

TIGER EYE UNIT

APPROVAL OF THE APPLICATION TO FORM THE TIGER EYE UNIT

Findings and Decision of the Director,
Division of Oil and Gas under a Delegation of Authority
from the Commissioner,
Department of Natural Resources, State of Alaska

October 4, 2012

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I. INTRODUCTION AND DECISION SUMMARY

The State of Alaska (State), Department of Natural Resources (DNR), Division of Oil and Gas (Division), received the Application for the Formation of the Tiger Eye Unit (TEU) from NordAq Energy, Inc. (NordAq), as the proposed Tiger Eye Unit Operator, on May 21, 2012 (Application). NordAq submitted confidential and public information as part of the Application, which meets the requirements for a complete application under 11 AAC 83.306. The Division gave notice of the proposed Tiger Eye Unit under 11 AAC 83.311 on July 8, 2012. The public comment period closed on August 7, 2012, and the Division received comments from one party.

“A unit must encompass the minimum area required to include all or part of one or more oil or gas reservoirs, or all or part of one of more potential hydrocarbon accumulations.” 11 AAC 83.356(a). NordAq has submitted confidential geological, geophysical, and engineering data demonstrating that a portion of the area proposed for unit formation includes all or part of a potential hydrocarbon accumulation.

The Division finds that the approval of the Application, as modified by this decision, promotes conservation of all natural resources, promotes the prevention of economic and physical waste, and provides for the protection of all parties of interest, including the State. The Application to form the Tiger Eye Unit, in accordance with the criteria under 11 AAC 83.303, is approved. The approved unit area is depicted on the Map of the Approved Tiger Eye Unit Boundary, Attachment 5. This decision constitutes the written finding and decision required by 11 AAC 83.303 and is appealable to the DNR Commissioner.

II. APPLICATION AND LEASE SUMMARY

NordAq submitted the Application to form the Tiger Eye Unit on May 21, 2012, and simultaneously paid the \$5,000.00 unit application filing fee, in accordance with 11 AAC 83.306 and 11 AAC 05.010(a)(10)(D), respectively. The Division deemed the Application complete on July 2, 2012. The Application includes: Exhibit A (Attachment 1), a table legally describing the proposed unit area, its leases, and ownership interests; Exhibit B (Attachment 2), a map of the proposed unit boundary; Exhibit G (Attachment 3), the Initial Unit Plan with proposed exploration activities; and the Tiger Eye Unit Agreement, DNR’s State Only Model Unit form dated March 2011. The Application also includes the Tiger Eye Operating Agreement, confidential technical data, and evidence that all proper parties were invited to join the TEU Agreement. A revised TEU Exhibit G was received August 20, 2012 (Attachment 4).

The Division published a public notice in the *Anchorage Daily News* on July 8, 2012, and in the *Peninsula Clarion* on July 8, 2012 under 11 AAC 83.311. Copies of the Application and the public notice were provided to interested parties. DNR provided public notice to the Kenai Peninsula Borough, the City of Kenai, the Village of Tyonek, the Cook Inlet Region Incorporated, the Salamatof Native Association, the Kenai Native Association, the Kenaitze Indian Tribe, the Kenai, Soldotna and Tyonek Postmasters, the radio stations KDLL and KSRM in Kenai, as well as the Alaska Department of Environmental Conservation, the Alaska Department of Fish and Game, and the Alaska Oil and Gas Conservation Commission. The notice was published on the State of Alaska Public Notice website and the Division’s website on

July 2, 2012. The public notices invited interested parties and members of the public to submit comments by August 7, 2012.

One party commented on the Application. Apache Alaska Corporation (Apache) objected to the TEU, as proposed. Apache requested the Division include its oil and gas leases (ADLs 391256, 391257 and 391259) in the proposed TEU, and requested an opportunity to discuss its comments with the Division. Apache believes its leases share common reservoirs with the leases proposed for the TEU. In response, the Division met with Apache on August 22, 2012 to hear Apache's technical information supporting its comments. NordAq also responded to Apache's comments in a letter to the Division dated August 8, 2012. The Division considered the comments in its evaluation of the Application and the issuance of this decision.

NordAq proposes the following two leases for inclusion in the TEU, comprising approximately 8,480.00 acres.

ADL No.	Total Acres	Effective Date	Expiration Date	State's Royalty Rate	DNR Lease Form	Working Interest Ownership
391103	2,720.00	10/1/2007	9/30/2012	12.50%	DOG 200604	NordAq 100%
391104	5,760.00	10/1/2007	9/30/2012	12.50%	DOG 200604	NordAq 100%

III. DISCUSSION OF DECISION CRITERIA

The DNR Commissioner reviews applications related to units under AS 38.05.180(p) and 11 AAC 83.303 – 11 AAC 83.395. By memorandum dated December 21, 1998, the Commissioner approved a revision of Department Order 003 and delegated this authority to the Division Director.

A unit may be formed to conserve the natural resources of all or a part of an oil or gas pool, field, or like area when determined and certified to be necessary or advisable in the public interest. AS 38.05.180(p). The conservation of the natural resources of all or part of an oil or gas pool, field or like area means maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources. 11 AAC 83.395(1).

The Commissioner will approve a proposed unit upon a finding that it will (1) promote conservation of all natural resources, including all or part of an oil or gas pool, field, or like area; (2) promote the prevention of economic and physical waste; and (3) provide for the protection of all parties of interest including the state. 11 AAC 83.303(a).

In evaluating these three criteria, the Commissioner will consider (1) the environmental costs and benefits of unitized exploration or development; (2) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir proposed for unitization; (3) prior exploration activities in the proposed unit area; (4) the applicant's plans for exploration or development of the unit area; (5) the economic costs and benefits to the state; and (6) any other relevant factors, including measures to mitigate impacts identified above, the

Commissioner determines necessary or advisable to protect the public interest. 11 AAC 83.303(b).

The Division's review of the Application is based on the criteria set out in 11 AAC 83.303(a) and (b). A discussion of the subsection (b) criteria, as they apply to the Application, is set out directly below, followed by a discussion of the subsection (a) criteria.

A. Decision Criteria considered under 11 AAC 83.303(b)

1. Environmental Costs and Benefits

The proposed TEU is located onshore on the west side of Cook Inlet, at the mouth of the Kustatan River within the Redoubt Bay Critical Habitat Area (RBCHA). Activities in the RBCHA are jointly managed by DNR and the Department of Fish and Game (DF&G) with guidelines prescribed by the Kenai Area Plan adopted January 7, 2000, and the RBCHA Management Plan, adopted July 1994. The RBCHA was established to protect fish and wildlife habitat, especially the Tule geese. Oil and gas activities are allowed in the area under terms consistent with the goals and policies of the RBCHA Management Plan.

Oil and gas activity in the proposed unit area may affect some wildlife habitat and some hunting and fishing activities. However, approval of the formation of the TEU has no direct environmental impact. This decision is an administrative action that does not authorize any on-the-ground activity.

DNR previously considered the environmental costs and benefits of activity on these leases when approving their sale. Alaska statutes require DNR to give public notice and issue a written finding before disposal of the State's oil and gas resources, such as the leases at issue here. AS 38.05.035(e); AS 38.05.945; 11 AAC 82.415. In preparing a written decision before an oil and gas lease sale, the Commissioner may impose additional conditions or limitations beyond those imposed by law. AS 38.05.035(e). For these leases, DNR developed lease stipulations during the lease sale process to mitigate the potential environmental impacts from oil and gas activity. These stipulations apply throughout the life of the leases.

DNR will consider the environmental costs and benefits of more specific activities on these leases during the plan of operations and permit approval processes. Unit formation itself does not provide approval for activity on the land, and thus this decision does not create risk to the environment. The Unit Operator must obtain approval of Plans of Operations from the state and permits from various agencies on state leases before drilling a well or wells, or initiating development activities to produce reservoirs within the unit area. 11 AAC 83.346. Potential effects on the environment will be analyzed when permits to conduct exploration or development in the unit area are reviewed.

2. Geologic and Engineering Characteristics and Prior Exploration Activities

Introduction

The nearest oil and gas fields to the proposed TEU are the West McArthur River oil field, approximately four miles to the east-northeast, and the West Foreland gas field, approximately three miles to the east.

Data and information submitted by NordAq to the Division in support of the Application include: well log cross section, structure map of the Lower Tyonek Formation, and interpreted reprocessed strike and dip 2D seismic lines. NordAq requested all proprietary data and interpretations be held confidential under AS 38.05.035(a)(8)(C).

Regional Geologic Setting

The Tertiary Cook Inlet basin is an elongate, northeast trending, fault bounded forearc basin that extends from the Matanuska Valley southward along the Alaska Peninsula. Extensive right lateral and dip slip motion has occurred along the northern and northwestern bounding fault zones resulting in multiple structural traps for hydrocarbon accumulation within the basin. Two major non-marine depositional systems comprise the Tertiary basin fill in the Cook Inlet basin, alluvial fan systems at the base overlain by axial fluvial systems. The alluvial fan systems developed along the arc and accretionary margins of the basin and carried sediment out into the actively subsiding basin. The axial fluvial systems flowed perpendicular to the alluvial fan systems and migrated across the basin floor in relation to sediment input and topography.

The Tertiary rocks in the Cook Inlet basin comprise the Kenai Group that range in age from Paleocene to Pliocene and contain both local and regional unconformities. The Kenai Group is divided into five formations (from oldest to youngest): West Foreland, Hemlock, Tyonek, Beluga and Sterling. The West Foreland is Eocene in age and consists of tuffaceous sandstones and conglomerates with poor to fair reservoir quality. The Hemlock Formation is Oligocene in age and consists of clean, porous sandstone and conglomerate with good reservoir quality that form proven oil reservoirs in many parts of the basin. The overlying Tyonek formation consists largely of siltstone, sandstone and coals of Oligocene to Middle Miocene age. The Beluga is of Middle to Late Miocene age and is comprised of siltstone and thin, muddy sandstones with abundant thin coals. The Sterling ranges in age from Latest Miocene to Pliocene and consists largely of stacked porous sandstones with blocky log signatures.

Oil within the Cook Inlet basin is sourced from the Middle Jurassic Tuxedni Formation and the gas is sourced from Tertiary coal beds.

Prior Exploration Activities

Three exploration wells were drilled within the vicinity of the proposed TEU: Pan Am Bachatna Creek State #1 (completed in 1969); Hartog North Kustatan State Unit #1 (completed in 1970); and Cities Service West Foreland State A-1 (completed in 1973). Both the Bachatna Creek State #1 and West Foreland State A-1 were plugged and abandoned and are located updip of an interpreted northeast-southwest trending sealing fault that forms the potential hydrocarbon accumulation's northwest boundary. No oil shows were found in either well. The North

Kustatan State Unit #1 is located downdip of the mapped closure and had oil shows on the mudlog in the Tyonek formation. The North Kustatan State Unit #1 was plugged and abandoned.

Geologic and Engineering Characteristics

The western margin of the Cook Inlet basin is defined by a series of northeast-southwest trending reverse faults. Evidence of growth of the Tertiary stratigraphic section downdip of these basin bounding faults is observed in the exploration wells in the vicinity of the proposed TEU. The Hartog North Kustatan State Unit #1 well which is downdip of these reverse faults has an expanded Hemlock and Tyonek section relative to the well located updip of the reverse faults, the Pan Am Bachatna Creek State #1.

The trapping mechanism within the proposed TEU is both structural and stratigraphic in nature. The structure is seismically defined as a northeast-southwest trending fault with three-way closure. Interpreted crossfaults subdivide the prospect. The stratigraphic component to the trap is the thinning or pinching out of the Tyonek sands up toward the sealing fault. Evidence of oil shows in the Tyonek Formation is found in the North Kustatan State Unit #1.

The principal objectives of the proposed TEU are sands found within the middle and lower Tyonek Formation. The secondary objectives are in the deeper Hemlock and West Foreland Formations.

Conclusion

NordAq submitted sufficient technical data to support the approved unit area. Because there is a seismically identified entrapping mechanism, there is a potential hydrocarbon accumulation. 11 AAC 83.356(a); 11 AAC 83.395(5). The approved unit area is depicted on the Map of the Approved Tiger Eye Unit Boundary, Attachment 5.

3. Plans for Exploration and Development

NordAq submitted an initial Unit Plan of Exploration (POE), as part of the Application, and met with the Division for technical presentations on May 3, 2012 and August 8, 2012. And, NordAq submitted a revised POE, Attachment 4, on August 20, 2012.

In the revised POE, NordAq proposes to drill two exploration wells in 2012 and 2013, and acquire 3D seismic in 2013. It planned to spud its first well, the Tiger Eye Central #1 well, before the end of September 2012, but had delays due to severe weather in the Cook Inlet area, and the expected spud date is now October 9, 2012. NordAq has constructed its pad and access road across adjacent private Native land. Due to restrictions within the RBCHA, the company located the Tiger Eye Central #1 well pad outside the proposed unit boundary on private surface and subsurface land. During exploration, NordAq plans to use existing infrastructure on the west side of Cook Inlet whenever possible.

The Division approves the proposed POE as follows: NordAq is required to drill, evaluate and test the Tiger Eye Central #1 well and complete, suspend or abandon the well December 31, 2012. The initial POE is effective September 30, 2012 through September 30, 2013. A Second POE is due on August 1, 2013.

4. The Economic Costs and Benefits to the State

Unitized development conducted under the TEU Agreement provides for development of the unitized leases as a single lease, rather than development conducted on a lease-by-lease basis. Unitized development maximizes oil and gas recovery, promotes conservation, prevents waste, and protects all of the parties of interest.

Formation of the unit will provide economic benefit to the state through hydrocarbon assessment and production. The assessment of the hydrocarbon potential on these state lands may create jobs and in-state economic activity in the short-term. If the exploration activity is successful and leads to development, the state may receive royalty revenues and its residents benefit from increased employment opportunities over the long term. The processing facilities on the west side of Cook Inlet may benefit from more production, leading to economic efficiencies and prolonging the life of existing infrastructure.

5. Amendments to the State Only Model Unit Agreement Form

The TEU Agreement was submitted using the state only model unit agreement form, revised March 2011. No amendments to the model unit agreement form were requested.

6. Other Relevant Factors

Access in the RBCHA is restricted to ice roads and existing infrastructure for oil and gas exploration activities. Since the RBCHA was created in 1989, no exploration drilling has occurred in this area. NordAq has successfully negotiated access across adjacent private and Native lands to allow for year-round access and has installed a gravel access road and pad to explore the state leases. NordAq intended to commence drilling operations before its leases expire and has plans to continue drilling operations based on the results of its initial well.

In its letter to the Division, Apache indicates it believes it is a ‘proper party’ to the proposed TEU and its leases should be included in the proposed unit. Apache states it *“believes there are common reservoirs that traverse the boundaries of the Apache Leases and the Proposed Unit.”* NordAq responded in a letter dated August 8, 2012, that *“its proposed Tiger Eye Unit application encompasses the entire area that overlies a potential hydrocarbon accumulation.”* Apache also alleged that it has been unable to hold meaningful meetings with NordAq to discuss including the Apache leases in the proposed TEU. The Division considered and evaluated Apache’s comments and all information provided.

As part of the Application, NordAq was required to provide evidence that it made a reasonable effort to “obtain joinder of any proper party who has refused to join the unit agreement.” 11 AAC 83.306(3). Here, Apache has not refused to join the unit; in fact, it desires to join the unit because it believes that it has an interest in the potential hydrocarbon accumulation to be

included in the unit. 11 AAC 83.328(a) defines proper party to be “record owners of any right, title or interest in the oil or gas reservoirs or potential hydrocarbon accumulations to be included in a unit.” The information provided by Apache does not conclusively prove that the potential hydrocarbon accumulation identified in the Application extends onto the Apache leases; in other words, there is no evidence that Apache has an interest in the potential hydrocarbon accumulation to be included in the unit.

B. Decision Criteria considered under 11 AAC 83.303(a)

1. Promote the Conservation of All Natural Resources

The unitization of oil and gas leases and the formation of unit areas to develop hydrocarbon-bearing accumulations and reservoirs are well-accepted means of hydrocarbon conservation. Unitization, with development occurring under the terms of a unit agreement, can promote efficient evaluation and development of the State’s resources, and minimize impacts to the area’s cultural, biological, and environmental resources. NordAq has demonstrated that a portion of the TEU area overlies a potential hydrocarbon accumulation and is appropriate to be unitized.

Forming the TEU and implementing the POE promotes conservation of all natural resources. Environmental impacts may be reduced by developing reservoirs from existing shared facilities. Without the unit agreement, the lessee would be compelled to follow through with its original plan to drill wells into each individual lease in order to extend the leases beyond their primary terms. Review and approval of exploration and development activities under a unit agreement will also ensure that rational surface use decisions are made.

2. The Prevention of Economic and Physical Waste

Unitization, as opposed to activity on a lease-by-lease basis, may prevent economic and physical waste. Economic waste can result if wells are drilled in excess of the number necessary for the efficient recovery of the oil and gas in place. Physical waste, among other things, includes the inefficient, excessive, or improper use of, or unnecessary dissipation of, reservoir energy. Unitization may also prevent economic and physical waste by eliminating redundant expenditures for a given level of production, or by avoiding loss of ultimate recovery with the adoption of a unified reservoir management plan. Forming the TEU prevents economic and physical waste by allowing the lessee to optimize surface locations, and to develop hydrocarbons in an efficient manner without regard to lease boundaries.

3. The Protection of All Parties of Interest, Including the State

The people of Alaska have an interest in both the conservation of natural resources for human use and development of the state’s oil and gas resources to maximize the economic and physical recovery of the resources. AS 38.05.180(a)(1); AS 44.37.020(a). It is further in the State’s best interest to encourage assessment of oil and gas resources, recognize the costs of exploring in varied geographic regions, and minimize the adverse impact of exploration, development, production, and transportation activity. AS 38.05.180(a)(2).

The Division considered and evaluated Apache’s concerns. The evidence provided did not demonstrate that the potential hydrocarbon accumulation traversed the lease boundaries between

Apache's leases and the area approved for inclusion in the TEU. In the event a common reservoir is discovered by drilling and put on production, the expansion provisions of the TEU Agreement will protect all parties of interest by allowing production from a producing reservoir to be allocated back to each tract contributing to production in paying quantities.

The TEU Agreement, in combination with the initial POE, promotes the State's economic interests because exploration and development will likely occur earlier than without unitization. Any commercial discovery will stimulate the State's economy with production-based revenue, oil and gas related jobs, and service industry activity. In that respect, unitization can further the State's and people's economic interests.

The TEU Agreement protects all parties, including the State. It provides for accurate reporting and record keeping, DNR approval of plans of exploration, development and operation, royalty settlement, in-kind taking, and emergency storage of oil and gas, all of which will further the state's interests. The TEU Agreement, along with provisions in the lease form, also provides that the state's royalty share will be free and clear of all lease expenses, unit expenses and participating area expenses, which directly benefits the State and its people.

IV. FINDINGS AND DECISION

A. The Conservation of All Natural Resources

1. The TEU Agreement will provide for exploration and development of the leases under the unit agreement, will maximize the efficient recovery of oil and gas, and will minimize the adverse impacts on the surface and other resources, including hydrocarbons, gravel, sand, water, wetlands, and valuable habitat.
2. The unitized development and operation of the leases under the TEU Agreement will reduce the amount of land and wildlife habitat that would otherwise be disrupted by individual lease development. This reduction in environmental impacts is in the public interest.
3. All unit development must proceed according to an approved Plan of Operations. Before undertaking any specific operations, the Unit Operator must submit unit plans of operations to the Division and other appropriate local, state and federal agencies for review and approval. The Unit Operator may not commence any drilling or development operations until all agencies have granted the required permits. DNR may condition its approval of a unit Plan of Operations and other permits on performance of mitigation measures in addition to those in the leases and the TEU Agreement, if necessary or appropriate. Compliance with mitigation measures will minimize, reduce or completely avoid adverse environmental impacts.
4. I find that formation of the TEU promotes the conservation of all natural resources, including hydrocarbons, gravel, sand, water, wetlands, and habitat.

B. The Prevention of Economic and Physical Waste

1. NordAq submitted confidential geological, geophysical and engineering data in support of the Application. Division technical staff determined that the TEU area encompasses all or part of one or more potential hydrocarbon accumulations. The available geological, geophysical and engineering data support unitizing only those lands depicted on the Map of the Approved Tiger Eye Unit Boundary, Attachment 5.
2. The Initial Unit Plan of Exploration and adherence to the work commitment timelines specified in this decision provides for the reasonable exploration of the potential hydrocarbon accumulation in the unit area. In the event of a commercial development of hydrocarbons, the TEU Agreement and approved plans of development thereunder will promote the prevention of economic and physical waste.
3. As conditioned by this decision, I find that formation of the TEU will prevent economic and physical waste.

C. The Protection of All Parties of Interest, Including the State

1. The TEU Agreement, conditioned upon the performance of the Initial Unit Plan of Exploration and adherence to the work commitment timeline specified in this decision, adequately and equitably protect the public interests.
2. NordAq provided evidence of reasonable effort to obtain joinder of any proper party to the Agreement.
3. NordAq Energy, Inc. holds sufficient interest in the unit area to give reasonably effective control of operations, and is hereby designated operator of the TEU.
4. The TEU Agreement meets the requirements of 11 AAC 83.303.
5. The Division complied with the public notice requirements of 11 AAC 83.311.
6. Formation of the TEU will not diminish access to public and navigable water beyond those limitations, if any, imposed by law or already contained in the oil and gas leases covered by this decision.
7. The TEU Agreement provides for expansion and contractions of the unit area in the future, as warranted by data obtained by exploration or otherwise. Therefore, the TEU Agreement protects the public interest, the rights of the parties, and the correlative rights of adjacent land and mineral owners, including Apache.
8. The Initial Unit Plan of Exploration for the TEU is approved until September 30, 2013 as follows:
 - a. NordAq shall drill, evaluate and test the Tiger Eye Central #1 well, and will complete, suspend or abandon the well by December 31, 2012.
 - b. NordAq shall submit a second POE to the Division on or before August 1, 2013.

9. ADL 391103 is severed as to lands committed to the TEU and those lands not committed to the TEU. 11 AAC 83.373(a). Upon approval of this decision, that portion of ADL 391103 not committed to the TEU is severed and may only be maintained in accordance with the terms and conditions of the original lease. 11 AAC 83.373(a). That portion outside the unit has expired and hereby terminates effective September 30, 2012.
10. ADL 391104 is severed as to lands committed to the TEU and those lands not committed to the TEU. 11 AAC 83.373(a). Upon approval of this decision, that portion of ADL 391104 not committed to the TEU is severed and may be extended at the discretion of the commissioner. 11 AAC 83.373(b). That portion of ADL 391104 not committed to the TEU is hereby extended and will expire September 30, 2014.
11. Formation of the TEU Agreement for the area described below, as conditioned by this decision, protects all parties in interests, including the State, with its best interest in assessing oil and gas resources while minimizing adverse impacts, and in its role protecting the people of Alaska, who have an interest in the development of the state's oil and gas resources to maximize the economic and physical recovery of the resources. AS 38.05.180(a).

Tiger Eye Unit

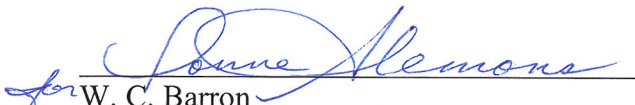
Tract #	ADL No.	Unitized Legal Description	Section Acres	Total Acres	Effective Date	Expiration Date
1	391103	T. 8 N., R. 15 W., Seward Meridian, Alaska		2,560.00	10/1/2007	9/30/2012
		Section 1: S1/2	320.00			
		Section 11: SE1/4	160.00			
		Section 12: All	640.00			
		Section 13: All	640.00			
		Section 14: All	640.00			
		Section 15: SE1/4	160.00			
2	391104	T. 8 N., R. 15 W., Seward Meridian, Alaska		5,120.00	10/1/2007	9/30/2012
		Section 22: All	640.00			
		Section 23: All	640.00			
		Section 24: All	640.00			
		Section 25: All	640.00			
		Section 26: All	640.00			
		Section 27: All	640.00			
		Section 34: All, including the beds of Johnson Slough and Seal Slough	640.00			
		Section 35: All tidelands and submerged lands	3.96			
		Section 22: All uplands, including the beds of the Kustatan River	636.04			

Total Unit Acreage: 7,680.00

12. Within 30 days of the issuance of this decision, NordAq shall submit revised Exhibits A and B for the TEU Agreement to comport with this decision.

For the reason discussed in this Findings and Decision, I hereby approve the Tiger Eye Unit Agreement, subject to the conditions set out in this Findings and Decision, effective September 30, 2012.

An eligible person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to Daniel S. Sullivan, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.


for W. C. Barron
Director, Division of Oil and Gas

10/4/2012
Date

V. ATTACHMENTS

1. Exhibit A, Proposed Tiger Eye Unit Tracts/Leases, May 21, 2012
2. Exhibit B, Map of the Proposed Tiger Eye Unit Boundary, May 21, 2012
3. Exhibit G, Initial Tiger Eye Unit Plan of Exploration (Initial POE), May 21, 2012
4. Exhibit G, Revised Initial Tiger Eye Unit Plan of Exploration, August 20, 2012
5. Map of the Approved Tiger Eye Unit Boundary

Attachment 1

Exhibit A, Proposed Tiger Eye Unit Tracts/Leases, May 21, 2012



MAY 21 2012

DIVISION OF
OIL AND GAS

EXHIBIT "A"
Attached to and made part of the Tiger Eye Unit Agreement
Description of Unit Tracts

Unit Tract No.	Lease No.	Legal Description	Tract Acreage	Royalty & ORRI Owners	Percentage	Working Interest Owners	Percentage
1	ADL 391103	T8N, R15W, Seward Meridian Section 1, NE1/4, SE1/4, SW1/4, Unsurveyed All Section 11, SE1/4, Unsurveyed All Section 12, Unsurveyed All Section 13, Unsurveyed All Section 14, Unsurveyed All Section 15, SE1/4, Unsurveyed All	2720.00	State of Alaska N Slepovich V P Gavora Alaska LLC D R Gilbertson J Kidd H North R Warthen Cranberry Vent Socarta Chawist L Jacober I J Fair Trust I J Fair 2005 Trust T Yates W DeBroe Ltd Fenedora	12.5% 1.25% 1.25% 1.25% 1.25% 1.5% 0.5% 0.5% 1.0% 0.5% 0.5% 0.1% 0.05% 0.05% 0.1% 0.9% 0.378% 23.578%	NordAq Energy Inc.	100%
2	ADL 391104	T8N, R15W, Seward Meridian Section 22, Unsurveyed All Section 23, Unsurveyed All Section 24, Unsurveyed All Section 25, Unsurveyed All Section 26, Unsurveyed All Section 27, Unsurveyed All Section 34, Unsurveyed All including the beds of Johnson Slough and Seal Slough Section 35, Unsurveyed All tidelands and submerged lands (3.96 acres) Section 35, Unsurveyed All uplands including the beds of Kustatan River and Seal Slough (636.04 acres) Section 36, Unsurveyed All tidelands and submerged lands (102.41 acres) Section 36, Unsurveyed All uplands including the beds of the Kustatan River (537.59 acres)	5760.00	State of Alaska N Slepovich V P Gavora Alaska LLC D R Gilbertson J Kidd H North R Warthen Cranberry Vent Socarta Chawist L Jacober I J Fair Trust I J Fair 2005 Trust T Yates W DeBroe Ltd Fenedora	12.5% 1.25% 1.25% 1.25% 1.25% 1.5% 0.5% 0.5% 1.0% 0.5% 0.5% 0.1% 0.05% 0.05% 0.1% 0.9% 0.378% 23.578%	NordAq Energy Inc.	100%
			TOTAL UNIT ACREAGE	8480.00			

Attachment 2

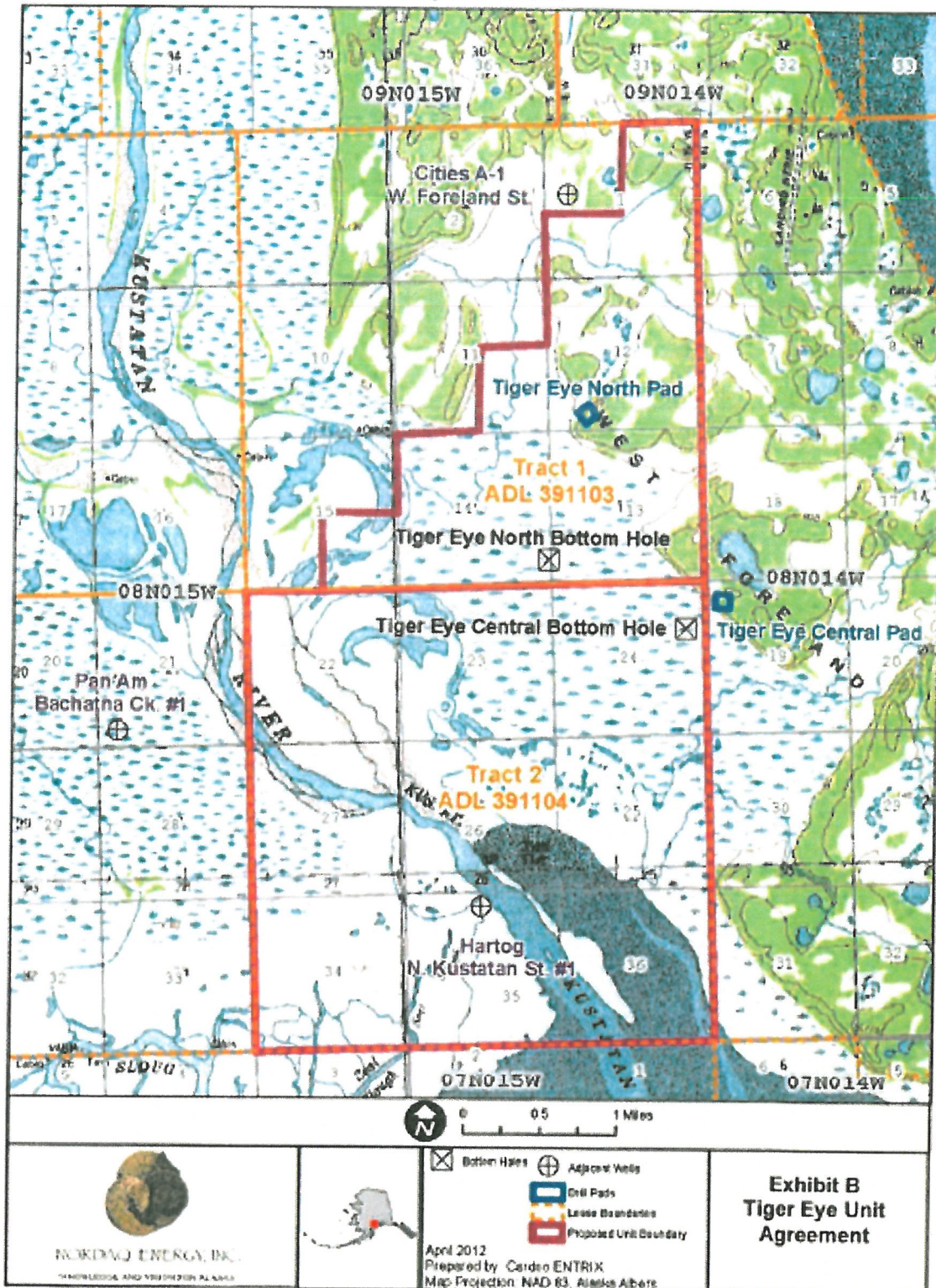
Exhibit B, Map of Proposed Tiger Eye Unit Boundary, May 21, 2012

RECEIVED

MAY 21 2012

**DIVISION OF
OIL AND GAS**

EXHIBIT "B"
Attached to and made part of the Tiger Eye Unit Agreement
Map of Unit Area



Attachment 3

Exhibit G, Proposed Initial Unit Plan of Exploration, May 21, 2012

EXHIBIT "G"
Attached to and made part of the Tiger Eye Unit Agreement
Initial Unit Plan of Exploration

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MAY 21 2012
DIVISION OF
OIL AND GAS

INTRODUCTION

NordAq Energy, Inc. (NordAq) is an Anchorage-based independent oil company with offices in Alaska. NordAq provides this Unit Plan of Exploration to the Alaska Department of Natural Resources (ADNR) as part of its Unit Application pursuant to Article 8 of the Tiger Eye Unit Agreement, 11 AAC 83.341, and 11 AAC 83.343. NordAq plans to conduct an exploratory drilling program for oil and gas on the west side of Cook Inlet within its Tiger Eye Prospect (Figure 1).

Two wells will be drilled in a two-year period (2013 and 2014) as part of the exploration program within Alaska Oil and Gas Leases ADL 391104 and ADL 391103 (See Figures 2 and 3). NordAq is the owner (100%) of the Unit Leases ADL 391104 and 391103. NordAq will be the operator and permittee of record for the proposed Unit Exploration Program.

The Tiger Eye Unit Area shall be divided in to two (2) Tracts as described below in Table 1:

Table 1: Tiger Eye Unit Exploration Well Location Information	
Tiger Eye Central #1, Tract 2	
Lease	ADL 391104
Legal Description (Section, Township/Range)	Section 19, T8N/R14W, Seward Meridian
Section (12) Meets and Bounds	690 ft. from West Line, 550 ft. from North Line
Planned Surface Geodetic Position, Latitude/Longitude	60.7748°/-151.8134°(NAD 83)
Planned Surface Alaska State Plane Coordinates(X/Y), Zone 4	N755706 ft./W401161 ft. (NAD 83)
Planned BH Geodetic Position, Latitude/Longitude	60.7717°/-151.8229°(NAD 83)
Planned BH Alaska State Plane Coordinates(X/Y), Zone 4	N2478495 ft./W1314555 ft. (NAD 83)
Relative Surface Elevation (Above Mean Sea Level)	~ 150 ft.
Tiger Eye North #1, Tract 1	
Lease	ADL 391103
Legal Description (Section, Township/Range)	Section 12, T8N/R15W, Seward Meridian
Section (19) Meets and Bounds	700 ft. from South Line, 1550 ft. from West Line
Planned Surface Geodetic Position, Latitude/Longitude	60.7927°/-151.8396°(NAD 83)
Planned Surface Alaska State Plane Coordinates(X/Y), Zone 4	N2486243 ft./W 1311794 ft. (NAD 83)
Planned BH Geodetic Position, Latitude/Longitude	60.7786°/-151.8473°(NAD 83)
Planned BH Alaska State Plane Coordinates(X/Y), Zone 4	N2481138 ft./W1310248 ft. (NAD 83)
Relative Surface Elevation (Above Mean Sea Level)	~ 100 ft.

See Figure 4 for NordAq's proposed exploration wells, surface and bottom hole locations, and existing industry exploration wells. The nearest town to the drill pads is Nikiski, approximately 17 miles to the east across Cook Inlet. The Trading Bay Production Facility (TBPF) owned and operated by Hilcorp Energy Company (Hilcorp) is approximately 1.8 miles to the northeast.

TIGER EYE CENTRAL #1, TRACT 2

The proposed Tiger Eye Central drill pad is approximately 2.5 miles inland from Cook Inlet and 2.5 miles east of the Kustatan River. NordAq proposes to build a 2.39-mile long single lane gravel

access road from an existing lease road near the Cook Inlet shoreline to the Tiger Eye Central well location, and construct a gravel exploration pad. The road and well pad will be constructed on Salamatof Native Corporation lands. Construction is scheduled for summer 2012. NordAq will acquire 3-D winter seismic over southern half of Tiger Eye prospect, barge drilling equipment and materials to the pad, and spud Tiger Eye Central #1 by the end of the second quarter 2013 (May 2013 through June 2013).

TIGER EYE NORTH #1, TRACT 1

NordAq proposes to build a 2.5-mile long single lane gravel access road from the existing lease road near the Cook Inlet shoreline to the Tiger Eye North well location, and construct a gravel exploration pad. A portion of the road near the proposed well pad will be constructed on state land to access the drill pad. This short section of the road is approximately 0.75 miles; the remaining portion of the road is on Salamatof Native Corporation lands. Construction is scheduled for spring 2013. NordAq will barge drilling equipment and materials to the pad, and spud Tiger Eye North #1 by the end of the second quarter 2014 (May 2014 through June 2014).

DRILLING RIG

NordAq plans on using an arctic class mobile rotary drill rig. The drilling rig is mobilized to a site either as a self-propelled unit or in truckable modules and assembled. Specific modules are designed to contain power generation units, drilling fluid handling equipment, tanks, pumps, and other systems necessary to drill the wells. The heaviest load will be modules that do not exceed 200,000 pounds (175 tons). The drilling rig has a maximum depth capability of about 13,000 feet.

OIL FIELD SUPPORT SERVICES

NordAq will use existing infrastructure and resources found on the west side of Cook Inlet whenever possible during the project. These resources include barge landings, staging areas, gravel lease roads, gravel pads, airstrips, regulated landfills, and water supplies.

Personnel, equipment, materials and supplies will be mobilized to the exploration drill pads during drilling operations. The majority of the well support services contractors have offices, shops and additional equipment located in Kenai and Nikiski that will support their remote field operations for this project.

ROAD CONSTRUCTION

NordAq will conduct road construction for the Tiger Eye Central access road and pad during the 2012 summer season, and for the Tiger Eye North access road and pad during the 2013 summer season. Road construction will begin shortly after clearing and grubbing. Traffic during road and pad construction will average approximately 200 gravel truck trips per day, in addition to 50 light truck and passenger vehicle trips per day.

The gravel road design also calls for road construction capable of transporting modules that are up to 70 feet long and weigh 200,000 lbs. NordAq will construct the single lane, 2-foot thick gravel access road with an 18-foot wide road surface and 1.5:1 shoulders, resulting in a basal footprint that will be a maximum of 24 feet wide in both upland and wetland areas. NordAq will place gravel in 1-foot lifts on geotextile, and then grade and compact it. If gravel is placed frozen, then NordAq will grade and compact a second time after spring thaw.

NordAq will construct turnouts and passing lane pullouts in upland areas. Turnouts will be constructed at about 300-foot intervals to reduce the distance that dump trucks need to backup to dump during construction. These turnouts will always be co-located with the passing lane pullouts.

The passing lane pullouts will be constructed at about one-quarter mile intervals. The pullouts will allow a vehicle to pull over and out of the way to allow another to pass on the single lane access road during operations. Passing lane pullouts will be 100-feet long by 28-feet wide with 50-foot transitions.

DRILL PAD CONSTRUCTION

NordAq will build the Tiger Eye drill pads using similar gravel construction methods. The drill pads will have a continuous gravel berm constructed around its perimeter to control runoff, and will be graded to allow for drainage and collection of surface runoff in the center in a lined sump. Spill containment on the pad will include placing oil-resistant Heculite® or similar 30-mil, bermed liner under storage tanks; temporary drilling waste storage cells and the footprint of the drill rig modules. A preliminary pad layout diagram is included in Figure 5.

TIGER EYE PERMIT REQUIREMENTS

NordAq is in contact with local, state, federal agencies and Native organizations to obtain all necessary permits authorizations and non-objections for its exploration drilling. Permits will be posted in appropriate and conspicuous places on the drilling rig as stipulated.

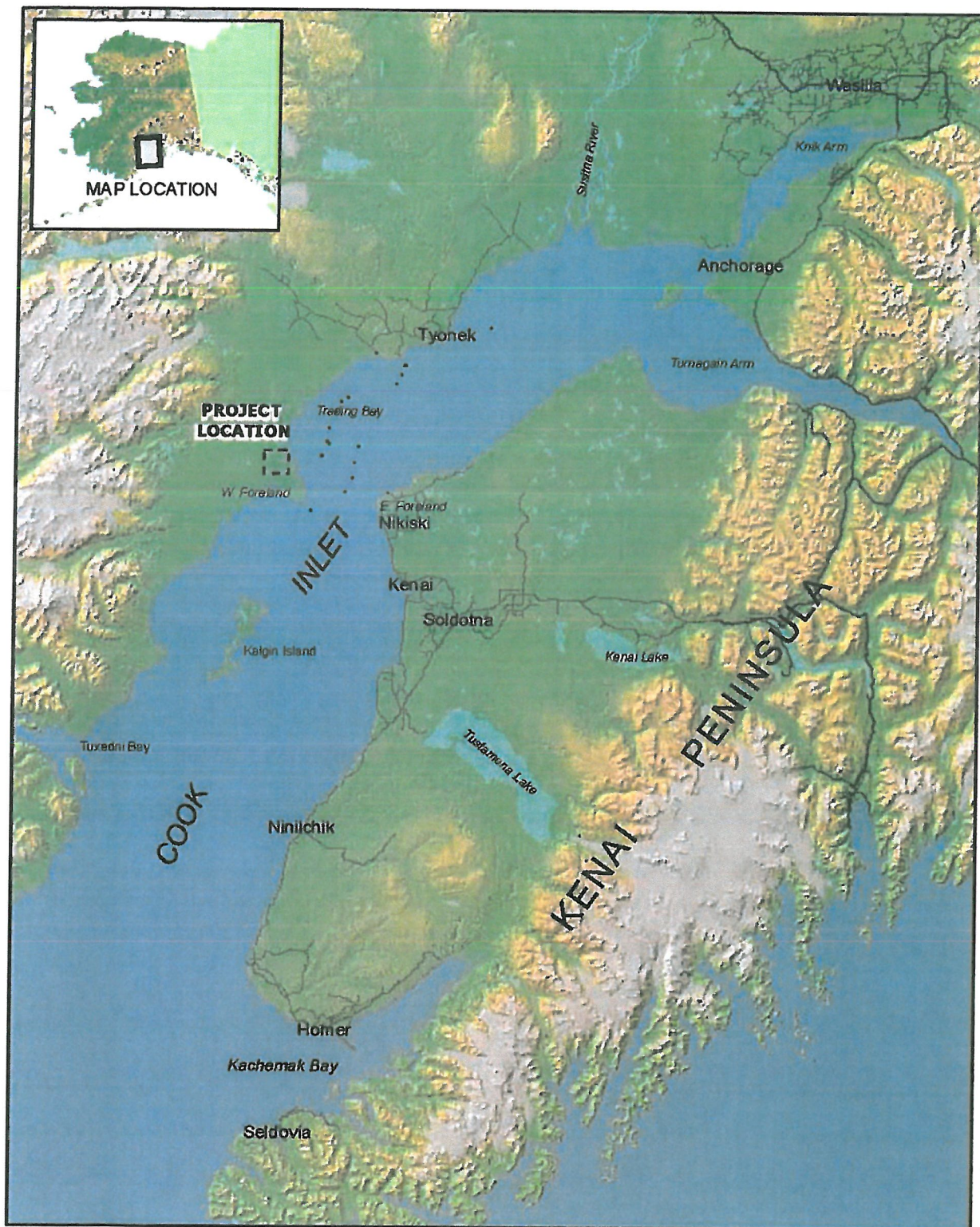
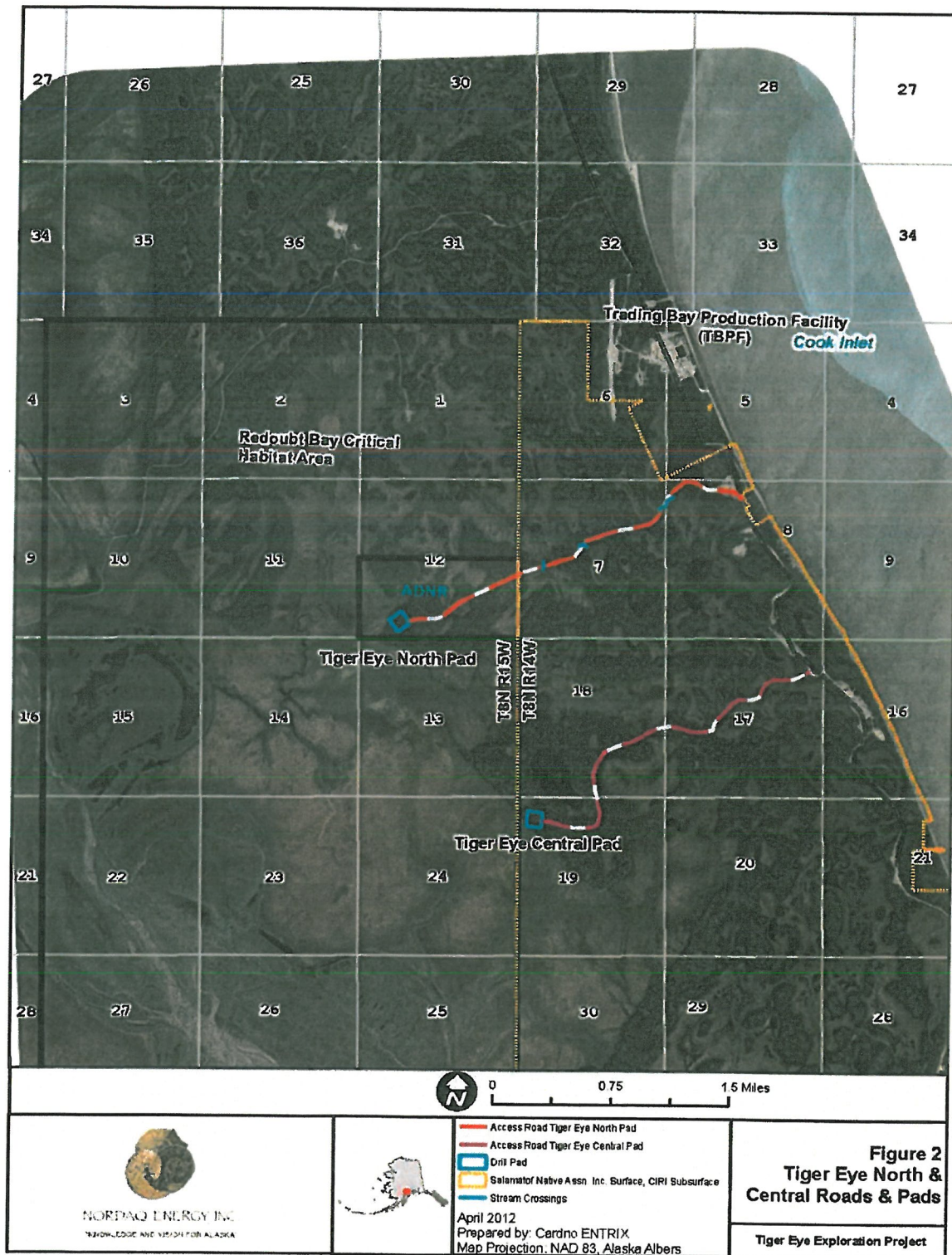
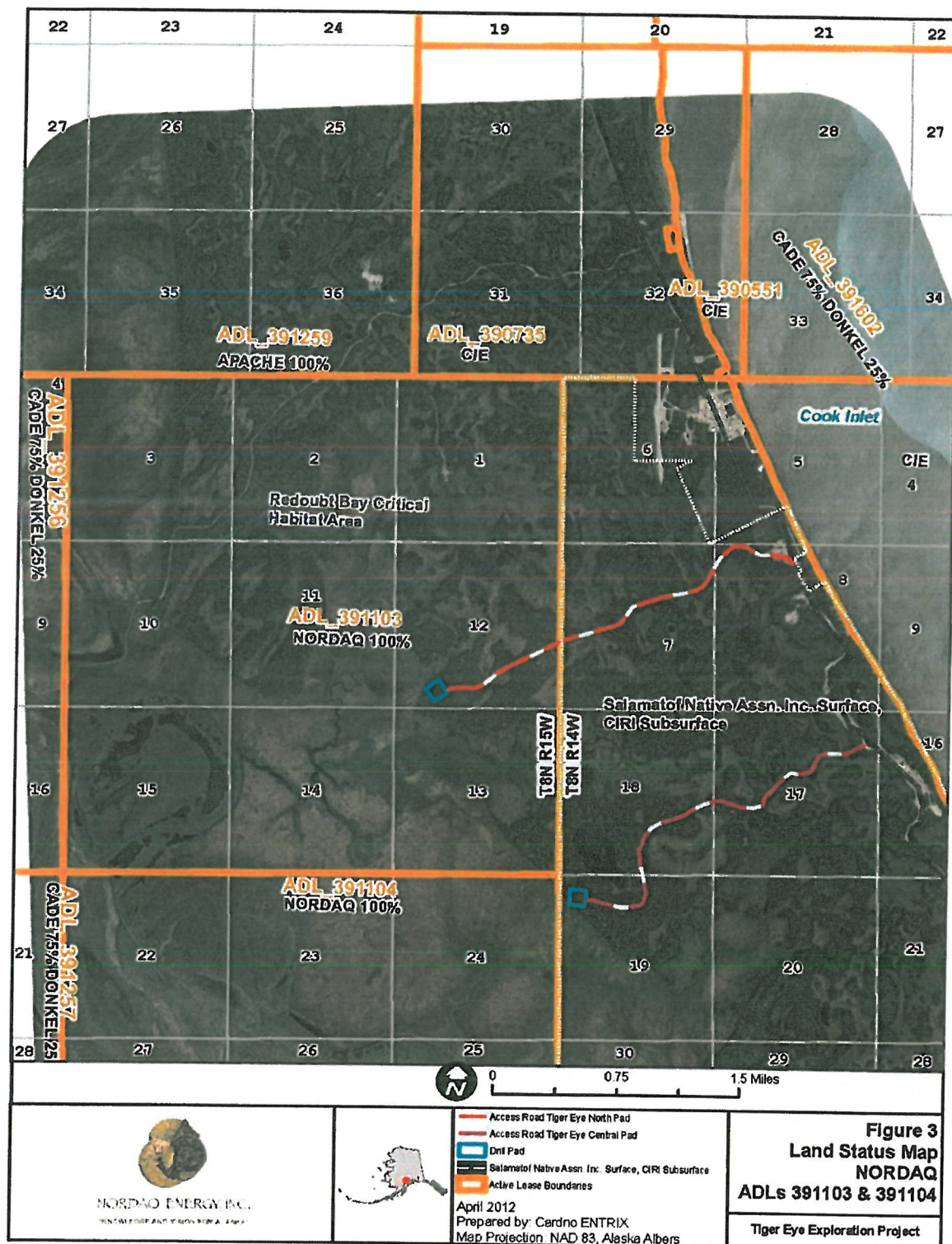
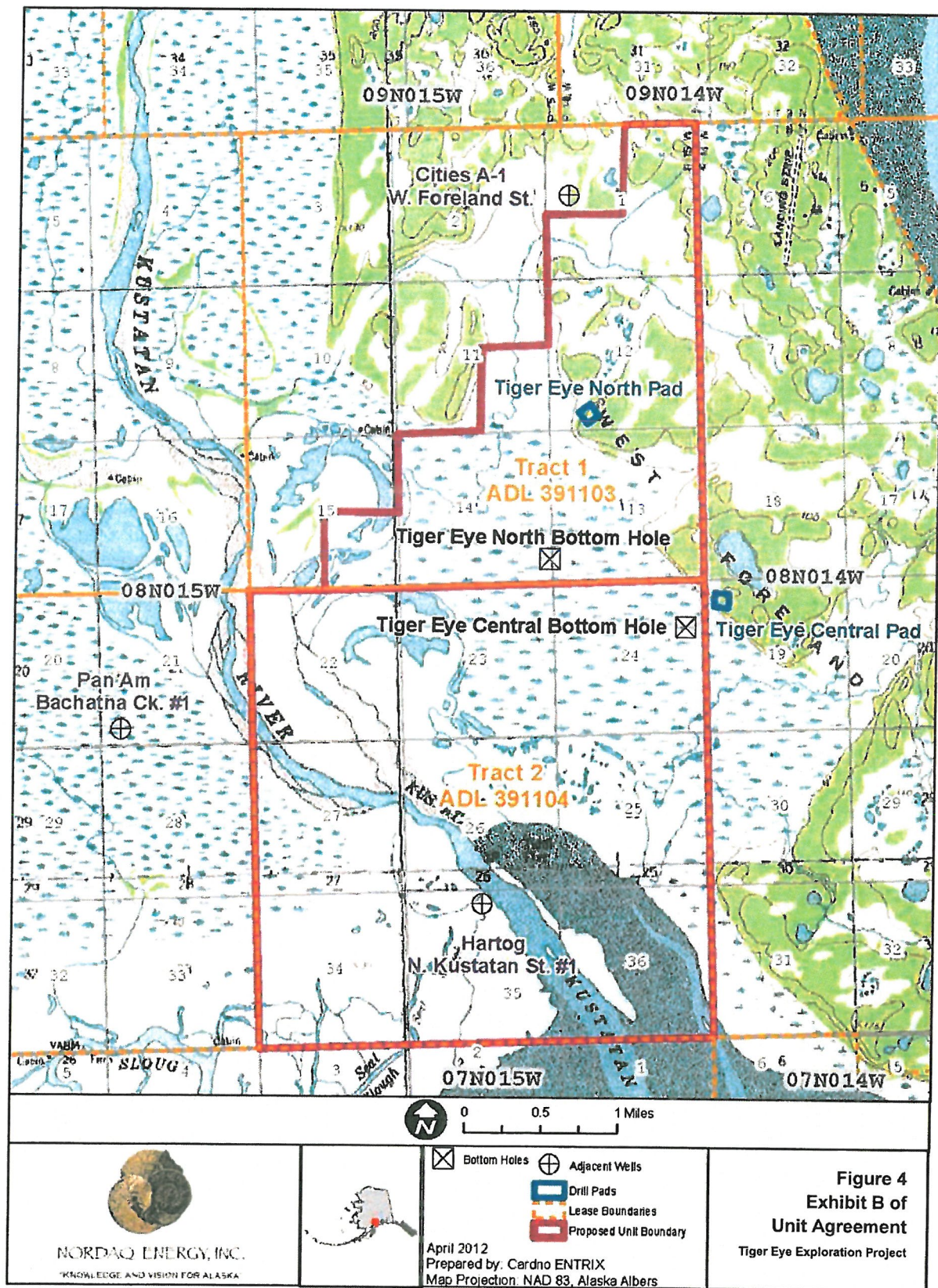


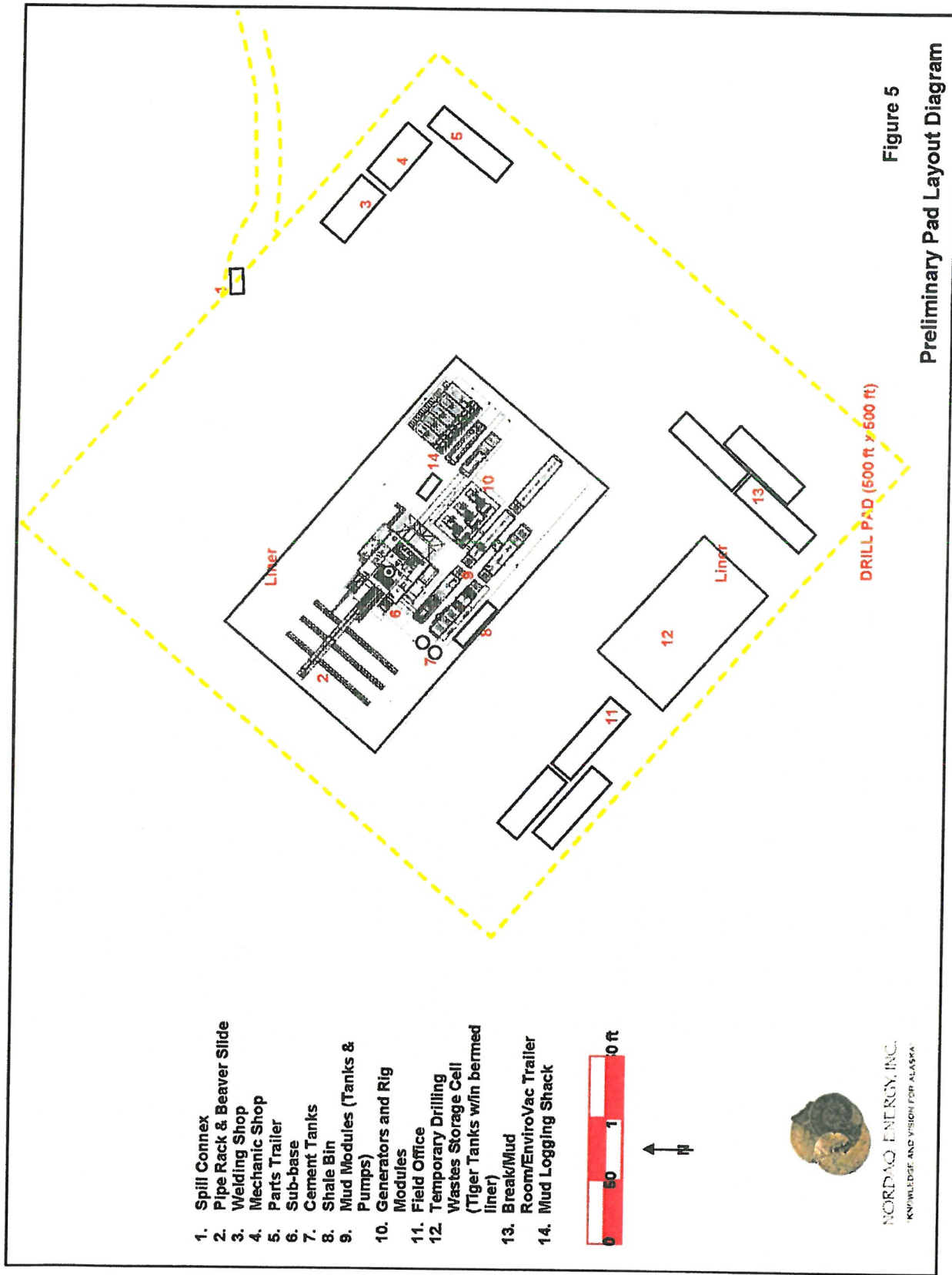
Figure 1
General Vicinity Map











Attachment 4

Exhibit G, Revised Initial Unit Plan of Exploration, August 20, 2012

Exhibit "G"
Attached to and made part of the Tiger Eye Unit Agreement
Initial Unit Plan of Exploration

RECEIVED

AUG 20 2012

**DIVISION OF
OIL AND GAS**

INTRODUCTION

NordAq Energy, Inc. (NordAq) is an Alaska based independent oil company with offices in Anchorage and Kenai. NordAq provides this Unit Plan of Exploration to the Alaska Department of Natural Resources (ADNR) as part of its Unit Application pursuant to Article 8 of the Tiger Eye Unit Agreement, 11 AAC 83.341, and 11 AAC 83.343. NordAq plans to conduct an exploratory drilling program for oil and natural gas on the west side of Cook Inlet within its Tiger Eye Prospect (Figure1).

Two wells will be drilled in the period of 2012 and 2013 as part of the exploration program within Alaska Oil and Gas Leases. ADL 391104 and ADL 391103 (see figures 2 and 3). NordAq is the owner (100%) of the Unit Leases ADL 391104 and 391103. NordAq will be the operator and permittee of record for the proposed Unit Exploration Program.

The Tiger Eye Unit Area shall be divided in to two (2) Tracts as described below in Table 1:

Table 1: Tiger Eye Unit Exploration Well Location Information	
Tiger Eye Central #1	
Lease	ADL 391104
Legal Description (Section, Township/Range)	Section 19, T8N/R14W, Seward Meridian
Section (19) Meets and Bounds	690 ft. from West Line, 550 ft. From North Line
Planned Surface Geodetic Position, Latitude/Longitude	60°46'29.388" / -151°48'48.312"(NAD 83)
Planned Surface AK State Plane Coordinates (X/Y), Zone 4	N2479577 ft. / E1316287 ft. (NAD83)
Planned Bottom Hole Geodetic Position, Latitude/Longitude	60°46'23.755 / -151°49'18.048"(NAD 83)
Planned Bottom Hole AK State Plane Coordinates (X/Y), Zone 4	N2479046 ft. / E1314795 ft. (NAD 83)
Relative Surface Elevation (Above Mean Sea Level)	~ 150 ft.
Tiger Eye Central #2	
Lease	ADL 391103
Legal Description (Section, Township/Range)	Section 19, T8N/R14W, Seward Meridian
Section (19) Meets and Bounds	775 ft. from West Line, 465 ft. from North Line
Planned Surface Geodetic Position, Latitude/Longitude	60°46'30.223" / -151°48'46.603" (NAD 83)
Planned Bottom Hole AK State Plane Coordinates (X/Y), Zone 4	N2479659 ft. / E1316374 ft. (NAD 83)
Planned Bottom Hole Geodetic Position, Latitude/Longitude	60°46'38.488" / -151°49'05.808" (NAD 83)
Planned Bottom Hole AK State Plane Coordinates (X/Y), Zone 4	N2480524 ft. / E1315444 ft. (NAD 83)
Relative Surface Elevation (Above Mean Sea Level)	~150 ft.

See Figure 4 for NordAq's proposed exploration wells, surface and bottom hole locations, and existing industry exploration wells. The nearest town to the drill pads is Nikiski, approximately 17 miles to the east across Cook Inlet. The Trading Bay Production Facility (TBPF) owned and operated by Hilcorp Energy Company (Hilcorp) is approximately 1.8 miles to the northeast.

TIGER EYE CENTRAL #1, TRACT 2

The proposed Tiger Eye Central drill pad is approximately 2.5 miles inland from Cook Inlet and 2.5 miles east of the Kustatan River. NordAq proposes to build a 2.27 mile long single lane gravel access road from an existing lease road near the Cook Inlet shoreline to the Tiger Eye Central well location, and construct a gravel exploration pad. The road and well will be constructed on Salamatof Native Corporation lands. Construction is scheduled for summer 2012. NordAq will barge drilling equipment and materials to the pad, and spud Tiger Eye Central #1 by the end of the third quarter 2012 (September). During winter months, February and March 2013, NordAq will acquire 3D seismic over the southern half of the Tiger Eye project,

Tiger Eye Central # 1, will be drilled within State of Alaska Oil and Gas Lease Number ADL 391104 (see Table 1 and Figures 2 and 3). The entire project is located on private land until the well bore reaches a depth of 1,920 feet. From this depth to total depth of 11,500 feet TD, the well will be located on State land in ADL 391104.

TIGER EYE NORTH CENTRAL #2

NordAq plans to drill a second well, Tiger Eye Central #2, from this same drill pad location. This new well will also be drilled on private land until the well bore reaches a depth of approximately 2,000 feet. From this depth to total depth of 10,175 feet TD, the well will be located on State land in ADL 391103. NordAq will barge and transport drilling equipment and materials to the pad, and spud Tiger Eye central #2 by the end of the second quarter 2013 (May 2013 through June 2013).

DRILLING RIG

NordAq plans on using an arctic class mobile rotary drill rig leased from Nabors Alaska Drilling, rig # 106AC. The drilling rig will be mobilized to the site in truckable modules and assembled. Specific modules are designed to contain power generation units, drilling fluid handling equipment, tanks, pumps, and other systems necessary to drill the wells. The heaviest load will be modules that do not exceed 200,000 pounds (175 tons). The drilling rig has a maximum depth capability of about 12,000 feet.

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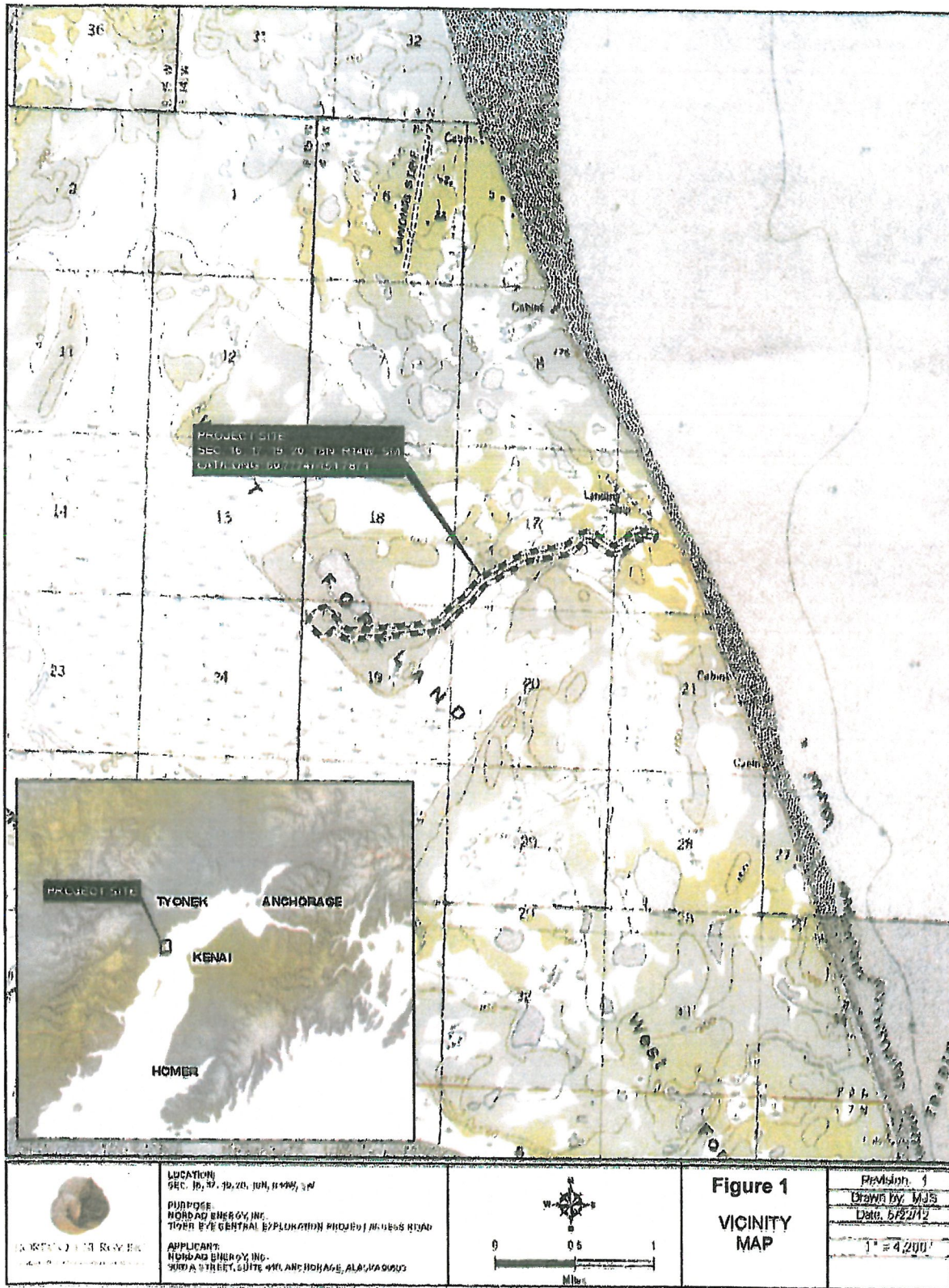
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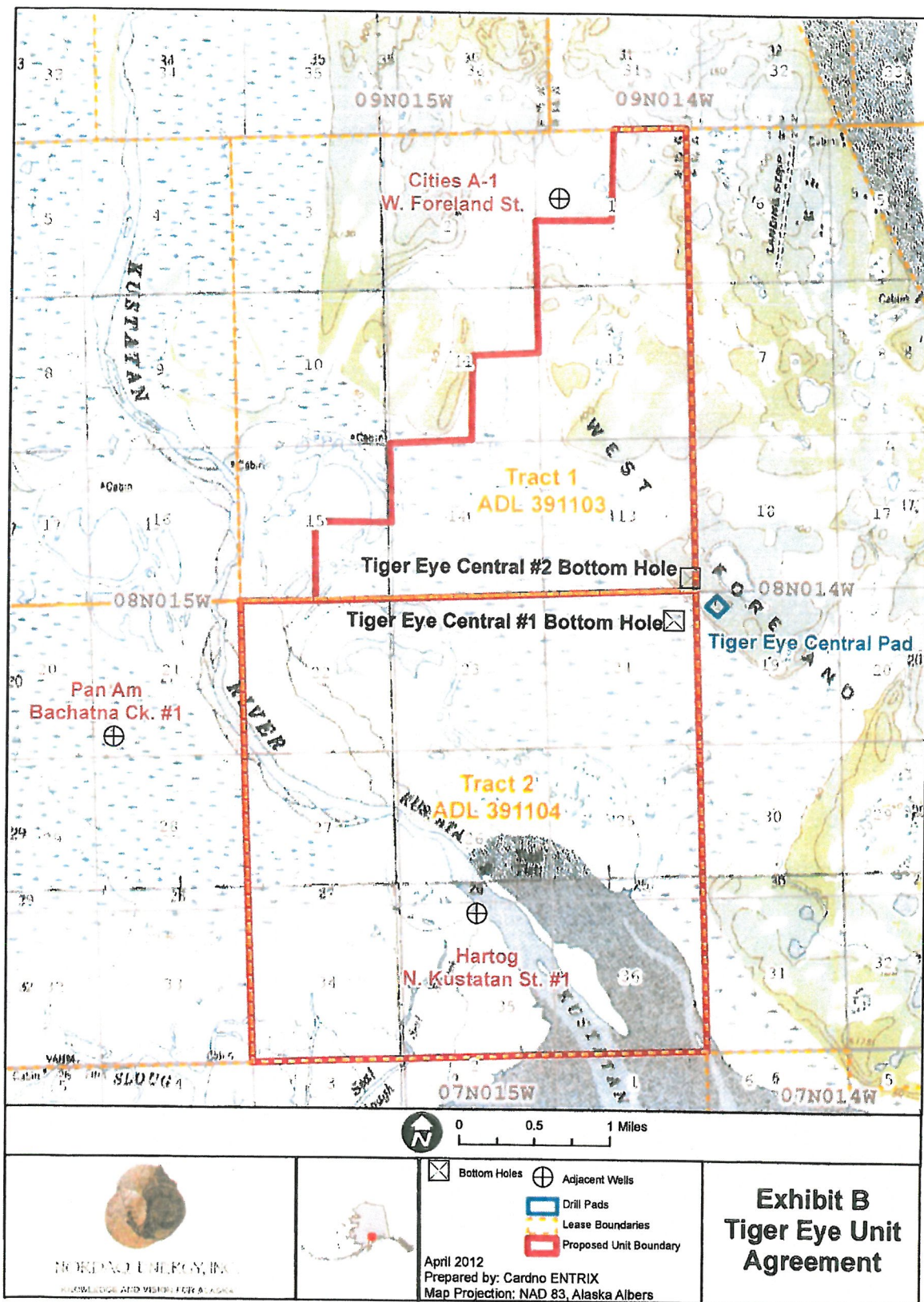
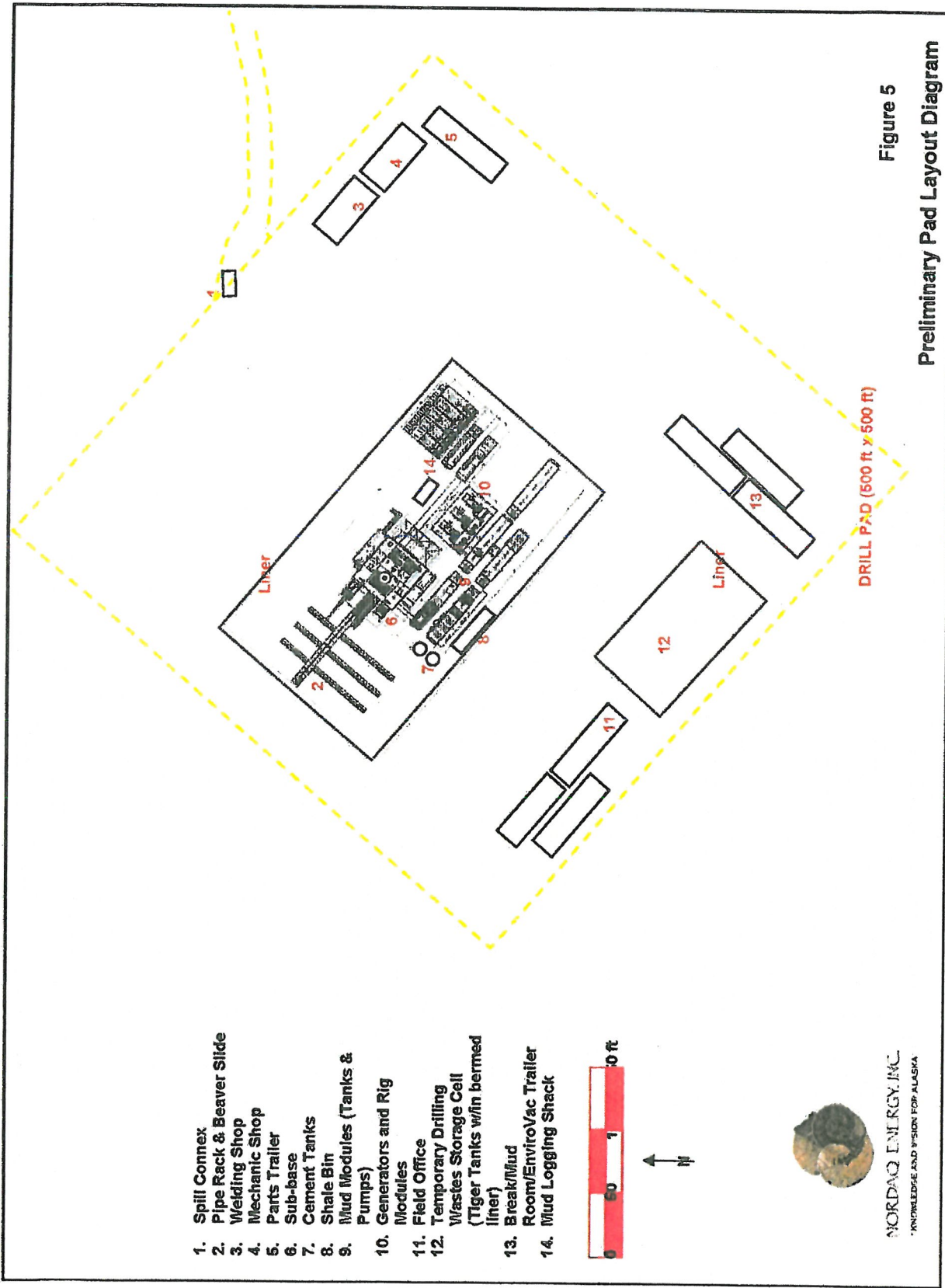


Exhibit B Tiger Eye Unit Agreement

NOVEMBER 2011
HONOLULU, HAWAII

April 2012
Prepared by: Cardno ENTRIX
Map Projection: NAD 83, Alaska Albers



Attachment 5

Map of the Approved Tiger Eye Unit Boundary

