

UNIT PLAN OF OPERATIONS AMENDMENT APPLICATION

State of Alaska

Department of Natural Resources, Division of Oil & Gas 550 W. 7th Ave, Suite 1100, Anchorage, AK 99501-3563 Phone: 907-269-8800 Fax: 907-269-8943

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SECTION I: APPLICANT INFORMATION				
1. Applicant:	2. Applicant Contact:			
Name: Hilcorp Alaska, LLC	First Stetson Last Sannes Name:			
	Title: Environmental Specialist			
Mailing 3800 Centerpoint Drive, Suite 1400	Mailing Address: 3800 Centerpoint Drive, Suite 1400			
City: Anchorage	City: Anchorage			
State: AK Zip Code: 99503	State: AK Zip Code: 99503			
Phone: 907-777-8300 Fax: 907-777-8560	Phone: 907-564-4665 Fax: 907-777-8560			
Email: Enter Email.	Email: Stetson.Sannes@hilcorp.com			
2 Unit Name Nimilabile Unit				

3. Unit Name Ninilchik Unit

4. Unit Operator Contact:

First Name: Enter First Name. Last Name: Enter Last Name. Title: Enter Title.

Mailing

Address: Enter Mailing Address.

City: Enter City. State: Enter State. Zip Code: Enter Zip Code.

Phone: Enter Phone. Fax: Enter Fax. Email: Enter Email.

Describe the relationship between the Unit Operator and the Applicant:

Hilcorp Alaska, LLC is the applicant and the Unit Operator

SECTION II: 3RD PARTY INFORMATION	SECTION III: APPLICATION DATE AND NUMBER		
(Fill out this section only if you are applying for the Applicant)			
3rd Party Company Name: Enter Name.	Application Date (Office Use Only):		
First Enter First Last Name: Name: Name:			
Title: Enter Title.			
Mailing Address: Enter Mailing Address.			
City: Enter City.			
State: Enter State. Zip Code: Enter Zip Code.			
Phone: Enter Phone. Fax: Enter Fax.			
Email: Enter Email.			
Describe the affiliation to the Applicant:	Application Number: LO/Cl 17-001		
Describe your affiliation to the Applicant.			

SECTION IV: PROJECT INFORMATION

1. Project Name: Pearl Pad Facilities and Pipeline

2. Proposed Start Date: 9/1/2022

3. Project Description:

Is activity discussed in the approved Plan of Development on file with the Division's Units Section?					
Describe what and where:					
Hilcorp Alaska, LLC proposes to install a pipeline and gas production facilities at Pearl Pad in the Ninilchik Unit (NKU) for purposes of bringing the Pearl wells online as gas production wells in 2022. The Pearl Pad and access road were constructed on private land in 2017-2018, and the Pearl 2A delineation well was spudded and completed in 2021. Figure 1 in "Appendix A: Maps" shows the Pearl vicinity and pad location. Pearl exploration activities were authorized by Alaska Department of Natural Resources (ADNR) Division of Oil & Gas (DO&G) Lease Operations-Cook Inlet (LOCI) 17-002 on August 31, 2014 and the Pearl 2A delineation well was authorized by DOG LOCI 17-002 on August 31, 2017. Bringing the Pearl Pad to production will involve installing gas production facilities on the existing pad and constructing a gas pipeline from the pad to connect to the existing Kenai Kachemak Pipeline (KKPL) gas transmission pipeline. Figure 2 in "Appendix A: Maps" shows the Pearl Pad production facility layout and proposed gas pipeline.					
	SECTION V: LAND STATUS				
1. State Mineral Estate:					
Are supplemental pages for land status in	ncluded in Appendix C?	□ Yes ⊠ No			
Affected ADL: 384372	Date Effective: 1/1/2012 Date	ate Assigned: 12/29/2011			
Oil And Gas Lessee(s): Hilcorp Alaska,	LC				
Surface Ownership: State of Alaska (C	ook Inlet)				
Do you have, or anticipate having an Acc	ess Agreement: ☐ Yes ⊠ No				
Special Use Lands: N/A					
Jointly Managed Lands: N/A					
Other Considerations: N/A					
Project Components Meridian, Township, Range, And Section(s) GPS Coordinates					
Well Pearl 2A Bottom Hole Location (existing)	Seward, T01S, R14W, Section 14 Lat: 60.087142, Long: -151.628157				
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2. State of Alaska Surface Lands:					
Are supplemental pages for land status in	ncluded in Appendix C?	☐ Yes ⊠ No			
Oil And Gas Mineral Estate Owner: N/	A				
Access Authorization(s): N/A					
Special Use Lands: N/A					
Jointly Managed Lands: N/A					
Other Considerations: N/A					
Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates			
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Click here to enter text.	Click here to enter text.				
Click here to enter text. Click here to enter text. Click here to enter text.					
3. Private Lands:					
Are supplemental pages for land status in	ncluded in Appendix C?	☐ Yes ☐ No			
Oil And Gas Mineral Estate Owner: S	tephen Wackowski and Thomas Brady / Cynthia Halton				
Surface Ownership And Access Agreeme	ent(s): Hilcorp Alaska, LLC				
Special Use Lands: N/A					
Jointly Managed Lands: N/A					
Other Considerations: The pipeline will be directionally drilled under the existing Sterling Highway					
Project Components Meridian, Township, Range, And Section(s) GPS Coordinates					
Pearl Pad Facilities	Seward Meridian T1S R14W S23	Lat: 60 08178 N. Long: -151 62788 W			

Pearl Pipeline End Point	Seward Meridian, T1S, R14W, S23-24	Lat: 60.07907 N, Long: -151.62356 W
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SECTION VI: SEQUENCE AND SCHEDULE OF OPERATIONS

Project Milestone #	Project Milestone	Proposed Start Date	Proposed End Date
1.	Construct Pearl flowline	8/1/2022	11/1/2022
2.	Install gas production facility infrastructure on Pearl Pad	8/1/2022	3/1/2023
3.	Begin production	11/1/2022	11/1/2022
4.	Enter Milestone.	Enter Date.	Enter Date.
5.	Enter Milestone.	Enter Date.	Enter Date.
6.	Enter Milestone.	Enter Date.	Enter Date.
7.	Enter Milestone.	Enter Date.	Enter Date.
8.	Enter Milestone.	Enter Date.	Enter Date.
9.	Enter Milestone.	Enter Date.	Enter Date.
10.	Enter Milestone.	Enter Date.	Enter Date.

SECTION VII: PROJECTED USE REQUIREMENTS

1. Describe the proposed operations, including the location and design, of Well Sites:

No new well sites are proposed as part of this project. The purpose of this project is to enable gas production from existing well sites.

2. Describe the proposed operations, including the location and design, of **Buildings**:

Hilcorp will install production facility infrastructure on the existing Pearl Pad to support gas production from the Pearl development wells. Gas and produced fluids from the Pearl wells will be conveyed via subgrade facility piping from each well to a heater separator unit (HSU) located on the pad. Gas will then be routed to a compressor module and a glycol dehydration module, which will increase the gas pressure and remove water to meet sales specification, and produced fluid will be routed to two, 200-barrel, steel, double-walled produced water tanks located on the pad. Processed gas will be metered at the meter located inside a dehydration module prior to being transported off-pad via pipeline to tie into the KKPL transmission pipeline. Produced fluid will be routinely collected from the tanks via vacuum truck, and it will be transported to the Kenai Gas Field or NNA Pad for disposal into an active Class II disposal well. Electrical and instrumentation lines will also be installed to each well location, which will tie into the Pearl control room. Pearl will not be a manned facility, but will be monitored by personnel staged out of the Ninilchik Susan Dionne Pad Control Room. The proposed production facility layout is shown on Figure 2 in "Appendix A: Maps"; proposed infrastructure includes up to three HSU skids, two compressor skids, two dehydration units, a vent stack with a vent scrubber for venting gas when needed, and two 200-barrel double-walled produced water tanks.

3. Describe the proposed operations, including the location and design, of **Fuel and Hazardous Substances**:

On-pad chemical/fuel storage will include the following: one 500-gallon methanol tote per well, one 500-gallon portable diesel tank, up to four 55-gallon drums of triethylene glycol, and up to four 55-gallon drums of lube oil. The dehydrator skids use triethylene glycol to remove moisture from gas; approximately 200-250 gallons of triethylene glycol is contained in each dehydration system when it is in operation (in addition to the glycol stored in drums on the pad). The floor of the dehydrator skid has built-in containment for potential leaks. The compressor skid requires use of approximately 200 gallons of lube/engine oil, which will also be contained within the skid's built-in secondary containment in case of a leak. Both the compressor and the power module have natural gas-powered engines.

4. Describe the proposed operations, including the location and design, of **Solid Waste Sites**:

This project does not include installing a solid waste facility. Waste will be handled consistent with Hilcorp waste management practices as follows: 1) Waste will be properly segregated and containers labeled to ensure proper disposal. 2) Closed top dumpsters will be onsite for household-type wastes; these will be emptied regularly and trash will be taken to the Kenai Peninsula Borough Landfill for disposal. 3) Oily waste will be segregated and sent to a specialty waste contractor for offsite disposal. 4) Drilling waste (muds and cuttings) generated by oil and gas drilling activities will be hauled via vacuum truck or supersucker directly from the facility to the Kenai Gas Field Grind and Inject Facility for disposal. Horizontal directional drilling (HDD) activities for pipeline installation will generate clean mud and cuttings that will be placed in an upland location. Specific locations for HDD mud and cuttings have yet to be identified.

5. Describe the proposed operations, including the location and design, of Water Supplies:

Hilcorp will use fresh water as base fluid during pipeline installation by HDD (see Section VIII.6) and to hydrotest the installed pipeline. An estimated 1,000 barrels of fresh water will be used as base fluid for HDD operations, and an estimated 1,700 barrels of fresh water will be used to hydrotest the pipeline. Fresh water will be purchased from the City of Anchor Point or withdrawn from existing and permitted water wells at the Pearl Pad location or at nearby Hilcorp-operated locations.

6. Describe the proposed operations, including the location and design, of **Utilities**:

Hilcorp will install a buried 6-inch-diameter lateral gas pipeline coming from the edge of the Pearl Pad and traveling southeast to tie into the KPPL gas transmission pipeline. The pipeline will be approximately 1,150 feet in length, will traverse private land from the pad location southeast to the Department of Transportation (DOT) Sterling Highway right-of-way (ROW), under the Sterling Highway to daylight at the tie-in location south of the Sterling Highway. A gravel pad will be constructed at the pipeline tie-in location within the DOT ROW and an aboveground valve will be positioned on the gravel pad. Engineering drawings included in "Appendix C: Other" shows the pipeline route. Electrical and communications will be run to the pad from nearby existing power/cable supply. Pipeline installation will be performed by a combination of trenching and HDD construction methods. There is one proposed HDD section, a ~400 foot length beneath the historical Sterling Highway and existing Sterling Highway. Buried piping is required for the Sterling Highway crossing and the boring will allow Hilcorp to avoid impacts to the historical Sterling Highway. The remainder of the pipeline will be installed by excavating a 4-foot-wide by 6-foot-deep trench (pipe will be buried a minimum of 4 feet below ground surface). Excavated trench material will be stockpiled on the ground next to the trench and utilized as fill after the pipeline is placed. This project, including trenching and HDD, avoids wetland area entirely (refer to drawings in "Appendix C: Other").

7. Describe the proposed operations, including the location and design, of Material Sites:

Not applicable. If needed, material will be purchased from third-party sources.

8. Describe the proposed operations, including the location and design, of Roads:

Gas production will be from an existing pad with an existing access road. Minor road improvements including grading and fill in areas of need may be required, but road footprint expansion is not needed.

9. Describe the proposed operations, including the location and design, of Airstrips:

Not applicable.

10. Describe the proposed operations, including the location and design, of All Other Facilities and Equipment:

See Section VII, 1.

11. If another permit(s) is required for the above described Projected Use Requirements, provide the following information:

Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
See Appendix C	Enter Permit Type.	Enter Permit Number.	Enter Application Status.	Enter Projected Use Requirement(s).

SECTION VIII: REHABILITATION PLAN

1. Proposed Level of Infrastructure, Facilities and Equipment Removal:

After the field is no longer producing, the access road and pad will be restored/rehabilitated to the satisfaction of the surface landowner and in compliance with applicable laws and regulations.

2. Description of Restoration and Rehabilitation Activities for Vegetation, Habitat, Impacted Wildlife, and Other Applicable Resources:

After the field is no longer producing, the access road and pad will be restored/rehabilitated to the satisfaction of the surface landowner and in compliance with applicable laws and regulations. Impact to vegetation from trenched sections of the pipeline will be minimized to the extent practicable, and topsoil will be placed to allow natural revegetation of the pipeline corridor to occur. Pipeline maintenance will require that vegetation be cleared above the ground surface periodically within the ROW to keep trees and large shrubs from growing over the pipeline. No impact to habitat, wildlife, or other resources is anticipated. Any inadvertent impact to the aforementioned will be rehabilitated to the satisfaction of the private land owner and any applicable agencies and/or stakeholders.

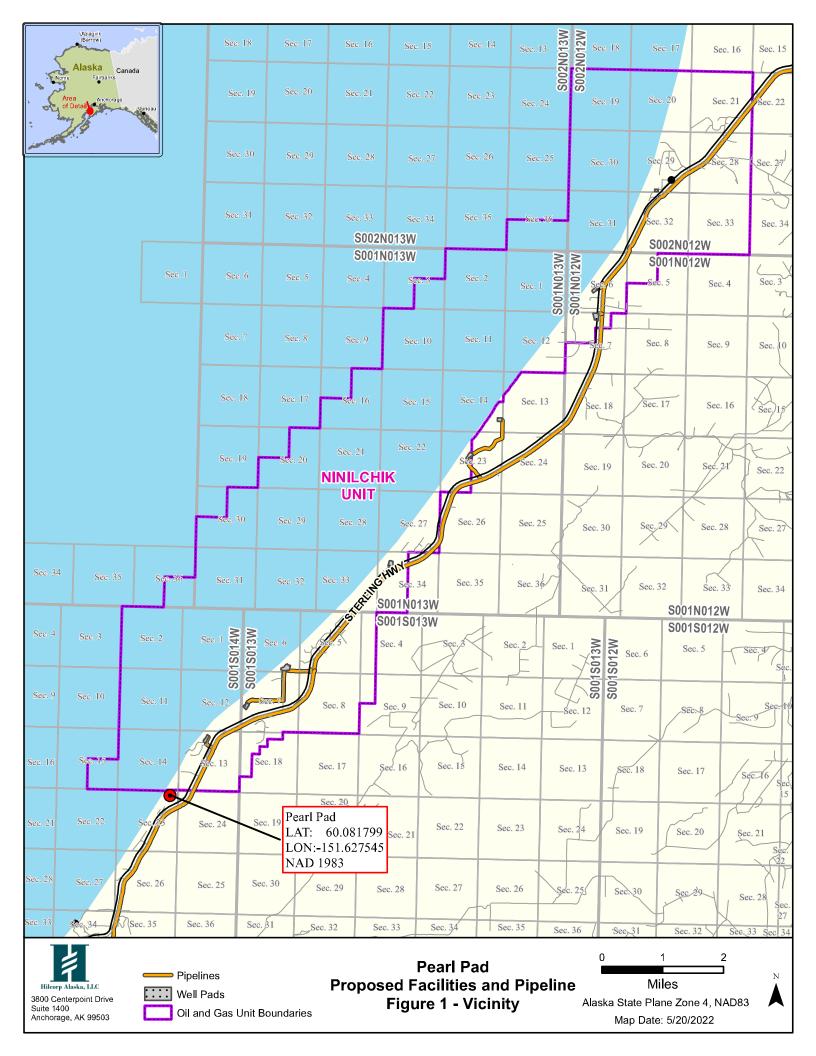
SECTION IX: OPERATING PROCEDURES DESIGNED TO MINIMIZE ADVERSE EFFECTS

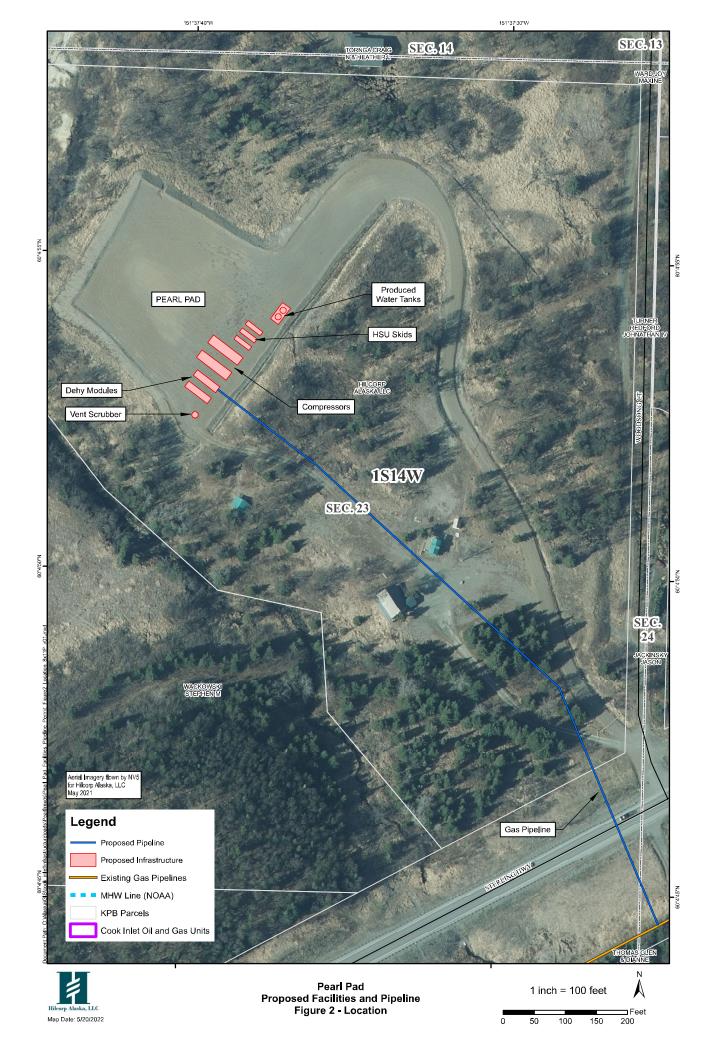
Describe operat adjacent areas i		prevent or minimize advers	e effects on other natural resources and	I other uses of the Unit area and	
Fish and Wildlife	disturbed by gr project avoids will be returned	avel extraction activities. The pi stream crossing and wetlands.	xisting gravel pad, which was constructed in a peline route will be located along an already of Frenched sections of the pipeline will typically several weeks; therefore, Hilcorp does not ant	disturbed gravel access road. The be no more than 4 feet in width and	
Historic and Arc	gravel a Charles dated J access not be a archaed cleared will stop	access road. A cultural resource is M. Mobley & Associates and the luly 2017, recommended a dete road. No historic properties are disturbed by pipeline construction plogical sites by boring ~10 feet areas is not anticipated to enco by work and immediately notify the	installed on existing gravel pad. The pipeline is survey of the Pearl Pad and project parcel line report provided to the State Historic Preser mination of no effect on historic properties for located within the Pearl Pad property and the on. Pipeline installation via HDD will avoid impubeneath the ground surface. Pipeline installation that the sunter historic/archaeological sites due to prione State Historic Preservation Office (SHPO) incountered during project activities.	has previously been conducted by rvation Office (SHPO). The report, or construction of the Pearl Pad and e old Sterling Highway alignment will pacting potential historic / stion via trenching along already or disturbance; however, personnel	
Public Use Area	s: Public use areas will not	be impacted by the proposed p	roject, as this project occurs on private lands.		
Other Uses:	None				
		SECTION X: GLO	SSARY OF TERMS		
Term #	Term		Term Definition		
1.	HDD	Horizontal Directional D	rilling		
2.	HSU	Heater Separator Unit			
3.	ROW	Right-of-Way	Right-of-Way		
4.	KKPL	Kenai Kachemak Pipeline			
5.	SHPO	State Historic Preservat	on Office		
		SECTION XI: CO	ONFIDENTIALITY		
The undersigned APPLICANT CC	• •	page/section of this applicate	tion <u>marked</u> confidential be held confiden	ıtial under AS 38.05.035(a)(8).	
Sign here.	Ente	er Name.	Enter Title.	Enter Date.	
Signature	Nar	me	 Tit l e	 Date	

APPENDIX A: MAPS

Figure 1 – Pearl Pad Location Overview Map

Figure 2 – Pearl Pad Facility Layout and Pipeline Route





APPENDIX B: MITIGATION MEASURES	
No changes to existing mitigation measures.	

APPENDIX C: OTHER

See attached Pearl Pipeline Detail drawings.

Additional Permits:

Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
Regulatory Commission of Alaska	Connection Permit	Docket #P-22- 008	Submitted	Lateral line connection to KBPL regulated pipeline
Alaska Departement of Environmental Conservation	APDES	Statewide Oil and Gas Pipelines General Permit AK320000	Received	Discharge of hydrotest water (if required)
Alaska Departement of Environmental Conservation	APDES	Statewide Oil and Gas Pipelines General Permit AK320000	Received	Excavation dewatering (if required)
Alaska Department of Transportation	ROW Permit	TBD	Submitted	HDD beneath Sterling Highway

