.3, and 4.4). Offerors will specify prices for various combinations of blocks, shown in Table 1, as set forth in Section 6 of this RFP. The combinations of blocks are designed to provide flexibility in responding to a variety of potential funding appropriation scenarios and cost proposals. The zipped file 'RFP2013-1000-1890Blocks.ZIP' contains ESRI shape files which must be used to determine final flight line location and calculate costs of blocks. The figures in Appendix 4 are to be used as general guidelines to the survey locations. Please see Appendix 4 for more information about ESRI shape files included in the zip file and see Section 1.2 of this RFP if you have a problem accessing the ZIP file.

Table 1: Block Combinations and Sizes for East Styx, Wrangellia, and Eastern Surveys

Area (right)/ Combination Number (down)	Area 1 East Styx	Area 2 Wrangellia	Area 3 Eastern	Approximate Total Square Miles
1.		A1+A2+A3= 'A' hereafter		936
2.		A + B		1,247
3.		A + B + C		1,400
4.		A + B + C	A	1,857
5.	A	A + B + C		1,912
6.	A + B	A + B + C		2,102
7.	A + B + C	A + B + C		2,390
8.	A + B + C	A + B + C	A	2,847
9.	A + B + C + D1+D2+D3	A1 + B + C + D	A + B	2,952

5.3 Exploration Exclusion and Confidentiality of Data

As part of the contract, the Contractor agrees that their firm, its associates, subcontractors and joint venture partners will not conduct exploration programs or mining land acquisition efforts within ten (10) miles of the geophysical survey area specified in the contract, for a period between the signing of the contract and six (6) months after the state's geophysical data for that area are released to the public at large.

The Contractor further agrees that all data, maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents, computer files and all other data compiled by or received by the Contractor under the contract shall be the property of the State, shall be treated by the Contractor as confidential and shall be delivered only to the State Project Manager or other authorized officials designated by the State Project Manager as required in the contract. Their contents shall not be made known by the Contractor to any person other than personnel of the Contractor performing services under the contract without written consent of the State. In all stages of the project, all data, images, and documents are to be transmitted only through means approved by the State Project Manager.

5.4 Planning

5.4.A Logistics

The proposer should include a plan of action outlining the detailed approach and technique to be followed in carrying out the work involved in completing all aspects of this project, including a technical description of the field operation, base of operations and ground station locations.

5.4.B Scheduling

Detailed scheduling with a bar chart is to be provided and must show how all activities will be coordinated to ensure achievement of required delivery date. Proposers will be held to their proposal timeline.

5.5 Survey Specifications

5.5.A Survey Platform

The area will be flown by a helicopter platform appropriate for accomplishing the tasks specified in this RFP.

5.5.B Line Direction

East Styx Survey: Traverse line direction will be N70°E (Appendix 4, Figure 4.2).

Wrangellia Survey: Traverse line direction shall be N45°W for Blocks A1, B, and C; N18°W for Block A2; and N-S for Block A3 and D. (Appendix 4, Figure 4.3).

"Eastern" Survey: Traverse line direction shall be N45°E (Appendix 4, Figure 4.4).

5.5.C Line Spacing

Traverse lines shall be spaced 1/4 mile. All flight lines, including infills, shall intersect at least two tie-lines.

5.5.D Tie Lines and Boundary Lines

Tie lines shall be flown perpendicular to traverse lines at intervals of approximately three miles. All tie lines must extend at least one-third mile beyond the area boundaries at survey altitude. A special effort must be made to ensure that all control lines are flown at the same mean terrain clearance as the traverse lines, particularly at the point where the two intersect. These flights should be carried out during optimum diurnal conditions.

For boundaries not parallel to the flight lines or tie lines a control line will be flown parallel to the boundary.

5.5.E Overlap with existing surveys

When blocks adjacent to existing surveys are flown, the area flown must overlap a minimum of 400 m with the boundary of the new survey areas given in 'RFP2013-1000-1890Blocks.ZIP'. The overlap areas are not included in the estimates of sq. mileage on any of the tables, nor are they included in the ESRI Shape files or the figures in Appendix 4.

5.5.F Flight-Line Tolerance

Uniform spacing of flight lines is preferred throughout survey. Flight path lines will be rejected and will be reflight if deviations from specified flight path of more than 500 feet persist over a distance of more than 1/2 mile, except for rugged areas, where flight path deviations will not exceed 650 feet over a distance of more than 1/2 mile. At no point shall spacing between adjacent lines exceed 1,820 feet or be less than 820 feet over a distance of more than 1/2 mile, except for rugged areas, where the spacing between adjacent lines shall not exceed 1,970 feet or be less than 670 feet over a distance of more than 1/2 mile, unless the spacing is required for safety.

If the spacing between survey lines exceeds the specifications in this section for more than 1/2 mile, a fill-in line shall be flown at the Contractor's expense. However, if the flight line spacing deviation is caused by safety requirements or FAA regulations, the Contractor is not required to fly a fill-in line.

Parts of lines re flown to complete a flight line must cross control lines at either end and cross the original survey line at a low angle at a point where the data is acceptable.

5.5.G Altitude and Tolerance

It is preferred that lines be flown at a mean terrain clearance of 200 feet averaged over any one mile distance. Offerors shall discuss instrumental, legal, and operational factors which require deviation from the 200 feet terrain clearances; in general, it is preferred that deviations not exceed 100 feet.

5.5.H Flight Line Map

Digital files in ESRI shape file format of all flight line paths must be submitted for each area with the proposal.

5.5.I Flying Speed

It is preferred that maximum flying speed not exceed 80 nautical miles per hour.

5.5.J Aviation Rules for Populated Areas

The Contractor is wholly responsible for following Federal Aviation Regulations for local areas of dense population and remote cabin sites. Small mining or fishing operations may be present in the survey areas. The Yukon River particularly may have many established fish camps or areas of semi-permanent populations.

5.5.K Observance of Military Operations

Military training routes may cross any of the survey areas. Information about training routes is given at the Web sites <http://www.faa.gov> and <http://www.elmendorf.af.mil>. Frequent contact with the appropriate Air Force Base Range Control will be necessary and is the Contractor's responsibility. The Proposer should state their procedure for dealing with flight restrictions.

5.5.L Hunting Season

Hunting season may interfere with acquisition of data. It is in the State's best interest to cooperate with the appropriate regulatory agencies and individual hunters. Offerors should state their procedure for dealing with hunting season. Some useful sites include the following:

Lists of big game guides and maps of guide use areas:

<http://www.commerce.alaska.gov/occ/guideusemaps/mainpage.cfm>

<http://www.commerce.alaska.gov/occ/apps/GuideUseReg.cfm>

Alaska Division of Fish & Game main hunting page:

<http://www.adfg.alaska.gov/index.cfm?adfg=hunting.main>

Maps of the game management areas:

<http://www.adfg.alaska.gov/index.cfm?adfg=huntingmaps.gmuinfo&gmu=20>

5.6 Instrumentation and Calibration

The requirements specified in this section define desired and required specifications based on our understanding of current technologies and survey methods. Offerors must be able to demonstrate in their proposals their understanding and ability to perform in accordance with these requirements for the systems and equipment indicated. Offerors may propose alternate methods or specifications provided they can satisfactorily meet the State's objectives and the Offeror can document why changing these requirements would be in the best interest of the State.

5.6.A General Requirements

The Contractor shall maintain and update an equipment log book or file noting all equipment serial numbers, replacement and repairs throughout the survey and the results of calibration tests, daily resolution checks, and source tests. This will be checked by the State Project Manager during the inspection visit.

5.6.B Electromagnetic System

A frequency domain system shall be used. Because the geophysical data will be followed by geologic mapping, an electromagnetic system providing information on the near surface bedrock, structures, lithologies, and conductive zones from areas of exposure is required. The ability to distinguish variations in overburden fill from bedrock variations, i.e. shallow from deep responses, is needed.

Preference will be given to systems having more frequencies and coil configurations. Systems having a greater theoretical depth of penetration and resolution will be given preference; data acquisition procedures, data reduction procedures, and other technical parameters will also be used in evaluation of the system, however.

The proposal shall contain a general description of the electromagnetic system to be used, stating advantages and disadvantages. In addition, the proposal shall contain the following specific information.

5.6.B.1 Coil Configuration and Transmitter Power

The orientations and spacings of all coil configurations that will be used shall be specified, as well as RMS amp/turn ratios or other measures of transmitter power.

5.6.B.2 Frequencies

The frequencies that will be available for use shall be specified.

5.6.B.3 Noise Levels

Static and in-flight system noise levels shall be specified. The specified noise levels shall become a requirement. Measurements of the static noise level and in-flight noise level at altitude shall be made before the survey.

5.6.B.4 Sferics

If the frequency of sferic events affects the quality of the electromagnetic data as it is being processed by the acquisition system in real time, survey flying will be suspended.

5.6.B.5 System Drift

Maximum rates of system drift due to both mechanical and electronic changes shall be specified. The specified drifts shall become a requirement; the procedures that shall be used for monitoring and correction of drift shall be specified.

5.6.B.6 Calibration

The techniques that shall be used to calibrate the system shall be described. The system must be calibrated as often as necessary to ensure that it operates within stated specifications.

A calibration check on the accuracy of the electromagnetic system must be carried out prior to the commencement of survey operations.

5.6.B.7 Power Line Noise

The level of 60 Hz power line noise shall be monitored; a brief description of the monitor shall be provided.

5.6.B.8 Sampling Interval

The sampling interval will be 0.1 seconds for all electromagnetic parameters.

5.6.C Magnetometer System

5.6.C.1 Static Resolution

The static resolution of the system shall be given. It must be 0.1 nanoteslas (nT) or better. The total field sensors utilized will be either self-orienting or be otherwise independent of the ambient direction of the earth's total magnetic field. The magnetometer shall have an inflight sensitivity of 1.0 nT or better with an ambient range not less than 20,000 to 100,000 nT.

5.6.C.2 Sampling Rate

The maximum sample rate shall be specified for each sensitivity. Readings shall be taken and recorded at a rate of no less than two per second. Ten readings per second are preferred.

5.6.C.3 Inflight Noise Envelope

The inflight noise envelope shall be specified. "Quiet" air conditions may be assumed but the specified noise envelope shall be a requirement.

5.6.C.4 Heading Error

The errors due to changes in heading shall be specified and shall become a requirement. Heading error shall be verified before the survey begins by flying over the same point on magnetic north, east, south, and west directions at least twice. A maximum of 2 nT peak-to-peak variation will be tolerated in a single 360° test. Verification shall be repeated if mechanical parts of the aircraft are changed or if the magnetometer is repaired or modified.

5.6.C.5 Digital Record of Earth's Magnetic Field

A digital record of the variations of the earth's magnetic field shall be made during the periods when airborne data are being collected. The monitor station shall be placed in a magnetically quiet area within ten miles of the survey area. The resolution of the magnetometer shall be 0.1 nT or better and the noise envelope shall be 0.1 nT or better. The field shall be measured and recorded at least once per 2.0 seconds. The airborne and digital base station magnetometer shall be synchronized with an accuracy of 1.0 second or better. Synchronization shall be checked at the end of each day's flight.

5.6.C.6 Time-Dependent Variation of Earth's Magnetic Field

Airborne surveys shall not be conducted when non-linear variations of the earth's magnetic field exceeds 10 nT from a chord 1.0 minutes long, as determined from the digital record on the ground monitor.

5.6.D Spectrometer System, East Styx survey

5.6.D.1 Detector and Multi-channel Analyzer

A gamma-ray spectrometer system capable of recording at least 256 channels will be used. In order to minimize spectrum drift, the spectrometer must either have internal stabilization or be temperature stabilized and thermally insulated.

The system must permit cosmic-ray activity to be monitored using a window monitoring gamma radiation above 3000 keV.

Prior to the commencement of the survey or any calibration procedure, the overall system resolution must be better than 7 percent based on the full width half maximum of the ^{208}Tl peak at 2615 keV.

5.6.D.2 Ancillary measurements

Air temperature and pressure must be monitored. The temperature and pressure sensors must have a digital output with a minimal precision of 1 degree Centigrade for temperature and 0.1 percent for pressure. The digital output from a barometric altimeter may be used as an alternative to a specialized pressure sensor.

5.6.D.3 Data Recording

The following data must be recorded digitally for each 1 second (or less) counting interval:

- The entire 256 channel spectrum from the main 4π detectors;
- The following window counts from the main 4π detectors to the nearest whole number of channels:

→ Potassium	1370 – 1570 keV
→ Uranium	1660 – 1860 keV
→ Thorium	2410 – 2810 keV
→ Total Count	400 – 2810 keV
→ Cosmic	3000 - ∞ keV
- If upward-looking detectors are used to monitor background radioactivity, only the uranium window need be recorded;
- The system dead-time or system live time (if measured electronically) to an accuracy of 0.1 percent;
- The radar altimeter;
- Air temperature;
- Air pressure.

5.6.D.4 Dead Time and Accumulation Times

The maximum dead time per pulse will not exceed 15 microseconds. The accumulation time and sampling times will be 1 second.

5.6.D.5 Rainfall and Snowfall

State your procedure for dealing with rainfall and snowfall.

5.6.D.5 Calibrations Prior to Survey

Prior to the commencement of the survey, all calibration information must be supplied to the client. Historical calibration data must be provided demonstrating spectrometer calibrations within the last 12 months. If available, past calibration test results should be supplied for comparison purposes.

Current calibrations must be provided to demonstrate system values and the consistency of results. Further calibrations will be performed as necessary and if agreed upon by both parties.

Major calibrations are described below:

Cosmic Calibration: A series of high level lines must be flown to relate the cosmic-ray window to the combined cosmic and aircraft background counts in each radioelement window. The flying time at each altitude should be a minimum of 10 minutes. If upward detectors are used, the time should be increased to 15 minutes.

Radon Calibrations: The Offeror must be able to remove radon background using either upward-looking detectors or the spectral ratio technique

Calibration Pads: The airborne spectrometer system must be calibrated on an approved set of calibration pads for the measurement of stripping ratios.

Sensitivity and Height Attenuation Calibrations: A series of flights must be made over an approved calibration range to determine aircraft system sensitivities and height attenuation coefficients. The calibration range must be surveyed with a calibrated 256 channel portable spectrometer on the same day as the calibration flights.

Re-calibration Requirements: If any significant change has been made to the gamma-ray spectrometer, or the aircraft has been changed since any of these calibrations were performed all the calibrations except for the calibration pad tests must be repeated. The tenderer must demonstrate that the equipment sensitivity has not changed since the last calibrations, otherwise all calibrations must be repeated.

Describe your calibration procedures in your proposal. Include calibration records for the spectrometer with your proposal.

5.6.D.7 Monitoring Procedures

5.6.D.7.1 Calibration Monitoring

All resolution checks, source tests and survey test line data should be recorded digitally and will be included as deliverables.

If the spectrometer system does not automatically correct/calibrate itself, then before and after every calibration, thorium sources tests must be performed to establish that the system sensitivity has not changed during the calibration. A source must be placed at least 40 cm from the center of each detector package so that all detectors are adequately illuminated. The average of the dead-time and background corrected thorium window count rate from the thorium source must be calculated. If the pre and post calibration source checks differ by more than 3 percent, the calibration must be repeated. The average of the pre and post calibration source tests must also not differ by more than 3 percent from the average of all other calibrations, otherwise that calibration must be repeated.

In order to verify that the system sensitivity has remained constant since the last series of calibrations, a thorium source test and a background measurement must be carried out prior to the commencement of the survey. If the dead-time and background corrected thorium window count rate varies by more

than 3 percent from the average of all pre and post calibration source tests, all calibrations must be repeated.

5.6.D.7.2 Daily Thorium Source Tests

If the spectrometer system does not automatically correct/calibrate itself, in order to verify that the system sensitivity has remained constant throughout the survey, thorium source tests and background measurements must be carried out before and after every days flying. If the deadtime and background corrected thorium window count rate differs by more than 5 percent from the average of all measurements carried out during the most recent calibrations, the cause of the change must be investigated before continuation of flights. If the problem cannot be resolved quickly, the State Program Manager must be contacted for discussion and instruction on whether to continue flying before resolving the problem.

5.6.D.7.3 Daily System Resolution Checks

If the spectrometer system does not automatically correct/calibrate itself, each day the overall system resolution must be measured with a thorium source placed at least 40 cm from each detector package. If the resolution has changed by more than 1 percent (e.g. 6 to 7 percent) from the resolution at the beginning of the survey, the cause of the change must be investigated before continuation of flights. If the problem cannot be resolved quickly, the State Program Manager must be contacted for discussion and instruction on whether to continue flying before resolving the problem.

5.6.D.7. Spectrum Stability

In order to monitor spectral drift during the course of a flight, the average spectrum for each flight line must be plotted. The plots must also indicate the potassium and thorium peak positions to one tenth of a channel. If the flight lines are less than 1000 seconds duration, spectra should be accumulated for at least 1000 seconds before plotting.

5.6.D.7.4 Survey Test Line

A survey test line at least 4 km in length should be flown each day at the nominal survey altitude to monitor the effects of soil moisture and verify that the system is functioning correctly. If the background and height corrected thorium window count rate varies by more than ± 10 percent from the mean of the previous measurements, flights should be suspended until the thorium count rate has returned to acceptable levels. If there is rain in part of the survey area or on the test line, 4 km of a previously flown flight line can serve to monitor the effect of moisture.

Discuss your reasoning for choosing an area to be a test line as it applies to these surveys.

5.6.D.7.5 Radiometric Survey Monitoring Reporting

The contractor shall maintain an equipment log noting all equipment serial numbers, equipment replacements and repairs throughout the survey and the results of daily resolution checks and source tests. All resolution checks, source tests and survey test line data should be recorded digitally and included as deliverables. Cumulative plots should be made of the thorium source tests, average background and height corrected thorium count rates over the survey test line, and the average flight line spectra indicating the thorium resolution and the potassium and thorium peak positions.

5.6.E Altimeter

5.6.E.1 Types and Locations of Altimeter

A radar altimeter and another continuously recording altimeter, i.e. a differential GPS or a barometric altimeter, shall be employed. Both altimeters will have digital output. The radar altimeter offered shall recover altitude within three percent of flight height above ground. Include the location of the installed altimeters.

5.6.E.2 Altimeter Resolution

The resolution of both altimeters shall be specified, and shall become a requirement.

5.6.E.3 Accuracy of Altimeter

The absolute accuracy of the altimeters over flat terrain shall be specified and shall become a requirement. It is desired that the radar altimeter will have a sensitivity of 10 feet or better.

5.6.E.4 Calibration of Altimeter

The methods used to calibrate the altimeters shall be specified. The altimeters shall be calibrated at the beginning of the survey and as often as required to ensure that the altimeters are operating within specifications. A recalibration must be done if equipment is changed.

5.6.F Navigation and Flight Path Recovery Systems

5.6.F.1 Navigation Systems Specified

A differential GPS will be used to control all flight paths. The system used for aircraft navigation shall be specified in detail.

5.6.F.2 Navigation System Calibration

A calibration check on the accuracy of the electronic navigation system must be carried out prior to the commencement of survey operations.

5.6.F.3 Flight Path Recovery

The flight path shall be recovered within 50 feet of the true position in the along track and cross track directions. This accuracy shall be verified by use of a tracking camera or other specified means.

5.6.G Digital Records

5.6.G.1 Digital Data Recording

The system used for digital recording shall be specified. Describe backup methodology and equipment.

5.6.G.2 Resolution of Digital Records

The digital records of inflight data shall be of sufficient resolution and scale to enable visual checks to be made of the system performance (e.g. noise levels) during flight. All values must be visually accessible per line. Flexibility to change vertical scales in the field as the recorded geophysical parameter activity demands must exist.

The data used for visual checks at a minimum shall consist of the following:

- a) All channels of EM data,
- b) Magnetometer readings at fine and coarse scales,
- c) All necessary radiometric readings,
- d) Radar and barometric altimeter data,
- e) Fiducial and time data, and
- f) 60 Hz noise level.

5.7 Reflight Specifications

5.7.A General Specifications

The Contractor will resurvey, free of charges, lines or segments of lines for which the required digital data are missing or are not in accordance with the Technical Specifications. Isolated errors or spikes and short, non-sequential gaps consisting of a few points which can be corrected by interpolation are acceptable. When reflights are necessary, all the different types of data will be reacquired and integrated into the existing data set.

5.7.B Causes for Reflights

Reflights will be flown for the situations listed below.

5.7.B.1 Deviations exceeding flight path tolerance

Flight path lines will be rejected and will be reflown if deviations from specified flight path exceed the flight path tolerance specified. However, if the flight line spacing deviation is caused by safety requirements or FAA regulations, the Contractor is not required to fly a fill-in line.

5.7.B.2 Deviations exceeding altitude tolerance

Excessive deviations in altitude that are not caused by safety reasons shall be reflown.

5.7.B.3 Electromagnetic data—noise and drift

The Contractor will re-fly any line segments that exceed the noise envelope and drift rates specified.

5.7.B.4 Electromagnetic data—sferics

Should data be acquired during such intense sferic activity that data processing techniques cannot recover useful data, the area impacted shall be reflown.

5.7.B.5 Excess Diurnal Variation

The Contractor will re-fly any line segments that exceed the tolerance for the diurnal variation.

5.7.B.6 Radiometric data

Radiometric data inconsistent with specifications will be reflown. Data in question must be brought to the attention of the State Project Manager for acceptance or rejection of data.

5.7.B.7 Other incomplete data

Any non-complete data, such as non-recoverable GPS data are cause for reflights. Continuous or semi-continuous strings of missing data of unusual length shall be brought to the attention of the State Project Manager for acceptance or rejection of data.

5.7.B.8 Other technical standards not met

Any non-technically acceptable data, such as periodic oscillations in magnetometer data, reflights that do not follow Section 5.5.F, etc. are cause for reflights. Data problems must be called to the attention of the State's Project Manager.

5.7.B.9 Lost digital data

The Contractor must make back-up copies of the digital data for themselves. If digital data lost in transit or in processing, any reflights to replace the lost digital data will be made at the Contractor's sole expense.

5.8 Data Verification, Inspection, and Quality Control

5.8.A General Requirements

A copy of the Technical Specifications must be readily available and be in the possession of each of the pertinent Contractors personnel who have a responsibility in the execution of the contract. The Contractor must also obtain and have available in the field and office all relevant charts, maps, etc. pertaining to navigation.

5.8.B Field Requirement

It is required that initial flight path recovery and full inspection of data will be done in the field. At the end of field operations, there must be a completed flight path which may be improved by further office processing, plus a list, by flight, of digital editing corrections of all recorded parameters which are apparent on the chart records. GPS data must be accurately synchronized with the data fields to minimize uncertainty in the recorded time.

5.8.C Integrity and Verification of Digital Data

The Contractor shall provide the State with sufficient verification information to establish the integrity of the digital data. The system proposed for digital data verification shall be described in detail by the Offeror, and at a minimum shall include the following items:

- (1) The digital data must be verified on a daily basis with an in-field system to determine if faulty recording or has taken place.
- (2) The digitally-recorded values must be analyzed, viewed, or plotted to ensure that all data are within specifications daily and there are no data problems, such as periodicity.
- (3) The flight path derived from electronic navigation (differentially corrected using the base station GPS unit) will be verified utilizing the color video data as well as through the generation of a speed check.

5.8.D Inspection by State Project Manager

The State Project Manager may make a visit at any time to review equipment, calibration results, equipment log, procedures, and all data. It is a requirement that the Contractor will go over all data and equipment with the State Project Manager at that time. It is understood that in a busy field situation, particularly with short notice of State Project Manager's visit, the Contractor may not be completely finished with the items listed below, and may continue preparing items while the State Project Manager evaluates others.

The Contractor should be prepared to discuss and provide the following at a minimum:

- (1) Log book of equipment changes;
- (2) Calibration results to date;
- (3) Flight path in Autocad ESRI Shape file or another agreed upon format;
- (4) Preliminary Geosoft database(s) containing all raw data, including diurnal data;
- (5) Preliminary grids of the aeromagnetic data; all coplanar and coaxial apparent resistivities, radiometric data, altimetry data, and dtm;
- (6) Examples of the worst data that is within specifications and examples of data that are being reflighted for appropriate channels;
- (7) Preliminary statistics of missing data points, and snapshots, jpegs, or other views of significant missing data for all data types;
- (8) Videos of the flight path.

At a minimum, items 3, 4, 5, and preliminary statistics from item 7 above are to be provided on DVD to the State Project Manager during a field visit or sent during field data acquisition to the State office after discussion with the State Project Manager.

5.8.E Final Field Data

The Contractor must provide to and discuss the final field data for each tract with the State Project Manager before the equipment is demobilized from each base of operations. Failure to comply with this item may warrant unnecessary expense on the Contractor's part, as remobilization to the area may be necessary. Because partial payment will be made upon acceptance of the data for each area, a more thorough discussion of this topic and a complete list of items to be delivered as final field data are contained in Section 5.13.A.

5.9 General Specifications for Data Processing and Interpretation

5.9.A Magnetic Data

Diurnal variations shall be removed by use of the base station magnetometer data and leveling shall be verified by use of tie-line data. The Contractor shall use the maximum possible number of tie-line/traverse-line crossing points for the purpose of magnetic leveling. A regional trend (either IGRF or a local trend) shall be removed after discussion with the State Project Manager.

Although the State does not insist on any particular method, the procedure proposed for gridding the magnetic data must meet current industry standard. The final cell size is to be 25 m. Magnetic grids to be provided include the following:

- Total Field Magnetism
- Residual Magnetic Intensity
- First Vertical Derivative
- Analytic Signal
- Tilt Derivative

Describe your procedures for processing and gridding the magnetic data in your proposal.

5.9.B Apparent Resistivity Data

Digital grids and contour maps showing coplanar apparent resistivities shall be prepared for the survey areas. The apparent resistivity using a pseudo-layer half space model shall be calculated for three combinations of frequencies or times and coil configurations, excluding the areas where the results are thought to be affected by cultural features. The procedures that shall be used for processing the electromagnetic data shall be described in the proposal.

Although the State does not insist on any particular method, the procedure proposed for gridding the resistivity data must meet current industry standards. Final cell size is to be 25 m.

Describe your procedures for processing and gridding the electromagnetic data in your proposal.

5.9.C Radiometric Data

Digital grids and contour maps showing radiometric data shall be prepared for the East Styx survey area.

Although the State does not insist on any particular method, the procedure proposed for gridding the radiometric data must meet current industry standards. Final cell size is to be 25 m. Radiometric grids to be provided include the following:

- Percent Potassium
- Equivalent Thorium
- Equivalent Uranium
- Equivalent thorium / percent potassium ratio
- Equivalent uranium / percent potassium ratio
- Equivalent uranium / equivalent thorium ratio
- Natural air absorbed dose rate

Radiometric Ternary data will be provided as a map.

Describe your procedures for processing and gridding the radiometric data in your proposal.

5.9.D Altimetry Data

Digital elevation values, in meters a.m.s.l., will be calculated from the GPS z-value or barometric altimeter, minus the aircraft radar altimeter and provided as gridded data. Describe the process and finished product in your proposal.

5.9.E Interpretation of EM Data and Culturally Induced EM Anomalies

The electromagnetic data shall be interpreted to identify bedrock conductors in the survey areas. A quantitative estimate of the conductivity as well as the EM response characteristic as a proportion of the anomaly shall be prepared. The EM data should be zero-level corrected, converted to parts per million of the primary field, and lag corrected with the magnetic field measurement. All EM anomalies that are thought to be caused by cultural features as well as those caused by magnetite shall be identified.

Include a discussion of how EM anomalies will be picked and interpreted in the proposal. Resolution of the anomalies, depth estimates, uses for the EM interpretation, and sources for processing programs and interpretation information will be considered. The Offeror should provide examples of the typical symbols and interpretive notation.

5.9.F Interpretation of Geophysical and Geological Data

Using all geophysical data acquired and geologic information provided by the State, the Contractor will produce a Project Report including at least the following:

- (1) A description of the field operations with work statistics, bases of operations, pertinent dates, personnel, survey aircraft used, and instrumentation.
- (2) Technical specification of the survey, a description of problems encountered, and a discussion of effectiveness of survey techniques and instrumentation with suggestions for improvement in future surveys.
- (3) Description of the compilation procedure including a flow chart of methodology from correction and editing of raw data to final contour map production; a list of all criteria employed in rejection/acceptance of data; a general explanation of the leveling and gridding procedure.
- (4) An interpretation section, including discussions of the geophysical data and geology in the project area. This section must contain an analysis describing the geophysical signatures from gross geological features, as well as new structural and lithological information that can be inferred from the geophysics. The results of the interpretation should be indicated on the two interpretation maps listed in Table 3 (Section 5.10.B.6). These maps will be included in map pockets in the report.
- (5) All appropriate calibration records.

5.9.G Merging Grids

The contractor shall merge existing gridded data for residual magnetic field, digital terrain model (DTM), and 3 coplanar apparent resistivity grids when possible for the tracts flown adjacent to existing surveys. Probable grids that can be merged are discussed in Section 4 for each area. The data for the existing surveys will be provided to the Contractor as Geosoft GDB and GRD files. The profiles must be leveled and merged so that the each type of data is one continuous data set. The consolidated data set must be corrected for annual variations and regional trends, as well as for the normal short term fluctuations and variations specified elsewhere in this contract.

Maps produced from the contract resulting from this RFP will contain only the new survey areas with small amounts of the previously surveyed area where appropriate, so that continuity of the data is apparent to the general user. The gridded data will be provided for the new areas separately, as well as with the merged grids.. Appropriate vector data need only be supplied for the new survey areas.

The Offeror shall describe in detail the process used for merging the data sets and a discussion of any problems that might preclude this procedure.

5.10 Specifications for Final Products

5.10.A Approval of Digital Products by State Project Manager

Completed or draft items of all items produced for publication for the survey areas must be provided to the State Project Manager for approval. Small groups of items, such as all resistivity grids, shall be provided as they are completed, rather than waiting until all the items of that type, e.g. all grids, are completed.

5.10.A.1 Digital flight plan

Digital flight plans for all areas are to be provided to the State Project Manager for approval before flying begins.

5.10.A.2 File names and Documentation

File names, particularly how the different survey blocks are named, will be decided by the State Project Manager in conjunction with the Contractor. To save time, file names should be requested by the Contractor before much time has been spent producing draft files.

Documentation of the data, including 'readme' files and metadata, is a critical part of the project. The Contractor must initiate and provide appropriate 'readme' files which will be further modified by the State Project Manager and the Contractor to arrive at the final files. The State Program Manager will require the Contractor to provide details for metadata, including appropriate process steps, definitions of entities, and other items only answerable by the Contractor. The Contractor must take an active role in preparing and editing text documents with the State Project Manager.

5.10.A.3 Digital Linedata

The Contractor will provide a 'linedata.txt' file containing channel names, the number of decimals, and definitions for approval before the linedata is provided to the State Project Manager.

Raw and processed linedata are to be provided in Geosoft GRD (float and noncompressed) and XYZ formats. The data must contain flight number, line number, date, and fiducial information. X and Y are to be provided in NAD 27, UTM Zone 5N for East Styx, and NAD 27, UTM Zone 6N for Wrangellia and the Eastern Survey. Longitude and latitude are to be provided in WGS 84. The State Project Manager reserves the right to require more raw data be included in the linedata files.

If the cycling rate for the magnetometer data is less than the EM data, the magnetometer data shall be splined so that a magnetometer value is represented with each EM sequence in the profile archives.

5.10.A.4 Digital Gridded data

The digital gridded data in both UTM north format will be provided to DGGS for review before map products or draft DVDs are made. Gridded data shall be provided for review in both Geosoft float and ER Mapper formats.

For map products, the gridded data need to be oriented with Geographic north pointing north. These grids will be given to DGGS on the third DVD per area, and as they are just rotated versions of grids already approved, do not need to be approved by the State Project Manager.

5.10.A.5 Geotiffs

The geophysical images of each area with associated color bar that are used for the maps shall be provided in Geotiff format at suitable dpi to provide crisp image. Geotiffs shall be provided in UTM north format. Discuss your method for producing the Geotiffs.

5.10.A.6 Digital Vector Files

The flight path is to be provided in ESRI shape file format or another agreed upon format.

Other vector files used for the map products are to be provided in DXF format, or another agreed upon format. The vector data are to be provided both with UTM north up for review, and rotated such that geographic north is oriented up for inclusion on the third DVD for each area.

For the magnetic contours, closed magnetic lows shall be indicated by toothed contours directed inward; highs and lows shall be indicated by "H" and "L" respectively (or other agreed upon symbols) with numerical value of the high or low if map complexity permits.

The magnetic contour interval shall be chosen in consultation with the State Project Manager; in general it is desired that the contour interval be 10 nT or less.

5.10.A.7 Digital Map and Plot Files

HPGL/2 and Adobe Acrobat PDF files are to be provided that are compatible with the Hewlett Packard (HP) Design Jet T1300PS plotter for each map product. Files must be internally labeled to denote map number on the plotter interface. Adobe Acrobat files must be version 8 or later. Discuss the process and your capability to produce these products.

5.10.A.8 Project Report

Contents of the Project Report are discussed in Section 5.9.F. The Project Report should be provided in Microsoft Word format for review, with maps being provided as PDF and DXF files.

5.10.B Map Requirements

5.10.B.1 Layout and Approval of Layout

All maps for this project will be produced with gridded data rotated to Geographic north. A standard format for titles, legends, and explanations to be printed on each map will be supplied by the State. Map legend shall include basic survey and instrument specifications, explanation of symbols used, etc. The base for all colored maps shall include Latitude/Longitude and UTM notations along border of maps. The State Project Manager will decide in consultation with the Contractor whether more UTM information will be included. Township and section grids with Township/Range notations will be included on maps without topography.

Proposed sheet layout and index maps will be provided to the State Project Manager for approval before maps are made. Final copies of the index maps will be provided to the State Project Manager in jpg and dxf format after index maps are finalized.

5.10.B.2 Plotter Paper and Inks for maps

All paper maps must be HP C6020A or equivalent. The State Project Manager reserves the option of choosing the type of plotter ink used.

5.10.B.3 Topography

The State requires that map products be made using very good quality topography. The State prefers either digital vector topography or high resolution raster topography. Photographic topography, though not preferred, must be used if digital topography is not acceptable quality as judged by the State Project Manager. Describe the process and finished product in your proposal. Include an example on paper with your proposal of your product including a raster geophysical data image and similar topography.

5.10.B.4 State section grid

The State will provide the Contractor with the section grids for each area in Autocad dxf or ESRI shape file format. The Contractor must annotate the section grid with suitable township and range numbers for use on maps without topography and to make a digital version of the section grid available to DGGs customers.

5.10.B.5 Maps for First Delivery and DVD

The first release for each area will include maps on paper and as digital files on DVD along with other digital files. Maps and the number of paper copies to be included for this are listed in Table 2. All 'First Delivery' maps are to be produced at a scale of 1:63,360.

- First Delivery maps and DVD for Wrangellia and the Eastern Survey will contain maps 1-13 in Table 2.
- First Delivery maps and DVD for East Styx will contain maps 1-28 listed in Table 2.

Table 2: Maps Required for First DVD and Associated Paper Releases					
Table 2 Map No.	Map Products Required	Containing			No. of paper copies
		Topo	Contours	State Section Grid	
1	Residual field magnetic (mag)	yes			13
2	Residual field mag		magnetic	yes	9
3	First vertical derivative - mag	yes			13
4	Analytic signal of mag	yes			13
5	Analytic signal of mag		analytic signal	yes	9
6	Tilt Derivative of mag	yes			13
7	Tilt derivative contours on color shadow residual magnetic field image		tilt derivative	yes	13
8	1 st Freq. App. Resistivity	yes			13
9	1 st Freq. App. Resistivity		resistivity	yes	9
10	2 nd Freq. App. Resistivity	yes			13
11	2 nd Freq. App. Resistivity		resistivity	yes	9
12	3 rd Freq. App. Resistivity	yes			13
13	3 rd Freq. App. Resistivity		resistivity	yes	9

Table 2, cont.: Maps Required for First DVD and Associated Paper Releases

Table 2 Map No.	Map Products Required	Containing			No. of paper copies
		Topo	Contours	State Section Grid	
14	Equivalent thorium / percent potassium ratio	yes			13
15	Equivalent thorium / percent potassium ratio		ratio	yes	9
16	Equivalent uranium / percent potassium ratio	yes			13
17	Equivalent uranium / percent potassium ratio		ratio	yes	9
18	Equivalent uranium / equivalent thorium ratio	yes			13
19	Equivalent uranium / equivalent thorium ratio		ratio	yes	9
20	Percent potassium	yes			13
21	Percent potassium		potassium	yes	9
22	Equivalent thorium	yes			13
23	Equivalent thorium		thorium	yes	9
24	Equivalent uranium	yes			13
25	Equivalent uranium		uranium	yes	9
h	Natural air absorbed dose rate	yes			13
27	Natural air absorbed dose rate		data	yes	9
28	Radiometric ternary	yes			13

5.10.B.6 Maps for Second Delivery

The State may want the two interpretation maps in Table 4 to have topography. This will be decided in consultation with the State Project Manager.

Table 3: Maps Required for Second DVDs and Associated Releases					
Map Products Required	Containing			Scale	No. of paper copies
	Image Background	Topo	Vector grids		
Detailed electromagnetic anomalies and flight path	Residual mag	yes		1:31,680	15
Interpretation, with line work in colors (associated with project report)		to be determined	State section to be included if topography is not included	1:63,360	15
Interpretation, with line work in black (associated with project report)	Residual mag	to be determined	State section to be included if topography is not included	1:63,360	15

5.10.C DVD products

5.10.C.1 Overview of DVDs

Data for each area will be on separate DVDs. The Contractor will provide the First and Second DVDs for publication for each area. A third DVD set for each area will include original data, other supporting files, and map surrounds and will be delivered at the end of the project. A fourth DVD set containing digital video files made during the survey will be delivered when the Contractor has no more need for them.

5.10.C.2 DVD types and covers

Digital data will be supplied on a cDVD or DVD-ROM or other applicable DVD formats readable standard common DVD readers for PC computers.

Each DVD supplied shall have a unique visual label attached to each DVD and to each enclosing box. Information to be included on the label will be supplied by the State. The DVD cover and label shall be submitted to the Project Manager for approval. The visual label will correlate with supplied descriptive material of the DVD's contents.

Draft and final versions of the DVD label and cover shall be provided to DGGS in a useable format for future DVD copies.

5.10.C.3 Preparation for Draft versions of the DVDs

Excluding the DVDs containing video files, draft versions of each DVD for each area shall be delivered for review before final DVD preparation. To save time in DVD production, the following procedures shall be followed.

- A) A checklist containing files to be included on the DVDS shall be reviewed by both parties before the DVDS are made.
- B) Excluding metadata text files, the 'readme.txt' and any other 'text' file, will also be reviewed by both parties before the draft DVDS are made.
- C) Though not always possible, all files will ideally have been provided for review before the draft DVDs are made, so that draft DVDs can be approved quickly.

5.10.C.4 Contents of 'First DVD' for each area

All gridded, Geotiff, and vector data for the first DVD deliverable for each area will be in NAD 27 and the appropriate UTM zone. Data shown in maps will be with Geographic north pointing north. The 'First DVD' for each area shall include:

- DVD-1.A) Raw and final processed data for all systems as described in Section 5.10.A.3; Geosoft ASCII XYZ format with Geosoft import template, and in Geosoft binary GDB format.
- DVD-1.B) Gridded data in both Geosoft (.grd – float, noncompressed) format and ER Mapper format (.ers) of the grids listed below. At a minimum, data included are the following:

- 1) Total Magnetic Field (in nT).
- 2) Residual Magnetic Field (in nT).
- 3) First Vertical Derivative of the Magnetic Field.
- 4) Analytic Signal of the Magnetic Field
- 5) Tilt Derivative of the Magnetic Field
- 6-8) Three maps, each containing an apparent resistivity calculated from one of three EM frequencies (in ohm-m).
- 9) Digital Elevation Model (in m).
- 10) Gridded altimetry.

Gridded data for East Styx additionally includes the following:

- 11) Percent Potassium
- 12) Equivalent Thorium
- 13) Equivalent Uranium
- 14) Equivalent Thorium/Percent Potassium
- 15) Equivalent Uranium/Percent Potassium
- 16) Equivalent Uranium/Equivalent Thorium
- 17) Natural air absorbed dose rate.

Merged grids of new surveys and old where appropriate include the following

- 18) Residual Magnetic Field (in nT).

- 19) Apparent resistivity calculated from three EM frequencies (in ohm-m).
 - 20) Digital Elevation Model (in m).
- DVD-1.C) Geotiff format images of the grids 2-20 listed in DVD-1.B above. If the data were shown on a map, the image used on the map should be shown. No surrounds except for the color bar are to be included. Each of these data types should be shown as one file for the entire contiguous area.
- DVD-1.D) Vector files in DXF format except for the flight path, which shall be in ESRI shape file format. At a minimum, files include the following:
- 1) Flight path.
 - 2) Residual magnetic field contours.
 - 3) Analytic Signal of the Magnetic Field
 - 4) Tilt Derivative of the Magnetic Field
 - 5-7) Apparent resistivity contours for three frequencies.
- Vector files for East Styx additionally include
- 8) Percent Potassium contours
 - 9) Equivalent Thorium contours
 - 10) Equivalent Uranium contours
 - 11) Equivalent Thorium/Percent Potassium contours
 - 12) Equivalent Uranium/Percent Potassium contours
 - 13) Equivalent Uranium/Equivalent Thorium contours
 - 14) Natural air absorbed dose rate contours
 - 15) State Section grid for map area.
 - 16) UTM grid for map area.
- DVD-1.E) Maps as discussed in Section 5.10.B.5. Digital maps are to be provided in HPGL/2 and Adobe Acrobat PDF formats,
- DVD-1.F) 'Text' and other files
- 1) 'Readme' file describing contents of DVD (produced in conjunction with DGGS).
 - 2) Metadata for the publication (produced in conjunction with DGGS).
 - 3) File describing contents of linedata database, statistics of dummy variables per channel, and reasons for missing variables. File to be provided in PDF and CSV formats.
 - 4) Index map showing location of survey area in Alaska. Provided in PDF or jpg format.
 - 5) Index map for the 63,360-scale map sheets. Provided in PDF or jpg format.

5.10.C.5 Contents of Second DVD for each area

The second DVD for each area shall include the following files at a minimum:

DVD-2.A) Detailed EM anomalies

- 1) Import template (.i0) file for the Geosoft XYZ anomalies;
- 2) Database of the EM anomalies in Geosoft .XYZ format;
- 3) EM anomalies in .csv format;
- 4) 'EMAnomaliesReadMe' in pdf and txt format.

DVD-2.B) Maps as discussed in Section 5.10.B.6 and Table 3. To be provided in HPGL2 and PDF files (or other agreed upon formats).

- 1) Project Report Interpretation maps at 1:63,360-scale. Includes typical publication headings at tops of sheet on both left and right, a title stating the map contents, and appropriate legends. Arcs and polygons should meet at adjacent sheet borders.
 - a) Project Report Interpretation in color and as described in Table 4.
 - b) Project Report Interpretation in black and white on residual magnetic field, IGRF removed; with topography. The magnetic background must be mentioned in the title and an appropriate color bar should be added.
- 2) EM anomaly maps at scale of 1:31,680.

DVD-2.C) Project Report text in PDF format

DVD-2.D) Geotiffs and associated legends.

- 1) One file for each individual EM anomaly map containing the magnetic grid, flight line, and EM anomaly symbols. No surrounds except for the magnetic color bar to be included.
- 2) One file containing interpretation sheets for the interpretation associated with the project report (Section 5.10.B.6, Table 3). No surrounds to be included.
- 3) EM Anomaly interpretation legend in jpeg format
- 4) Interpretation legend in jpeg format

DVD-2.E) Vector files with UTM north. Except where noted, all vector files should be in DXF unless another format is agreed upon.

- 1) Flight path, ESRI Shape file or another agreed upon format.
- 2) State Section grid if used for the published maps.
- 3) UTM grid for map area if used for the published maps.
- 4) EM anomalies for entire map area in one file if possible, otherwise a file for each individual sheet will suffice.
- 5) Interpretation map from project report as one file for entire map area Arcs and polygons should meet at adjacent sheet borders.

DVD-2.F) Stacked multichannel profiles in PDF format at a scale of 1:31,680. Each sheet shall be labeled with DGGS-provided publication number and sheet number. Each sheet will include Location of EM anomalies and their interpretation symbol. Documentation of the stacked profiles will be included in the ReadMe documents by the Contractor.

Documentation of the items plotted including scales and appropriate symbols shall be included in the 'Readme' file discussed above or in a separate pdf file describing the stacked profiles, to be decided by the State Project Manager. Provide sample of stacked profile with your proposal.

DVD-2.G) Metadata files for the contents of the DVD provided by DGGS but produced in conjunction with the Contractor.

DVD-2.H) Text and other files to be included at the DVD level

- 1) A 'ReadMe' file for the publication in PDF and txt format (made in conjunction with DGGS).
- 2) Index map showing location of survey area in Alaska. Provided in PDF or jpg format; format to be determined in conjunction with the State Project Manager.
- 3) Index map for the 63,360-scale map sheets. Provided in PDF and jpg format; format to be determined in conjunction with the State Project Manager.
- 4) Index map for the 31,680-scale map sheets. Provided in PDF and jpg format; format to be determined in conjunction with the State Project Manager.

5.10.C.6 Contents of Third DVD for each area

The third DVD for each area shall include the following files at a minimum:

DVD-3.A) Map Surrounds for all maps produced for this project including the interpretation map. The surrounds should be oriented with "Geographic north up". In DXF file format or other agreed upon format.

DVD-3.B) Gridded data with Geographic north pointing north of the grids listed below. In Geosoft ASCII GXF format:

- 1) Total Magnetic Field (in nT).
- 2) First Vertical Derivative of the Total Magnetic Field.
- 3) Analytic Signal of the Total Magnetic Field
- 4) Tilt Derivative of the Total Magnetic Field
- 6-8) Apparent resistivity calculated from three EM frequencies (in ohm-m).

The third DVD for East Styx additionally includes

- 9) Percent Potassium
- 10) Equivalent Thorium
- 11) Equivalent Uranium
- 12) Equivalent Thorium/Percent Potassium
- 13) Equivalent Uranium/Percent Potassium

Gridded data continued:

- 14) Equivalent Uranium/Equivalent Thorium
- 16) Natural air absorbed dose rate

DVD-3.C) Vector files with Geographic north pointing north of the files listed below. Unless mentioned below, in DXF format or another agreed upon format:

- 1) Flight path in ESRI Shape file format.
- 2) Magnetic total field contours with IGRF removed.
- 3) Analytic Signal of the Total Magnetic Field
- 4) Tilt Derivative of the Total Magnetic Field
- 5-7) Apparent resistivity contours for three frequencies.
- 8) EM anomalies
- 9) Interpretation from Project Report, in color

Vector files for East Styx additionally include

- 10) Percent Potassium
- 11) Equivalent Thorium
- 12) Equivalent Uranium
- 13) Equivalent Thorium/Percent Potassium
- 14) Equivalent Uranium/Percent Potassium
- 15) Equivalent Uranium/Equivalent Thorium
- 16) Natural air absorbed dose rate.
- 17) State Section grid for map area.
- 18) UTM grid for map area.

DVD-3.D) Final field linedata including dates flown and associated readme.txt if not included in DVD 1. In Geosoft GDB and .XYZ format. To be discussed with State Project Manager.

DVD-3.E) Files at the DVD level

- 1) Archive Read me in txt and pdf format.

DVD-3.F) Supporting files in formats listed below. These will not be included in the publication.

- 1) Project report in Microsoft Word format.
- 2) Figures used in the Project Report. To be provided in jpg format, including heading test, altimeter test, mag processing flow chart, and any other calibration or documentation figures in the project report.
- 3) Any calibration records determined between the Contractor and the State Project Manager to be inappropriate or unnecessary for the Project Report.
- 4) Flight logs.
- 5) If versions of any text files, such as but not limited to something like 'GPR2014-3Readme.txt' and 'EMAnomaliesReadMe.txt', were modified from text format to a Word document that differed from the text format for publication in PDF format, the Microsoft Word version 2007 document should be included.

5.10.C.7 Contents of Fourth DVD for each area

The fourth DVD for each area shall contain the video files for all flight and tie lines.

5.11 Optional Data Systems Proposed

The State understands that with a minimum of additional expense we may be able to collect additional or more refined data with this EM-Magnetometer survey. For this reason we want Offerors to discuss how they would propose to gather additional information from more refined systems, such as gradient magnetic data, or secondary systems such as Gamma Ray Spectrometer for the East Styx survey area or altimeters, etc. Information about acquiring, processing, and interpretation of the data should be included. Discuss any tradeoffs and advantages. Maps (9 paper copies of each sheet) and digital data would be desired.

5.12 Optional Services/Deliverables Proposed

Vendors may also provide additional deliverables that could increase customer satisfaction or that could provide for greater ease of use for the State and its customers. Any additional items should be listed in your proposal.

5.13 Deliverable Items

Offerors should provide documentation as to their ability to provide these items or alternate deliverables if appropriate.

5.13.A Draft and Final DVDs Delivery Dates

- (1) Preliminary version of the first final DVD for one area, to be determined in conjunction with DGGs, is to be delivered by January 13, 2014.
- (2) Copies of the approved version of the first DVD for one area is to be delivered by January 27, 2014.
- (3) Preliminary version of the first final DVD for the other area is to be delivered by March 3, 2014.
- (4) Copies of the approved version of the first final DVD for the other area is to be delivered by March 18, 2014.

- (5) Preliminary versions of the second final DVD set for the other area is to be delivered by May 21, 2014.
- (6) Final versions of this reviewed second DVD is to be delivered by June 30, 2014.
- (7) Preliminary versions of the second final DVD set for the other area is to be delivered by July 15, 2014.
- (8) Final versions of this reviewed second DVD is to be delivered by August 15, 2014.
- (9) Preliminary versions of the third DVDs for both areas are to be delivered by September 15, 2014.
- (10) Final versions of these reviewed third DVDs for both areas are to be delivered by October 15, 2014.
- (11) The 4th DVD, containing the video files produced during flights, for each area can be delivered with the third DVD set or earlier. A preliminary DVD of the video files is not necessary.

5.13.B Deliverable Items At Conclusion of Data Acquisition for Each Area

Partial payments for each major survey area will be made upon receipt, verification, and acceptance by the State of the interim products in this section (5.13.B) for each survey. These products are to be delivered and/or discussed by the geophysicist-on-site at the State DGGS office in Fairbanks within 5 days of the end of the field part of each field project.

Verification of selected or all portions of field data from the area will be done to demonstrate compliance with the technical requirements in this RFP; such verification will be done by the Contractor and the State Project Manager in the Division of Geological & Geophysical Survey (DGGS) offices at 3354 College Road, Fairbanks, Alaska. A copy of the requisite software for the verification of the data will be brought by the Contractor for use by the Contractor in the DGGS office.

Sufficient information and raw data (e.g. location, altitude, background field records, magnetic field, diurnal, etc.) must be provided to the State Project Manager on DVD in case of need to produce the deliverables listed in Section 5.13.C, D, and E of this RFP. The DVD shall include the following at a minimum:

- (1) Preliminary Geosoft database(s) containing all raw data;
- (2) Preliminary grids of the aeromagnetic data; all coplanar and coaxial apparent resistivities, altimetry data, and dtm for each survey or block as appropriate.
- (3) Preliminary grids of the radiometrics for the East Styx area
- (4) Flight path at a scale of 1:63,360 (inch-to-a-mile) in ESRI shape file or another agreed upon format;
- (5) Preliminary statistics of missing data points; and
- (6) Calibration results.

Additional items to be provided include:

- (6) Paper or digital copy of the flight logs indicating production times, lines flown, operational problems, diurnal data, and other relevant data.
- (7) A short, digital document containing a summary of the field equipment, data resolution, and other pertinent information shall be provided at the end of data acquisition.

The geophysicist should be prepared to discuss and show the following:

- (8) Examples of the worst data that is within specifications and examples of data that are being reflowed for appropriate channels;
- (9) Snapshots, jpegs, or other views of significant missing data for all data types.

5.13.C Final Products for 'First Delivery' for each area

- (1) The final versions of the DVD label and cover shall be provided to DGGs in a useable format for future DVD copies preferably a week before the release dates.
- (2) Full color maps individually folded to fit an 8 1/2 x 11 inch envelope with top right corner visible.

Maps for the 'First Delivery' for each area are described in Section 5.10.B.5, and listed along with the number of copies needed in Table 2.

- (3) DVDS. 'First Delivery' DVD files listed in Section 5.10.C.4, Twenty-five copies for each area

5.13.D Final Products for Second Delivery for each area

- (1) Maps to be delivered on paper and as digital files on 'Second Delivery DVD for each area are listed along with the number of copies needed in Table 3, Section 5.10.B.6.
Paper copies individually folded to fit an 8 1/2 x 11 inch envelope with top right corner visible.
- (2) DVDS for each area containing files listed in Section 5.10.C.5, plus any optional products proposed (Section 5.11) and accepted. Twenty copies.
- (3) Paper version of the Project Report text. One copy.

5.13.E Final Products for Third and Fourth Delivery for each area

- (1) DVDS containing files listed in Section 5.10.C.6 for each area. Four copies.
- (2) DVDS containing the video files (Section 5.10.C.7) for each area. Two copies.

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SECTION 6. PROPOSAL SUBMISSION FORMAT

We wish to discourage unnecessarily lengthy and costly proposal preparation, yet all proposals must contain the following information in the following format. Failure to follow this format for a proposal or failure to include complete information as requested may result in a lower score or disqualification of the proposal depending on the severity of the discrepancy. (Appendix 1 shows an example of an item-by-item response to each technical requirement that the Offerors may choose to use in responding to this RFP.)

6.1 Introduction

Include a letter of transmittal containing the complete name and address of the firm; name, mailing address, telephone number of the contact for the proposal; Alaska Business license number or proof of having a valid AK business license as required by Section 2.9 and a statement confirming that the proposal is valid for ninety (90) days from closing date for receipt of proposals, a certification, as appropriate, that your firm qualifies as an Alaskan vendor in accordance with section 2.16, and statement with regard to any perceived or potential conflicts of interest.

Include a title page showing:

RFP 2013-1000-1890

Firm's Name

Date of Proposal

Include a Table of Contents.

6.2 Methodology

This section should discuss your methods, equipment, and other resources you will use to accomplish this project. At a minimum it should include; a discussion on how you intend to meet the technical requirements of the RFP (Reference Section 5), your management plans, a brief discussion of your organization, products to be delivered, and a project work schedule.

6.2.A Management plan

Provide a clear comprehensive management plan for the project. Provide information on the organization of the firm as it relates to this project. Include an organizational chart showing all key personnel designated to perform work under this RFP. Provide a brief description, by discipline, for each position on the organizational chart. Clearly state which personnel are full-time employees. Also provide the percentage of each individual's time or number of hours that will be allocated to this project. Identify subcontractors and how they relate to your organization.

6.2.B Technical work plan

Provide a detailed plan describing how you will accomplish the work and meet the technical requirements defined in Section 5. At a minimum this should include discussions about the capabilities of the equipment and how it will be used.

Discuss each major system and procedures to be used in running those systems identified in the scope of service (Section 5); aircraft to be used and flying parameters; the electromagnetic system, the magnetometer system, the radiometric system, altimeter specifications, navigation and flight path recovery systems, digital data recording, specifications for data processing, processing and interpretation of magnetic, radiometric, and electromagnetic data, and final deliverables.

Identify any optional or additional work products or services that would provide ease of use for the State or the customers. Include examples if appropriate.

Provide a description of the criteria for anomaly selection, parameters normally measured and used on maps, resolution of data, any models used to interpret data, base level correction procedures, and other procedures that are critical to maintaining accuracy and consistency in the data collection and final products.

Discuss your ability to provide the optional services requested and describe any cost-effective, innovative options such as high sensitivity instruments that will extend the data set, enhance the quality of the data.

Identify potential problems or requirements related to this project that you perceive may be encountered in performance of this project. Include administrative or legal concerns you may have with standard contract language or specifications.

Provide a work schedule with critical dates and proposed time frame for providing deliverables.

6.3 Personnel & Firm Qualifications and Experience

Proposals must include a Statement of Qualifications or Resumes for all key personnel designated to perform work under this RFP. This Statement of Qualifications must clearly describe experience, education, degrees held and dates thereof. The vita should include detailed resumes of all personnel, including subcontractors, who will be directly executing the geophysical surveys, as well as data processing specialists, data interpreters, and cartographers involved in the final products. Include computer programmers, systems analysts, and mathematicians available to the project. The State requires that a professional geophysicist be on-site daily during data acquisition and processing phases of the surveys.

Include documentation verifying the qualifications and experience of the firm and its subcontractors as they relate to carrying out airborne electromagnetic and magnetic surveys of the type solicited in this RFP. Specific emphasis should be given to experience and successes of providing survey data and deliverables to scientific agencies or institutions such as the Alaska Division of Geological & Geophysical Surveys during the past five years.

Provide information for 3 to 5 projects similar to the work defined by this RFP that have been completed within the last five years. Include for each:

- (1) A brief description of the project, including deliverables. Include general number of copies of deliverables supplied.
- (2) Project schedules, including planned and actual start and completion dates.
- (3) Location of project.
- (4) Name/number of contract, client's name, address and a current telephone number, preferably from scientific agencies, who can respond to queries concerning their experience with the Offeror's firm.
- (5) Major subcontractors used in performance of the work.
- (6) Initial cost estimates and actual costs.
- (7) Provide examples of full size non-confidential products and data from similar surveys.

6.4 Cost Proposal

In order to evaluate costs for proposals we request you provide us with the following unit cost information, cost detail by option, and cost summary information.

6.4A Unit Cost Information

The State requests that you provide at a minimum the following generic unit cost formula that you will be using in calculating your total cost. Additional unit cost information may be appropriate.

Table 5: Generic Unit Cost Information/Formulas	
Personal/Employee costs	Including salary and benefits by employee by hr.
Printing expenses	By deliverables - Include all layout and printing costs
Data processing	Provide a detailed list of services and rates for those services.
Subcontracting	Provide a list of subcontracted services, rates, and estimated costs for those services.
Other direct expenses	Define and include an itemized listing in your proposal
Other indirect expenses	Include a list of any other indirect expenses
Overhead	Your companies standard rate and what it is based on
Profit	Your method of calculating profit.
Optional Services Cost (All other items)	This should include costs for providing optional services besides merging data.

6.4B Summary Costs by Block

Provide a summary cost proposal based on square miles with each of the following combinations of priority blocks within the areas. The costs quoted for each combination of blocks shall include all necessary base map materials, mobilization, demobilization, flying, fuel, navigation, anticipated standby costs, compilation, printing, data interpretation and presentation, subcontractor costs, and any other costs incurred by the Contractor in providing the deliverable items listed in the scope of services of this RFP. The price of optional products may not be considered in the formula for calculating the cost score of the proposal unless funds are available and all proposers offer the same options, however, the State may negotiate the costs and choices for these options with the highest ranked Contractor based on availability of funds and project priorities. The combinations of areas and blocks in the table below are designed to accommodate a range of State funding appropriation scenarios. New items in each line in Table 6 are shown in blue text.

Table 6: Summary Cost by Block Combination					
Block Com- bination	Survey blocks: ES = East Styx; W= Wrangellia; E = Eastern	Approx. sq. miles	Total Cost	Cost, Other Proposed Items	Total Cost
1.	W(A1+A2+A3); referred to as W(A) hereafter	936			
2.	W(A+B)	1,247			
3.	W(A+B+C)	1,400			
4.	W(A+B+C) + E(A)	1,857			
5.	ES(A) + W(A+B+C)	1,912			
6.	ES(A+B) + W(A+B+C)	2,102			
7.	ES(A+B+C) + W(A+B+C)	2,390			
8.	ES(A+B+C) + W(A+B+C) + E(A)	2,847			
9.	ES(A+B+C+D1+D2+D3) + W(A+B+C+D)+ E(A)	2,952			

6.4.C Detailed Cost Factors for Various Area Combinations

In order for the State to better understand our options and costs for these options please provide a summary of costs used to calculate your totals by block as in Table 7.

Table 7: Cost Factors for Area Combinations (From Table 6 above)									
Area Combination	1.	2.	3.	4.	5.	6.	7.	8.	9.
Direct Expenses									
Personal services- Survey work									
Personal Services / Data Interpretation									
Survey Flying Cost									
Equipment									
Transportation									
Food and lodging									
Printing									
Digital Media Costs									
Misc. Direct Expenses									
Indirect Expenses & Profit									
Overhead									
Administrative Expenses									
Profit									
Total by Area/Block Combination									
Optional Services									
Proposed Other Options									
Total with Options									

SECTION 7. EVALUATION CRITERIA

7.1 Evaluation Process

All responsive proposals received will be reviewed and evaluated by a committee made up of representatives or staff of the Department of Natural Resources. Other representatives may be added as appropriate. Each member shall exercise independent judgment and no member's vote or score will be weighted more than any other. During the evaluation process the evaluators may consider information from previous State contracts regardless of whether or not it is included in the proposal and may contact other state or federal government agencies on our own regarding previous work regardless of whether they are listed as references or not.

Proposals will be opened and evaluated in a manner that avoids disclosure of the contents to competing vendors during the evaluation process and negotiations.

Proposals will initially be reviewed for the following minimum responsiveness requirements:

- 1) Was the proposal received by the deadline for receipt of proposals?
- 2) Is the proposal signed?
- 3) Has the vendor submitted evidence of having a valid Alaska Business license?

Proposals that fail to meet these requirements will be rejected as non-responsive and will not be evaluated. The Evaluation Committee will evaluate the remaining proposals based on the evaluation criteria and weighting listed in this section.

The Evaluation Committee will evaluate and numerically score each proposal in accordance with the evaluation criteria below.

The Evaluation Committee may select a vendor for negotiations based on the first look and evaluation of proposals. However, if the committee desires they may request additional information for the purpose of clarification, (Section 2.19), or develop a list of proposals reasonably susceptible for award, or request best and final offers, (Section 2.20). Re-evaluation of proposals after discussions will be conducted by the same Evaluation Committee using the same criteria and weights laid out in this section. In the evaluation process we may be contacting other state or federal government agencies on our own regarding previous work regardless of whether they are listed as references or not.

In accordance with AS 36.30.240, vendors reasonably susceptible of being selected for award will be accorded fair and equal treatment with respect to any opportunity for discussion and revision of proposals.

7.2 Alaska Proposer Evaluation Factor -- 10%

10% of the total points available will be awarded to qualified Alaskan vendors in accordance with 2 AAC 12.260(e). For a definition of "Alaskan vendor" refer to Section 2 of this RFP.

7.3 Methodology -- 15%

At a minimum this portion of the proposal will be evaluated against the following questions and criteria:

Will the airborne geophysical systems proposed provide good quality information for geologic mapping and aid in distinguishing depth of conductive overburden? Will the system locate as many possibilities for ground-based follow-up useful in relatively early exploration as possible? Will the survey be general enough to cover the areas we want to survey and still give us the level of detail and resolution we need to provide a

usable product? Are all the systems that will be used in the survey clearly defined? Does the equipment appear to be adequate? Are there backup systems? Are the personnel in the field knowledgeable about fixing the system? Are the calibration techniques clearly stated and adequate? Are the schedule and time frames reasonable? Are the costs so low that there is reason to doubt that the Offeror fully understands the methodology and the products required? Are the costs so unreasonably low that the Offeror could lean towards poor products or cause quality control issues? Can the Offeror provide all requested deliverables? Can the Offeror provide products near the end of January 2014 that are ready to be released to the public? To what degree does the Offeror meet or exceed our requirements? In providing options to our requirements, does the Offeror explain the benefits or advantages of those options? Has the Offeror discussed any possible problems that may arise during performance of the project?

Does the Offeror demonstrate their firm has the resources to plan and carry out a survey in the area and meet the flying deadlines? Does the Offeror appear to have enough staff at appropriate levels to accomplish this task? Has the Offeror demonstrated an understanding of particular problems that may be encountered in Alaska and offered solutions to those problems? To what degree does the Offeror meet or exceed our requirements? In providing options to our requirements, does the Offeror explain the benefits or advantages of those options?

Features of the magnetic system will also be given close consideration in evaluating proposals, i.e. instrumentation, the digital acquisition system, positioning equipment, altimeter, analog systems, 60 Hz monitor, and systems for diurnal correction will be considered in the proposal evaluation process. Objective criteria that will be examined include:

- (1) Overall system configuration,
- (2) Survey line and altitude tolerances,
- (3) Magnetometer resolution and figure of merit,
- (4) Diurnal magnetometer characteristics,
- (5) Time constants and cycling rates of other sub-systems,
- (6) Navigation and position accuracy,
- (7) Calibration procedures of sub-systems.

Specific criteria for the EM systems that will be examined include:

- (1) Theoretical and actual depth of penetration,
- (2) Resolution and sensitivity,
- (3) Conductivity-thickness aperture,
- (4) Attenuation of electromagnetic system response with increasing height above a conductive target,
- (5) Signal to noise ratio,
- (6) Time constants and cycling rates,
- (7) Calibration procedures,
- (8) Ability of the system to differentiate between conductive overburden and bedrock conductors,
- (9) Ability of the system to provide information conducive to good bedrock geologic mapping, as well as identify conductors,
- (10) Ability of the survey platform to drape fly in the survey area.
- (11) Availability of back-up equipment

Specific criteria for the radiometric system that will be examined include:

- (1) Overall system resolution,
- (2) Prior history of spectrometer calibrations,
- (2) Calibration procedures,
- (3) Spectrum stability,
- (4) Monitoring procedures, and
- (5) Rainfall/snowfall procedures

Does the Offeror demonstrate that his or her employees have a clear understanding of the interpretation procedures to be employed on the survey data? Does the Offeror demonstrate that her or his firm or sub-Contractor has adequate computer hardware/software to generate the final maps and archive DVDS? Does the Offeror have adequate computer expertise and personnel? Does the Offeror have adequate cartographic procedures and personnel? To what degree does the Offeror meet or exceed our requirements?

Can the Offeror provide any optional services at minimal costs? Are these services of use to the State? Does the Offeror explain the benefits or advantages of those options? Are the optional services or products useful? Can we afford them? If optional maps are offered, are they maps we can not produce ourselves? Are samples included of optional maps?

Consideration will be given to companies providing cost-effective options for cost-effective options such as other maps, ancillary equipment, data presentation, interpretation etc. Such options might include high sensitivity airborne magnetometer or any other cost-effective innovative approach that will maximize the output, achieve superior results while optimizing the cost per square mile.

7.4 Qualifications and Experience of Firm and Personnel -- 35%

At a minimum, qualifications and experience will be evaluated against the following questions and criteria:

Does the firm have adequate experience in conducting similar surveys? What level of similar Alaskan experience has been documented? What is the firm's record for safety, timeliness, and handling confidential data? Does the firm have a reputation for being within budget and conferring with the client? Does the firm have a reputation for providing quality service and reliable data? Does the Offeror demonstrate expertise in geophysical theory, procedures, modeling, and applying geophysical data to mineral exploration? Are there appropriately qualified individuals and subcontractors in key positions? Does the firm help clients with their products after the contract is finished? Does the firm suggest new products and ideas that help the customer?

What experience do they have in previous jobs working for the State of Alaska? What experience do they have in previous jobs working for government agencies, such as the U.S. Geological Survey?

Do the examples provided document the quality of expertise and experience needed to complete this contract? Are the examples from previous surveys complete and relevant? Are the references positive; if not are there adequate explanations or extenuating circumstances that should be considered? Are the personnel who are proposed to work on this job the same persons who worked on similar jobs for the firm? Are the personnel proposed to work on this job the same persons who worked on the previous surveys given in the references? Are resumes complete? Are examples included of finished maps at full scale that are similar to the ones we want?

The firm's record of airborne geophysical surveying, experience, references, personnel qualifications, examples of similar surveys and resulting products, are critical elements of the proposal evaluation. Vendors

who have been in the primary business of conducting helicopter-borne airborne magnetic and electro-magnetic surveys in remote locations for at least the immediate five-year period prior to 2013 will be rated higher than those who have not.

7.5 Costs -- 40%

The distribution of points based on cost will be determined as follows per AS 36.30.040, .210, .250, .270 and 2 AAC 12.260(d). The lowest priced proposal for the largest area will receive the maximum number of points allocated to price. Other allocations are determined by this formula:

$$(\text{Price of Lowest Cost Proposal}) \times (\text{Maximum Points for Cost}) = \text{Points awarded for cost}$$

$$\text{Price of Each Higher Cost Proposal}$$

Cost proposals from Alaska vendors will be reduced by 5% for this calculation. Ref 2 AAC 12.260.

The State will determine which combination of areas/blocks will be awarded based on the lowest cost for the largest area that fits within the available funds that is consistent with the technical requirements in Section 5. All other proposals will be evaluated based on that same area. The proposal that provides the greatest surveyed area for the least cost consistent with the technical requirements will get the maximum cost score. The score for other proposals will be based on their cost to complete the same area and the formula stated above.

7.6 Vendor Selection

Upon completion of the evaluations, the Department of Natural Resources Procurement Officer will review the evaluation process to assure procedures were followed in accordance with this RFP and existing State of Alaska statutes and regulations. This process may include reviewing score sheets, proposals, discussions or any other materials presented to the Evaluation Committee. The Procurement Officer may recommend that proposals be reevaluated prior to beginning negotiations if there is reason to suspect an error was committed during the evaluation process.

The final decision of the Evaluation Committee will be documented in writing and made a part of the contract file. The Evaluation Committee will recommend for negotiations to the Procurement Officer the Contractor whose proposal best meets the requirements of the project based on the criteria outlined in this RFP.

The apparent successful Contractor will be required to provide the following information during contract negotiations before award of the final contract.

- ☐ Certificate of Insurance
- ☐ Proof of Subcontractor's Alaska Business Licenses
- ☐ Any other information that may be needed for clarification of the Contractor's proposal.

SECTION 8: APPENDICES

APPENDIX 1

Example of suggested response format to RFP technical specifications.

Example of suggested response format to RFP technical specifications:

State of Alaska

RFP 2013-1000-1890

(2) **Flight Path Recovery**

(Your firm) is in compliance with the requirements of the RFP that follow with details shown in bold type:

The flight path shall be recovered within 50 feet of the true position in the along track and course track directions. This accuracy shall be verified by use of a tracking camera or other specified means.

A brand/model VHS color video camera and cassette recorder (i.e., closed circuit television system) operating in the NTSC format will record the flight path terrain passing beneath the aircraft for verification of the GPS navigational information. Time and fiducials will be superimposed on the video recording.

(E) **Analog Records**

(1) **Analog System Specified**

(Your firm) is in compliance with the requirements of the RFP that follow with details shown in bold type:

The system used for analog recording shall be specified.

A brand/model thermal graphics printer operating at a speed of 1.5 mm/sec will be used for real-time analog chart presentation of the geophysical data. The specifications for this system are provided in Appendix _____ of this proposal.

(2) **Resolution of Analog Records**

(Your firm) is in compliance with the requirements of the RFP that follow:

The analog records shall be of sufficient resolution to enable visual checks to be made of the system performance (e.g. noise levels).

APPENDIX 2

Form 02-093 B-1: Indemnity and Insurance

APPENDIX 2

INDEMNITY AND INSURANCE

Article 1. Indemnification

The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor's work.

Article 2. Insurance

Without limiting Contractor's indemnification, it is agreed that Contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the Contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, nonrenewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the Contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

2.1 Workers' Compensation Insurance: The Contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.

2.2 Commercial General Liability Insurance: covering all business premises and operations used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000. combined single limit per occurrence.

2.3 Commercial Automobile Liability Insurance: covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000. combined single limit per occurrence.

2.4 Aircraft Liability Insurance: Covering all aircraft used in this contract with liability coverage limits not less than \$10,000,000 combined single limit for bodily injury and property damage and not less than \$500,000 per passenger seat.

The State of Alaska shall be named as additional insured. This insurance shall be considered to be primary and non-contributory to any other insurance carried by the State through self insurance or otherwise.

APPENDIX 3

Form 02-093: Standard Agreement Form and General Contract Provisions

Printed as three pages

STANDARD AGREEMENT FORM

1. Agency Contract Number	2. ASPS Number	3. Financial Coding	4. Agency Assigned Encumbrance Number
5. Vendor Number		6. Alaska Business License Number	
This contract is between the State of Alaska,			
7. Department of		Division	hereafter the State,
8. and,			hereafter the Contractor
Mailing Address	Street or P.O. Box	City	State ZIP + 4
<p>9.</p> <p>ARTICLE 1. Appendices: Appendices referred to in this contract and attached to it are considered part of it.</p> <p>ARTICLE 2. Performance of Service:</p> <p>2.1 Appendix A (General Provisions), Articles 1 through 14, governs the performance of services under this contract.</p> <p>2.2 Appendix B sets forth the liability and insurance provisions of this contract.</p> <p>2.3 Appendix C sets forth the services to be performed by the contractor.</p> <p>ARTICLE 3. Period of Performance: The period of performance for this contract begins _____, and ends _____.</p> <p>ARTICLE 4. Considerations:</p> <p>4.1 In full consideration of the contractor's performance under this contract, the State shall pay the contractor a sum not to exceed</p> <p>4.2 \$_____ in accordance with the provisions of Appendix D.</p> <p>When billing the State, the contractor shall refer to the Authority Number or the Agency Contract Number and send the billing to:</p>			
10. Department of		Attention: Division of	
Mailing Address		Attention:	
11. CONTRACTOR			
Name of Firm		<p>13. CERTIFICATION: I certify that the facts herein and on supporting documents are correct, that this voucher constitutes a legal charge against funds and appropriations cited, that sufficient funds are encumbered to pay this obligation, or that there is a sufficient balance in the appropriation cited to cover this obligation. I am aware that to knowingly make or allow false entries or alterations on a public record, or knowingly destroy, mutilate, suppress, conceal, remove or otherwise impair the variety, legibility, or availability of a public record constitutes tampering with public records punishable under AS 11.56.815-820. Other disciplinary action may be taken up to and including dismissal.</p>	
Signature of Authorized Representative	Date		
Typed or Printed Name of Authorized Representative			
Title	Employer ID No. (EIN) or SSN		
12. CONTRACTING AGENCY			
Department/Division	Date	Signature of Head of Contracting Agency or Procurement Officer	Date
Signature of Project Director		Typed or Printed Name of Authorizing Official	
Typed or Printed Name of Project Director		Title	
Title			

NOTICE: This contract has no effect until signed by the head of contracting agency or designee.

02-093 (07/89)

APPENDIX A GENERAL PROVISIONS

Article 1. Definitions.

- 1.1 In this contract and appendices, "Project Director" or "Agency Head" or "Procurement Officer" means the person who signs this contract on behalf of the Requesting Agency and includes a successor or authorized representative.
- 1.2 "State Contracting Agency" means the department for which this contract is to be performed and for which the Commissioner or Authorized Designee acted in signing this contract.

Article 2. Inspection and Reports.

- 2.1 The department may inspect, in the manner and at reasonable times it considers appropriate, all the contractor's facilities and activities under this contract.
- 2.2 The contractor shall make progress and other reports in the manner and at the times the department reasonably requires.

Article 3. Disputes.

- 3.1 Any dispute concerning a question of fact arising under this contract which is not disposed of by mutual agreement shall be decided in accordance with AS 36.30.620-632.

Article 4. Equal Employment Opportunity.

- 4.1 The contractor may not discriminate against any employee or applicant for employment because of race, religion, color, national origin, or because of age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood when the reasonable demands of the position(s) do not require distinction on the basis of age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood. The contractor shall take affirmative action to insure that the applicants are considered for employment and that employees are treated during employment without unlawful regard to their race, color, religion, national origin, ancestry, physical handicap, age, sex, marital status, changes in marital status, pregnancy or parenthood. This action must include but need not be limited to, the following: employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship. The contractor shall post in conspicuous places, available to employees and applicants for employment, notices setting out the provisions of this paragraph.
- 4.2 The contractor shall state, in all solicitations or advertisements for employees to work on State of Alaska contract jobs, that it is an equal opportunity employer and that all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, age, physical handicap, sex, marital status, changes in marital status, pregnancy or parenthood.
- 4.3 The contractor shall send to each labor union or representative of workers with which the contractor has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' compensation representative of the contractor's commitments under this article and post copies of the notice in conspicuous places available to all employees and applicants for employment.
- 4.4 The contractor shall include the provisions of this article in every contract, and shall require the inclusion of these provisions in every contract entered into by any of its subcontractors, so that those provisions will be binding upon each subcontractor. For the purpose of including those provisions in any contract or subcontract, as required by this contract, "contractor" and "subcontractor" may be changed to reflect appropriately the name or designation of the parties of the contract or subcontract.
- 4.5 The contractor shall cooperate fully with State efforts which seek to deal with the problem of unlawful discrimination, and with all other State efforts to guarantee fair employment practices under this contract, and promptly comply with all requests and directions from the State Commission for Human Rights or any of its officers or agents relating to prevention of discriminatory employment practices.
- 4.6 Full cooperation in paragraph 4.5 includes, but is not limited to, being a witness in any proceeding involving questions of unlawful discrimination if that is requested by any official or agency of the State of Alaska; permitting employees of the contractor to be witnesses or complainants in any proceeding involving questions of unlawful discrimination, if that is requested by any official or agency of the State of Alaska; participating in meetings; submitting periodic reports on the equal employment aspects of present and future employment; assisting inspection of the contractor's facilities; and promptly complying with all State directives considered essential by any office or agency of the State of Alaska to insure compliance with all federal and State laws, regulations, and policies pertaining to the prevention of discriminatory employment practices.
- 4.7 Failure to perform under this article constitutes a material breach of the contract.

Article 5. Termination.

The Project Director, by written notice, may terminate this contract, in whole or in part, when it is in the best interest of the State. The State is liable only for payment in accordance with the payment provisions of this contract for services rendered before the effective date of termination.

Article 6. No Assignment or Delegation.

The contractor may not assign or delegate this contract, or any part of it, or any right to any of the money to be paid under it, except with the written consent of the Project Director and the Agency Head.

Article 7. No Additional Work or Material.

No claim for additional services, not specifically provided in this contract, performed or furnished by the contractor, will be allowed, nor may the contractor do any work or furnish any material not covered by the contract unless the work or material is ordered in writing by the Project Director and approved by the Agency Head.

Article 8. Independent Contractor.

The contractor and any agents and employees of the contractor act in an independent capacity and are not officers or employees or agents of the State in the performance of this contract.

Article 9. Payment of Taxes.

As a condition of performance of this contract, the contractor shall pay all federal, State, and local taxes incurred by the contractor and shall require their payment by any Subcontractor or any other persons in the performance of this contract. Satisfactory performance of this paragraph is a condition precedent to payment by the State under this contract.

Article 10. Ownership of Documents.

All designs, drawings, specifications, notes, artwork, and other work developed in the performance of this agreement are produced for hire and remain the sole property of the State of Alaska and may be used by the State for any other purpose without additional compensation to the Contractor. The contractor agrees not to assert any rights and not to establish any claim under the design patent or copyright laws. The contractor, for a period of three years after final payment under this contract, agrees to furnish and provide access to all retained materials at the request of the Project Director. Unless otherwise directed by the Project Director, the contractor may retain copies of all the materials.

Article 11. Governing Law.

This contract is governed by the laws of the State of Alaska. All actions concerning this contract shall be brought in the Superior Court of the State of Alaska.

Article 12. Conflicting Provisions.

Unless specifically amended and approved by the Department of Law, the General Provisions of this contract supersede any provisions in other appendices.

Article 13. Officials Not to Benefit.

Contractor must comply with all applicable federal or State laws regulating ethical conduct of public officers and employees.

Article 14. Covenant Against Contingent Fees.

The contractor warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, contingent fee, or brokerage, except employees or agencies maintained by the contractor for the purpose of securing business. For the breach or violation of this warranty, the State may terminate this contract without liability or in its discretion deduct from the contract price or consideration the full amount of the commission, percentage, brokerage, or contingent fee.

APPENDIX 4

General Maps of Proposed Survey Areas

Note: The ESRI shape files contain a more accurate location of the survey blocks than the figures with topography. The digital files should be used for final flight location and calculation of costs of survey blocks.

The ZIP file 'RFP2013-1000-1890Blocks.ZIP', as an attachment on the Online Notices with this PDF document, contains ESRI shape files of the candidate areas (named with 'Block' in the title) and a file for each candidate area containing outlines of the adjacent surveys that would be merged with the candidate area. The potential survey blocks do not contain overlap areas needed for merging with previously-flown data.

Digital File Attached or Adjacent to this PDF file

Digital zip file RFP2013-1000-1890Blocks.ZIP contains ESRI shape file format of the following files:

EastStyxBlocks (NAD 27. UTM 5N)

WrangelliaBlocks (NAD 27. UTM 6N); includes information for flight directions

EasternBlocks (Nad27, UTM 7N)

SurveysFlown_EastStyxArea (NAD 27. UTM 5N)

SurveysFlown_WrangelliaArea (NAD 27. UTM 6N)

SurveyFlown_EasternSurveyArea (Nad27, UTM 7N)

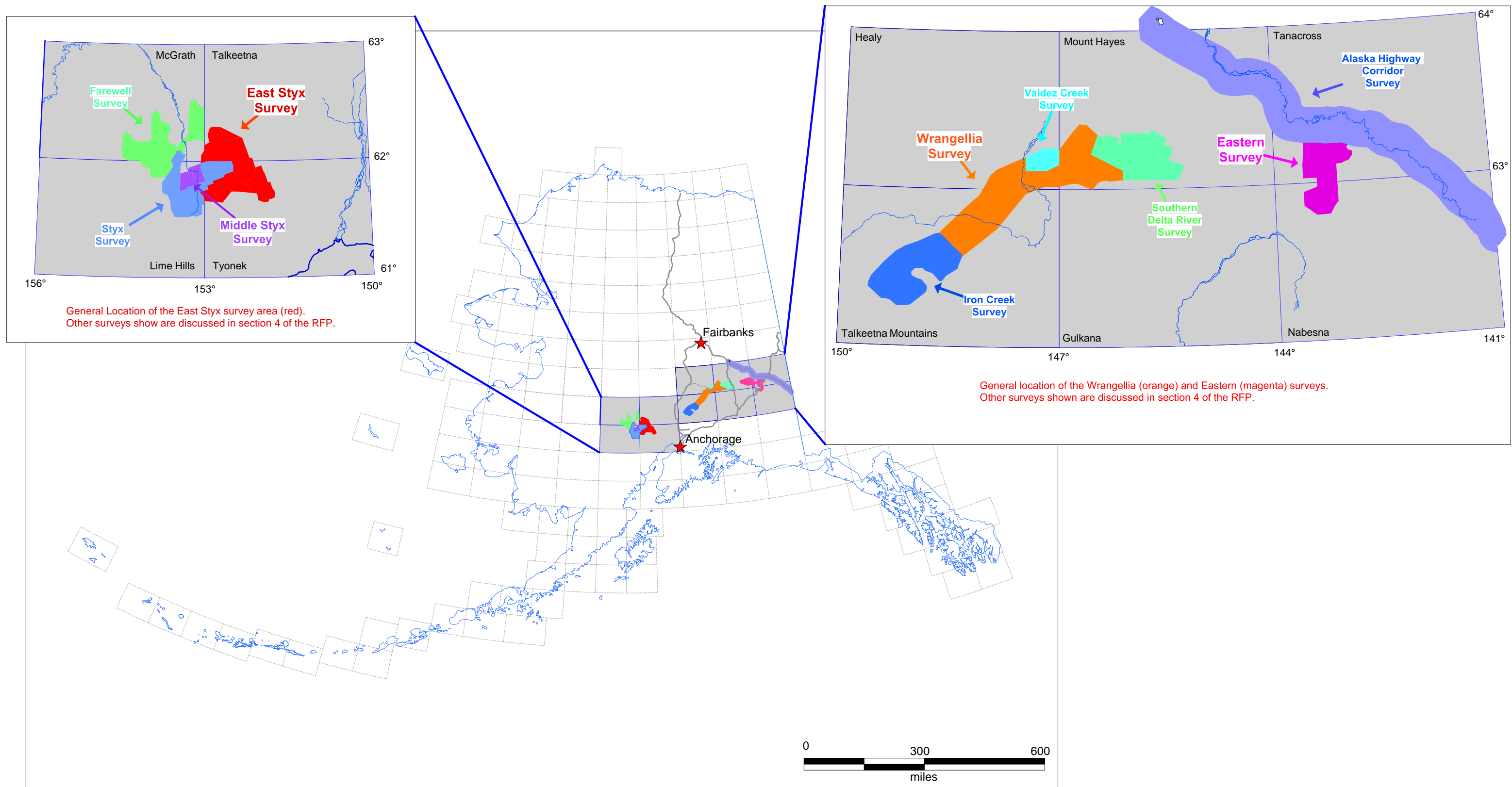


Figure 4.1: General location of the East Styx, Wrangellia and Eastern survey areas. Major roads are shown in solid grey lines on the main figure. U.S. Geological Survey 1:250,000-scale quadrangle boundaries are shown with dotted lines except near survey blocks.

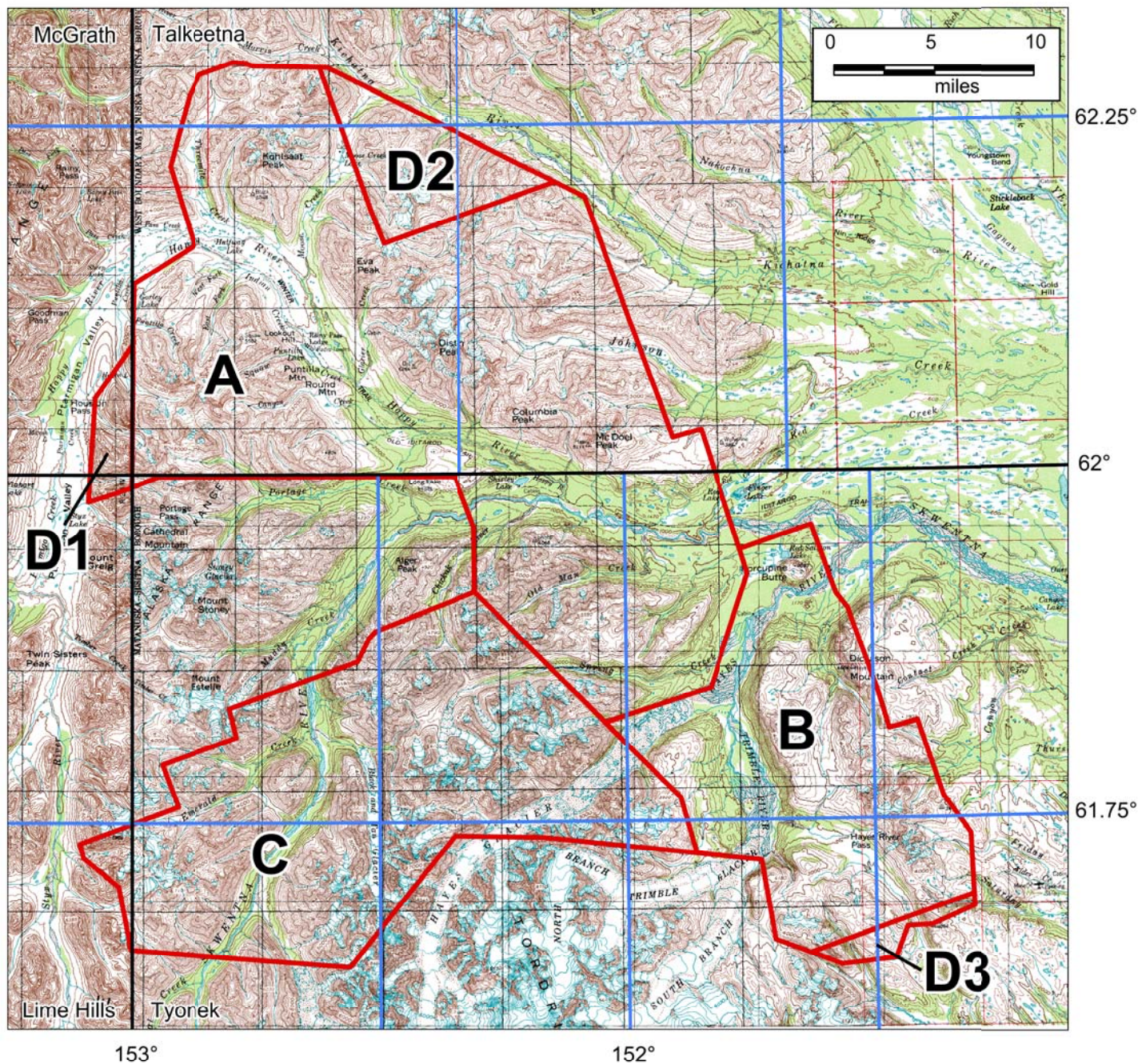


Figure 4.2: Figure showing location of potential survey blocks for East Styx survey: Traverse flight direction is to be N70°E. Blue lines represent 1:63,360-scale quadrangles. Figure in NAD27, UTM zone 5 North.

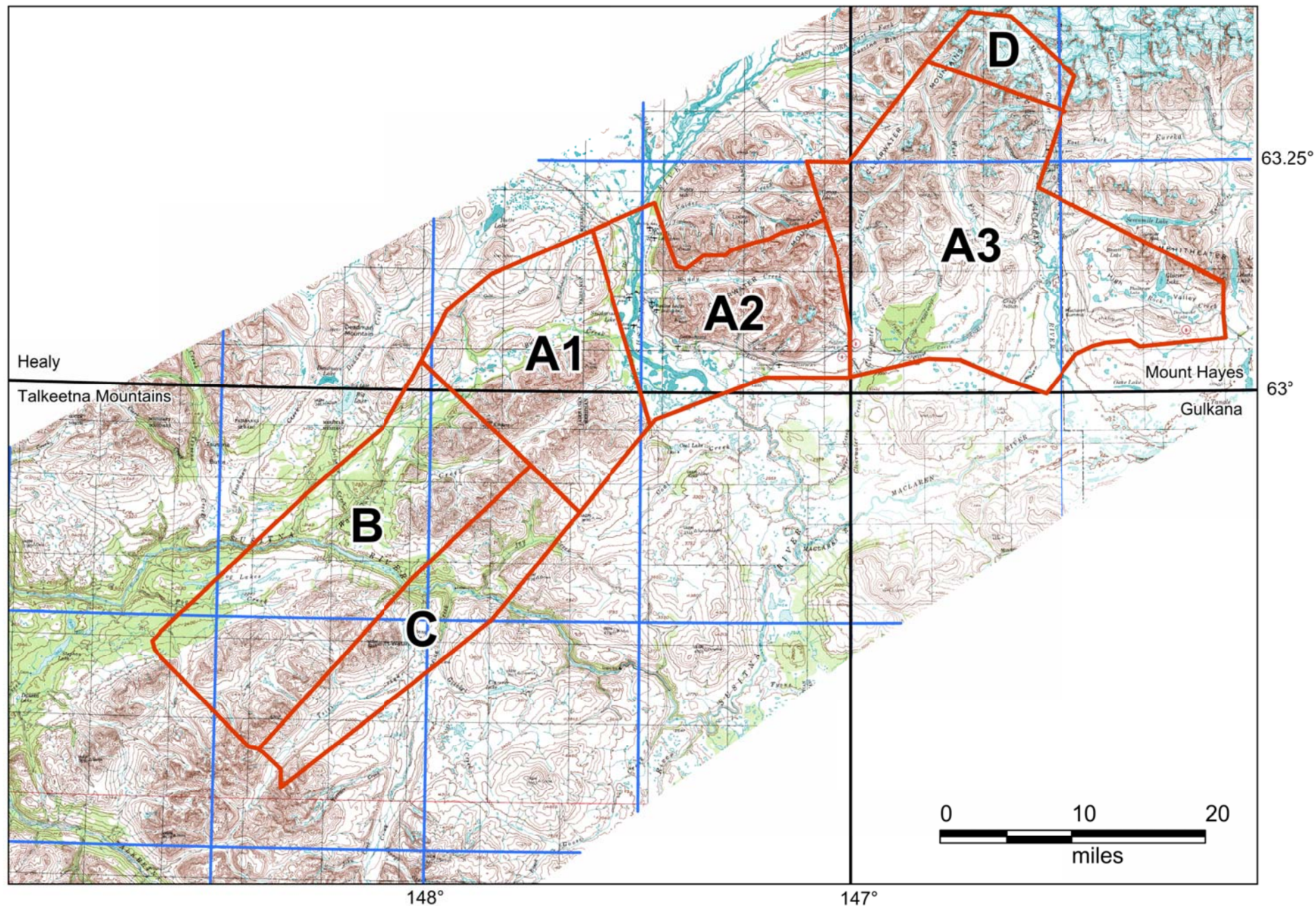


Figure 4.3 Wrangellia Survey Location: Traverse flight direction is to be N45°W for blocks B,C and A1, N18°W for A2, and N-S for A3 and D. Blue lines represent 1:63,360-scale quadrangles. Figures in NAD27, UTM zone 6 North.

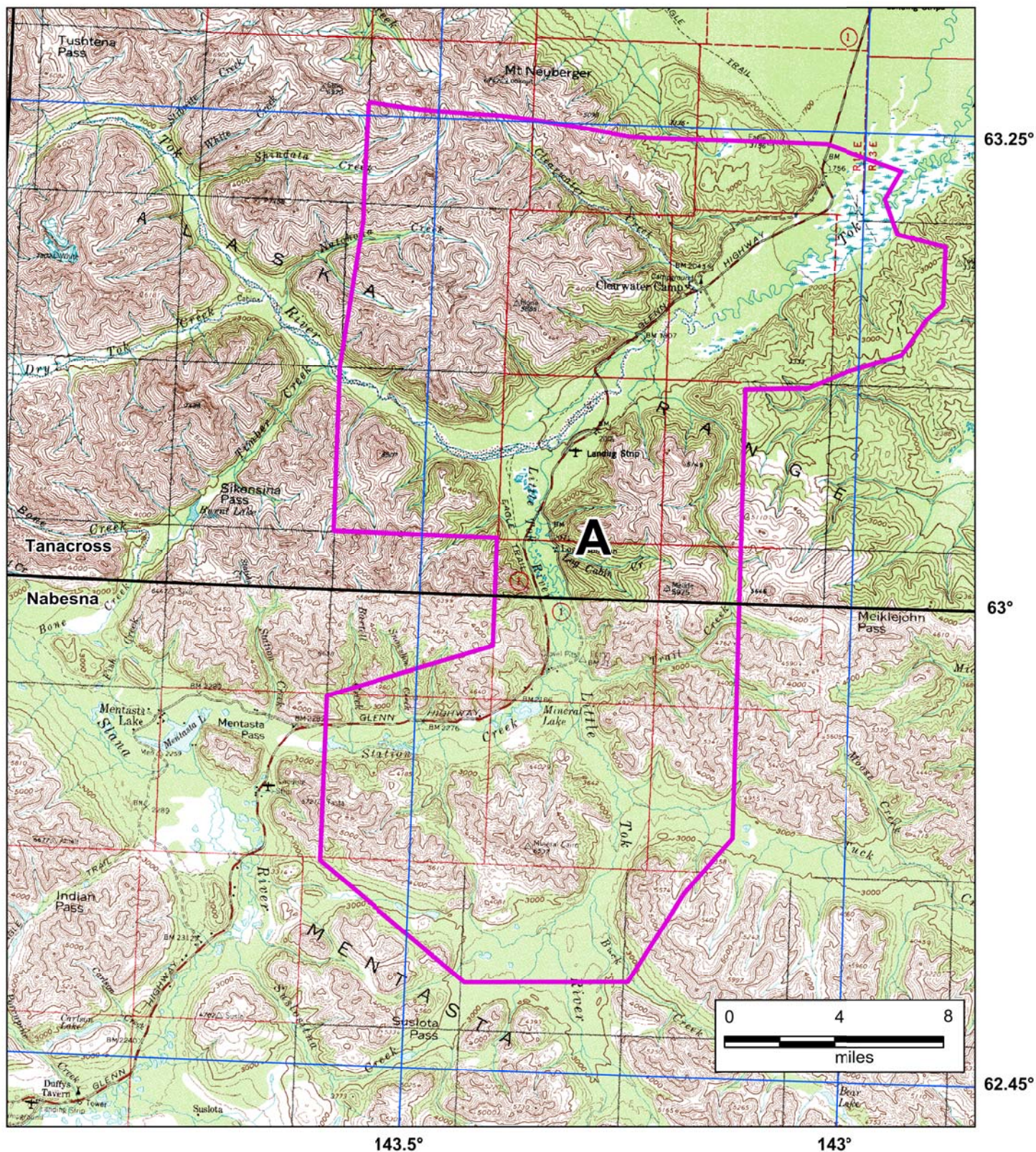


Figure 4.4: Figure showing location of potential survey blocks for Eastern survey area. Traverse flight direction N45°E. Blue lines represent 1:63,360-scale quadrangles. Figure in NAD27, UTM zone 7.