HB 276

<TARGET><BILL>HB 276</BILL><SUBJECT>HB 276</SUBJECT><COMM>HRES27</COMM></TARGET>

adopted as comm. work draft 3/12/12.

27-LS1193\D
Nauman/Bullock
3/2/12

CS FOR HOUSE BILL NO. 276( )

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-SEVENTH LEGISLATURE - SECOND SESSION

BY

Offered:
Referred:

Sponsor(s): REPRESENTATIVES THOMPSON, DICK, MILLETT, TUCK, AND MILLER, Tammie Wilson, Kawasaki

A BILL

FOR AN ACT ENTITLED

"An Act providing for a credit against the oil and gas production tax for costs incurred for conducting seismic exploration and drilling certain oil or natural gas exploration wells in certain basins; and relating to a limit on certain oil and gas production tax credits."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 43.55.025(a) is amended to read:

(a) Subject to the terms and conditions of this section **and except as provided in (q) of this section**, a credit against the production tax levied by AS 43.55.011(e) is allowed for exploration expenditures that qualify under (b) of this section in an amount equal to one of the following:

(1) 30 percent of the total exploration expenditures that qualify only under (b) and (c) of this section;

(2) 30 percent of the total exploration expenditures that qualify only under (b) and (d) of this section;

(3) 40 percent of the total exploration expenditures that qualify under (b), (c), and (d) of this section;

(4) 40 percent of the total exploration expenditures that qualify only under (b) and (e) of this section; [OR]

(5) 80, 90, or 100 percent, or a lesser amount described in (*l*) of this section, of the total exploration expenditures described in (b)(1) and (2) of this section and not excluded by (b)(3) and (4) of this section that qualify only under (*l*) of this section**;**

(6) the lesser of $22,500,000 or 80 percent of the total exploration drilling expenditures described in (n) of this section that qualify under (b), (c), and (p) of this section; or

(7) the lesser of $7,500,000 or 75 percent of the total seismic exploration expenditures described in (o) of this section that qualify under (b), (c), and (p) of this section.

*** Sec. 2.** AS 43.55.025(c) is amended to read:

(c) To be eligible for **a** [THE 30 PERCENT] production tax credit authorized by (a)(1)**, (3), (6), or (7)** of this section [OR THE 40 PERCENT PRODUCTION TAX CREDIT AUTHORIZED BY (a)(3) OF THIS SECTION], exploration expenditures must

(1) qualify under (b) of this section; and

(2) be for an exploration well, subject to the following:

(A) before the well is spudded,

(i) the explorer shall submit to the commissioner of natural resources the information necessary to determine whether the geological objective of the well is a potential oil or gas trap that is distinctly separate from any trap that has been tested by a preexisting well;

(ii) at the time of the submittal of information under (i) of this subparagraph, the commissioner of natural resources may request from the explorer that specific data sets, ancillary data, and reports including all results, and copies of well data collected and data

analyses for the well be provided to the Department of Natural Resources upon completion of the drilling; in this sub-subparagraph, well data include all analyses conducted on physical material, and well logs collected from the well and sample analyses; testing geophysical and velocity data including vertical seismic profiles and check shot surveys; testing data and analyses; age data; geochemical analyses; and access to tangible material; and

(iii) the commissioner of natural resources must make an affirmative determination as to whether the geological objective of the well is a potential oil or gas trap that is distinctly separate from any trap that has been tested by a preexisting well and what information under (ii) of this subparagraph must be submitted by the explorer after completion, abandonment, or suspension under AS 31.05.030; the commissioner of natural resources shall make that determination within 60 days after receiving all the necessary information from the explorer based on the information received and on other information the commissioner of natural resources considers relevant;

(B) for an exploration well other than a well to explore a Cook Inlet prospect, the well must be located and drilled in such a manner that the bottom hole is located not less than three miles away from the bottom hole of a preexisting well drilled for oil or gas, irrespective of whether the preexisting well has been completed, suspended, or abandoned;

(C) after completion, suspension, or abandonment under AS 31.05.030 of the exploration well, the commissioner of natural resources must determine that the well was consistent with achieving the explorer's stated geological objective.

*** Sec. 3.** AS 43.55.025 is amended by adding new subsections to read:

(n) The persons that drill the first four exploration wells in an area described in (p) of this section on state or private lands for the purpose of discovering oil or gas that penetrate and evaluate a prospect in a basin described in (p) of this section are eligible for a credit under (a)(6) of this section. A credit may not be taken for more

than two exploration wells in a single area described in (p)(1) - (6) of this section. A person or an affiliate of a person may qualify for a credit for not more than two wells under this subsection. The department shall make a determination of the order in which the wells are drilled based on the date and time that the drill bit first turns to the right for the purpose of drilling the well. A person planning to drill an exploration well on private land and to obtain a credit under this subsection shall obtain written consent from the owner of the oil and gas interest for the full public release of all well data collected within two years after receiving a credit under this section and in conjunction with and compliance with the data submission requirements in (f)(2) of this section. The written consent of the owner of the oil and gas interest must be submitted to the commissioner of natural resources before approval of the proposed exploration well. In addition to the requirements in (c) of this section and submission of the written consent of the owner of the oil and gas interest, a person planning to drill an exploration well shall obtain approval from the commissioner of natural resources before the well is spudded. Before approving the exploration well, the commissioner of natural resources must make an affirmative finding that the exploration well is in the best interest of the state based on the following: the location of the well; the proximity to a community in need of a local energy source; the proximity of existing infrastructure; the experience and safety record of the explorer in conducting operations in remote or roadless areas; the projected cost schedule; whether seismic mapping and seismic data sufficiently identify a particular trap for exploration; whether the targeted and planned depth and range are designed to penetrate and fully evaluate the hydrocarbon potential of the proposed prospect and reach the level below which economic hydrocarbon reservoirs are likely to be found, or reach 12,000 feet or more true vertical depth; and whether the exploration plan provides for a full evaluation of the wellbore below surface casing to the depth of the well. Exploration expenditures eligible for the credit in this subsection must be incurred for work performed after June 1, 2012. Whether the exploration well for which a credit is requested under this subsection is located within an area and a basin described under (p) of this section shall be determined by the commissioner of natural resources and reported to the commissioner. A taxpayer that obtains a credit under this subsection

may not claim a tax credit under AS 43.55.023 or another provision in this section for the same exploration expenditure.

(o) The persons that conduct the first four seismic exploration projects in the areas described in (p) of this section for the purpose of discovering oil or gas in a basin are eligible for the credit under (a)(7) of this section. A credit may not be taken for more than one seismic exploration project in a single area described in (p)(1) - (6) of this section. Exploration expenditures eligible for the credit in this subsection must be incurred for work performed after June 1, 2012. A person planning to conduct a seismic exploration project on private land and to obtain a credit under this subsection shall obtain written consent from the owner of the oil and gas interest for the full public release of all geophysical data and compliance with the data submission requirements in (f)(2) of this section. To qualify for a credit under this subsection, a person shall submit the written consent of the owner of the oil and gas interest for the release of data if applicable, and all data required under (f)(2) of this section to the Department of Natural Resources and shall agree in writing that all seismic data requirements submitted under the requirements of (f)(2) of this section may be made public within two years after receiving the credit in this subsection. A person or an affiliate of a person may qualify for a credit for more than one seismic exploration project under this subsection. A person intending to qualify for the tax credit under this subsection shall obtain approval from the commissioner of natural resources before the commencement of the seismic exploration activities. Before approving a seismic exploration project, the commissioner shall make an affirmative finding that the seismic exploration project is in the best interest of the state based on the location of the project, the projected cost schedule, the data acquisition and data processing plan, the reasons for choosing the particular area for seismic exploration, and the experience and safety record of the person in conducting seismic exploration operations in remote or roadless areas. Whether the seismic exploration project for which a credit is requested under this subsection is located in a basin described in (p) of this section shall be determined by the commissioner of natural resources and reported to the commissioner. A taxpayer that obtains a credit under this subsection may not claim a tax credit under AS 43.55.023 or another provision in this section for

the same exploration expenditure.

(p) The activity that is the basis for a credit claimed under (a)(6) and (n) of this section or (a)(7) and (o) of this section must be for the exploration of a basin and within the following areas whose central points are determined using the World Geographic System of 1984 datum,

(1) 100 miles from 66.896128 degrees North, -162.598187 degrees West;

(2) 150 miles from 64.839474 degrees North, -147.72094 degrees West;

(3) 50 miles from 62.776428 degrees North, -164.495201 degrees West;

(4) 50 miles from 62.110357 degrees North, -145.530551 degrees West;

(5) 100 miles from 58.189868 degrees North, -157.371104 degrees West;

(6) 100 miles from 56.005988 degrees North, -160.56083 degrees West.

(q) The amount of credit for an exploration expenditure under (a)(1) - (4) of this section for an expenditure that is also a lease expenditure under AS 43.55.165 is reduced by the amount necessary so that the tax benefit percentage is not more than 65 percent of the exploration expenditure. In this subsection, "tax benefit percentage" means the sum of the average monthly tax rate under AS 43.55.011(e) and (g) for the calendar year in which the credit is taken and the percentage of the exploration expenditure that may be taken as a credit under (a)(1) - (4) of this section.

AMENDMENT #1

TO: CSHB 276 VERSION D

Page 2, Line 14: Delete **(c)**

Explanation:

Subsection (c) applies to exploration wells. The new credit at 43.55.025(a)7 on page 2, lines 12 through 14 is for seismic only, not for an exploration well.

adopted U.C.

ALASKA STATE LEGISLATURE

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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

SPONSOR STATEMENT FOR HOUSE BILL 276 (27-LS1193\D)

"An Act providing for a credit against the oil and gas production tax for costs incurred for conducting seismic exploration and drilling certain oil or natural gas exploration wells in certain basins; and relating to a limit in certain oil and gas production tax credits."

HB276 is designed to incentivize seismic exploration and exploration drilling in certain areas of the State of Alaska that contain underexplored basins located in close proximity to a community in need of a local energy source. Due to complications associated with many basins' remote locations, they have stayed unexplored. HB276 is modeled after the Cook Inlet tax credits that successfully triggered a stampede of exploration. At a time when economic growth and development in a good portion of Alaska is crippled by high energy prices and the lack of reliable energy supplies, this legislation strongly encourages companies to invest in underexplored, frontier basins, located near energy challenged communities. In Alaska, the constituencies of seventeen House Districts still rely on expensive heating oil. Fairbanks, the second largest city in Alaska is located just 50 miles away from the Nenana Basin, a frontier-basin that shows potential, but lacks investors. HB276 is an effort to help not only Fairbanks but other regions of the state that are being crippled by high energy prices.

The seismic tax credits will apply to the first four persons that perform seismic exploration in four different areas identified by the bill. The credit will be for the lesser of $7,500,000 or 75% of the total seismic exploration expenditures. The drilling credit is for the first four exploration wells in an area described in the bill with no more than two wells in any single area. The exploration drilling credit is for the lesser of $22,500,000 or 80% of the total exploration drilling expenditures.

Incentivizing exploration in basins located near energy starved regions of Alaska that show potential for production of gas and/or oil is another step that will help support the economy and well-being of businesses and families in Alaska who are currently suffering from high energy costs and the lack of reliable energy supplies.

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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

Sectional House Bill 276 (version D)

Sec. 1. Establishes the new frontier basin credits for seismic and drilling exploration.

Sec. 2. Conforming amendment to add the new frontier basin credits to eligibility requirements under AS 43.55.025(b) and (c).

Sec. 3. AS 43.55.025 is amended by adding new subsections:

(n) Describes the frontier basin drilling credits and their requirements.

(o) Describes the frontier basin seismic credits and their requirements.

(p) Lists the six areas within the State of Alaska that qualify for the frontier basin credits.

(q) Is designed to treat explorers and producers equally in the state contribution rate to a project. Section (q) ensures that the combination of an exploration credit under AS 43.55.025, plus deductibility against production tax cannot exceed 65% state participation except for the credits given for the "stampede" and "frontier" portions of AS 43.55.025 (l)(n) and (o).

E-mail Representative_Steve_Thompson@legis.state.ak.us

RESOURCE DEVELOPMENT COUNCIL

Growing Alaska Through Responsible Resource Development

March 12, 2012

Co-Chairs Feige and Seaton
House Resources Committee
Alaska State Legislature
State Capitol Building
Juneau, AK 99801

Re: House Resources Hearing on CS HB 276 – Oil and Gas Tax Credits

Dear Co-Chairs Feige and Seaton and Members of House Resources:

The Resource Development Council (RDC) writes to express support for CS HB 276, oil and gas tax credits in areas south of the Brooks Range to outside the Cook Inlet basin, including the Nenana and Selawik basins.

RDC is a statewide business association comprised of individuals and companies from Alaska's oil and gas, mining, forest products, tourism and fisheries industries. RDC's membership includes Alaska Native Corporations, local communities, organized labor, and industry support firms. RDC's purpose is to encourage a strong, diversified private sector in Alaska and expand the state's economic base through the responsible development of our natural resources.

RDC supports the much needed development of oil and gas resources in Interior and western Alaska, regions that relies heavily on high priced heating fuel. Much of the area under consideration is near existing infrastructure, and Fairbanks, which could be a practical market for the oil and gas.

Not only is it a top priority for RDC to advocate for tax policy and incentives that enhance the State of Alaska's competitiveness for all industries, but also to support measures to reverse the Alaska oil and gas production decline. This includes legislation that results in new exploration and development.

Additionally, oil and gas exploration and production in Interior and rural Alaska would provide other benefits, such as new, well-paying jobs, and increased tax and royalty income to the state.

Thank you for the opportunity to comment.

Sincerely,

Marleanna Hall
Projects Coordinator
Resource Development Council

121 West Fireweed Lane, Suite 250, Anchorage, Alaska 99503-2035
Phone: 907-276-0700 Fax: 907-276-3887 Email: resources@akrdc.org Website: akrdc.org

Frontier Stampede Template
DNR technical team discussion document

February 16, 2012

Overview

- **This discussion document does not constitute an endorsement of this legislation by DNR in any way**
- DNR understands that the purpose of the proposed legislation is to define a program to promote conventional oil and gas exploration on state and native lands in frontier basins where there is possibility for local or regional use;
- DNR also understands that a secondary purpose would be to secure geologic and geophysical data for state use and public release;
- If the Legislature chooses to implement such a program, DNR suggests the following be considered as minimum provisions and scope:

Provisions and Scope:

- Any potential tax credits should be Implemented under AS 43.55.025 – the current exploration licensing statutes should not be altered;
- A maximum of 75% tax credit for either geophysical exploration or exploration drilling up to a maximum dollar limit per project (a recon 2D seismic program can cost $10 million or more per geophysical project, a remote site exploration well can cost $20 to $30 million per well depending on location and depth);
- Any credits should be applicable only to conventional oil and/or gas exploration on state lands, state waters, and private lands, south of 68 degrees North latitude, and not encompassed by the Cook Inlet areawide lease sale boundary;
- The credits should not be applicable to federal lands or waters;
- All credits should be subject to pre-qualification by the Commissioner of the Department of Natural Resources based on a finding that supporting the proposed exploration project is in the public interest;
- All credits should be restricted to proven, experienced, safe operators;
- DNR recommends defining geographic areas that will be eligible for this program (with township-range/legal description boundaries). Further, DNR recommends the Legislature set limits in this legislation on the number of geophysical projects and wells allowed in each area. A preliminary map (Attachment) accompanies this document, showing the ten areas of the state DNR suggests could be made eligible for credits.
- The areas indicated encompass sedimentary basins with sufficient depth and rock type to maintain some potential for conventional gas, and possibly oil. There is a wide range of potential, with the smallest and shallowest basins generally having the least potential.

- Projects within the boundaries defined for the following areas could be considered eligible for geophysical and/or drilling credits:
    - Nenana basin
    - Northern Alaska Peninsula
    - Southern Alaska Peninsula
    - Yukon Flats basin
    - Susitna basin
    - Kotzebue basin
    - Copper River basin
- Projects within the boundaries defined for the following areas should initially be eligible for geophysical credits only:
    - Y-K delta
    - Holitna basin
    - Minchumina basin
- Exploration expenditures for which the credit is claimed must be for work conducted in a defined time period.

Geophysical Exploration:

- DNR recommends a maximum 75% credit for 2-D or 3-D seismic or other geophysical exploration with a maximum cap per acquisition project (where "project" means all data collected within the boundaries of an eligible area in any given crew-season).

Recommended Pre-qualification requirements for geophysical exploration:

- The Commissioner of DNR must make an affirmative determination that supporting the proposed geophysical exploration project is in the public interest based on a presentation from operator and seismic contractor to DNR-DOG;
- Presentation must detail the location, exploration rationale, size, acquisition plan, processing plan, and anticipated cost schedule;
- Contractor must have a proven history of acquisition/processing in remote road-less areas;
- The data licensee must agree to data submission requirements as per AS 43.55.025(f)(2);
- If the exploration is conducted on privately owned land, the person claiming a tax credit under this program must secure and demonstrate pre-approval of the private landowner (including native corporations) for the full public release of all geophysical data collected after 3 years from the completion date + 30 day public notice, notwithstanding provisions under AS 43.55.025(f)(2)(C)(i – ii) to the contrary.

Post-acquisition requirements for seismic or other geophysical project:

- Final approval of the tax credit will be subject to the Commissioner of DNR determining that the operator fulfilled the data submission requirements.

Exploration Drilling:

- DNR recommends a maximum 75% credit for drilling costs, with a maximum limit per well (costs could include mob-demob, drilling completion, testing; costs should exclude rig modification);
- Drilling costs will be scrutinized to industry standards for remote operations;
- Cost over-runs will be responsibility of operator;
- Recommend 50% payback provision if well results in discovery that goes into sustained production (as per jack-up credit 025(l));

Pre-qualification requirements for a well:

- The Commissioner of DNR must make an affirmative determination that supporting the proposed exploration drilling project is in the public interest based on a presentation from operator to DNR-DOG;
- The operator should have a proven history of safe oil & gas drilling operations;
- Operator must demonstrate a seismically mapped prospect, providing sufficient interpreted seismic data and mapping to identify the intended trap, target depth or depth range, and planned total drilling depth;
- show that the prospect falls within a sedimentary basin capable of hosting a functioning petroleum system; identify anticipated source, reservoir, and seal intervals and their expected characteristics;
- must agree to drill either to economic basement, or at least 12,000 feet true vertical depth if basement is not penetrated;
- any credits must only be for the first well to penetrate the proposed trap;
- must agree to conduct a full evaluation of the entire wellbore below surface casing according to best practices for oil and gas exploration (**see data collection program below**);
- must agree to penetrate and thoroughly evaluate the hydrocarbon potential of the pre-approved prospect;
- must agree to submit all geological, geophysical, and engineering data collected to the Division of Oil and Gas for public release according to the requirements of AS 43.55.025(f)(2);
- if the exploration is conducted on privately owned land, the person claiming a tax credit under this program must secure and demonstrate pre-approval of the private landowner (including native corporations) for the full public release of all well and geophysical data collected, notwithstanding provisions under AS 43.55.025(f)(2)(C)(i – ii) to the contrary.
- Must include total estimated cost of project including cost of infrastructure to transport product to intended market and funding mechanism for development

Post-drill requirements for a well:

- Final post-drill approval of the tax credit will be subject to the Commissioner of DNR determining that the well penetrated and evaluated the pre-approved frontier basin prospect , and that the operator has fulfilled the data submission requirements.

Well Data Collection Program:

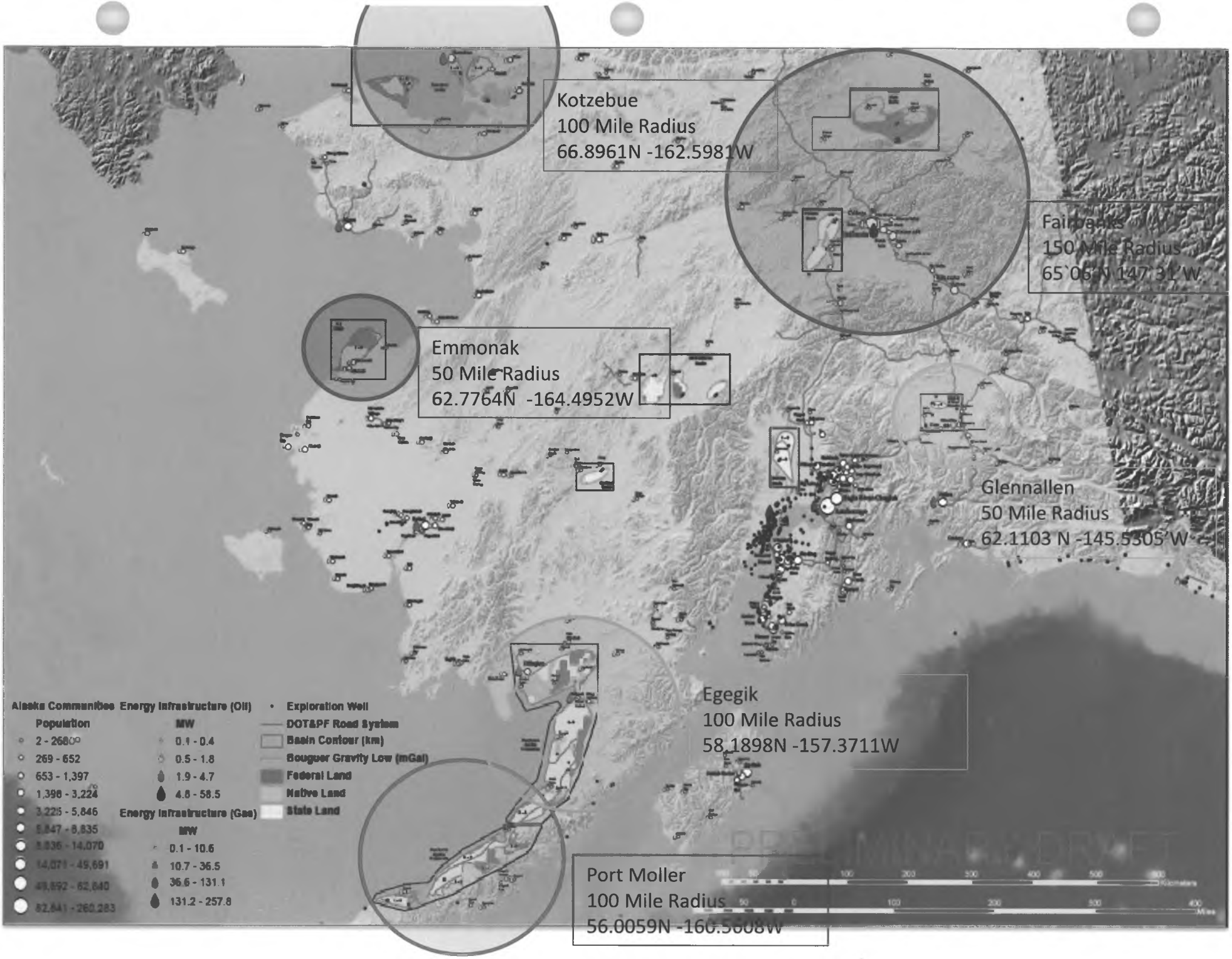
- The operator must;
- collect a standard full suite of open hole logs of the entire wellbore below surface casing including minimum of mudlog, gamma ray, spontaneous potential, resistivity, sonic, bulk density, and neutron porosity;
- make a good faith effort to collect representative full diameter core or rotary sidewall core for reservoir quality analysis,
- make a good faith effort to collect fluid samples and conduct analyses of total dissolved solids for use in calculating hydrocarbon saturation;
- if logs or samples identify potentially producible hydrocarbons, well completion and flow testing for illustrative purposes only If the well is completed and tested, data collection and post-drill submission must include all test data, test interpretations, and all cased hole logs.

Attachment:

Preliminary map (DGGS-DOG) for illustrative purposes only showing areas which the legislature could deem eligible for tax credit project support, provided all pre-qualification criteria are met. Proposed eligible areas are not yet formally defined, adopted, or legally described.

Questions/Concerns:

- How will the state limit financial exposure? One possibility would be to consider limiting to no more than one seismic and 1 well in each defined eligible area with a financial maximum
- What expenses are included? Recommend ensuring that provisions of 15 AAC 55.360 apply to this program.
- Some basins are very remote, and far from infrastructure or population. The minimum of 25% "skin in the game" will potentially limit any efforts where economic feasibility is non-existent.


Kotzebue
100 Mile Radius
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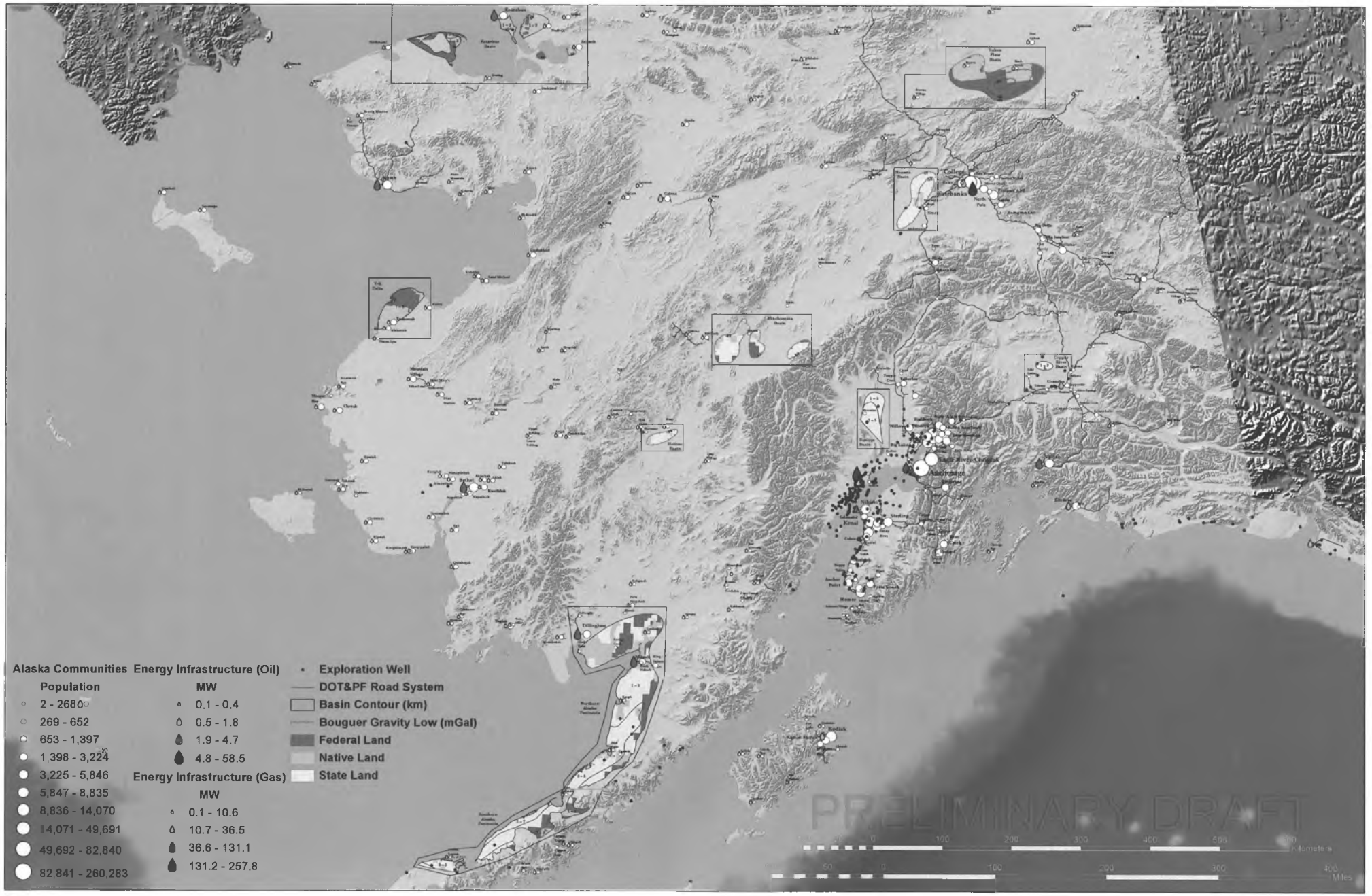
Fairbanks
150 Mile Radius
65`06`N 147`31`W
Emmonak
50 Mile Radius
62.7764N -164.4952W
Glennallen
50 Mile Radius
62.1103 N -145.5305`W
Egegik
100 Mile Radius
58.1898N -157.3711W
Port Moller
100 Mile Radius
56.0059N -160.5608W
Alaska Communities
Population
2 - 2680
269 - 652
653 - 1,397
1,398 - 3,224
3,225 - 5,846
5,847 - 8,835
8,836 - 14,070
14,071 - 49,691
49,692 - 82,640
82,641 - 260,283
Energy Infrastructure (Oil)
MW
0.1 - 0.4
0.5 - 1.8
1.9 - 4.7
4.8 - 58.5
Energy Infrastructure (Gas)
MW
0.1 - 10.6
10.7 - 36.5
36.6 - 131.1
131.2 - 257.8
Exploration Well
DOT&PF Road System
Basin Contour (km)
Bouguer Gravity Low (mGal)
Federal Land
Native Land
State Land

ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
DIVISON OF OIL & GAS

REGIONS FOR POTENTIAL FRONTIER BASIN OIL AND GAS EXPLORATION



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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

MEMORANDUM

To: Representatives Eric Feige, Co-Chair
House Resources Committee

Representative Paul Seaton, Co-Chair
House Resources Committee

From: Representative Steve Thompson

Date: January 25, 2012

Re: Hearing request for HB276 ***"An Act providing for a credit against the oil and gas production tax for costs incurred in drilling certain oil or natural gas exploration wells in the Nenana Basin"***

Please consider this memo as a request for the House Resources Committee to hear HB276.

The following documents will are provided and will be sent via email:

- Sponsor Statement for HB276
- HB276 (27-LS1193\A)
- CSHB276 (27-LS1193\M)
- Explanation of Changes from version A to version M

Thank you.

E-Mail: Representative.Steve.Thompson@legis.state.ak.us
Website: www.akrepublicans.org/thompson/

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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

SPONSOR STATEMENT FOR HOUSE BILL 276 (27-LS1193\M)

"An Act providing for a credit against the oil and gas production tax for costs incurred in drilling certain oil or natural gas exploration wells in the Nenana Basin"

HB276 is designed to incentivize exploration drilling in the underexplored Nenana Basin. The Nenana Basin has shown great potential, but has remained underdeveloped due to complications associated with its remote location. HB276 is modeled after the Cook Inlet tax credits that successfully triggered a stampede of exploration. At a time when economic growth and development in the Interior is crippled by high energy prices and the lack of reliable energy supplies, this legislation will strongly encourage companies to invest in this high potential, frontier basin, located just 50 miles from Fairbanks. HB276 has the potential to not only benefit the Interior but all Alaskans on the railbelt and beyond.

The tax credits will apply to the first three persons that drill an exploration well to the depth of 8,000 feet for the purposes of discovering gas or oil, and are structured as follows:

- The first person that drills an exploration well is credited 100 percent of costs, or $25 million, whichever is less;
- The second exploration well drilled is entitled to a credit of 90 percent, or up to $22.5 million;
- The third exploration well is credited at 80 percent, or up to $20 million.

If the exploration results in sustained oil and/or gas production from a reservoir discovered by the drilling, then 50 percent of the credits awarded will be repaid to the state.

Incentivizing exploration in basins that are located near energy starved regions of Alaska showing a high potential for production of gas and/or oil is another step, which will help support the economy and well-being of businesses and families in Alaska who are suffering from high energy costs and the lack of reliable energy supplies.

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REPRESENTATIVE STEVE THOMPSON
DISTRICT 10

HB276 Explanation of Changes between Versions A and Version M

Page 2, Lines 24-31, Page 3, Line1 – The payback provisions were changed in version "M" to 50 percent of the amount of the credit to be repaid in equal monthly installments over a 10-year period commencing 60 days after the start of sustained production. This payback provision is cleaner than in version "A" that called for a monthly installment greater than 1/240th of the total amount of the credit or 10 percent of the gross value for the month proceeding the month the payment is due.

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27-LS1193\M
Bullock
1/18/12

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A BILL

FOR AN ACT ENTITLED

"An Act providing for a credit against the oil and gas production tax for costs incurred in drilling certain oil or natural gas exploration wells in the Nenana Basin."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 43.55.025(a) is amended to read:

(a) Subject to the terms and conditions of this section, a credit against the production tax levied by AS 43.55.011(e) is allowed for exploration expenditures that qualify under (b) of this section in an amount equal to one of the following:

(1) 30 percent of the total exploration expenditures that qualify only under (b) and (c) of this section;

(2) 30 percent of the total exploration expenditures that qualify only under (b) and (d) of this section;

(3) 40 percent of the total exploration expenditures that qualify under (b), (c), and (d) of this section;

(4) 40 percent of the total exploration expenditures that qualify only

under (b) and (e) of this section; or

(5) 80, 90, or 100 percent, or a lesser amount described in (*l*) **or (n)** of this section, of the total exploration expenditures described in (b)(1) and (2) of this section and not excluded by (b)(3) and (4) of this section that qualify only under (*l*) **or (n)** of this section.

*** Sec. 2.** AS 43.55.025 is amended by adding a new subsection to read:

(n) The first three persons that drill an exploration well for the purpose of discovering oil or gas in the Nenana Basin are eligible for the credit under this subsection. To qualify for the credit under this subsection, the well for which the credit is claimed must be drilled to a depth greater than 8,000 feet or, if authorized by the commissioner of natural resources before the drill bit first turns to the right for the purpose of drilling the well, to a target depth of less than 8,000 feet, but not less than 5,000 feet. The person that drills the first exploration well is entitled to a credit in the amount of 100 percent of its exploration well expenditures or $25,000,000, whichever is less; the person that drills the second exploration well is entitled to a credit in the amount of 90 percent of its exploration well expenditures or $22,500,000, whichever is less; and the person that drills the third exploration well is entitled to a credit in the amount of 80 percent of its exploration well expenditures or $20,000,000, whichever is less. A person or an affiliate of a person may qualify for a credit for more than one well under this subsection. The department shall make a determination of the order in which the wells are drilled based on the date and time that the drill bit first turns to the right for the purpose of drilling the well. Exploration expenditures eligible for the credit in this subsection must be incurred for work performed after December 31, 2011. If the exploration well for which a credit is received under this subsection results in sustained production of oil or gas from a reservoir discovered by the exploration well, and notwithstanding that the credit may have been transferred under (g) of this section, 50 percent of the amount of the credit received shall be repaid to the department by the person that received the credit in equal monthly installments over a 10-year period commencing 60 days after the start of sustained production of oil or gas. Whether the exploration well for which a credit is requested under this subsection is located in the Nenana Basin, reached the required depth, or resulted in

sustained production of oil or gas from a reservoir discovered by the exploration well shall be determined by the commissioner of natural resources and reported to the commissioner. A taxpayer that obtains a credit under this subsection may not claim a tax credit under AS 43.55.023 or another provision in this section for the same exploration expenditure. In this subsection,

(1) "reservoir" means an oil or gas accumulation, discovered and evaluated by testing, that is separate from any other accumulation of oil or gas;

(2) "sustained production" means production of oil or gas from a reservoir into a pipeline or other means of transportation to market, but does not include testing, evaluation, or pilot production.

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HB276**
Fiscal Note Number:
Publish Date:

Identifier (file name): HB276-DNR-O&G-01-28-12
Title: OIL/GAS PRODUCTION TAX CREDITS: NENANA
Sponsor: Representative Thompson
Requester: House Resources Committee

Dept. Affected: Department of Natural Resources
Appropriation: Oil and Gas
Allocation: Oil and Gas
OMB Component Number: 439

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)								
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES	***	***	***	***	***	***	***

Estimated SUPPLEMENTAL (FY12) operating costs 0.0 *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs 0.0 *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

Initial Version, not applicable

Prepared by: William C. Barron — Phone: 269-7493
Division: Division of Oil and Gas — Date/Time: 1/28/12 12:00 AM
Approved by: Daniel Sullivan — Date: 1/28/2012
Department of Natural Resources

(Revised 8/17/2011 OMB)

FISCAL NOTE

STATE OF ALASKA **BILL NO.** HB276
2012 LEGISLATIVE SESSION

Analysis

HB 276 modifies AS 43.55.025 to provide for a credit for drilling the first three exploration wells in the Nenana Basin that target a deeper stratum.

The credit would be equal to 100% of the cost of the first exploration well, 90% for the second, and 80% for the third. The maximum well expenditure eligible for the credit would be $25 million per well. Under section 2, this credit would be in lieu of any tax credit under AS 43.55.023. If the wells drilled resulted in sustained commercial production, the taxpayer would have to pay back half the amount of the credit received in monthly installments over a 10-year period, or 10% of gross receipts, whichever is less.

This credit is more generous than the credits currently available to an explorer in the Nenana Basin under AS 43.55.023. In the event that the exploration well does not result in a commercial find, the credits reimburse the explorer for virtually all of the costs of the wells. If a commercial find is made, then the explorer recovers virtually all the capital up-front, as the explorer only has to pay back half the amount of the credit in monthly installments over the first 10 years of production.

The impact on royalties is indeterminate positive. It is dependent on a commercial discovery being made. HB 276 will probably make such a discovery more likely. Up to now, the wells that have been drilled in the Nenana Basin have targeted shallower strata. Deeper strata appear to be more gas prospective, but are more expensive to drill. If a commercial discovery is made, the State will likely receive royalty revenue. Currently, the State is the predominant owner of the mineral estate in the Nenana Basin, owning 1.25 million acres. The State issued an exploration license in the area covering almost 500,000 acres that expires in October of 2012. The State will not receive any direct revenues from this licensed area until it is converted to a lease.

Under HB 276, the Department has some direct administrative tasks to perform. The DNR must verify that the location of the well is in the Nenana Basin, and verify that the well has reached the required depth (8,000 feet). DNR can also authorize wells to be drilled to less than 8,000 feet (but more than 5,000 feet). The DNR must also verify that a well has resulted in sustained production of oil or gas, which then kicks in the pay back obligation. If a commercial find is made, the DNR will also have to convert the exploration license to a lease, and also perform tasks associated with permitting and leasing. These tasks are part of DNR's ongoing operations and thus no additional fiscal impact is expected.

FISCAL NOTE

STATE OF ALASKA
2012 LEGISLATIVE SESSION

Bill Version: **HB 276**
Fiscal Note Number:
() Publish Date:

Identifier (file name): HB276-DOR-TAX-01-27-12
Title: Oil/Gas Production Tax Credits: Nenana
Sponsor: Representatives Thompson, Dick, Millett, Tuck, Miller
Requester: (H) RES

Dept. Affected: Revenue
Appropriation: Taxation and Treasury
Allocation: Tax
OMB Component Number: 2476

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	FY13 Appropriation Requested	Included in Governor's FY13 Request	Out-Year Cost Estimates				
OPERATING EXPENDITURES	**FY13**	**FY13**	**FY14**	**FY15**	**FY16**	**FY17**	**FY18**
Personal Services							
Travel							
Services							
Commodities							
Capital Outlay							
Grants, Benefits							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)								
1002	Federal Receipts							
1003	GF Match							
1004	GF							
1005	GF/Prgm (DGF)							
1037	GF/MH (UGF)							
1178	temp code (UGF)							
TOTAL		**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

POSITIONS							
Full-time							
Part-time							
Temporary							

CHANGE IN REVENUES	***		***	***	***	***	***

Estimated SUPPLEMENTAL (FY12) operating costs _____ *(separate supplemental appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Estimated CAPITAL (FY13) costs _____ *(separate capital appropriation required)*
(discuss reasons and fund source(s) in analysis section)

Why this fiscal note differs from previous version (if initial version, please note as such)

This is the initial version of the bill.

Prepared by: Cherie Nienhuis, Commercial Analyst — Phone: 907-269-1019
Division: Tax — Date/Time: 1/27/12, 1:00pm
Approved by: Alicia Egan, Oil & Gas Legislative Liaison — Date: 1/28/2012
Department of Revenue

(Revised 1/17/2012 OMB)

STATE OF ALASKA
2012 LEGISLATIVE SESSION

BILL NO. HB 276

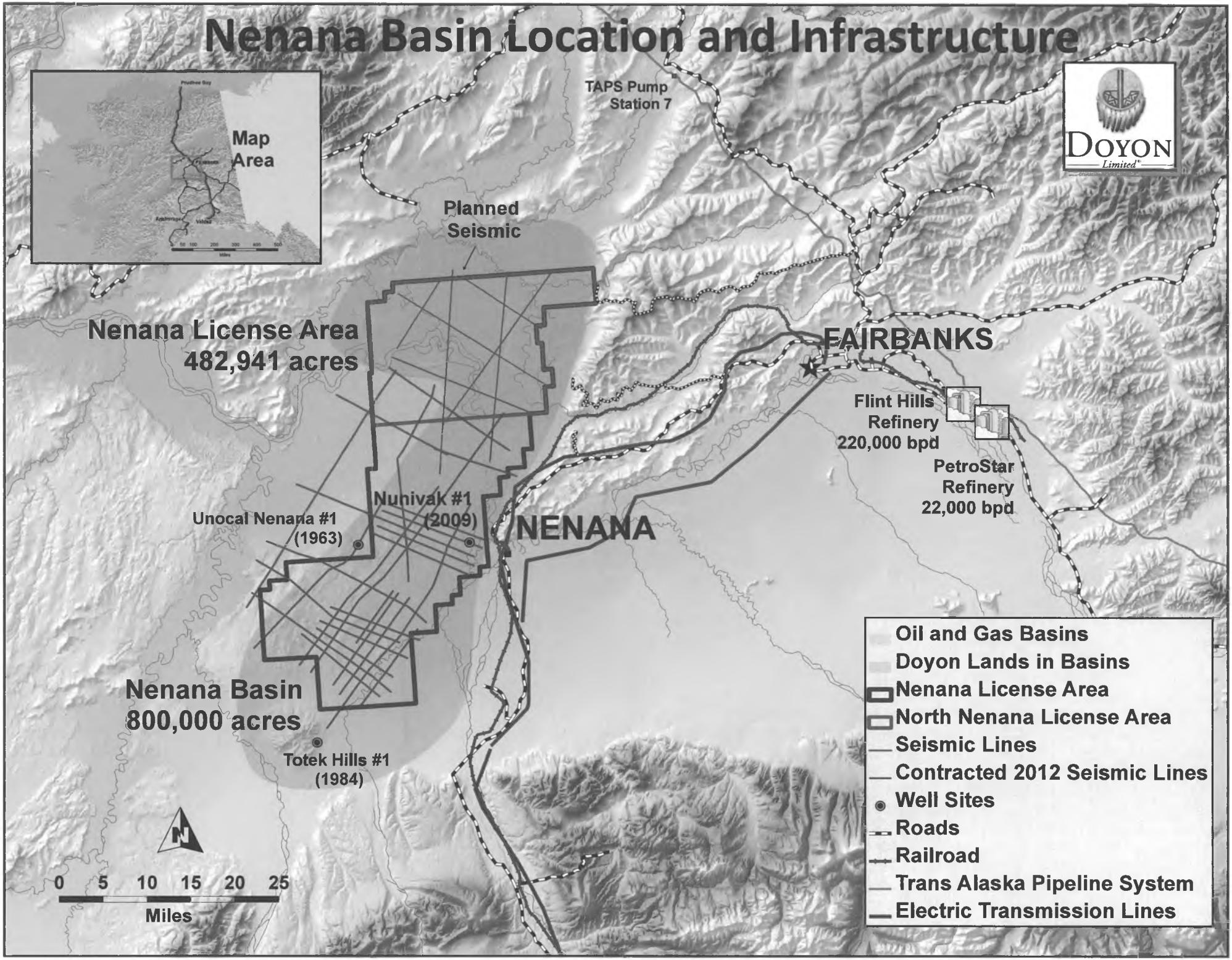
Analysis

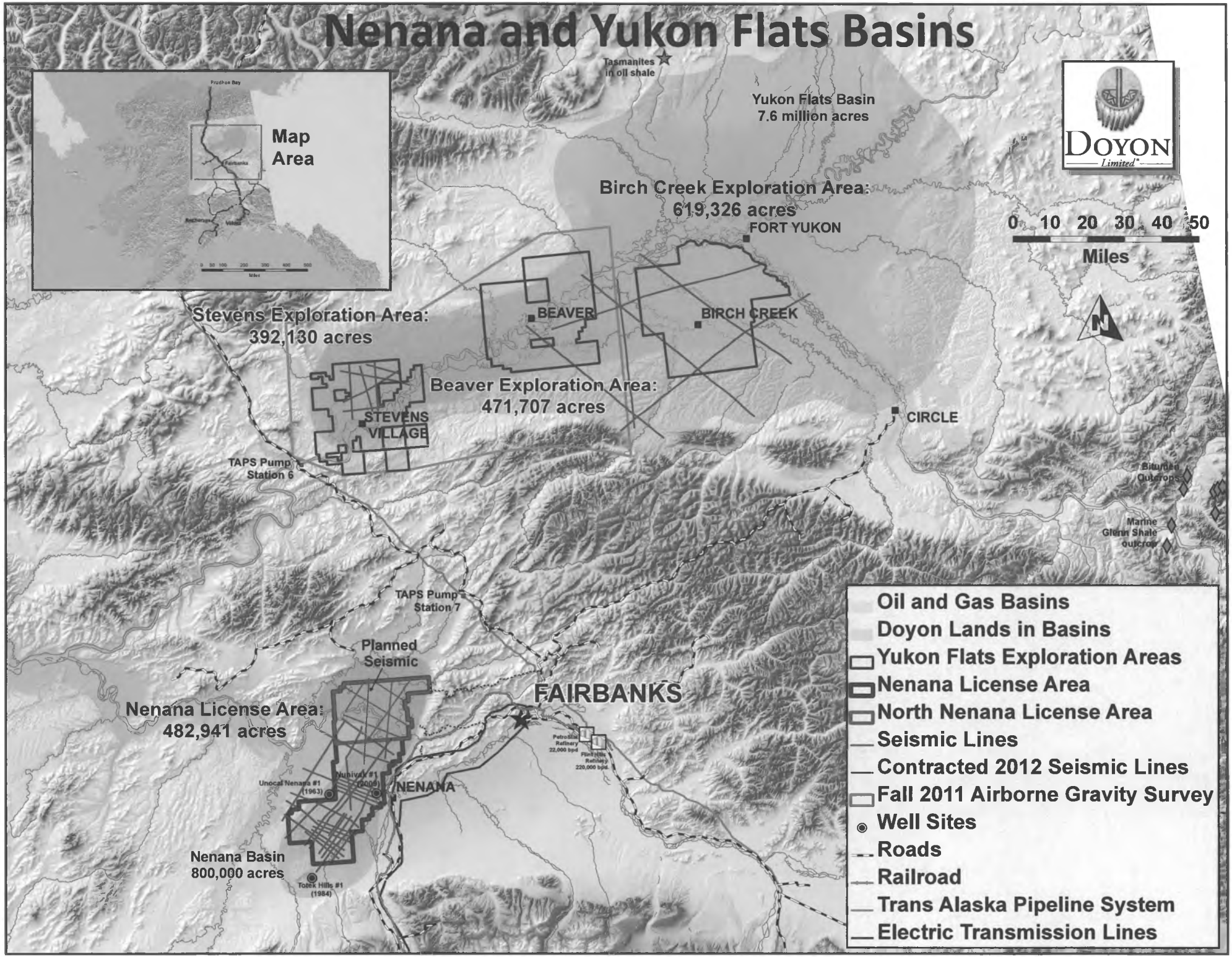
***The revenue impact of this bill is indeterminate.

This bill expands the production tax credit authorized at AS 43.55.025 to a maximum credit of 100 percent of the total exploration expenditures for drilling to a depth greater than 8,000 feet (unless otherwise authorized by the commissioner of the Department of Natural Resources) for drilling an exploration well for the purpose of discovering oil or gas in the Nenana Basin. The bill proposes to grant the full 100 percent of exploration expenditures to a person who drills a qualifying well under this credit, 90 percent to a person who drills the second qualifying well under this credit, and 80 percent to a person who drills the third qualifying well under this credit. A maximum of $25 million in exploration well expenditures per well will qualify under this credit, resulting in maximum credit limits of $25 million, $22.5 million, and $20 million for the first three wells. Only expenditures occurring after December 31, 2011 and before July 1, 2016 would qualify under the bill. If the exploration well for which credit is received results in paying quantities of production, the person(s) who received the credit will pay back to the state 50 percent of the credit received in monthly installments over 10 years. The monthly installment shall be the greater of 1/240th of the total amount of the credit received or 10 percent of the gross value at the point of production for the month preceding the month the payment is due.

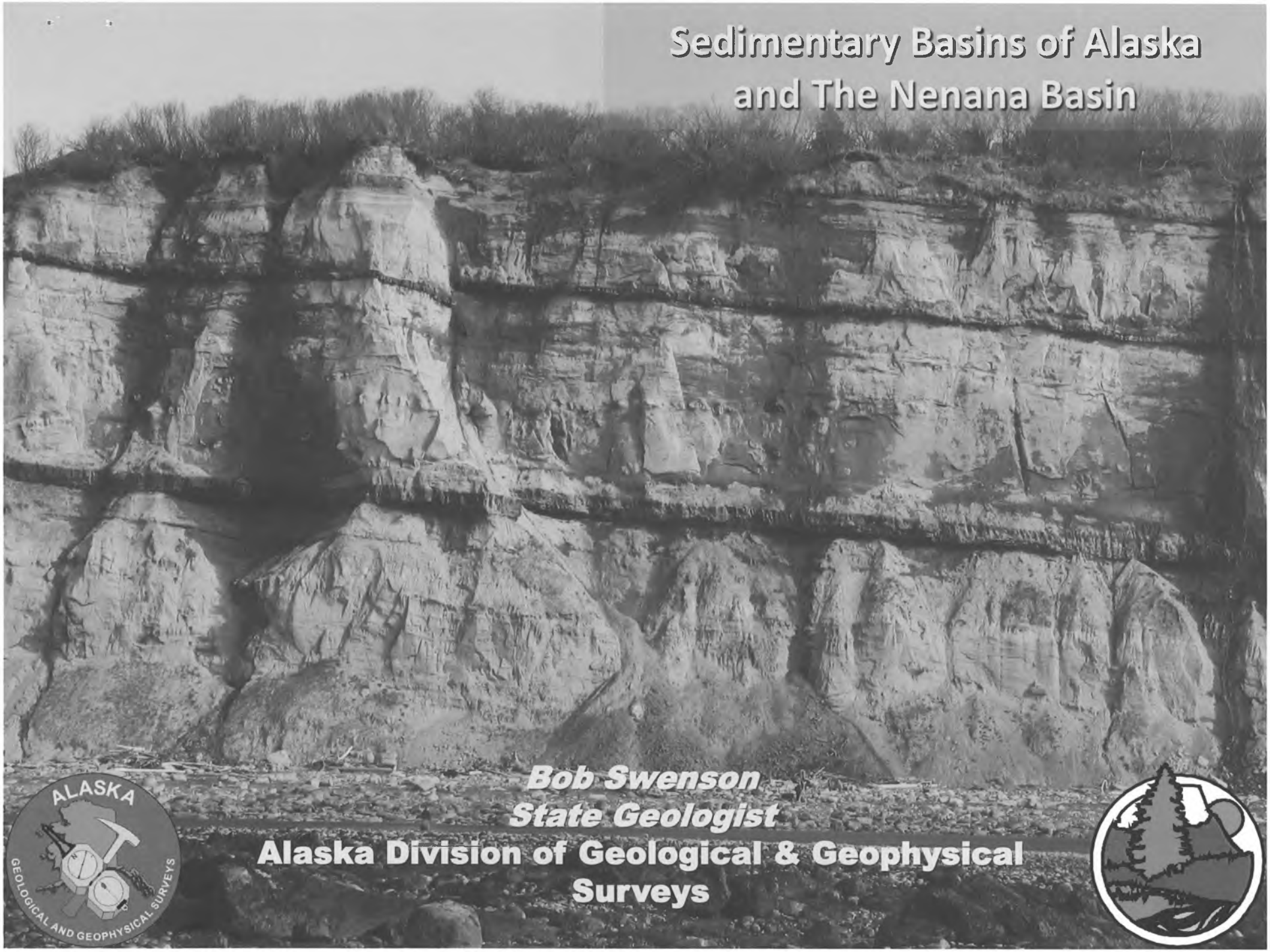
The fiscal impact of this bill is indeterminate. If three qualifying wells are drilled at $25 million apiece, the immediate revenue impact to the state would be $67.5 million. Under this scenario, if paying quantities of production are found, the state could be reimbursed up to $33.75 million of the credits over the 10 years following the start of sustained production.

The Department of Revenue could administer the provisions of this bill with existing resources.

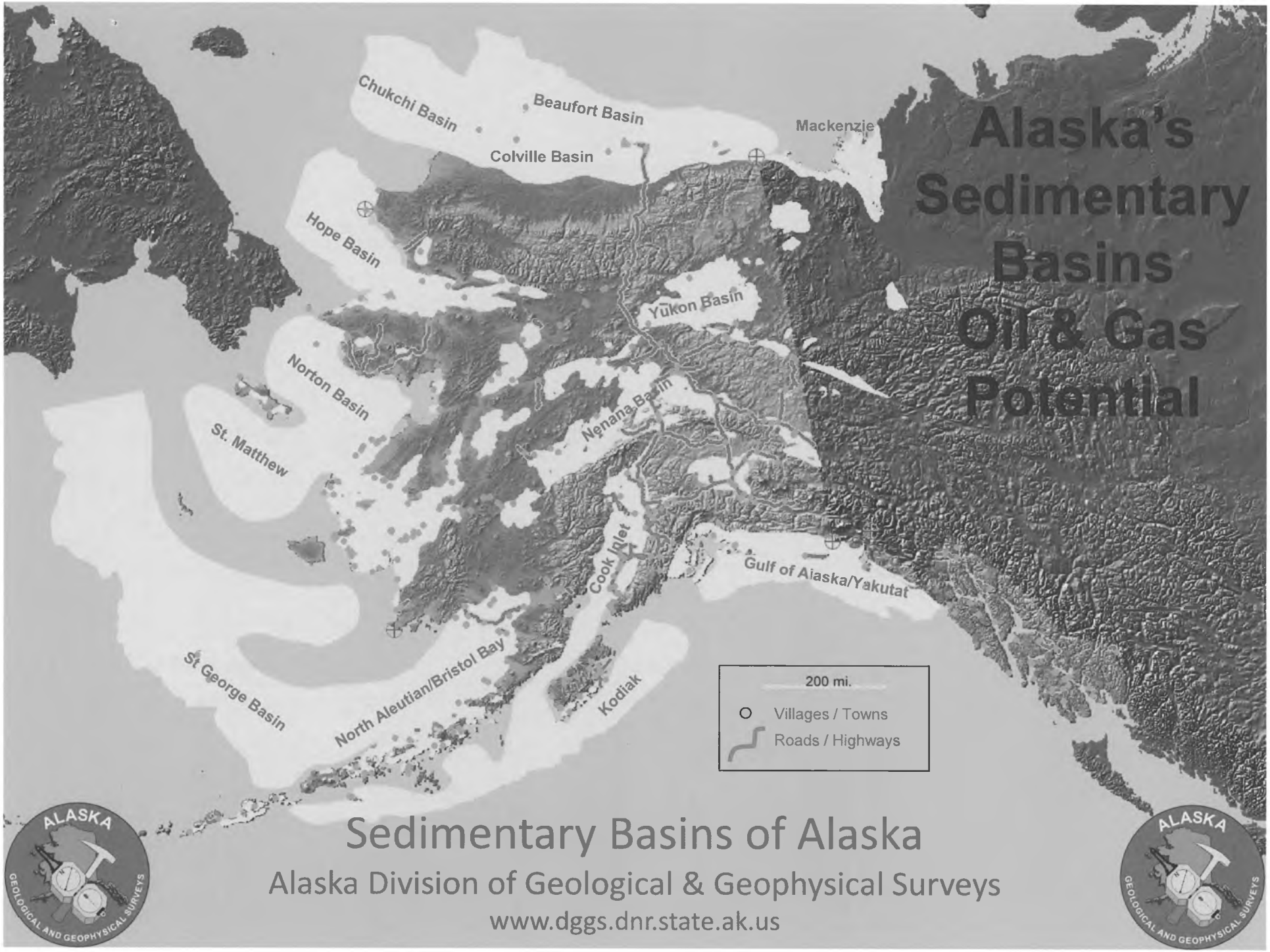

Nenana Basin Location and Infrastructure
Map Area
TAPS Pump Station 7
DOYON Limited
Planned Seismic
Nenana License Area
482,941 acres
FAIRBANKS
Flint Hills Refinery
220,000 bpd
PetroStar Refinery
22,000 bpd
Nunivak #1
(2009)
Unocal Nenana #1
(1963)
NENANA
Nenana Basin
800,000 acres
Totek Hills #1
(1984)
0 5 10 15 20 25
Miles
Oil and Gas Basins
Doyon Lands in Basins
Nenana License Area
North Nenana License Area
Seismic Lines
Contracted 2012 Seismic Lines
Well Sites
Roads
Railroad
Trans Alaska Pipeline System
Electric Transmission Lines


Nenana and Yukon Flats Basins
Tasmanites in oil shale
Yukon Flats Basin
7.6 million acres
DOYON Limited
Map Area
Prudhoe Bay
Fairbanks
Anchorage
Valdez
Birch Creek Exploration Area:
619,326 acres
FORT YUKON
0 10 20 30 40 50
Miles
Stevens Exploration Area:
392,130 acres
BEAVER
BIRCH CREEK
Beaver Exploration Area:
471,707 acres
STEVENS VILLAGE
CIRCLE
TAPS Pump Station 6
Bituden Outcrop
Marine Glenn Shale outcrop
TAPS Pump Station 7
Planned Seismic
FAIRBANKS
Nenana License Area:
482,941 acres
Petro Star Refinery 22,000 bpd
Flint Hills Refinery 220,000 bpd
Unocal Nenana #1 (1963)
Nubivak #1 (2009)
NENANA
Nenana Basin
800,000 acres
Totek Hills #1 (1984)
Oil and Gas Basins
Doyon Lands in Basins
Yukon Flats Exploration Areas
Nenana License Area
North Nenana License Area
Seismic Lines
Contracted 2012 Seismic Lines
Fall 2011 Airborne Gravity Survey
Well Sites
Roads
Railroad
Trans Alaska Pipeline System
Electric Transmission Lines

Sedimentary Basins of Alaska and The Nenana Basin



Bob Swenson
State Geologist
Alaska Division of Geological & Geophysical Surveys



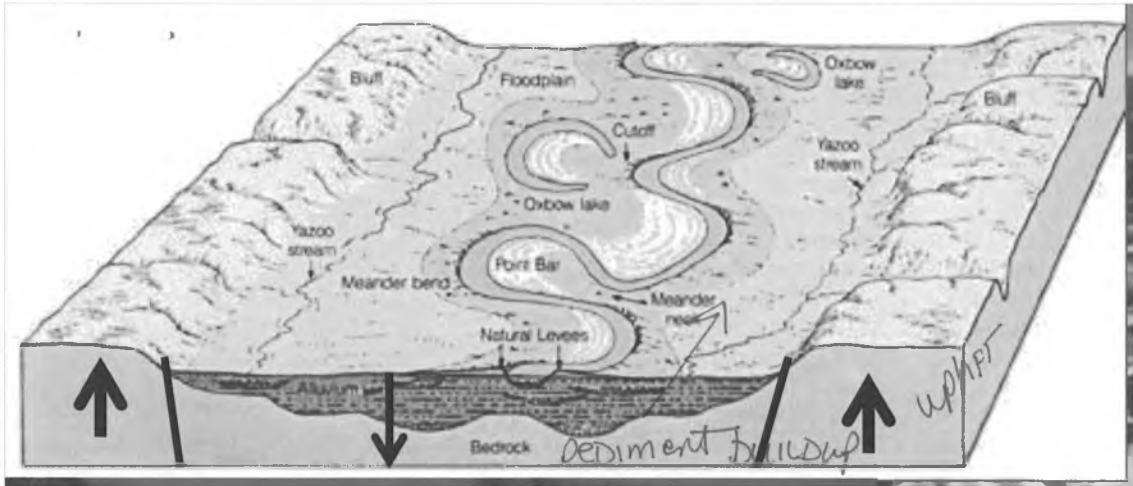
Sedimentary Basins of Alaska

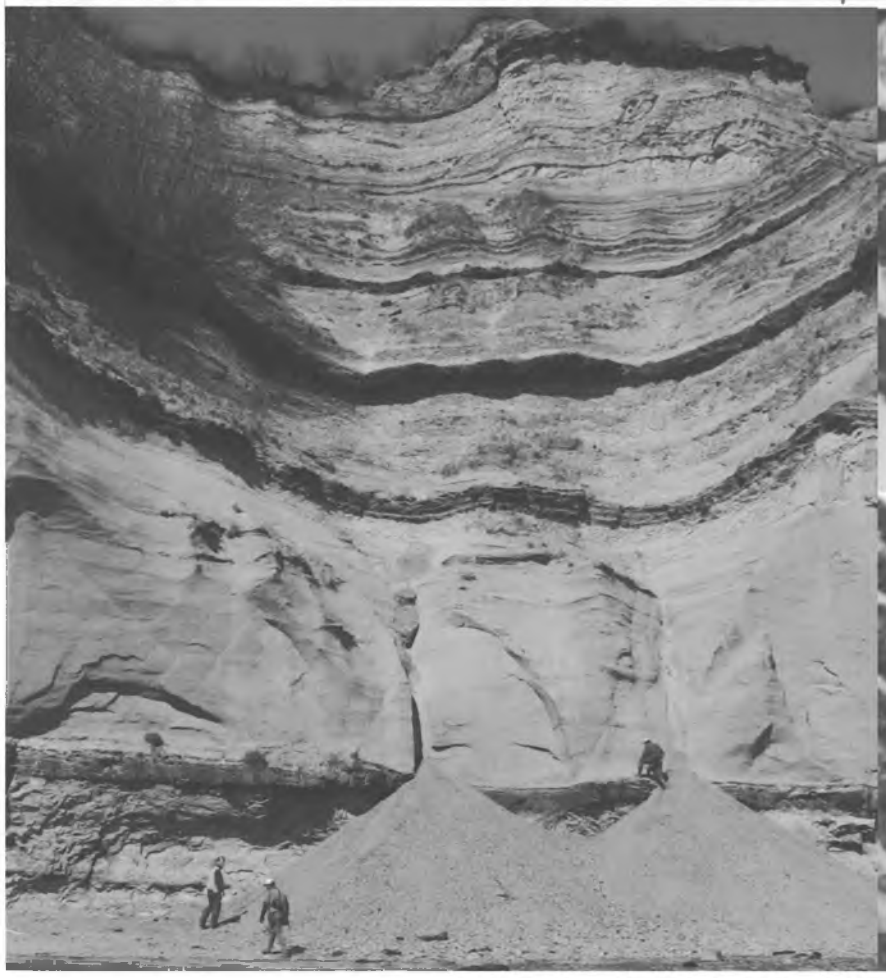
Alaska Division of Geological & Geophysical Surveys

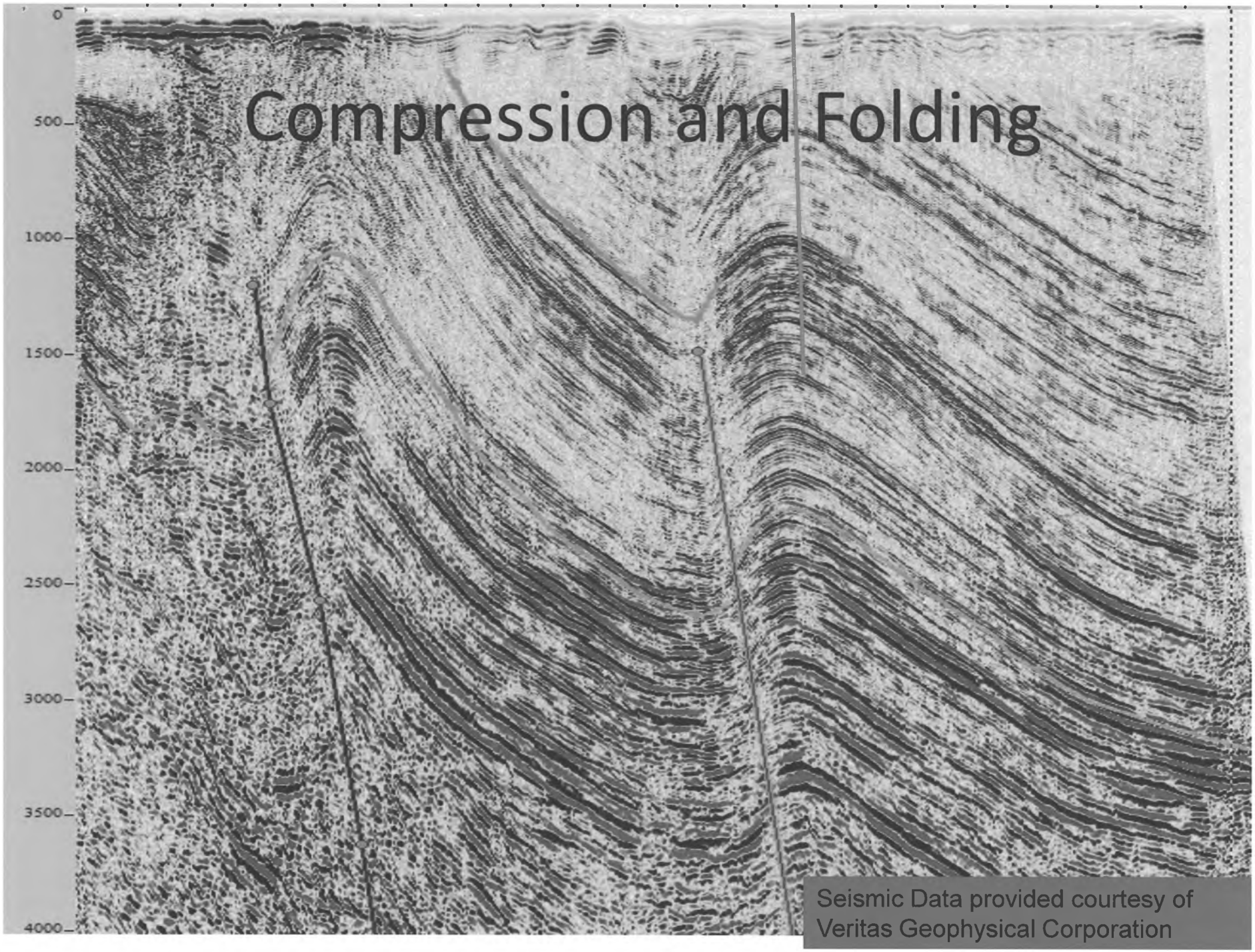
www.dggs.dnr.state.ak.us

Alaska is Complex, Both Topographically & Geologically

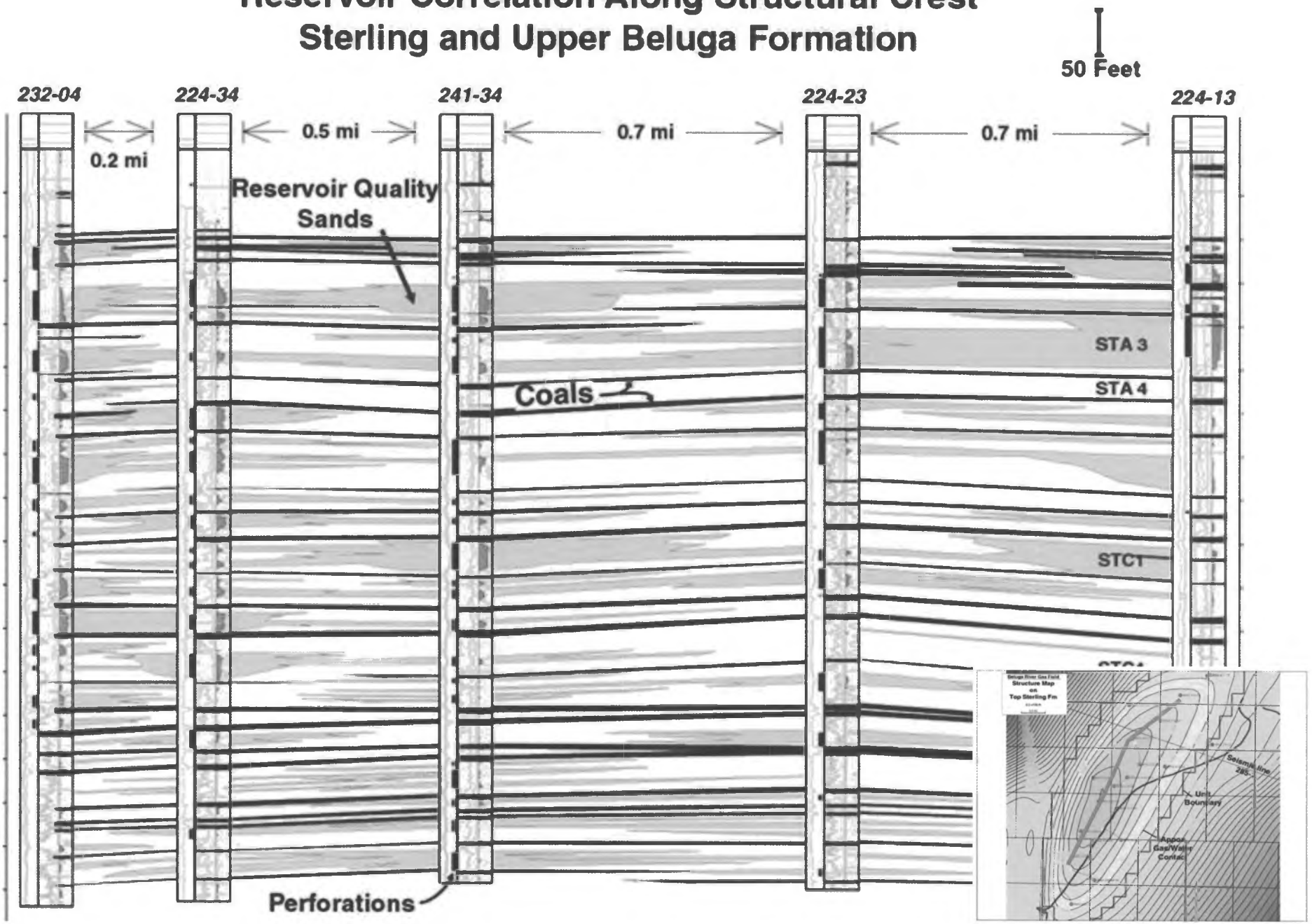
Tertiary Basin Depositional Systems

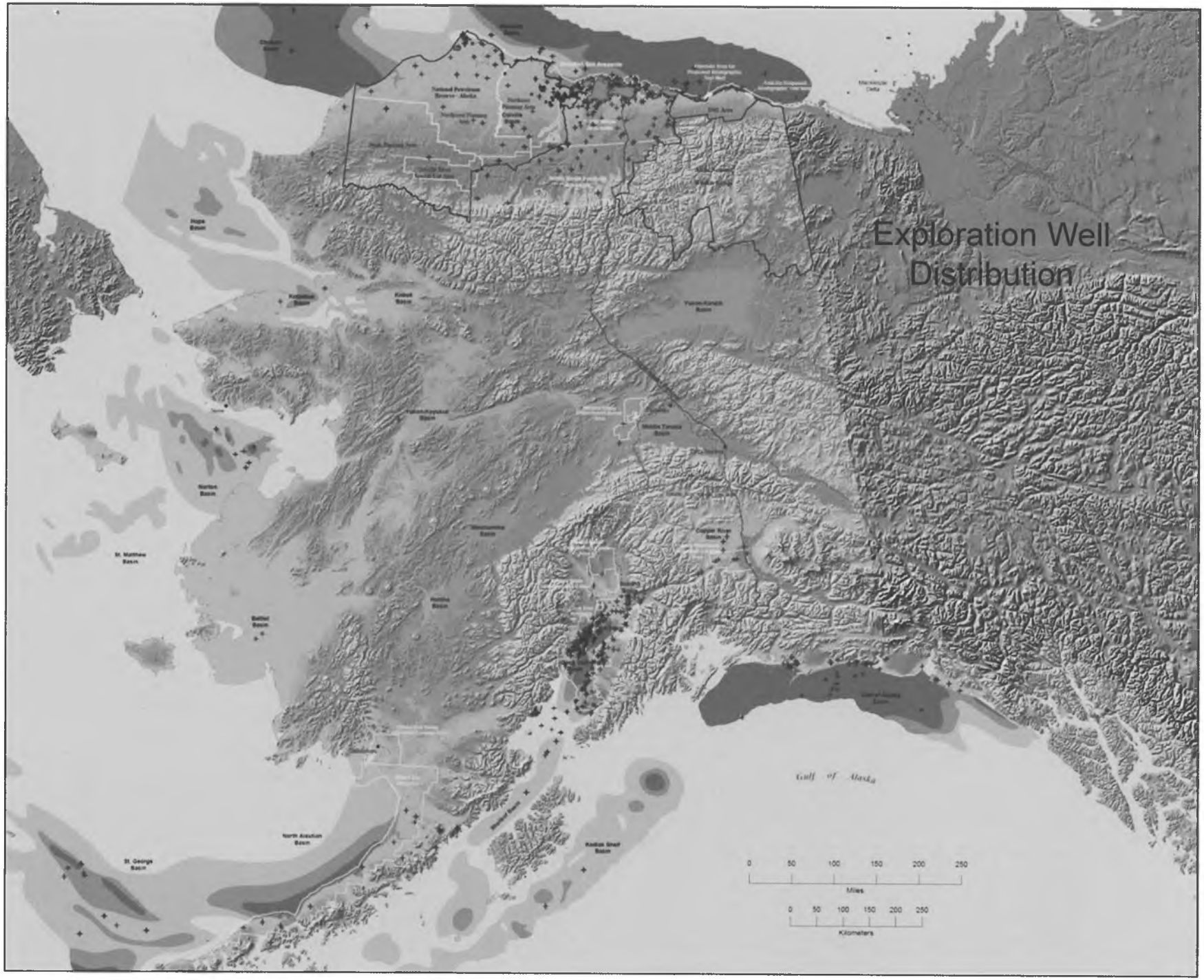





Compression and Folding
0
500
1000
1500
2000
2500
3000
3500
4000
Seismic Data provided courtesy of
Veritas Geophysical Corporation

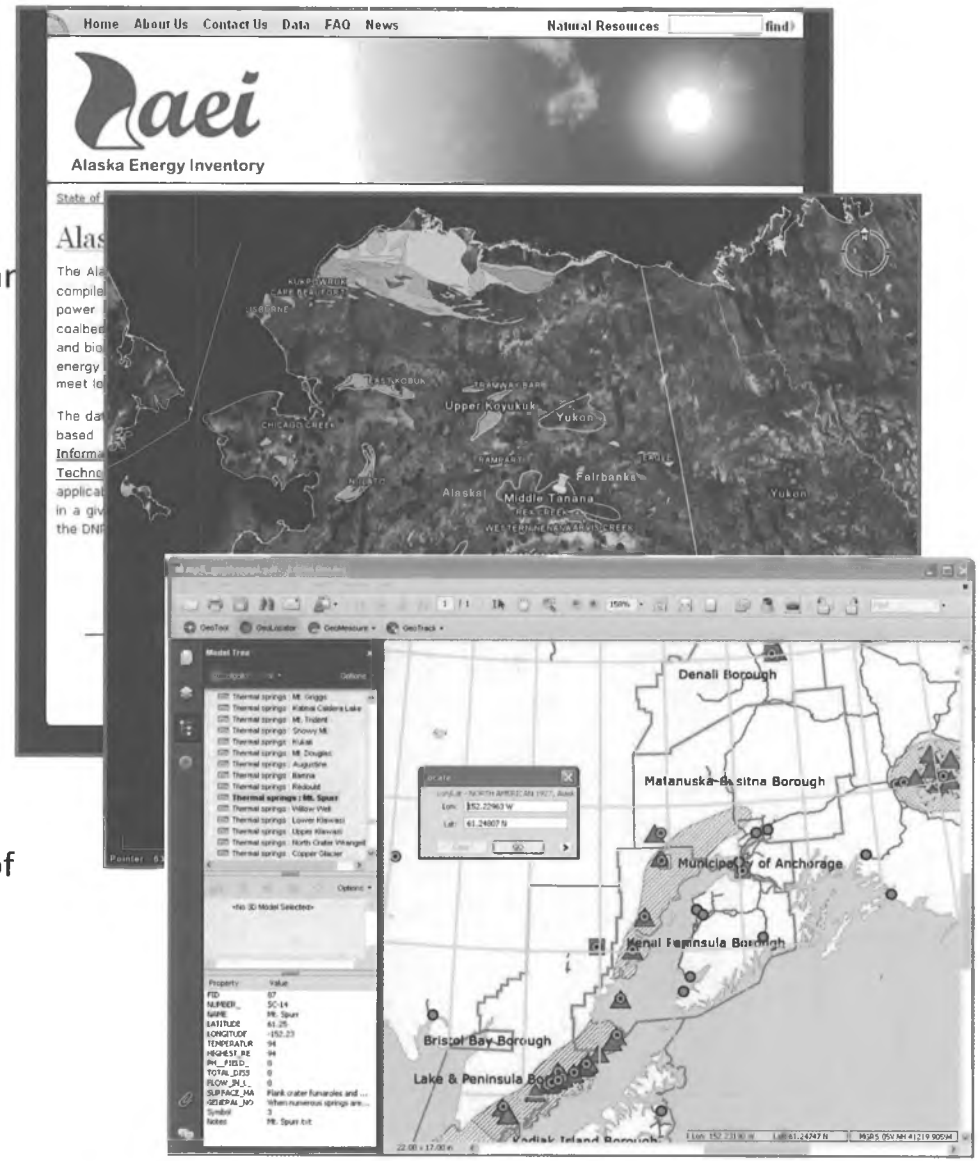
Beluga River Gas Field
Reservoir Correlation Along Structural Crest
Sterling and Upper Beluga Formation



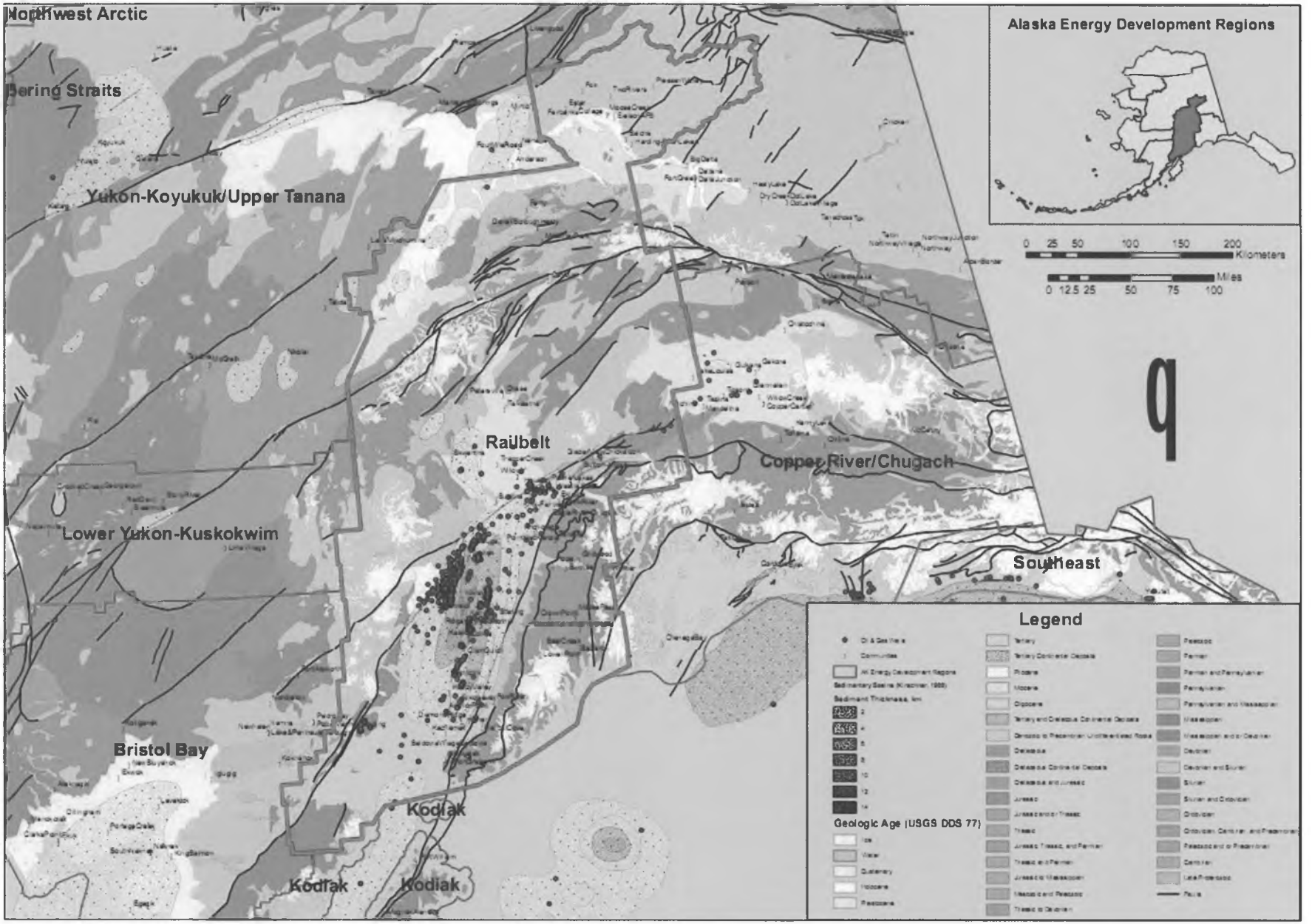

Exploration Well Distribution
Gulf of Alaska
0 50 100 150 200 250
Miles
0 50 100 150 200 250
Kilometers

Alaska Energy Data Inventory

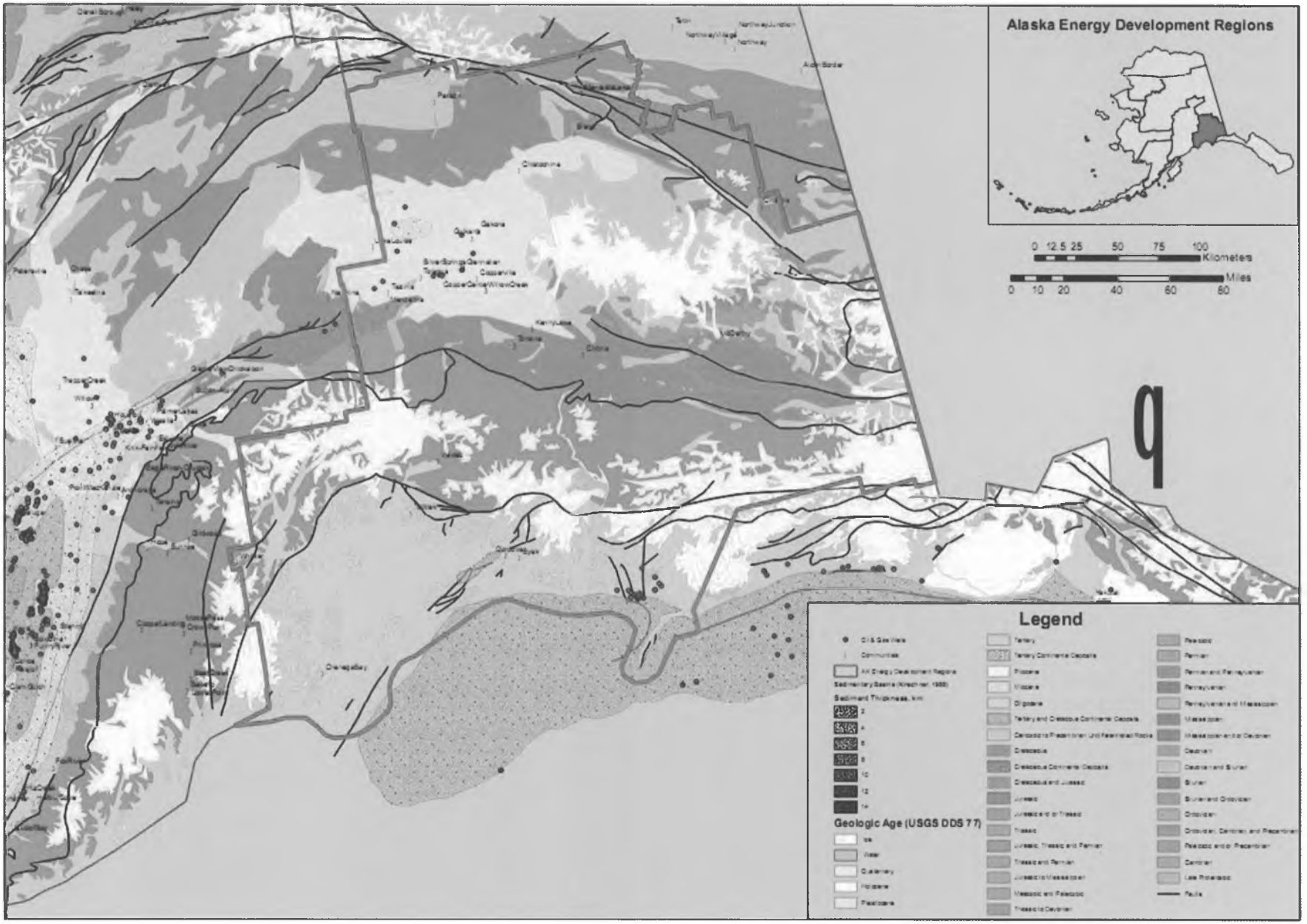
- Consolidating Alaska's energy resources data
  - Resource data suitable for electrical power generation and space heating needs
  - Natural gas, coal, coalbed and shalebed methan gas hydrates, geothermal, wind, hydro, and biomass
  - Available energy meeting local needs?
- Making the data accessible
  - Alaska Mapper, Google Earth, and Terrago Technologies' GeoPDF format
  - http://energyinventory.alaska.gov
  - Query and download data; view data with existing infrastructure
- Involvement
  - DGGS, Alaska Energy Authority, DNR Division of Forestry, DNR LRIS, UAF/GINA
  - CCHRC, USGS, USDOE, DNR DOG, BLM, DMLW, Div. Agriculture, DEC



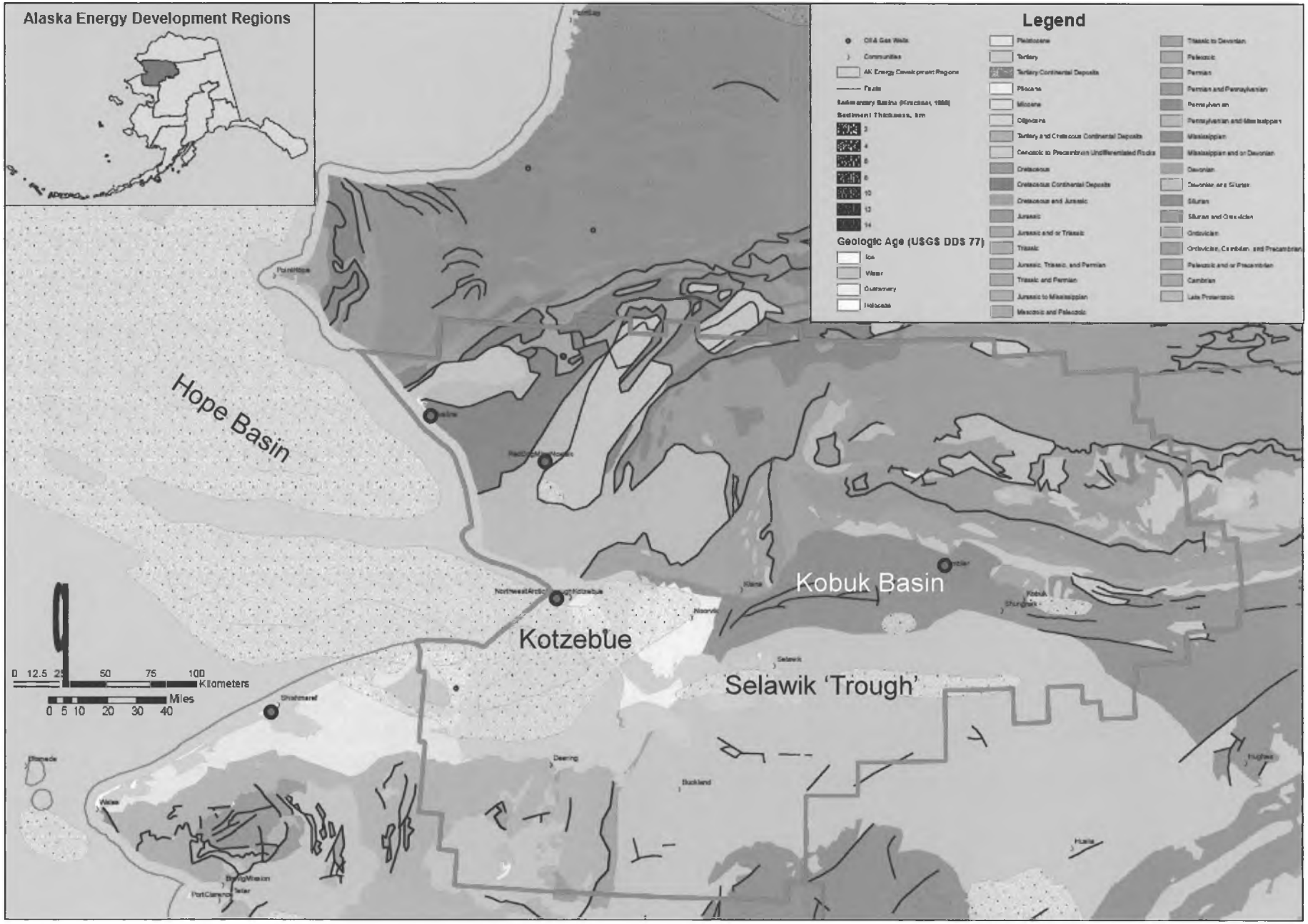
Geology of the Railbelt Energy Region, Alaska



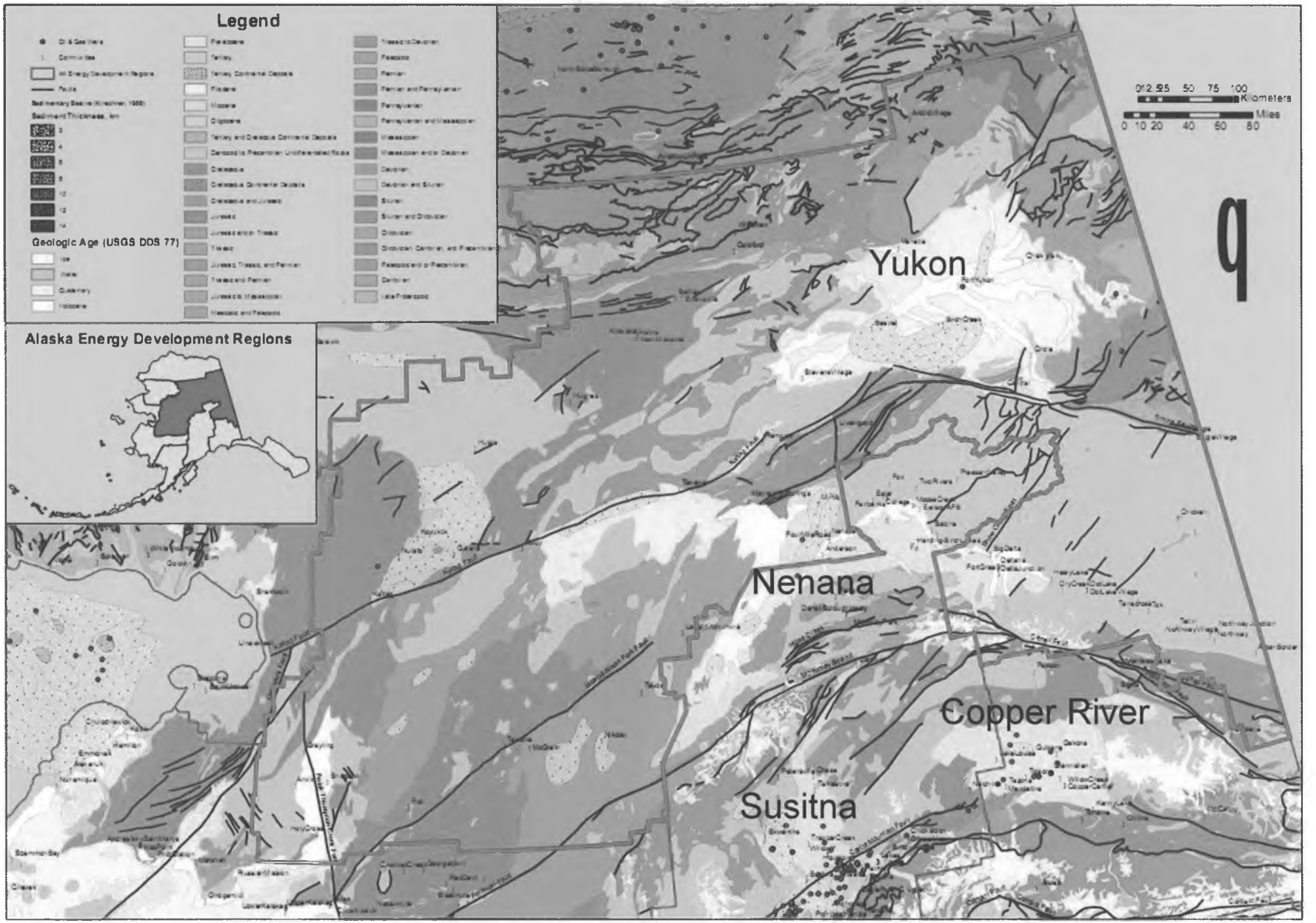
Geology of the Copper River/Chugach Energy Region, Alaska



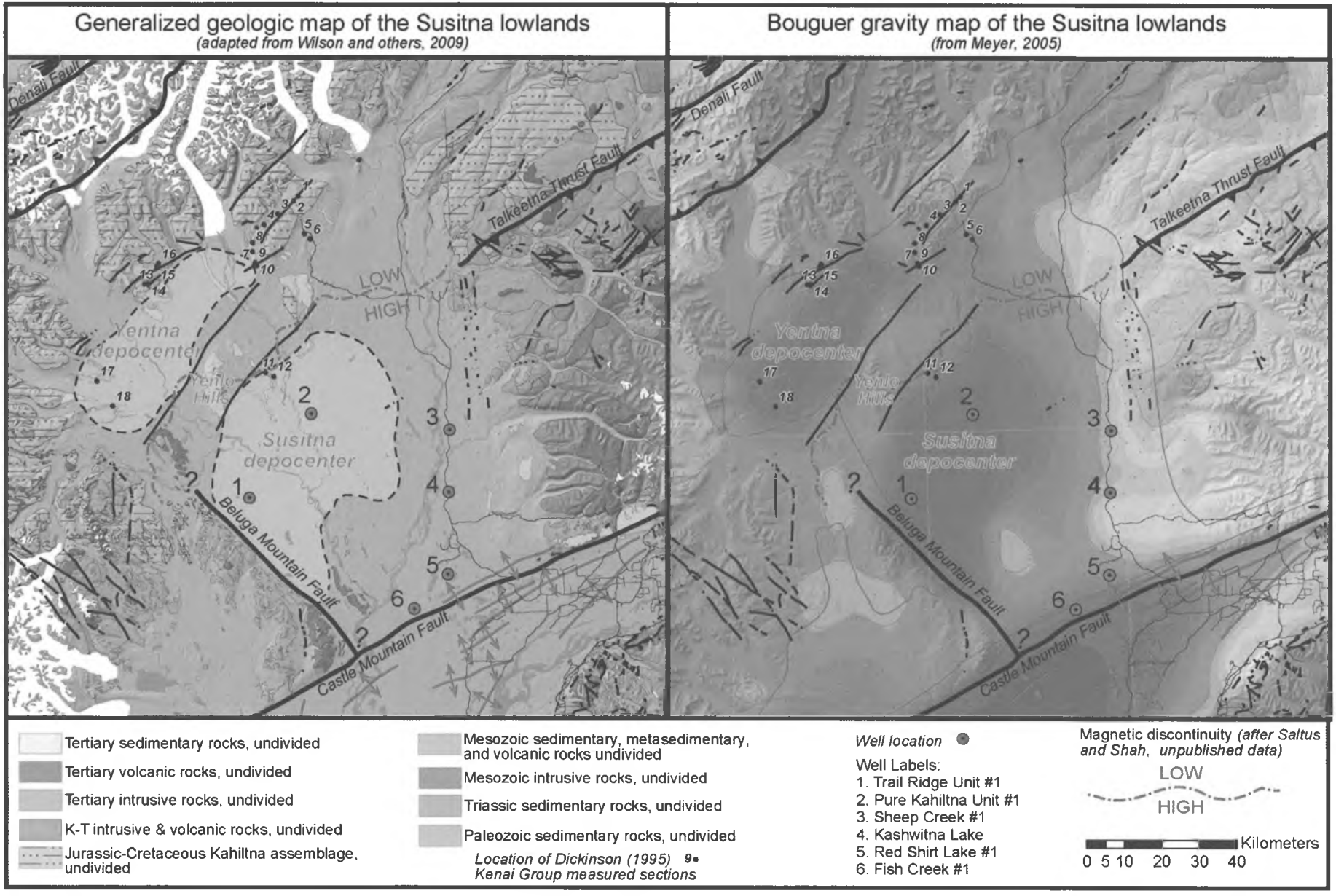
Geology of the Northwest Arctic Energy Region, Alaska



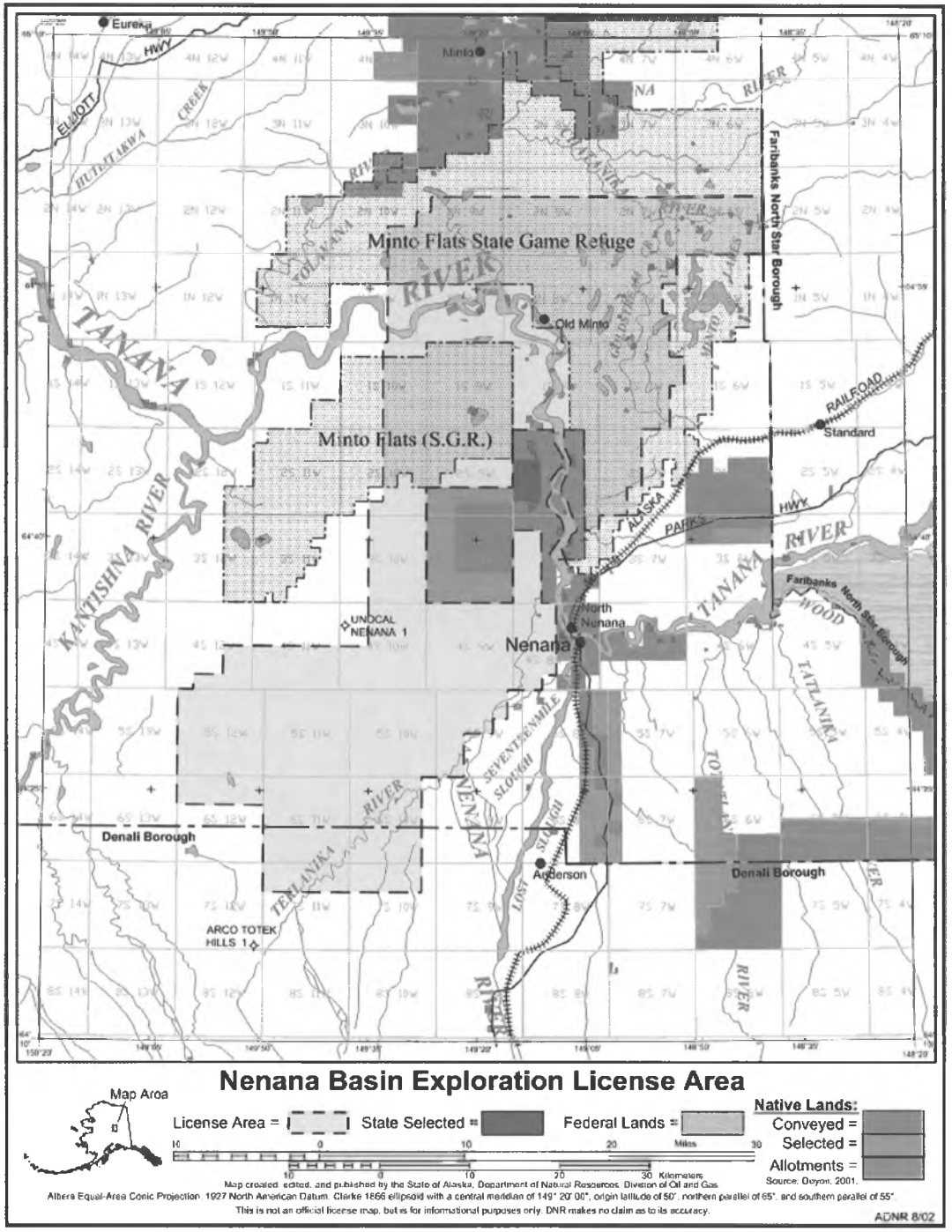
Geology of the Yukon-Koyukuk/Upper Tanana Energy Region, Alaska



Susitna Basin

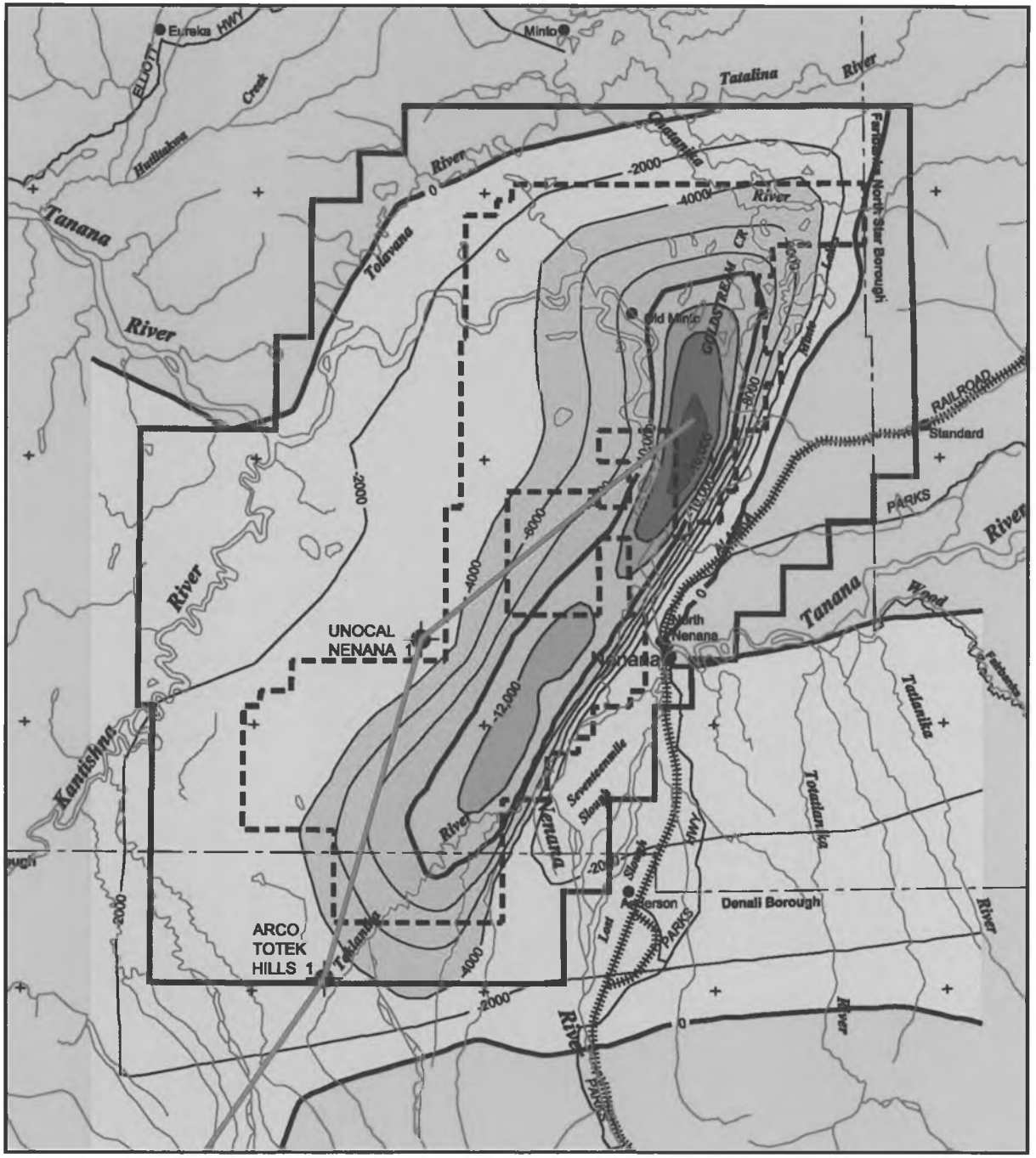


Land Status Nenana Basin Area



Nenana Basin

Thickness of Sedimentary Basin
Interpreted Gravity



Contour Interval = 2,000 Ft.

ods 2/02

Nenana Basin Statistics
Pre - 2009

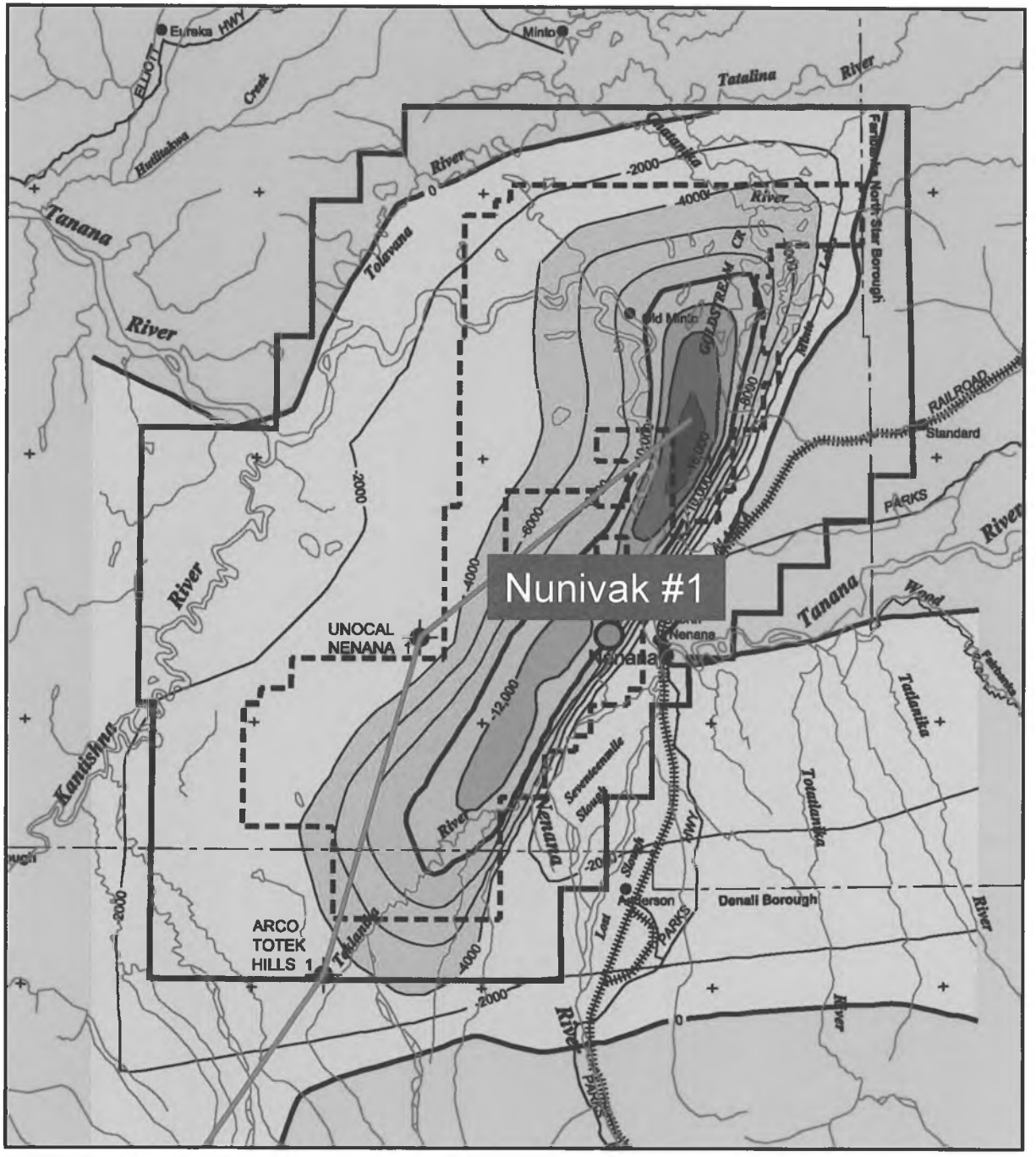
- Tertiary Non Marine Basin Fill
  - Up to 18,000 Ft Thick (Seismic).
  - Time-equivalent to Cook Inlet's productive Kenai Group.
  - Potential for oil is low due to thin low-organic source rocks & thermal history.
  - 350 miles 2-D seismic data in southern and central basin areas (1981-82)
- The range of possible reserve outcomes is wide and poorly constrained
  - Terrestrial Kerogens and Coal Sourced Gas
- 2 Wells Drilled on Basement Highs
  - Unocal Nenana #1 (1962) – 3,062' deep, coal seam gas shows.
  - ARCO Totek Hills #1 (1984) – 3,590' deep, coal seam gas shows.
  - Entire Section not Penetrated
  - Good Reservoir in Shallow Section
  - Potential for CBM and conventional gas is good
  - Potential for oil unknown
- Significant Deformation on Southern Margin
  - Likely Associated with Southern Basin Bounding Faults

Nenana Basin

Thickness of Sedimentary Basin
Interpreted Gravity

Recent Activity
- 2D seismic
- Nunivak #1 Drilled 2009
- Calibration of basin models with new data

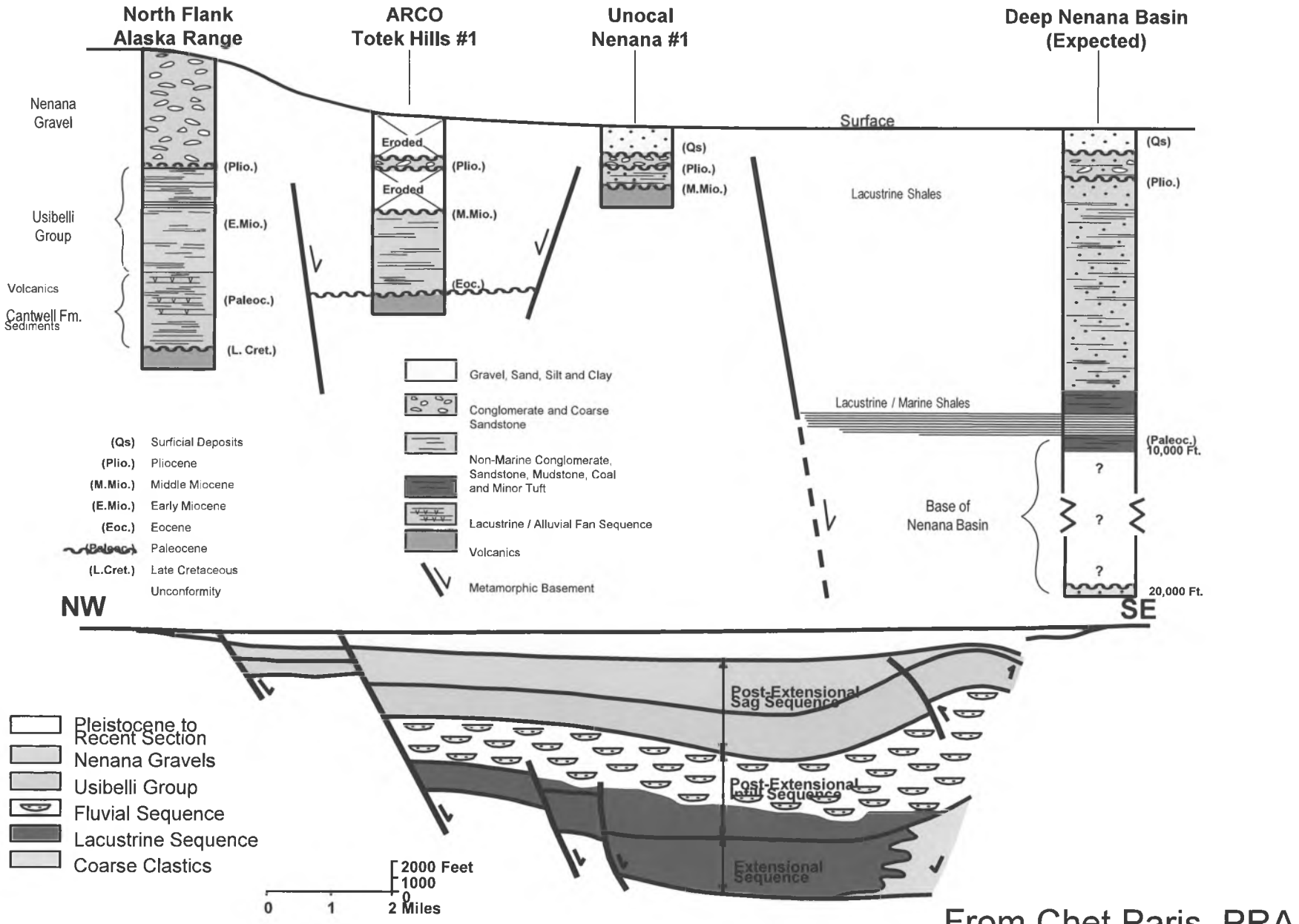
Contour Interval = 2,000 Ft.



Recent Data On Nenana Basin

- Oil & Gas Journal, January 9, 2012
- Significant Findings by Authors
  - Up to 25,000 ft of Tertiary strata
  - Thick Paleocene section encountered
  - Trace oil & gas shows noted in Paleocene section during drilling (indicates an operating petroleum system)
  - Geochemical analysis of drill samples shows elevated levels of HI and S2 values -- oil prone
  - Basin history modeling suggests potential for active petroleum system

Nenana Basin



From Chet Paris, PRA

Summary of Interior Basins Hydrocarbon Potential

- Relatively small with complex geologic histories
- Non-typical petroleum systems, if present
- Very little known about sub-surface geology
- Costly exploration targets, limited infrastructure
- Potential for biogenic gas and thermogenic hydrocarbons poorly understood
- “Wildcat” exploration targets

Nenana Basin

Interior Alaska
Natural Gas Exploration

Doyon, Limited
April 24, 2009

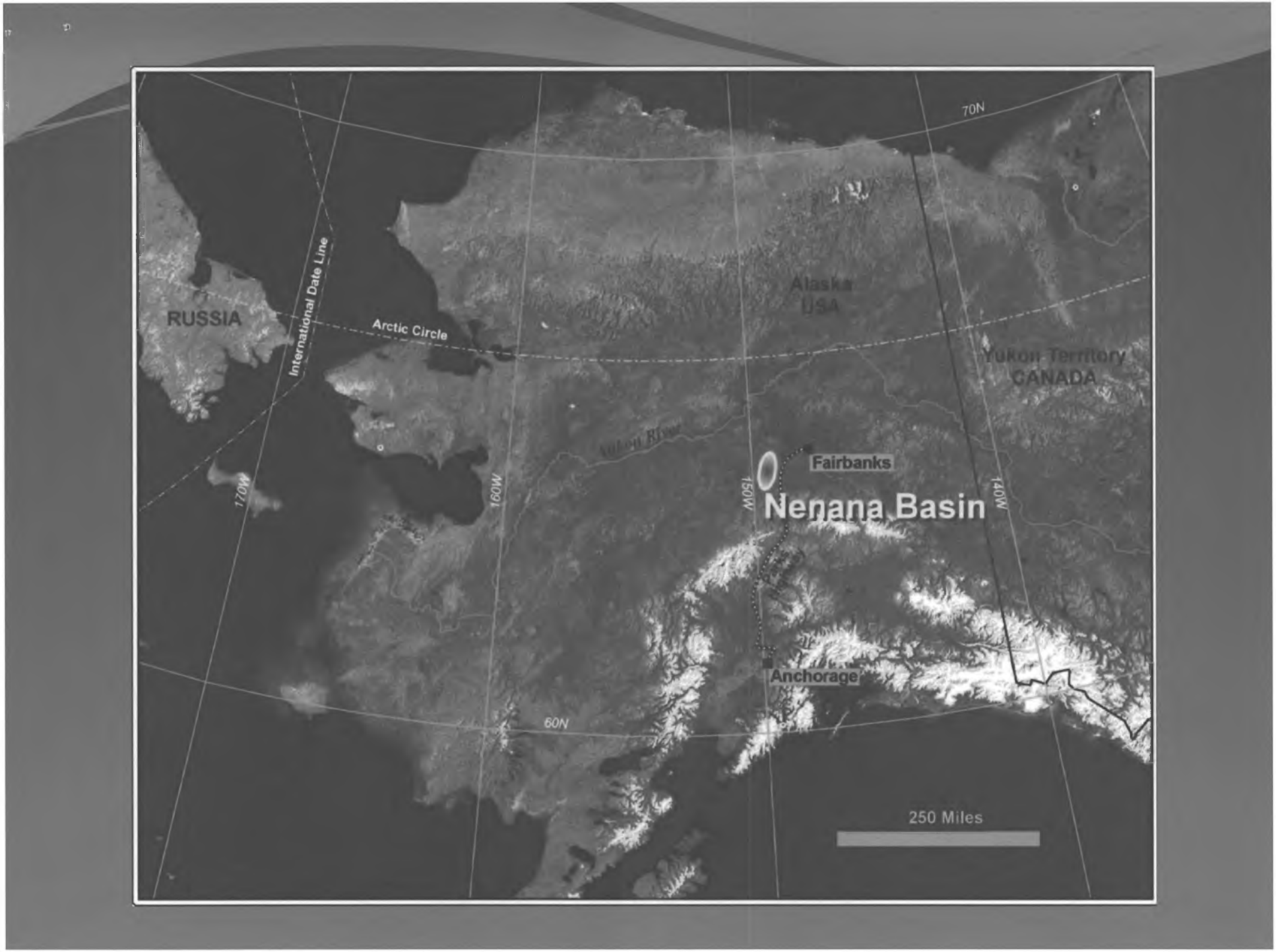
Alaska Miners Association
Fairbanks Chapter

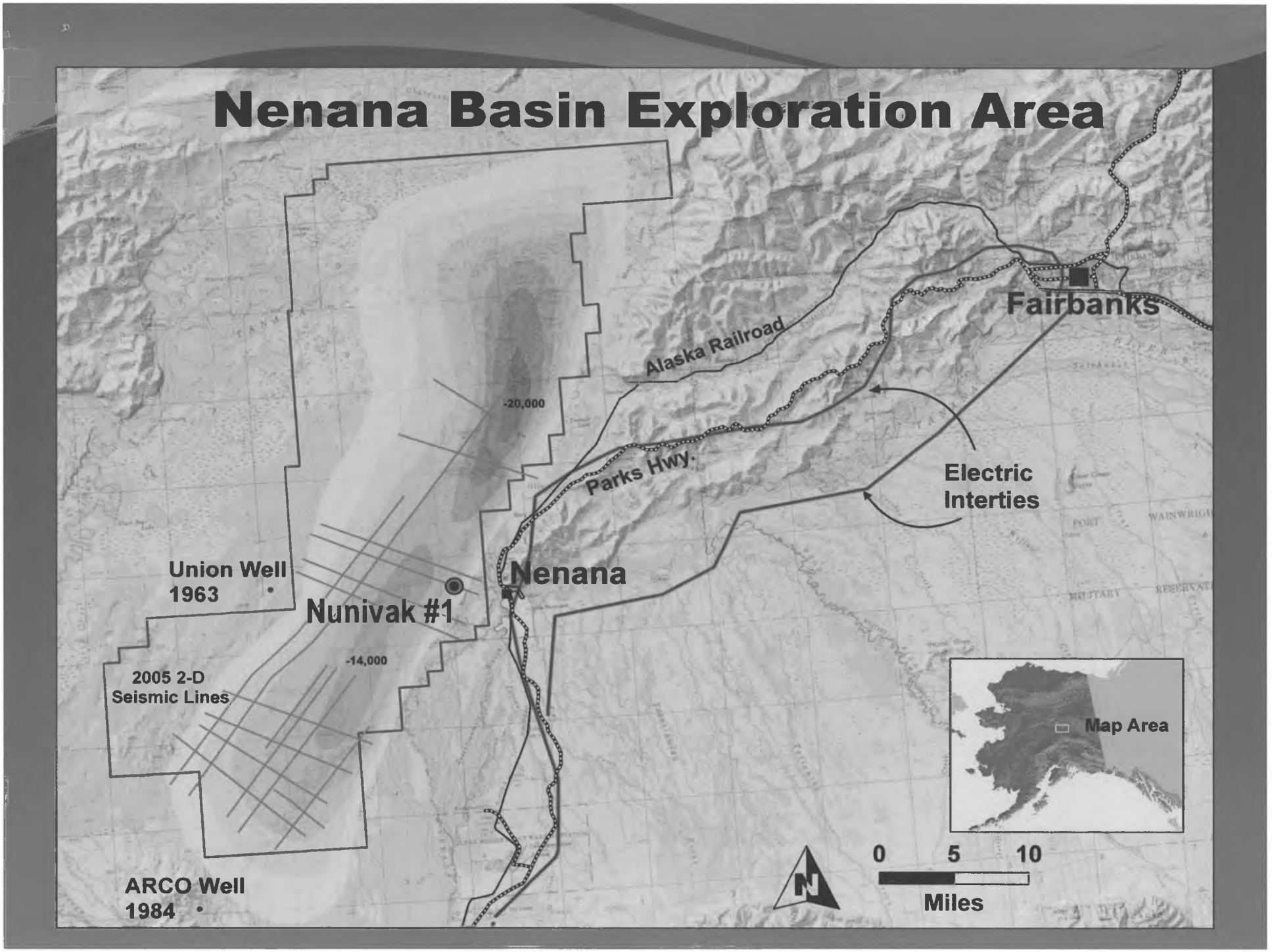
NENANA BASIN OVERVIEW

- 500,000 acre contiguous land package
  - State of Alaska, Mental Health Trust, Doyon/Toghottehele, University of Alaska
- 212 miles of 2-D seismic gathered in 2005
- 1-6 Tcf conventional natural gas potential
  - Cook Inlet has produced about 7 Tcf since early 1960s
  - Oil possible, Big Oil interest in 1980s
- 10,500' well - committed summer 2009
  - 4 trail miles from Nenana--MHT lands—much on existing ROW
- Adjacent to infrastructure
  - Parks Highway
  - Alaska Railroad
  - Interties

Nenana Investors

- Doyon, Limited
- Rampart Energy (Denver)
- Arctic Slope Regional Corporation
- Usibelli Energy


70N
RUSSIA
International Date Line
Arctic Circle
Alaska
USA
Yukon Territory
CANADA
Yukon River
Fairbanks
Nenana Basin
170W
160W
150W
140W
Anchorage
60N
250 Miles


Nenana Basin Exploration Area
Fairbanks
Alaska Railroad
-20,000
Parks Hwy.
Electric
Interties
Union Well
1963
Nenana
Nunivak #1
-14,000
2005 2-D
Seismic Lines
ARCO Well
1984
Map Area
0
5
10
Miles

ACCESS

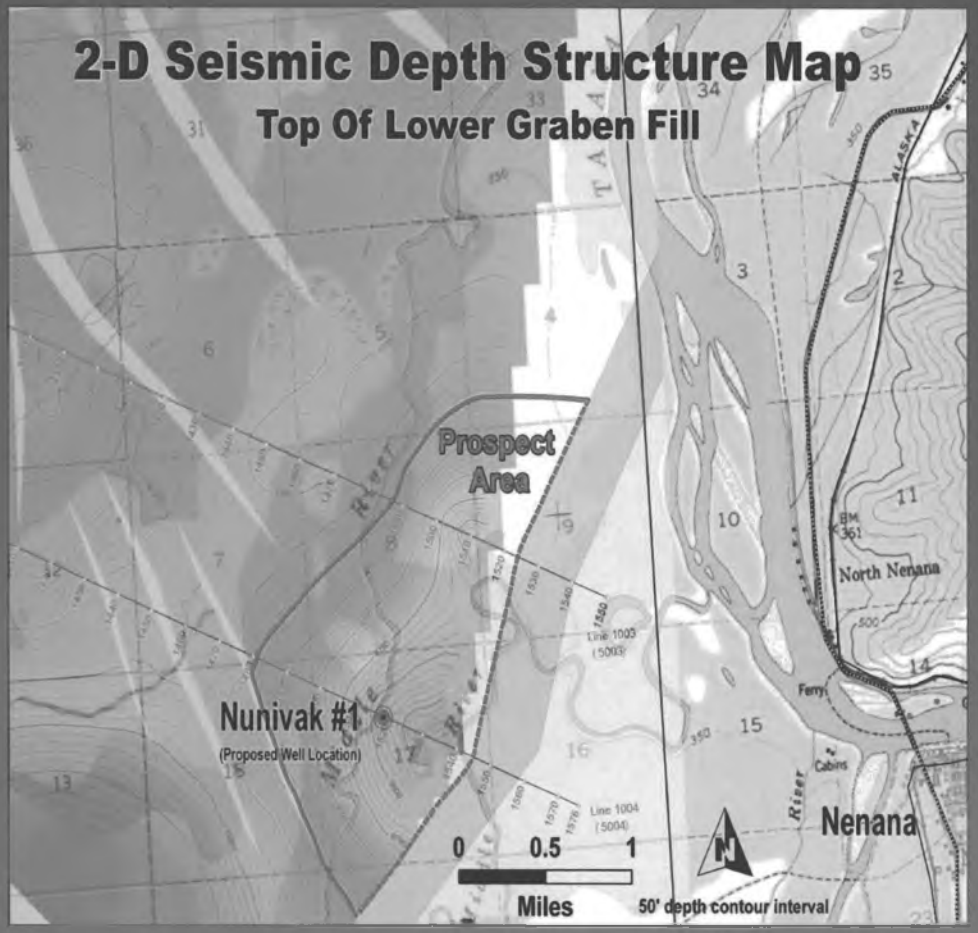
- **Adjacent to Parks Highway**
  - 50 highway miles to Fairbanks
  - 280 highway miles to Southcentral gas system
- **Adjacent to Alaska Railroad system**
- **Adjacent to major power transmission system**

Summer 2009 Drill Program

- 10, 500 ft. vertical hole--$15 million
- About 4 miles from Nenana River on old ROW/trail
- Trail will be improved/temporary bridges
- Doyon Drilling Arctic Wolf and DDI crews
- Civil work by Brice/Arctic Construction; winter construction of summer access substantially complete
- Barge/ferry support system to cross the Nenana River in summer

Summer 2009 Drill Target

- Prospect
  - up to 200 Bcf
- Median case
  - @ 60 Bcf
- Dry hole
- 2000 acres +/-



Exploration History

- 1962 & 1984: Two shallow wells drilled at basin's edge
- Early 1980s seismic shoots, pre-State lease sale
- Early 2002 lease from Doyon to Texas-based Andex Resources
- Late 2002: +/-500,000 acre State exploration license secured by Andex with Doyon assistance
- Smaller, adjacent lease acquired from Mental Health Land Trust soon thereafter
- 2004: Andex joined by Doyon, ASRC, and Usibelli Energy
- 2005: Commissioned modeling effort and shot 214 miles of additional 2D seismic

Exploration History (2)

- 2006: Prospective areas and preliminary drill sites identified
- 2007: Andex withdraws as operator of the project over production tax and drilling cost concerns
- Summer 2008: Rampart agrees to invest and act as operator
- Fall 2008: Drilling rig secured for '09 summer drilling season
- Spring 2009: Road construction begins near Nenana
- Summer 2009: Anticipated spud date of the Nunivak #1 well

Previous Drilling Results

- **Unocal Nenana #1 1963**
  - -Breached Anticline
  - -3052', TD'd in Basement
  - -2150' Nenana Gravel
  - -650' of thin Usibelli Group (Lignite Creek?)

- **Arco Totek Hills #1 1984**
  - -Breached anticline
  - -3590', TD'd in Basement
  - -117' Nenana Gravel
  - -117-3128' Usibelli Group, mainly Healy Creek
  - -No Sanctuary or Suntrana present

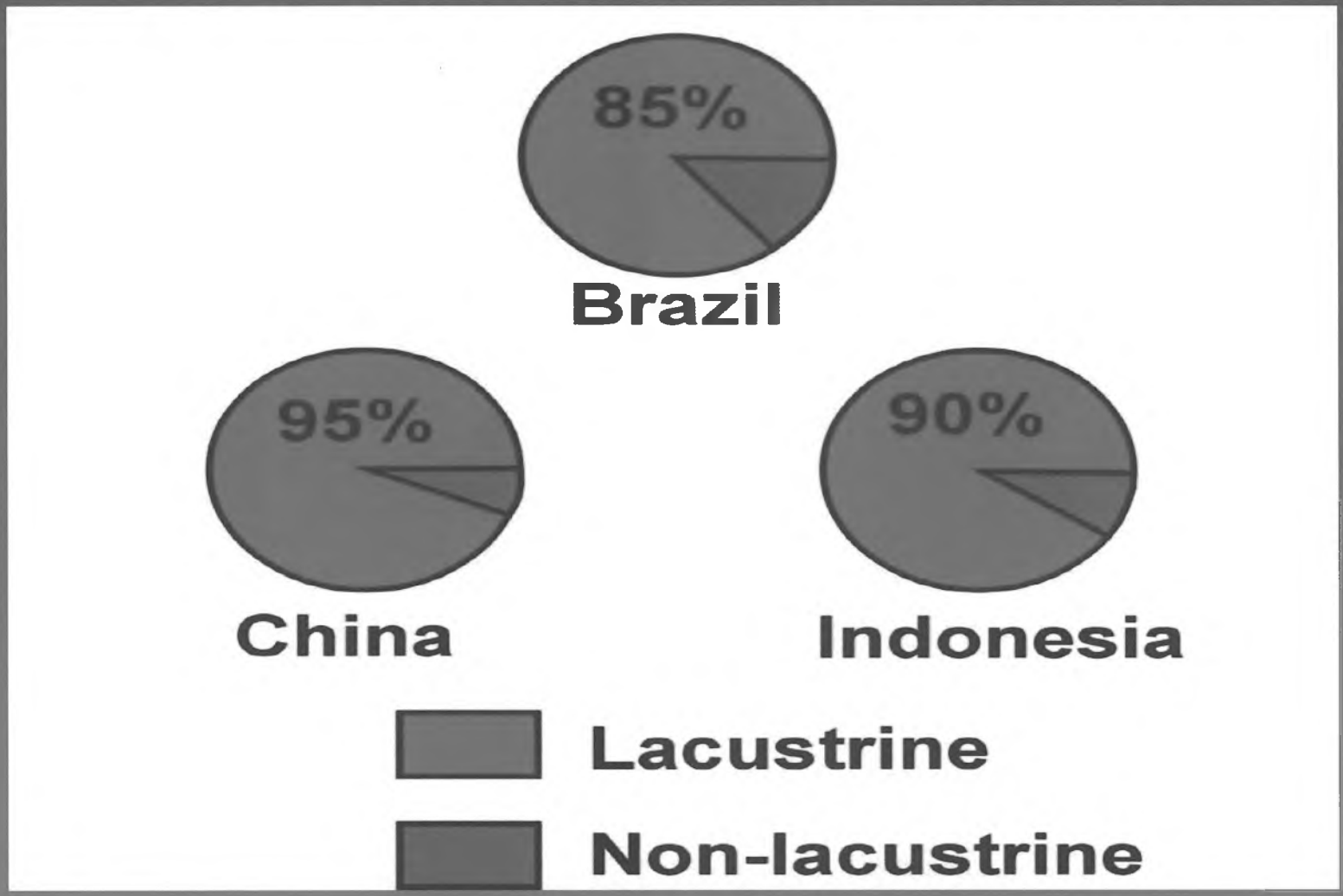
Current Basin Observations

- Poorly constrained stratigraphy
- Two previously-drilled wells, but on the edge of basin
- No large, 4-way dip structures
- Very sparse seismic grid
- Gravity data does excellent job in defining general basin geometry

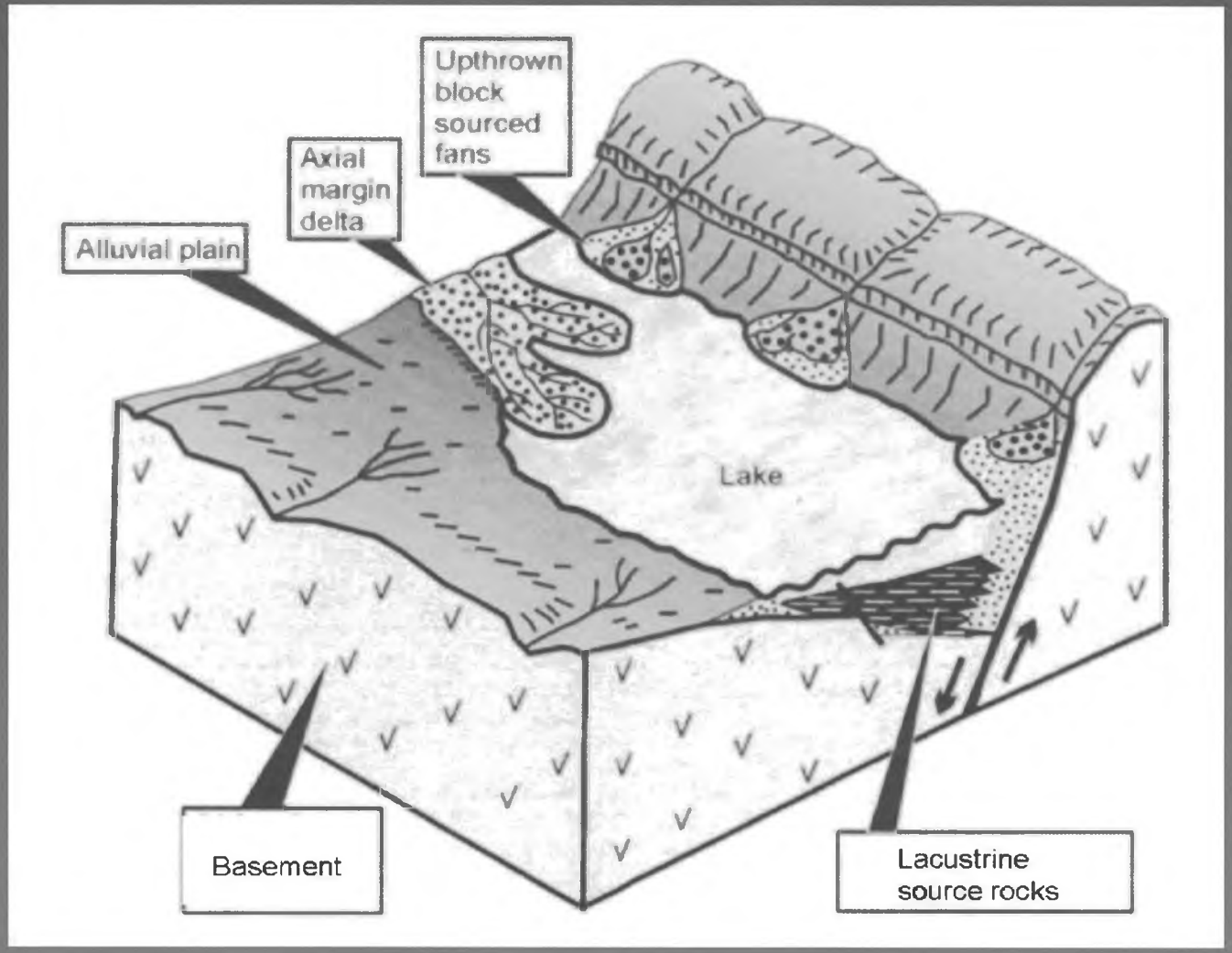
Geologic Summary

- Tertiary lacustrine extensional basin
- 14,000' and 20,000' twin depocenters
- Coals and shales as sources
- Variety of possible traps
- Drill target on seismic indications of fluid saturated rocks (gas sands)
- Looks like other gas producing Tertiary lacustrine basins

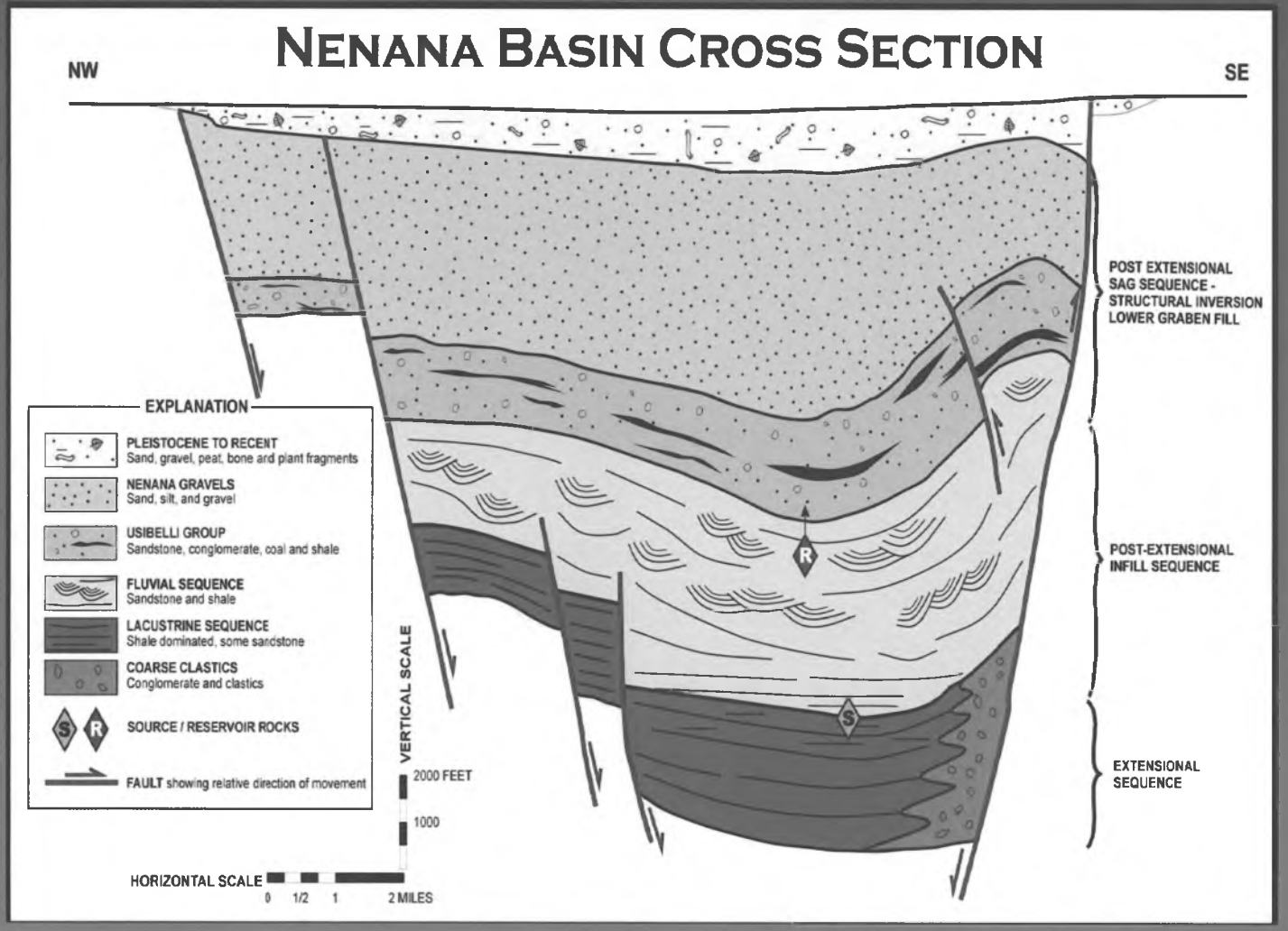
Relative Importance of Lacustrine Source Rocks in Three Areas



Lacustrine Basin Depositional Model



Nenana Basin Cross Section



Source Rocks

- **Usibelli Group Coals**
- **Lacustrine Shales**
  - -Olive-gray shales between 1,500’ and 2,000’ in the Arco Totek Hills #1
  - -Moderate to high organic carbon content
  - -Becomes progressively more anoxic with depth
  - -Immature in Totek Hills well

Reservoir Rocks

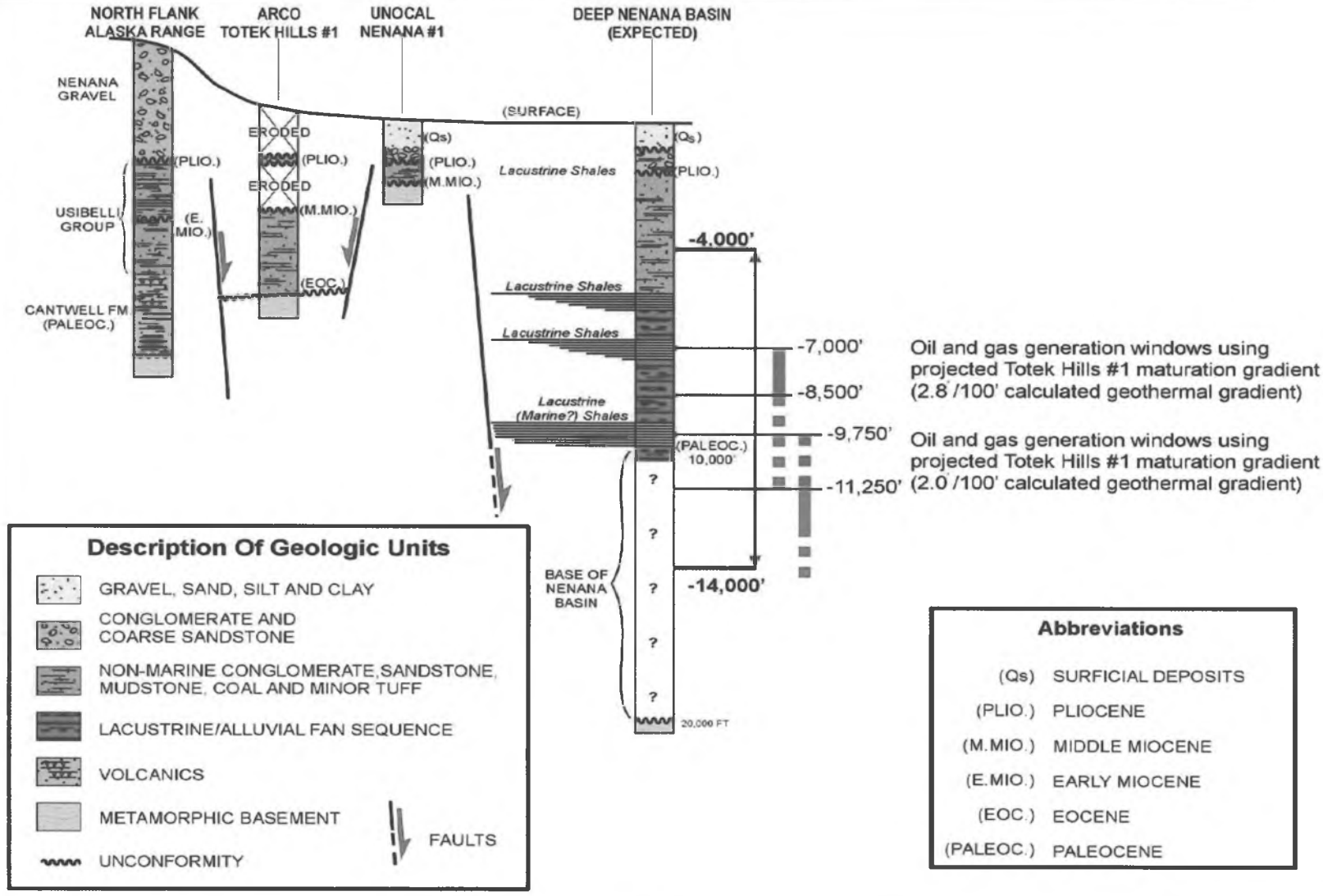
- **Fine to pebbly fluvial sandstone (mainly med. to coarse grained)**

- **In the Arco Totek Hills #1 well**
  - average porosity of 17.4% (range 7.1 –27.5%)
  - average permeability of 11.65 md (range 0.44 –43 md)

- **Porosities up to 34% in outcrop**

- **Sublitharenites to litharenites (abundant metamorphic rock fragments)**

Nenana Basin Stratigraphic Sections



Basin Modeling Results
(Platte River Associates)

- Assumes geothermal gradient 2.5°F/100 ft.
- Assumes gas expulsion from Lower Cantwell - Lower Suntrana (thermogenic) only
- Mid-late maturity at 9,300-10,500'
- Roughly 250,000 acres of mature source
- Expulsion 24 MY-present

Basin Modeling Results (2)

Gas Expelled

- P10 = 55 TCF
- P50 = 72 TCF
- P90 = 94 TCF

Risked Reserve Potential

- P10 = 10.0 TCF
- P50 = 2.6 TCF
- P90 = 0.8 TCF

No Assessment of biogenic gas, ex. Usibelli group

Goals For First Well

- Obtain representative stratigraphic information on the basin
- Test applicability of AVO as hydrocarbon indicator
- Most importantly-determine if the Nenana Basin is a petroliferous basin

Criteria For First Well Location

- Choose location that will test a thick section not seen in previous wells

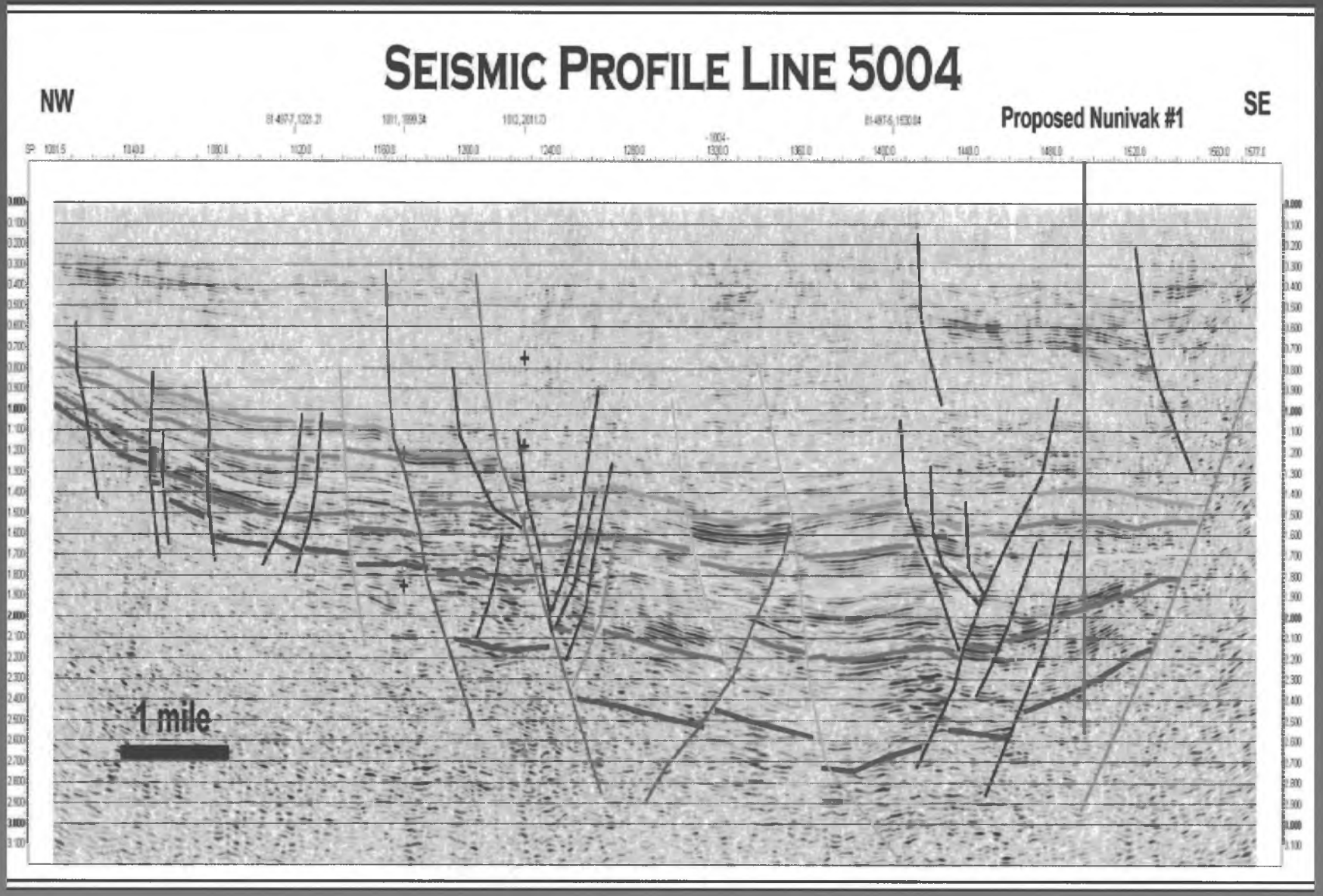
- Assume mainly vertical migration of hydrocarbons-stay immediately adjacent to deepest depocenters

- Assume that if any oil-prone, lacustrine source rocks exist, they will exist only in the deeper sub-basins

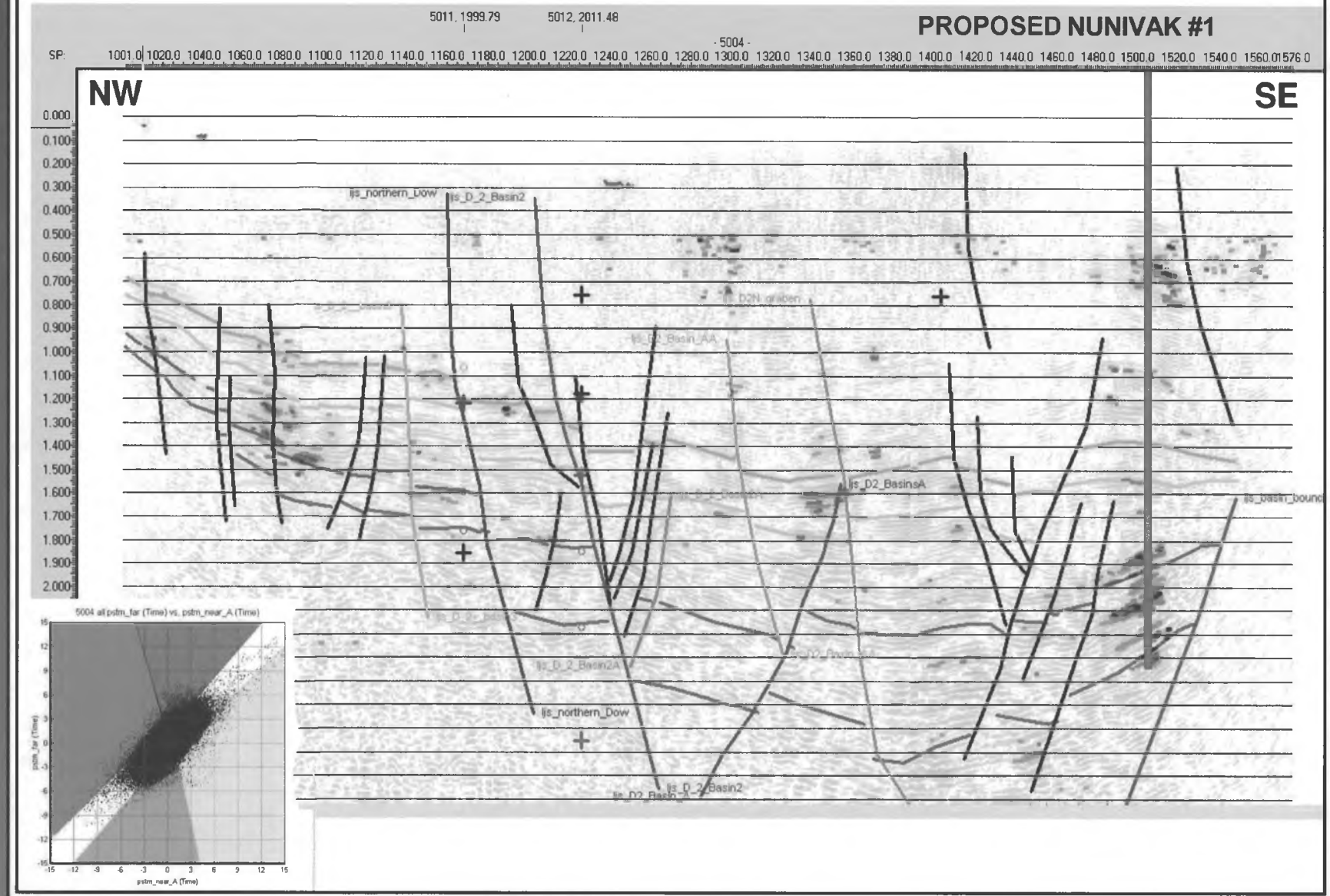
Criteria For First Well Location (2)

- Location must be directly on seismic line
- Strong preference for amplitude-supported prospect
- No preference given for logistical ease of drilling operations

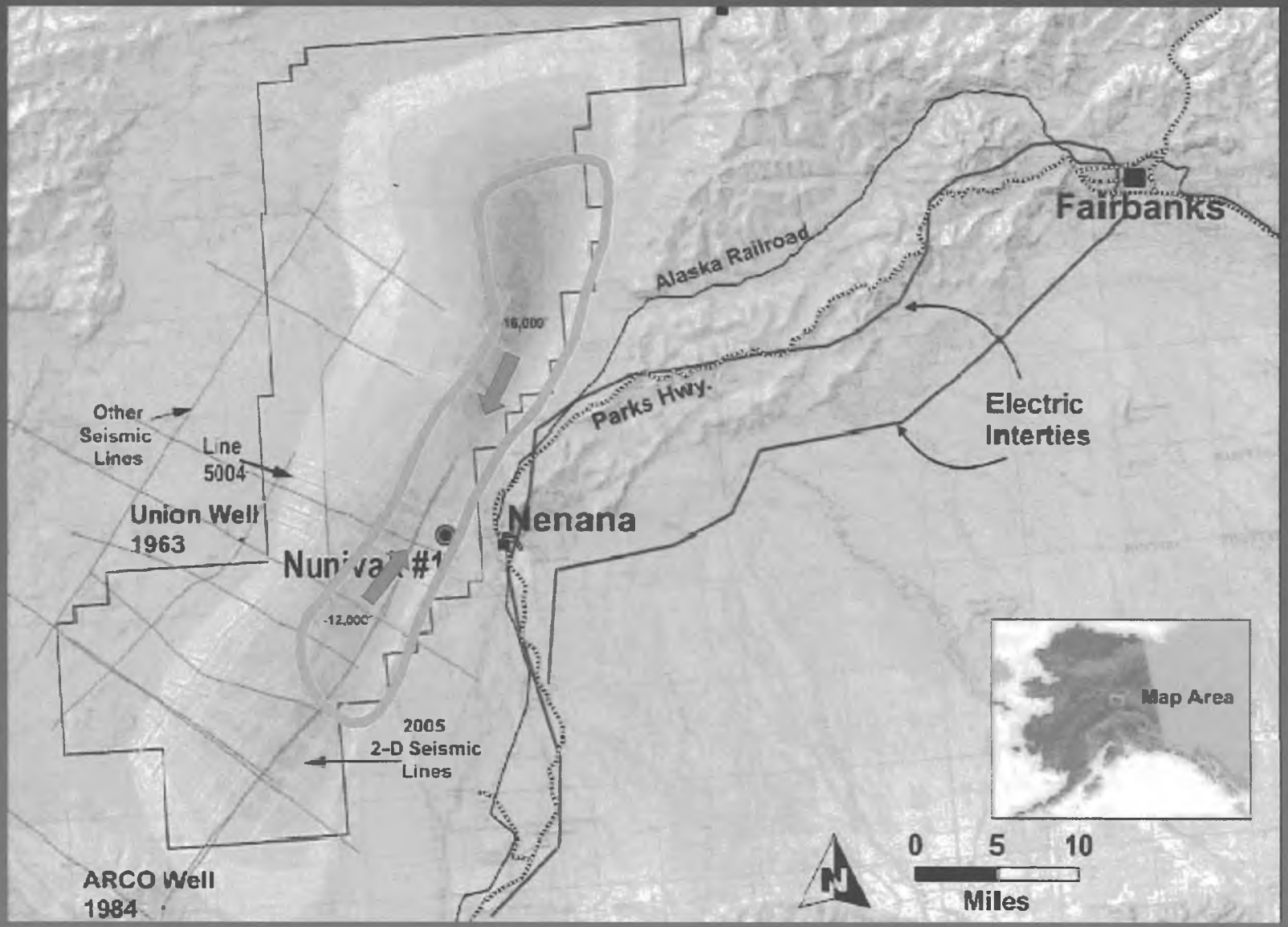
SEISMIC PROFILE LINE 5004



Seismic Line 5004 -AVO Anomalies



Migration from Twin Depocenters?



Nunivak #1

- AVO-supported fault trap
- Located in optimal position to receive charge coming from adjacent sub-basins
- Located to test stratigraphic section not encountered in previously-drilled wells
- 3 miles from rail belt, MEFS of 150 Bcf (pipeline to FBX)

Nunivak #1- Cost Estimate

•Rig Mobilization	$1.5 million
•Roads and Location	3.3 million
•Tangible Drilling Costs	0.6 million
•Intangible Drilling Costs	7.0 million
•Completion and Testing	2.5 million
	$14.9 million

Doyon Drilling's *Arctic Wolf* Rig

- To be mobilized to the Nunivak #1 location following break-up of the Nenana River

- Anticipated spud date: mid-June 2009

Nunivak #1 Access Route

Nunivak #1 – Access Road

Future (Success-Case) Activity

- Utilize wellbore sonic data to refine existing seismic interpretation
- Acquire 3D seismic over the Nunivak prospect area to assist in development
- Acquire additional 2D seismic data over the northern portion of the basin
- Drill additional wells to establish reserves, deliverability, and viable market alternatives

CORE TARGET MARKET

- **Pipeline Gas to Fairbanks/North Pole**
- Replace distillates: 10-15 Bcf/y or more
  - Residential and commercial heating
  - Power generation
  - Refineries
- Likely need 15-20 year supply of gas at 10 Bcf/y to justify a private sector pipeline (150-200 Bcf)

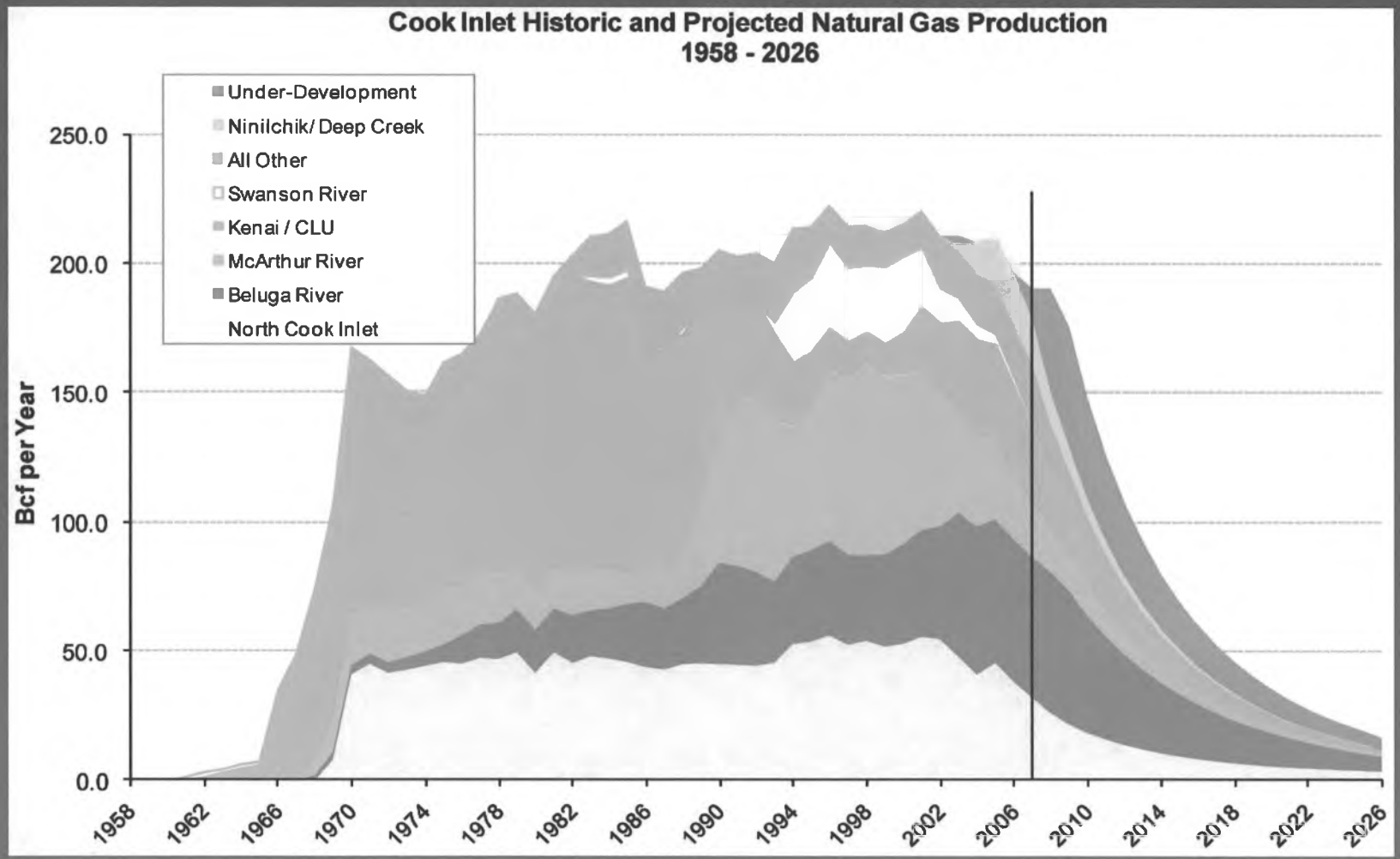
OTHER MARKETS

- **Power Generation at Nenana**
  - Fairbanks imports 40 Mw to 70 Mw each day
  - Increasingly more expensive
- Interties nearby and available space
- Power could go North and South
- Less gas reserves needed—nearest term possibility
- 4 Bcf/y or more
  - More if Intertie south of Healy upgraded

OTHER MARKETS

- **Pipeline gas to Anchorage**
- Increasing shortages which will be severe
- 30 Bcf/y to 70 Bcf/y deficit by 2015
- Alternative to Bullet Line from North Slope?
- Will need larger reserve base, but should be much less than a NS Foothills project
- Possible for Nenana

Cook Inlet Gas Production Decline



Project Threats/Challenges

- Wood Bison reintroduction in Nenana basin
  - Need to place them elsewhere in Alaska where not in conflict with development
  - Or, get Congressional action removing them from ESA jurisdiction
- ANGDA's Prudhoe Bay propane by truck proposal
  - Public money/ownership competing with private enterprise
  - Industrial users essential to support pipeline to Fairbanks from Nenana
- FNG's expanded Prudhoe Bay LNG by truck proposal
  - $250m public debt/ownership competing with private enterprise
  - Industrial users essential to support pipeline to Fairbanks from Nenana
  - Nenana option
- Permitting and rig availability

Summary

- Large gas resource possible
- Don't need a large resource for viable Fairbanks projects
- Nearby infrastructure/access allows for early and fast development
- In field power generation possible by 2012
- Pipeline gas to Fairbanks harder to predict but possible by 2013 or 2014