

STATE OF ALASKA  
**Application for Permits to Mine in Alaska (APMA)**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Single Year      Multi-year - Start: \_\_\_\_\_ Finish: \_\_\_\_\_ APMA (District/Year/Number): \_\_\_\_\_

What type activity are you planning to perform? <b>(1)</b>  Exploration/Reclamation Mining/Reclamation Hardrock Exploration/Reclamat	Surface estate of mineral properties: <b>(2)</b>  Access Equipment Suction Dredge Reclamation  State (General) Private (Patented) Private (Native Corp.)  State (Mental Health) Federal City or Borough
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Mineral Property Owners: <b>(3)</b> Company name and contact name if applicable	Lessee: <b>(4)</b> Company name and contact name if applicable	Operator: <b>(5)</b> Company name and contact name if applicable
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Mailing Address for official correspondence:	Mailing Address for official correspondence:	Mailing Address for official correspondence:
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Home phone# (winter):	Home phone# (winter):	Home phone# (winter):
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Work phone# (winter):	Work phone# (winter):	Work phone# (winter):
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Home phone# (summer):	Home phone# (summer):	Home phone# (summer):
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Work phone# (summer):	Work phone# (summer):	Work phone# (summer):
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Cell/Satellite:	Cell/Satellite:	Cell/Satellite:
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FAX:	FAX:	FAX:
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E-mail:	E-mail:	E-mail:
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Winter contact effective dates _____ to _____. Summer contact effective dates _____ to _____.	Winter contact effective dates _____ to _____. Summer contact effective dates _____ to _____.	Winter contact effective dates _____ to _____. Summer contact effective dates _____ to _____.
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Project Name If Applicable: <b>(6)</b>	# of Workers: <b>(7)</b>	Start-Up/Shut Down: (Month/Day) <b>(8)</b> _____ to _____.
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Mining District: <b>(9)</b>	Applicable USGS Map: <b>(10)</b>	On What Stream Is This Activity? <b>(11)</b>
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Legal Description of mineral properties to be worked and other projected related activities (MTRS): <b>(12)</b>
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Internal Use Only: Date Application Received Complete: <u>12/31/18</u> Adjudicator: <u>HAC</u> LAS Entry: _____
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Page 1 Form 102-4071 Revised 11/2018

**MINERAL PROPERTIES LIST**

Attach additional sheets as necessary.

Are any of these mineral properties an Upland or Offshore Mining Lease?                      Yes                      No

	ADL/BLM/USMS #	PROPERTY NAME		ADL/BLM/USMS #	PROPERTY NAME
1.			7.		
2.			8.		
3.			9.		
4.			10.		
5.			11.		
6.			12.		

**INVENTORY OF EQUIPMENT**

List all mechanized equipment to be used (make, model, type, size, weight, purpose, and number of each, including pumps). Attach additional sheets as necessary. If you are transporting on a trailer to the claim block, include the trailer size, weight and loaded total weight.

Check One:

	Make, Model and Type of Equipment or Pump	Weight of Equipment and Any Trailers, including Loaded Weight	Quantity of this type	Located on the claim block?	Transporting to claim block?
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					

**ACCESS OUTSIDE OF CLAIM BLOCK**

**Section Not Applicable**

Access across surface estates not owned by the State requires approval of the managing agency. It is the responsibility of the applicant to contact the owners of private property to obtain authorization for access.

All season roads may be an improved dirt road intended to be used during all seasons of the year without causing long term damage to the road. NOTE: It is strongly recommended that you contact the appropriate Regional Land Office as certain roads are subject to Generally Allowed Uses, and authorization (permit or easement) may be required for use of the route with off-road vehicles greater than 1500 lbs curb weight (like mining equipment).

A completed access map must be submitted with your application. Copies of USGS topographic maps at a scale of 1"=1 mile must clearly indicate the proposed access route from start to finish and include appropriate legal descriptions (township and range) on each map sheet. The quadrangle map name should also be indicated (Healy A-3, etc.). Paper size should be limited to 8 1/2" x 11". Do not tape maps together.

Access is:                      Existing                      To be constructed off claim block                      Both, or                      Helicopter Supported

Access outside the claim block crosses what type of land(s)?                      State (General)                      State (Mental Health)  
City/Borough                      Federal                      Private                      Private (Patented)                      Private (Native Corp. Land)

Does the proposed route of travel include use of RS 2477 access?                      Yes                      No.

If the RS 2477 ROW has a State of Alaska RST number, please list: \_\_\_\_\_

**ACCESS OUTSIDE OF CLAIM BLOCK, CONTINUED**

*Section Not Applicable*

Indicate type(s) of existing access:

All Season Road: \_\_\_\_\_.

Summer Cross Country Travel off of claim block that is not considered Generally Allowed Uses (Complete Box 16)

Airstrip

River

Winter Cross Country Travel that is not generally allowed use (Complete Box 16)

Indicate type(s) of access to be constructed:

Access Road

Airstrip

Please describe your construction activities and include mitigation measures to protect water, fish and game resources.

(A map outlining the route of construction activities is required). Attach additional pages if necessary:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CROSS COUNTRY TRAVEL**

*Section Not Applicable (16)*

**Summer Cross Country Travel:** Approvals for summer travel are issued from the DNR/DMLW Land section. Applications for LUPs may require sixty to ninety days to process and applications for easements may require six months to one year to process. A performance guarantee, insurance and fees are required before a permit will be issued and will only be released after travel is completed and no negative trail impacts have occurred.

**Winter Cross Country Travel:** May be approved when ground conditions will support the movement of heavy equipment. Existing roads and trails should be used whenever possible. The winter operation of ground contact vehicles for off-road travel must be limited to areas where ground frost and snow cover are adequate to prevent damage to the vegetation mat and underlying substrate. A completion report is required within 30 days of travel completion. Travel is generally not authorized after April 15<sup>th</sup> of each year (extensions may be granted as conditions allow).

A Cross Country Travel Route Map is required to obtain authorization. Is the map attached?

Name the individual(s) or business(es) who will be conducting the cross country travel:

\_\_\_\_\_

List all equipment and vehicles being transported from box 14:

\_\_\_\_\_

State the average total miles traveled in one round trip: \_\_\_\_\_. State the number of trips proposed: \_\_\_\_\_.

State the start and end date(s) or period(s) of proposed cross country travel: \_\_\_\_\_.

Select the following terrain type(s) that best describes your route of travel: Wetlands Tundra

Uplands Rivers or Other Water Bodies Wooded Areas (6" Trees or larger at breast height)

Will water be needed to construct ramps/ ice bridges? Yes No

If Yes, estimated quantity of water will be used \_\_\_\_\_ gallons/day WaterSource: \_\_\_\_\_

**CROSS COUNTRY TRAVEL, CONTINUED**

**Section Not Applicable**

Are you transporting fuel?      Yes                      No

The volume of fuel and hazardous substances to be used is the total volume (in gallons) to be carried on one vehicle and any trailers or sleds that vehicle is towing.

Maximum volume of fuel (in gallons) that is being transported by one vehicle and any trailers or sleds it is towing:

Are you transporting other hazardous substances?      Yes                      No    If "yes", indicate type and amount:

How are petroleum products contained? (i.e., drums, bladders, steel tanks, etc.)    Indicate size of containers:

How are petroleum products being transported? (i.e., skid-mounted tank; trailer; 55 gallon drums on skid; etc.)

Do you have an Oil Discharge Prevention and Contingency Plan approved by the Alaska Department of Environmental Conservation?      Yes                      No

Do you have either a trained spill response team or a contract with a spill response company?      Yes                      No

Describe any measures you plan to take to minimize drips or spills from leaking equipment or vehicles:

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Does your cross country travel include the staging or storage of equipment or structures off the claim block?    Yes    No

If Yes, describe the location and dimensions of the long term or short term parking and/or storage areas.

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**FUEL AT MINE SITE**

**(17)**

Describe the total volume of fuel stored on site:                      [BLM Operators Only - Spill Worksheet is Required]

0-1,320 gallons (secondary containment recommended, but not required)

1,321-10,000 gallons (Self Certified Spill Prevention, Control and Countermeasure Plan (SPCC) required)

10,000+ gallons (Certified Engineered Plans required)

Indicate Distance Stored From Flowing Waters: \_\_\_\_\_ Feet (Minimum distance from naturally occurring water bodies required by DNR is 100 feet).

Are fuel containment berms around storage containers?      Yes      No      Is berm area lined?      Yes      No

**ABOVEGROUND STORAGE TANK REGISTRATION**

**(18)**

If your operation will employ the use of at least one 1,000-gallon aboveground storage tank of noncrude oil (e.g. diesel), it must now be listed on a Class 2 Facility Registration and Notification Form. For additional information, including the registration form, visit <http://dec.alaska.gov/spar/ppr/prevention-preparedness/class-2-facilities/> or contact Class 2 facility staff at (907)465-5237 or [dec.spar.class2@alaska.gov](mailto:dec.spar.class2@alaska.gov).      Understood:      Yes      No

**TEMPORARY STRUCTURES/FACILITIES**

**(19)**

**Describe all temporary improvements (including buildings, tent platforms, out-buildings, etc., including thier quantity, dimensions and building type.**

Will/are any structures stored on general State lands (NOT within the permitted claim block)?    Yes                      No

Will the structures be temporary or maintained year round?    Temporary (From \_\_\_\_\_ to \_\_\_\_\_)                      Year Round

Request use of existing facilities (Indicate number and dimensions of each) on ADL(s): \_\_\_\_\_

Area of Camp: Length \_\_\_\_\_ Feet                      Width \_\_\_\_\_ Feet  
Frame \_\_\_\_\_                      Trailer \_\_\_\_\_                      Tent/Tent Frame \_\_\_\_\_.

Request to place temporary structures (Indicate number and dimensions of each) on ADL(s): \_\_\_\_\_

Area of Camp: Length \_\_\_\_\_ Feet                      Width \_\_\_\_\_ Feet  
Frame \_\_\_\_\_                      Trailer \_\_\_\_\_                      Tent/Tent Frame \_\_\_\_\_ .

Camp authorization is not requested because: \_\_\_\_\_.

If camp is on private land, provide location: \_\_\_\_\_.

Wastewater - Describe the wastewater type and quantity and proposed method of wastewater disposal:  
\_\_\_\_\_  
\_\_\_\_\_.

Waste- Describe the types of waste that will be generated on-site, including solid waste, the source of the waste, and the method of waste disposal, i.e. pit privy, or self-contained system, or outfall line; indicate distance from the nearest water body: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

What is the distance structures, including pit privies will be located from the ordinary high water mark of the nearest freshwater body (lake, stream, river, rivulet, etc.), or the mean high water mark of a saltwater body: \_\_\_\_\_.

Will there be any use of animals ( horses, dogs, goats/sheep, etc)?                      Yes                      No

Dismantle, Removal, and Restoration Plan: Provide a plan for dismantling and removing temporary structures. Include the method and timeline for restoration of all stucture location areas.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

**MINING METHOD**

**Section Not Applicable (20)**

Mechanical Placer Mining (e.g., terrestrial open-cut operations with dozer or excavator, etc.)

Estimated cubic yards processed annually: \_\_\_\_\_

Suction dredge                      Mechanical dredge (e.g., excavator or clam-shell)

List all suction and mechanical dredges. If information is not applicable, write "N/A." Attach extra sheet if necessary.

	Dredge 1		Dredge 2		Dredge 3	
Vessel ID (Name or Number)						
Vessel Dimensions						
Suction Dredge Intake Nozzle Diameter / Pump Size	Inches:	HP:	Inches:	HP:	Inches:	HP:
Mechanical Dredge Bucket Volume	Cubic Yards:		Cubic Yards:		Cubic Yards:	
Processing Rate	Yds. <sup>3</sup> /Hr.:		Yds. <sup>3</sup> /Hr.:		Yds. <sup>3</sup> /Hr.:	
Wastewater Discharge Rate	GPM:		GPM:		GPM:	
Maximum Water Depth	Feet:		Feet:		Feet:	
Average Daily Operating Hours						
Operation on Sea Ice (Yes/No)	Yes / No		Yes / o		Yes / No	
Vessel Registration # / State	#:	State:	#:	State:	#:	State:

Location:                      Offshore / Salt Water                      Pond connected to stream  
    Stream    Pond isolated from stream  
    Mine cut isolated from stream

**EXPLORATION TRENCHING and DRILLING**

**(21)**

(Indicate locations on sketch sheet and/or topographic map)

Trenching:

Estimated number of trenches to be excavated: \_\_\_\_\_ . How long will trenches be open? \_\_\_\_\_ .

Average Size: Length: \_\_\_\_\_ Feet Width: \_\_\_\_\_ Feet Depth: \_\_\_\_\_ Feet

Drilling:

Number of Holes To Be Drilled: \_\_\_\_\_ Type of Drill(s) Used: \_\_\_\_\_

Estimated Maximum Depth: \_\_\_\_\_ Feet Diameter of Drill Holes \_\_\_\_\_ Inches .

Will water be used?    Yes    No    Indicate how many pumps per water source: \_\_\_\_\_

Water source name(s): \_\_\_\_\_

\*\*\*Describe closure, plugging methodology, reclamation and abandonment in project narrative.\*\*\*

Trench/Drilling Location and Mining Claim Information			
Trench/Drill ID on Map	ADL/BLM/USMS NUMBER	NAD 83 Datum - Coordinates can be obtained using Alaska Mapper <a href="http://dnr.alaska.gov/mapper/controller">http://dnr.alaska.gov/mapper/controller</a>	
		Latitude	Longitude (approximate)

If more than 8 trenches/drill sites, please provide data in tabular format ([http://dnr.alaska.gov/mlw/forms/19apma/AHEA\\_ReclamationSpreadsheet.xls](http://dnr.alaska.gov/mlw/forms/19apma/AHEA_ReclamationSpreadsheet.xls).)

**EXPLOSIVES**

**Section Not Applicable (22)**

Will explosives be used? Yes No If "Yes", Indicate: Type: \_\_\_\_\_ Amount: \_\_\_\_\_.

Explosive Handler's Certification/ATF Permit Numbers: \_\_\_\_\_

Describe your blast design, blast schedule, and explosives handling plan in the project narrative.

**DAMS**

**Section Not Applicable (23)**

No dam required Existing To be constructed

Proposed Structure: Temporary Permanent

Purpose: Makeup water pond Settling/recycle pond Stream diversion Other: \_\_\_\_\_

Length: \_\_\_\_\_ ft Height: \_\_\_\_\_ ft Width At Crest: \_\_\_\_\_ ft Width At Base: \_\_\_\_\_ ft

Note: Height should be measured from the lowest point at either the upstream or downstream toe of the dam to the crest of the dam.

Water impoundment capacity (if known): \_\_\_\_\_ acre-feet

**IN-STREAM ACTIVITIES and STREAM CROSSINGS**

**(24)**

List any equipment that will be crossing streams or used in-stream (refer to Box 14 if necessary):

\_\_\_\_\_

List all stream crossings, suction dredge or pump locations, including unnamed streams.

	Stream Name/ Water Source	NAD 83 Datum (approximate) Coordinates can be obtained using Alaska Mapper <a href="http://dnr.alaska.gov/mapper/controller">http://dnr.alaska.gov/mapper/controller</a>		MTRSC ¼ ¼ Ex: F001S001N01 SWSW	Check boxes to indicate type(s) of activity		
		Latitude ddd.mmmm	Longitude -ddd.mmmm		Crossing	Dredging	Water Intake
1.							
2.							
3.							
4.							
5.							

If in-stream activities and/or stream crossings are requested at more than 5 locations, please provide tabular data format (DNR template available at <http://dnr.alaska.gov/mlw/forms/?tab=mining>).

**WATER USE AUTHORIZATIONS**

Water usage (including from 100% recycle systems) may require approval by either Temporary Water Use Authorization or a Water Right. Information provided below will be used to determine the quantity of water that you may be authorized to use for your mining operation. When estimating water quantities, please estimate withdrawal amounts typical of a dry summer and provide the maximum quantity that you may withdraw from a particular source (e.g. stream, pond, groundwater, etc.) in a season.

A Temporary Water Use Authorization application may be initiated from this APMA application unless a Water Right is requested. Please contact the ADNR, Water Resources Section at telephone number (907) 451-2790 if interested in a Water Right or for more information.

**A. START-UP WATER AND MAKE-UP WATER:**

Is water withdrawn from any lake, stream, creek, river, etc. (does not include recycling/settling ponds)? Yes No

What is the name(s) of the lake, stream, creek, river, etc.? \_\_\_\_\_

What are the months of water use needed (for example May 1<sup>st</sup> through October 31<sup>st</sup>)? \_\_\_\_\_

**Start-up water:** Is water required at the start of the season **to fill** your recycle/settling pond system?

Yes (if **YES**, complete information below). No If yes, what is the source name? \_\_\_\_\_

Source: Seepage infiltration from groundwater gained from cut and/or stream

Diversion ditch from stream. Number of days diverting from stream for start-up water: \_\_\_\_\_

Water intake rate: \_\_\_\_\_ gpm \_\_\_\_\_ hrs/day

Pump from stream. Number of days pumping from stream for start-up water: \_\_\_\_\_

Number of water pumps for start-up water: \_\_\_\_ Water intake rate (list for each pump): \_\_\_\_\_ gpm  
\_\_\_\_\_ hrs/day

**Make-up water:** Is water required **to maintain** water level in your recycle/settling pond system?

Yes (if **YES**, complete information below). No If yes, what is the source name? \_\_\_\_\_

Source: Seepage infiltration from groundwater gained from cut and/or stream

Ditch from stream. Number of days diverting from stream for make-up water: \_\_\_\_\_

Water intake rate: \_\_\_\_\_ gpm \_\_\_\_\_ hrs/day

Pump from stream. Number of days pumping from stream for make-up water: \_\_\_\_\_

Number of water pumps for make-up: \_\_\_\_ Water intake rate (list for each pump): \_\_\_\_\_ gpm  
\_\_\_\_\_ hrs/day Pump intake size: \_\_\_\_\_ inches

**B. RECYCLE/SETTLING POND SYSTEM.**

Beaver ponds or other natural water features will not be permitted for use as settling ponds.

Is a pre-settling pond used?: Yes No Is recycle used?: Yes No

How many ponds are used in the recycle system? \_\_\_\_\_

Recycle pond is pond # \_\_\_\_\_ Settling pond is pond # \_\_\_\_\_

**C. RECYCLE/SETTLING POND SYSTEM (continued).**

Indicate Length (L), Width (W), and Depth (D) of each pond:

Pond # 1: L: \_\_\_\_\_ ft W: \_\_\_\_\_ ft D: \_\_\_\_\_ ft Pond # 2: L: \_\_\_\_\_ ft W: \_\_\_\_\_ ft D: \_\_\_\_\_ ft  
Pond # 3: L: \_\_\_\_\_ ft W: \_\_\_\_\_ ft D: \_\_\_\_\_ ft Pond # 4: L: \_\_\_\_\_ ft W: \_\_\_\_\_ ft D: \_\_\_\_\_ ft  
Pond # 5: L: \_\_\_\_\_ ft W: \_\_\_\_\_ ft D: \_\_\_\_\_ ft Pond # 6: L: \_\_\_\_\_ ft W: \_\_\_\_\_ ft D: \_\_\_\_\_ ft



Estimated hours per day that pump(s) will be used, return line size (in inches), operating pump rate (in gallons per minute), and water usage days per month:

Pump #1: \_\_\_\_\_ hrs/day \_\_\_\_\_ inches \_\_\_\_\_ gpm \_\_\_\_\_ days/month

Pump #2: \_\_\_\_\_ hrs/day \_\_\_\_\_ inches \_\_\_\_\_ gpm \_\_\_\_\_ days/month

Pump #3: \_\_\_\_\_ hrs/day \_\_\_\_\_ inches \_\_\_\_\_ gpm \_\_\_\_\_ days/month

**D. CAMP WATER USE.**

Is camp water used?    Yes        No

Maximum number of persons present in camp at a time \_\_\_\_\_

Camp water source:    Well    Haul    Stream    Spring    Lake

Name of water source (if any): \_\_\_\_\_.

Camp pump intake diameter: \_\_\_\_\_ Camp pump rate: \_\_\_\_\_ gpm \_\_\_\_\_ hrs/day

**E. EXPLORATION ACTIVITIES.**

Is water required for exploration activities?    Yes        No

If **YES**, What types of exploration activities are being performed?    Trenching        Drilling

If **YES**, How many pumps are used in the exploration activities? \_\_\_\_\_

Estimated hours per day that pump(s) will be used, return line size (in inches), operating pump rate (in gallons per minute), and water usage days per month: Pump #1: \_\_\_\_\_ hrs/day \_\_\_\_\_ inches \_\_\_\_\_ gpm \_\_\_\_\_ days/month

**A map of your requested drilling water sources is required with the following information:**

- MTRS sections,
- stream reaches or other water sources (please label, including take points if known)
- and drill hole locations

**F. SUCTION DREDGING.**

If suction dredging activity is occurring please ensure that you have completed the dredge table in Section **(20) MINING METHOD.**

**WASTEWATER DISCHARGE PERMIT APPLICATION *Section Not Applicable* (26)**

All mechanical placer mine, suction dredge, and mechanical dredge operations that discharge to a water of the U.S. require an Alaska Pollutant Discharge Elimination System (APDES) permit from DEC. See Page Two for a list of APDES permit fees.

Operations wishing to discharge under the APDES Small Suction Dredge General Permit (dredges with intake diameters of 6" or less, or highbankers) may skip this section but must complete annual online registrations, including \$25 fee payments, at <http://alaska.gov/go/2MPF>.

Previously issued DEC-APDES Wastewater discharge permit #: \_\_\_\_\_

Do you want this APMA to act as an application or renewal for any of the following APDES general permits (GPs)\*:

Mechanical Placer Miners GP (open-cut terrestrial operations):	Yes	No
Medium-Size Suction Dredge GP (nozzle diameter greater than 6" to 10"):	Yes	No
Norton Sound Large Dredge GP (nozzle diameter greater than 10" or mechanical dredge):	Yes	No

**Waterbody the discharge flows directly into, or would potentially flow:** \_\_\_\_\_

**Approximate coordinates of mine site:**

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Source (e.g., DNR - Alaska Mapper): \_\_\_\_\_

\*Mechanical placer operations that do not elect coverage under the Mechanical Placer Miners GP may be required to obtain coverage under the Multi-Sector General Permit for Storm Water. Contact DEC to terminate a permit.

**Optional\* - Mixing Zone Request or Termination for Mechanical Placer Mine Operations**

Do you wish to apply for a mixing zone and modified turbidity limit from DEC? Yes  No

If a mixing zone is requested, provide the following:

Coordinates of discharge location: Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_.

Maximum Effluent Flow anticipated from your operation \_\_\_\_\_ (GPM) [must be greater than zero (0)].

Distance to nearest downstream drinking water source \_\_\_\_\_ and downstream placer mine \_\_\_\_\_.

Do you wish to terminate an active authorized mixing zone? Yes (APDES# \_\_\_\_\_)  No

\*A mixing zone authorizes an increase in the permit's turbidity limit based on available dilution from the surface water. Permittees without mixing zones must meet the water quality standard for turbidity at the point of discharge into the surface water.

**Certification Statement – applicable only to information required for DEC authorizations  
(required for all DEC permit or mixing zone applicants)**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

**Signature of Responsible Party:** \_\_\_\_\_

**Responsible Party Name (First Last, Position) - Printed:** \_\_\_\_\_

**Business Name (if applicable) - Printed:** \_\_\_\_\_

**SECTION 404 WETLANDS PERMIT**

**JURISDICTIONAL DETERMINATION (CORPS JD) and MITIGATION STATEMENT**

**All Placer Mining applicants are required to contact the Corps of Engineers for submittal requirements.**

A complete application for a Department of the Army (DA), U.S. Army Corps of Engineers (Corps) Section 404 permit includes a description of project impacts (contained in the APMA), a Jurisdictional Determination (JD) and a Mitigation Statement. The applications for the JD and the Mitigation Statement are contained in two Corps Supplements, which may be attached to this APMA. The Supplements may be downloaded from the Corps and DNR websites, or obtained directly from a Corps office in paper copy, by email, or mail. Please contact the Corps to determine what supplements are required.

**Corps Supplement, Attachment 1, Jurisdictional Determination:** Attachment 1 must be filled in and submitted to the Corps for **all new placer applications (New and Existing Operations)**. Photos of your mine site are required. Your JD will be valid for five years. Your photos will be used only for the purpose of conducting an offsite JD.

**Corps Supplement, Attachment 2, Mitigation Statement:** Alaska District regional mitigation policy for placer mining operations under this General Permit (GP) emphasizes avoidance and minimization of impacts; **compensatory mitigation is not required**. However, by regulation, a Mitigation Statement covering measures for avoidance, minimization, and compensatory mitigation, or, a reason why compensatory mitigation is not proposed, must be submitted to the Corps with each new APMA for projects that impact waters of the U.S.

**Note:**

- If your APMA requires, but does not include a JD or Mitigation Statement, your application will be considered incomplete. The Corps may also contact you for additional information. Please ensure your contact information on the front page is current.
- For BLM Operators: A complete 404 Wetland Permit Package with additional photos of the upland areas to be mined will be sufficient to meet the requirement for the uplands reclamation baseline data and riparian mitigation measures as required by § 43 CFR 3809.

**Provide the Latitude and Longitude of the operation location (DD, NAD83):**

Latitude: \_\_\_\_\_ Longitude: - \_\_\_\_\_

Source (e.g., DNR - Alaska Mapper): \_\_\_\_\_

**Please list Corps permits previously issued for this site:** POA- \_\_\_\_\_ - \_\_\_\_\_ , POA- \_\_\_\_\_ - \_\_\_\_\_

**Certification Statement**

The Alaska District will accept the APMA as a pre-construction notification, pursuant to 33 CFR 320.1 (c). Application is hereby made for a permit to authorize the work described in this APMA. I certify the information in the APMA, and any required Supplements, is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the operator/ applicant.

Operator or Agent: \_\_\_\_\_

Print Name

Signature

Date

**STREAM DIVERSION**

**Section Not Applicable (28)**

**A MAP OF COMPLETE STREAM DIVERSION IS REQUIRED:** Plan Map of Operation included in the APMA should show the entire length of the diversion (i.e. where the water is diverted from the natural stream channel to where it returns to the natural stream channel) with start and end locations clearly marked.

**Please note:** If you have a stream diversion structure; this structure may also qualify as a dam and be subject to the Alaska Department of Natural Resources Dam Safety Program per definitions provided in AS 46.17.900(3). Complete Section 24 (regarding a Dam) of this APMA. If you require further regulatory guidance regarding dams, please contact our Dam Safety and Construction Unit, Dam Safety Engineer at telephone number 907-269-8636 or for more information go to the Alaska Dam Safety Program website at: <http://dnr.alaska.gov/mlw/water/dams/index.cfm>

**Is stream diversion required?** Yes (if **YES**, complete information below). No

Existing (Date Constructed \_\_\_\_\_) To Be Constructed (Date \_\_\_\_\_)

**If a diversion is required or pre-existing, please contact your local ADF&G, Division of Habitat for Fish Habitat Permitting information. To facilitate permit issuance, please provide the following information:**

Is Stream Diversion? Permanent Temporary \_\_\_\_\_ year(s) \_\_\_\_\_ months

Will diversion be reclaimed annually prior to freeze-up or be retained throughout the mine life?

Annually reclaimed/returned to natural stream Maintained throughout mine life

Dimensions of existing stream in diversion area:

Length \_\_\_\_\_(ft) Top Width\_\_\_\_(ft) Bottom Width\_\_\_\_(ft) Depth\_\_\_\_(ft) Floodplain Width\_\_\_\_(ft)

Dimensions of proposed diversion:

Length \_\_\_\_\_(ft) Top Width\_\_\_\_(ft) Bottom Width\_\_\_\_(ft) Depth\_\_\_\_(ft) Floodplain Width\_\_\_\_(ft)

Dominant substrate type (Choose Two): Bedrock Boulder Cobble Gravel Sand Silt/Clay

Note: Diversion should approximate the existing stream in terms of meander bends, length, depth, stream width, and floodplain width.

**(Please provide plan and profile diagrams of diversion in Section 29, PLAN MAP OF OPERATION) or attach additional sheets as necessary**

**PLAN MAP OF OPERATION**

**(29)**

**VICINITY MAP**

Date Prepared:	Applicant Name:
<b>STATE OF ALASKA</b> <b>DEPARTMENT OF NATURAL RESOURCES</b> <b>DIVISION OF MINING, LAND AND WATER</b>	
<b>MAP:</b>	
Sec.(s) _____ Township _____, Range _____, Meridian _____	
Scale: 1" = _____	ADLs:
SHEET OF _____	APMA # _____

(Attach additional sheets, along with detailed explanations as necessary)

**CROSS SECTION SKETCH**

**BEFORE MINING**

**Section Not Applicable (30)**

**DURING MINING**

**AFTER MINING**

Date Prepared:

Applicant Name:

**STATE OF ALASKA  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF MINING, LAND AND WATER**

**MAP:**

Sec.(s) \_\_\_\_\_ Township \_\_\_\_\_, Range \_\_\_\_\_, Meridian \_\_\_\_\_

Scale: 1" = \_\_\_\_\_

ADLs:

SHEET OF

APMA #



2018 ANNUAL RECLAMATION STATEMENT

(32)

Placer Mining
Suction Dredging
Hardrock Exploration

APMA # : \_\_\_\_\_.

Complete and return this statement by December 31, 2018. If you did not operate, fill in name, check bottom box, sign and return form.

In accordance with AS 27.19 (Reclamation Act):

I, \_\_\_\_\_ hereby file an annual reclamation statement for the 2017 mining operation described in subject Application for Permits to Mine in Alaska. (Submission of this statement does not constitute reclamation approval.)

Volume of material disturbed in 2018: \_\_\_\_\_ cubic yards (includes strippings and processed material).

Sluice days last season: \_\_\_\_\_ Cubic yards of material processed daily: \_\_\_\_\_ Annually : \_\_\_\_\_.

Total acreage disturbed in 2018: \_\_\_\_\_ acres. (Includes stripped areas, mining cuts, overburden and tailing stockpiles and disposal areas, temporary stream diversions, stream bypasses, and settling ponds). Federal operators should include area of camp and access roads.

Length \_\_\_\_\_ feet and Width \_\_\_\_\_ feet of stream diversion. No Diversion

Stream diversion: Temporary Permanent (check one).

Total area reclaimed in 2018: \_\_\_\_\_ acres.

Total un-reclaimed acres: \_\_\_\_\_ (This should match "total acreage currently disturbed" on the 2019 Reclamation Plan Form.)

For areas reclaimed, the following reclamation measures were used (check only measures that were used).

You must include photographs or videotapes of the completed reclamation work:

- Spread and contoured tailings
Spread topsoil, vegetation, overburden muck or fines on the surface of contoured tailings
Reestablished flood plain with stream channel in stable position
Ponds are reclaimed
Backfilled and reclaimed temporary stream diversions
Camp removed, cleaned up and left free of debris
Hardrock Exploration : Complete and submit an electronic Annual Reclamation Report

Other reclamation measures taken:

Empty rectangular box for other reclamation measures.

I did not operate in 2018 and therefore did not conduct reclamation.

Relationship to Claim(s)

Owner Lessee Operator

Agent For: \_\_\_\_\_

Signed



Date



RECLAMATION PLAN

(33)

RECLAMATION PLAN

(Disturbed Area 5 Acres Or Greater or BLM Notices)

LETTER OF INTENT TO DO RECLAMATION

(Disturbed Area Less Than 5 Acres)

In accordance with Alaska Statute 27.19, reclamation is required of all mining operations. Reclamation bonding is required of operations with disturbance of 5 acres or greater. Completion of this application will meet the requirements for a "Reclamation Plan" for operations 5 acres and larger in size and for a "Letter of Intent To Do Reclamation" for operations under 5 acres. If you do not intend to use the reclamation methods presented below, you must provide additional information concerning your plans for reclamation under separate attachments.

BLM requires that the reclamation plan be consistent with §43 CFR 3809.420, Performance Standards for the Surface Management regulations for Federal Operations. Refer to 43 CFR 3809 or the BLM minerals website available at http://www.blm.gov/ak/st/en/prog/minerals.html for more information on what is needed for a reclamation plan on Federal lands.

Total acreage currently disturbed: \_\_\_\_\_ acres. This should match: "Total Unreclaimed Acres" on your 2018 Annual Reclamation Statement for Small Mines, or line #7 on your 2019 Bond Pool Renewal Form. Disturbed ground includes all unreclaimed mining and exploration activity (excluding camps and roads) since October 1991. Federal operators must include areas of camps and roads.

New acres to be disturbed in 2019 \_\_\_\_\_ acres. Total acreage (currently disturbed plus new acres): \_\_\_\_\_ acres.

Acreage disturbed by land status: \_\_\_\_\_ State (general) \_\_\_\_\_ State (Mental Health) \_\_\_\_\_ Private \_\_\_\_\_ Federal

Total acreage to be reclaimed in 2019: \_\_\_\_\_ acres; Total volume of material to be disturbed in 2019: \_\_\_\_\_ cubic yards.

Include strippings and overburden to be removed. Cubic yards = Length (yards) x Width (yards) x Depth (yards).

Reclamation will be conducted concurrently with activity. Reclamation will be conducted at the end of the season.

THE FOLLOWING RECLAMATION MEASURES SHALL BE USED:

(These measures are required by law. Those that do not apply may be crossed out; but, an explanation must be given as to why these measures are not necessary at your site.)

- Topsoil, vegetation, and overburden muck, not promptly redistributed to an area being reclaimed, will be individually separated and stockpiled for future use. This material will be protected from erosion and from contamination by acidic or toxic materials and will not be buried by tailings.
• The area reclaimed will be reshaped to blend with the surrounding area using tailings, strippings, and overburden and be stabilized.
• Stockpiled topsoil, overburden muck, will be spread over the contoured exploration sites to promote natural plant growth such that the area can reasonably be expected to revegetate within five years. Stockpiled vegetation will be spread over topsoils.
• Exploration trenches will be backfilled. Brush piles, stumps, topsoil, and other organics will be spread on the backfilled surface to inhibit erosion and promote natural revegetation. Exploration trenches shall be flagged and signs posted to notify the public of the existence of the open trenches. All exploration trenches shall be reclaimed by the end of the exploration season in which they are constructed, unless specifically approved by the DMLW.
• Shallow auger holes (limited to depth of overburden) shall be backfilled with drill cuttings or other locally available material in such a manner that closes the hole to minimize the risk to humans, livestock and wildlife.
• All drill hole casings shall be removed or cut off at, or below, ground level. All drill holes shall be plugged by the end of the exploration season with bentonite holeplug or equivalent slurry, for a minimum of 10 feet within the top 20 feet of the drill hole. The remainder of the hole will be backfilled to the surface with drill cuttings. If water is encountered in any drill hole, a minimum of 7 feet of bentonite holeplug or equivalent slurry shall be placed immediately above the static water level in the drill hole. Complete filling of the drill holes, from bottom to top, with bentonite holeplug or equivalent slurry is also permitted and is considered to be the preferred method of hole closure during which they are drilled, unless otherwise specifically approved by the DMLW.
• If artesian conditions are encountered, the operator shall contact the DMLW (Kindra Geis (907) 451-2790) and the DEC (Tim Pilon at (907) 451-2136) for hole plugging requirements.
• All buildings and structures constructed, used or improved, on State land, will be removed, dismantled, or otherwise properly disposed of at the completion of the activity. The campsite will be cleaned up and left free of debris. In consideration of potentially significant historic properties/cultural resources, do not remove or disturb any buildings, structures, objects, or artifacts that were located on the site prior to the current operation without preauthorization from SHPO (Contact Mckenzie Johnson of SHPO at (907) 269-8726 or mckenzie.johnson@alaska.gov ).

IMPORTANT: 1. Alternative reclamation measures may be approved if the reclamation measures presented above are not applicable to your site. Please explain in separate correspondence. Submit a sketch and describe additional reclamation measures you propose to conduct at your operation. Reclamation measures must comply with AS 27.19.
2. Federal land managers may require reclamation measures different to those identified above.

BONDING: In accordance with AS 27.19, bonding is required for all operations having a mined area of ≥ five acres on State Land. This area must be bonded for \$750.00 per acre, unless the miner can demonstrate that a third party contractor can do the needed reclamation for less than that amount. A Statewide bonding pool has been established and may be joined by completing the bond pool application form. No reclamation plan approval goes into effect until the bonding pool deposit and annual nonrefundable fee are paid. Federal land managers may have additional bonding requirements. Use bond form to calculate area of disturbance for bonding.

Form with fields for Printed name (Applicant), Signature (Applicant), Relationship to Mineral Property (Owner, Lessee, Operator, Agent For), Date, and APMA #.

STATE OF ALASKA  
DEPARTMENT OF NATURAL RESOURCES  
STATE WIDE BOND POOL FORM

APMA # \_\_\_\_\_.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
Zip Code

Submits unto the State of Alaska, Department of Natural Resources, the sum of

\$ \_\_\_\_\_ DOLLARS

for payment into the State Wide Bonding Pool to meet the bonding requirements of Alaska Statute 27.19 for mining activity located on claim numbers

\_\_\_\_\_  
These claims are located within legal description (Township, Range, Section, Meridian

\_\_\_\_\_  
This bond amount was calculated as follows:

For **Federal Claims**: The total area of the mining operation, including camp site, access roads, unreclaimed areas, and areas to be stripped for mining next season is \_\_\_\_\_ acres. Acreage should be rounded to the next whole acre. This acreage must include all areas disturbed by mining operations after January 1, 1981, that have not been approved as reclaimed by BLM. If a mining operation disturbs a previously mined area, that area must also be included in the acreage to be bonded.

For **State and Patented Claims**: The active mining disturbance, not including camp and access roads is \_\_\_\_\_ acres (acreage should be rounded to the next whole acre). This includes all areas that are part of the mining operation; including stripped areas, mining cuts, overburden and tailing stockpiles and disposal areas, temporary or permanent stream diversions, and settling ponds. This acreage must include all areas disturbed by a mining operation after October 15, 1991 that have not been approved as reclaimed by ADNR. If a mining operation disturbs a previously mined area, that area must also be included in the acreage to be bonded.

Refundable bond deposit (new): \_\_\_\_\_ acres X \$112.50 = \$ \_\_\_\_\_.

Nonrefundable bond pool annual fee (new): \_\_\_\_\_ acres X \$ 37.50 = \$ \_\_\_\_\_.

Total \$ \_\_\_\_\_.

Make check payable to 'Department of Natural Resources'. Sign and return form with applicable fees to: DNR - Mining: 550 W. 7<sup>th</sup> Ave. Suite 900B, Anchorage, AK 99501-3577 or 3700 Airport Way, Fairbanks, AK 99709-4699.

\_\_\_\_\_  
Signed - Miner

\_\_\_\_\_  
Date

\_\_\_\_\_  
ADNR - Division of Mining, Land & Water

\_\_\_\_\_  
Date

\_\_\_\_\_  
BLM - Bureau of Land Management

\_\_\_\_\_  
Date

**AMENDED ACREAGE**  
**STATE OF ALASKA**  
**DEPARTMENT OF NATURAL RESOURCES**  
**STATE WIDE BOND POOL FORM**

*Section Not Applicable*

APMA # \_\_\_\_\_.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Mailing Address

\_\_\_\_\_  
City State Zip Code

Submits unto the State of Alaska, Department of Natural Resources, the sum of  
\$ \_\_\_\_\_ DOLLARS

for payment into the State Wide Bonding Pool to meet the bonding requirements of Alaska Statute 27.19 for mining activity located on  
claim numbers

\_\_\_\_\_

These claims are located within legal description (Township, Range, Section, Meridian

\_\_\_\_\_

This bond amount was calculated as follows:

For **Federal Claims**: The total area of the mining operation, including camp site, access roads, unreclaimed areas, and areas to be stripped for mining next season is \_\_\_\_\_  
acres. Acreage should be rounded to the next whole acre. This acreage must include all areas disturbed by mining operations after January 1, 1981, that have not been approved as reclaimed by BLM. If a mining operation disturbs a previously mined area, that area must also be included in the acreage to be bonded.

For **State and Patented Claims**: The active mining disturbance, not including camp and access roads is \_\_\_\_\_ acres (acreage should be rounded to the next whole acre). This includes all areas that are part of the mining operation; including stripped areas, mining cuts, overburden and tailing stockpiles and disposal areas, temporary or permanent stream diversions, and settling ponds. This acreage must include all areas disturbed by a mining operation after October 15, 1991 that have not been approved as reclaimed by ADNR. If a mining operation disturbs a previously mined area, that area must also be included in the acreage to be bonded.

Original acreage bonded: \_\_\_\_\_.

New acreage bonded: \_\_\_\_\_.

Refundable bond deposit (new): \_\_\_\_\_ acres X \$112.50 = \$ \_\_\_\_\_.

Nonrefundable bond pool annual fee (new): \_\_\_\_\_ acres X \$ 37.50 = \$ \_\_\_\_\_.

Total \$ \_\_\_\_\_.

Grand total of bonded acres: \_\_\_\_\_.

Make check payable to 'Department of Natural Resources'. Sign and return form with applicable fees to: DNR - Mining: 550 W. 7<sup>th</sup> Ave. Suite 900B, Anchorage, AK 99501-3577 or 3700 Airport Way, Fairbanks, AK 99709-4699.

\_\_\_\_\_  
Signed – Miner Date

\_\_\_\_\_  
ADNR - Division of Mining, Land & Water Date

\_\_\_\_\_  
BLM - Bureau of Land Management Date



**NOTICE OF OPERATOR AUTHORIZATION -- STATE MINERAL LOCATIONS Section Not Applicable**

All operators or lease holders submitting APMA's for operations on State mineral locations must submit a "Notice of Authorization" from the owner of record. This notice of authorization must name the operator and leaseholder (if different), the claims(s) by Name and ADL number(s), and the time frame (beginning and ending dates) for which the authorization remains in force. The Division of Mining, Land & Water will not issue any mining permits until we receive this Notice of Authorization. **Please include it with your APMA.**

**OPERATOR AUTHORIZATION**

I, \_\_\_\_\_, OWNER of state claim(s) :

<u>Claim Name</u>	<u>ADL Number</u>	<u>Claim Name</u>	<u>ADL Number</u>	<u>Claim Name</u>	<u>ADL Number</u>

(Attach additional sheet if necessary)

Have authorized \_\_\_\_\_.

**Address of Operator** \_\_\_\_\_.

to operate on these claims from \_\_\_ / \_\_\_ / \_\_\_ to \_\_\_ / \_\_\_ / \_\_\_.

Owner's Signature \_\_\_\_\_ Date \_\_\_\_\_

**NOTARY**

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

For (owner)

(Signature of Notary) \_\_\_\_\_.

My commission expires:

**OR** (If the LESSEE and OPERATOR are not the same, both sections must be completed)

I, \_\_\_\_\_, LESSEE of state claim(s) :

<u>Claim Name</u>	<u>ADL Number</u>	<u>Claim Name</u>	<u>ADL Number</u>	<u>Claim Name</u>	<u>ADL Number</u>

(Attach additional sheet if necessary)

have authorized \_\_\_\_\_ to operate on these claims from \_\_\_ / \_\_\_ / \_\_\_ to \_\_\_ / \_\_\_ / \_\_\_.

Lessee's Signature \_\_\_\_\_ Date \_\_\_\_\_

Lessee's Address \_\_\_\_\_.

**NOTARY:**

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

For (Lessee)

(Signature of Notary) \_\_\_\_\_.

My commission expires:

## **PEBBLE PROJECT 2019-2023 Narrative of Operations (APMA Block 31)**

The Pebble Limited Partnership (PLP) operates an advanced exploration program on Alaska State mining claims registered to the Pebble East Claims Corporation and Pebble West Claims Corporation. These claims occupy a contiguous 416-square mile area generally located northwest of Iliamna Lake near Iliamna, Alaska (Iliamna C7, C8, D6, D7, D8 USGS Topographic Maps, Seward Meridian) (Figures 1-6). Individual claims are listed in Appendix A for each corporation.

During the requested permit term, PLP intends to continue exploration activities within the claim block to support permitting efforts and advance design options for potential mine facilities. Field activities described in this application are expected to begin on or about May 1, 2019 and continue through 2023. Planned activities include:

- 121 exploration boreholes
- Repairs to Borehole 3127 and Borehole 9475
- Routine inspections and maintenance

Field seasons generally run from May through October of each year, although some activities may occur year-round. Prior to the start of each field season, PLP will submit an updated description of upcoming activities to ADNR for review and approval as required.

### **1. GENERAL FIELD OPERATIONS**

#### **1.1 SITE ACCESS**

There are no roads to the claim block. PLP (and its predecessor, Northern Dynasty Minerals) have conducted all field activities via helicopter and will continue to do so for the renewed permit term. Snow machines may be used for short distance travel around field installations located entirely within the claim block; they may not be used to provide access from outside the claim block or conduct cross-country travel. Snow machine use is further restricted to areas where snow cover is sufficient to protect underlying vegetation.

#### **1.2 TEMPORARY FIELD INSTALLATIONS**

PLP maintains several small field installations within the claim block that serve as staging and storage areas or data collection sites. Locations are selected to minimize any potential impact to vegetation or water sources, prioritizing existing rock or gravel areas with limited vegetation. The footprint of each site is kept as compact as practicable, with all structures and bulk supplies stored on tundra pads, racks or elevated platforms. The general locations of each installation are shown on Figures 4, 5, and 7.

Temporary field installations occupy a combined footprint of approximately 2.165 acres within the permitting claim block.

##### **1.2.1 *Main Supply Depot***

The Main Supply Depot (MSD) was initially constructed in 2004 and serves as the primary storage and staging area for field operations. The site occupies approximately 2.5 acres of a gravel bluff in the west zone

## Pebble Project

of the deposit (SE1/4 SE1/4 of Sec 21, T3S R35W and the NE1/4 NE1/4 of Sec 28, T3S, R35W) (ADL Nos. 516811 and 516874) (Figure 7).

Multiple temporary wood frame buildings and platform tents provide sheltered storage for mechanical equipment, drilling equipment, environmental supplies, and variety of small parts and tools. Small quantities of drilling fluids, motor oils, and antifreeze are stored in weather-proof shelters. All temporary structures are constructed on elevated platforms or placed on tundra pads.

Other items such as drill rods, lumber, tundra pads, outhouses, fuel containments, rig supports, are stored with the MSD yard on racks or elevated platforms. Figure 8 shows a categorical layout of the MSD at 1":50' scale.

### 1.2.2 *Watershed*

The Watershed site is located approximately 0.75 miles east of the MSD in the SW1/4 SE1/4 of Sec 22, T3S, R35W (ADL No. 524712) (Figure 7). The site occupies an approximate footprint of 0.05 acres and consists of three temporary buildings constructed on elevated platforms: one Quonset-style building with a corrugated metal roof (14' x 16') that served as a light machine shop, and two wood frame buildings (9' x 38'; 10' x 16') used to store hoses and miscellaneous hand tools and field supplies. A small generator shed is attached to the Quonset hut. One 110-gallon fuel tank (empty) is kept in an aluminum containment next to the shed. The Watershed site will continue to be used for air hose storage and serve as a light machine shop through the end of 2023.

### 1.2.3 *West Bay 1 and 3*

The West Bay installations were used to provide shelter for monitoring crews during data collection. West Bay 1 includes two temporary wood frame buildings (8' x 10') constructed on an elevated platform, occupying an approximate footprint of 0.005 acres. West Bay 3 has an approximate footprint of 0.0025 acres and consists of one temporary wood frame building (8' x 10') and an attached generator shed, both placed on tundra pads. The West Bay 4 site contains similar structures, but because it is contained within the larger MSD area it is no longer identified as a separate field location.

West Bay 1 is located in the SW1/4 SW1/4 of Sec 23, T3S, R35W (ADL No. 524714) (Figure 7). West Bay 3 is located in the NE1/4 SW1/4 of Sec 33, T3S, R36W (ADL No. 642412) (Figure 4). West Bay 1 will be used to support operations at the ARD test site. West Bay 3 will be used as a temporary staging area for drill sites located in the Kaskanak Mountain/G Valley area.

### 1.2.4 *Meteorological and Communications*

The Pebble 1 meteorological station is located in the SW1/4 NE1/4 of Sec 20, T3S, R35W (ADL No. 524829) (Figure 7). The small site consists of a temporary fiberglass structure (approximately 8 x 8 ft) and associated equipment. The occupied footprint is approximately 0.025 acres. Meteorological data will be collected to support field operations through the end of 2023.

The Koktuli Mountain radio repeater is located in the NE1/4 SW1/4 of Sec 36, T3S, R35W (ADL No. 646608) (Figure 7). The small site consists of a temporary metal structure (approximately 8 x 8 ft) and associated equipment, and occupies an approximate footprint of 0.025 acres. The radio repeater is used year-round to support field operations and will remain operation through the end of 2023.

### 1.2.5 *Acid Rock Drainage Test Location*

The ARD test site was set up to evaluate real time weathering and acid generation potential in area rock. The site consists of 12 large plastic barrels filled half way with rock fragments. Barrels are racked on wood tundra pads. Each barrel is covered with a 40-mil HDPE tarp to prevent water intrusion. Barrels are also

## Pebble Project

covered with a 3/8-inch aluminum plate to prevent wind and wildlife damage. Drainage tubes are also sealed to prevent leakage. The occupied footprint is approximately 0.005 acres

In 2017 PLP re-activated the ARD testing site and resumed full-scale testing in 2018. Barrels remained uncovered from July to September, after which the covers were replaced until testing resumes in spring 2019. ARD testing will be conducted in each field season through 2023.

The ARD site is located in the SE 1/4 SE 1/4 of Section 22, T3S, R35W (ADL No. 524713) (Figure 7).

### 1.3 PERSONNEL AND ACCOMMODATIONS

All personnel will be lodged off-site in the towns of Iliamna or Newhalen; PLP does not maintain any personnel camps in the field. Work crews are ferried to individual work sites by helicopter.

Each work site is outfitted with an emergency shelter, medical tent, and other small, temporary structures for storage and employee safety. The emergency shelter is a WeatherPort tent (or similar) containing a portable heating system, survival gear, and extra food and water to support field crews if weather conditions limit helicopter operations. The medical tent is supplied with first aid and medical supplies, and is staffed by an emergency medical technician whenever drilling is active. A portable toilet is stationed at each work site. All solid waste is collected and shipped offsite to an approved waste disposal facility.

All temporary structures are either constructed on, or placed on, wooden tundra pads to keep them elevated off site vegetation and minimize any impacts. These structures are all portable and moved by helicopter.

### 1.4 FUEL

Fuel for all mechanical equipment will be supplied from commercial storage facilities in Iliamna. Prior to the start of each field season, PLP will stage up to 1,200 gallons of Jet A fuel at the Main Supply Depot (MSD) to support helicopter operations. Any remaining fuel will be transported back to Iliamna at the end of each field season.

Fuel for each drill site will be transported to the work site by helicopter. Fuel quantities stored at each site vary based on the drill type and expected drilling depth. Maximum fuel storage is typically limited to the amount required to support 24 hours of continuous operation, generally 600 gallons or less. Fuel tanks are removed when the activity is completed.

Prior to transport, fly tanks receive an external visual inspection for signs of damage, fatigue cracking or deformation. Fly tank caps and fittings are visually inspected and physically manipulated to verify integrity. Fire extinguishers and spill response kits are inspected and confirmed to be response ready.

All field fuel tanks are double-walled and stored in welded aluminum containments when in use. Each containment is sized to contain at least 110 percent of the fuel tank's maximum capacity. All PLP fuel tanks, regardless of use or location, are filled to no more than 80 percent of the tank's maximum capacity and stored at least 100 feet from the nearest naturally occurring surface water source. Emergency spill kits and scrubbers are kept at any active fuel storage location.

PLP's Spill Prevention, Control, and Countermeasures Plan (SPCC) will be updated prior to the start of the 2019 field season.

## 2. PLANNED ACTIVITIES

PLP intends to continue exploratory drilling operations to support permitting and advanced engineering requirements for mine facilities. Planned drilling activity will include up to 121 separate drill sites over the



## Pebble Project

five-year permit term using various drilling methods: sonic, ODEX/air hammer, or diamond core. The method used for a particular borehole varies based on the intended purpose, depth, and geology encountered. Multiple methods may be used if necessary.

The number and location of sites drilled during a particular field season is based, in part, on design needs, previous drilling results, and input from permitting agencies such as the Alaska Dam Safety Program. Prior to the start of each field season, PLP will notify ADNR of the estimated number of sites, locations and potential drilling methods that are proposed for the active year.

Prior to drilling, each site will be surveyed and recorded. Final locations will be reported to ADNR by the end of each field season. Any sites retained for further investigation (packer testing, piezometer installation, etc.) will be reported to ADNR at the end of each field season, reclaimed, and capped as required. Final depths will be recorded and reported to ADNR at the end of each field season.

Proposed drill sites are listed in Appendix D and shown on figures 9 and 10.

### 2.1 ODEX/AIR HAMMER DRILLING

ODEX drilling uses a down-hole air hammer to advance the casing during drilling. Cuttings are removed using pressurized air to force them to the surface, where they will be collected and buried in an excavated pit. Core samples are removed from the field for analysis. ODEX drilling does not use drilling muds and typically does not require water except to mix grout or cement. The disturbed area footprint of ODEX drilled sites is small. Borehole diameters for ODEX drilled sites will range from two to ten inches. Bore depths are estimated to range from 100 to 500 feet.

### 2.2 SONIC DRILLING

A sonic drill works by sending high-frequency resonant vibrations down a drill string to the drill bit. The frequency varies between 50 and 200 hertz depending on field conditions. Resonance magnifies the amplitude of the drill bit, which fluidizes the soil particles at the bit face. Drill mud is not required; air and water may be used but are not always necessary. Small quantities of water may be used to prepare grout mixtures for borehole closure. Generally, no cuttings are produced other than the core samples, which are removed from the field for analysis. Drill bits range from two to eight inches in diameter. Bore depths are estimated to range between 100 and 200 feet.

### 2.3 DIAMOND CORE DRILLING

Diamond-embedded drill bits are lubricated with water or approved drilling muds to prevent overheating and facilitate core extraction. Core samples are removed from the field for analysis. Small volumes of rock (cuttings) are extracted along with water and drilling muds to the surface. Recycling tanks and sumps are used to settle any solids or suspended material out of the recirculated water. Any collected solids are buried in sumps below the surface. Drill bits range from three to eight inches in diameter. Bore depths are estimated to range between 150 and 2000 feet.

### 2.4 BOREHOLE CLOSURE

At completion, all newly drilled boreholes will either be stabilized and capped for ongoing monitoring or plugged with bentonite or an equivalent slurry from bottom to top. If this method is impracticable, each borehole will meet ADNR minimum standards for borehole closure: bentonite plug for a minimum of 10 feet within the top 20 feet of the drill hole in competent material; if water is encountered in any borehole, a minimum of seven feet of bentonite or equivalent slurry will be placed above the static water level.

## Pebble Project

If artesian water is encountered during drilling, ADNR or ADEC staff will be contacted for hole plugging requirements. If possible, artesian waters will be held down hole using drill mud, or the interval making water will be sealed off. Where this is not possible, the flow will be collected in a sump and directed to uplands away from stream, lakes and wetlands.

Material types and quantities used to plug boreholes will be recorded and reported to ADNR in the annual reclamation report.

### 2.5 REPAIRS

Attempts to repair boreholes 3127 and 9475 are ongoing. Artesian flows at both sites have been reduced but not cut off completely. Water volumes are small (< 2 gallons per minute) and re-infiltrate the ground within a short distance of each borehole. PLP will continue repair efforts at both locations in 2019. A work plan outlining the approach to closing each site will be submitted to ADNR for review by March 29, 2019.

### 2.6 DISTURBED ACREAGE (1 ACRE = 43,560 SQUARE FEET)

All previously disturbed areas have been fully reclaimed (“disturbed” is defined as the vegetative mat removed or destroyed). PLP policies require all potentially land-disturbing activities to limit any disturbance to the maximum extent practicable. Based on historic averages for the same activity type, PLP estimates the following disturbed acreage for planned activities during the five-year permit term:

0.35 acres	ODEX/Sonic drilling sites (150 sq. ft. average)
0.14 acres	Diamond drilled core sites (350 sq. ft. average)
0.01 acres	Borehole 3127
0.01 acres	Borehole 9475
<b>0.51 acres</b>	<b>TOTAL</b>

All disturbed areas are reclaimed as soon as practicable after the activity ends. Actual disturbed acreage for each work site will be recorded and reported to ADNR in the annual reclamation report. Disturbed areas are monitored in subsequent field seasons to evaluate reclamation success and any need for additional enhancements.

## 3. ENVIRONMENTAL CONTROLS

### 3.1 SITE PREPARATION

Drill sites are surveyed and photographed prior to any land-disturbing activity. Areas with minimal or no vegetation are prioritized to site material and equipment. When necessary, vegetation is removed and preserved to be re-used in reclamation. Soil and vegetation is placed on fabric mats to limit impacts and facilitate reclamation. All heavy equipment and bulk materials are placed on wooden tundra pads to minimize impacts to vegetation.

### 3.2 WATER MANAGEMENT AND FISH PROTECTION

Water required for exploration will be taken from permitted temporary water use locations (i.e., nearby streams, ponds and/or from previous bore holes) should they contain sufficient volume. One submersible borehole pump with the maximum pumping capacity of 25 GPM will be used at each drill rig location. Each pump is affixed with an 18-inch distribution sleeve which has been certified by ADF&G for use in water bodies containing Group A fish (fry stage whitefish) or larger. The screen maximum approach velocity is 0.1 feet per second and has an outer mesh covering of 1mm x 12mm, slotted.

## Pebble Project

Water used for lubrication or core extraction is recirculated using aluminum recycle tanks. Overflow water is routed to a multi-stage sump to promote solids settling and infiltration. Any excess water from the sumps will be pumped and dispersed across uplands away from all surface waters and wetlands. Water dispersal locations will be monitored and relocated as necessary.

Proposed temporary water sites and intake locations are listed in appendices E and F, and shown on figures 11 and 12.

### 3.3 RECLAMATION

All debris generated during drilling activities is collected and removed to PLP's Iliamna location for proper disposal. The disturbed surface will be recontoured and stabilized to prevent erosion and promote natural revegetation. Salvaged vegetation will be replaced where practical. If necessary, an approved seed mixture will be used to reseed the disturbed areas to encourage more rapid revegetation. Each disturbed area will be inspected in the subsequent field season to evaluate reclamation success and the need for any enhancements.

All cuttings produced during drilling are buried in sumps or other excavated pits at least 18 inches below the surface.

Disturbed areas are measured at the time of excavation using GPS coordinates or hand measurements and verified following reclamation. Total disturbed areas and total reclaimed areas for each site will be recorded and reported to ADNR in the annual reclamation report.

### 3.4 WILDLIFE

PLP has a long-standing commitment to environmental stewardship. All field activities are conducted under strict guidelines that seek to avoid any potential disturbances and mitigate any impacts that occur. PLP's general wildlife management practices include:

- Helicopter-only travel. All summer field work is conducted exclusively by helicopter, including transit between individual field locations. The lack of roads and surface vehicle use significantly decreases noise and other potential disturbances to wildlife.
- Minimum flight elevation and distance. All helicopters are required to travel between work sites at a minimum elevation of 500 feet above ground level (unless safety conditions prohibit) to minimize noise disturbances. If caribou, bear, moose, are observed during flight, helicopters are directed to maintain a one-mile horizontal buffer where practicable.
- Avoidance. Prior to commencing any work, individual locations are inspected from the air at the cruising altitude. If the area is visibly free of subject wildlife (e.g., caribou, moose, bears, beaver, waterfowl, migratory birds, raptors) staff conduct a ground-level inspection to confirm the work site is clear for the intended activity. If subject wildlife are present, work is either postponed until the area is open, or cancelled.
- Limited duration. Work sites are mobilized and demobilized within the shortest practical timeframe to limit field presence. All work sites are reclaimed as necessary.

## 4. OTHER PERMITS

### 4.1 TEMPORARY WATER USE

Water required for exploration activities will be withdrawn from permitted temporary water use locations. This APMA applies for 15 separate temporary water sources for the 5-year permit term (Appendix E) and

## Pebble Project

proposes preliminary intake locations (Appendix F) based on planned drill sites. Sources and locations are shown on figures 11 and 12. To facilitate the Temporary Water Use Authorization (TWUA) process, all proposed water sources have been authorized under previously issued TWUAs that have since expired.

PLP notes that final intake locations may vary based on field conditions (water flow, access, safety) as well as the sequence and proximity of drill sites. Actual intake locations will be surveyed and assessed for suitability at the start of each field season. Coordinates will be reported to ADNR as required.

### 4.2 FISH HABITAT

Fish Habitat permits will be required for water withdrawals from fish bearing streams. PLP will submit application materials to ADF&G and obtain all necessary permits prior to the start of any withdrawal activity.

### 4.3 CULTURAL SURVEYS

Cultural resource surveys have been completed for proposed work areas and are on file with the Office of History and Archaeology. If necessary, additional cultural surveys will be conducted prior to the start of any ground-disturbing activity.

### 4.4 WETLANDS PERMIT

All drill sites are sited to avoid wetland areas where practicable. Any drilling activity occurring within wetlands falls under Nationwide General Permit for Survey Activities (NWP-6). This NWP does not require preconstruction notification to be made to the US Army Corps of Engineers (USACE), but PLP regularly communicates with USACE-Alaska District staff to apprise them of planned activities.

## Appendix A

### Mineral Properties List (APMA Block 13)

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 552871	Pebble East Claims Corp.	SOUTH PEBBLE 113	8S005S036W08	160
ADL 552872	Pebble East Claims Corp.	SOUTH PEBBLE 114	8S005S036W08	160
ADL 552873	Pebble East Claims Corp.	SOUTH PEBBLE 115	8S005S036W09	160
ADL 552874	Pebble East Claims Corp.	SOUTH PEBBLE 116	8S005S036W16	160
ADL 552875	Pebble East Claims Corp.	SOUTH PEBBLE 117	8S005S036W16	160
ADL 552876	Pebble East Claims Corp.	SOUTH PEBBLE 118	8S005S036W17	160
ADL 552877	Pebble East Claims Corp.	SOUTH PEBBLE 119	8S005S036W17	160
ADL 552878	Pebble East Claims Corp.	SOUTH PEBBLE 120	8S005S036W18	160
ADL 552879	Pebble East Claims Corp.	SOUTH PEBBLE 121	8S005S036W18	160
ADL 552880	Pebble East Claims Corp.	SOUTH PEBBLE 122	8S005S036W18	160
ADL 552881	Pebble East Claims Corp.	SOUTH PEBBLE 123	8S005S036W18	160
ADL 552882	Pebble East Claims Corp.	SOUTH PEBBLE 124	8S005S036W17	160
ADL 552883	Pebble East Claims Corp.	SOUTH PEBBLE 125	8S005S036W17	160
ADL 552884	Pebble East Claims Corp.	SOUTH PEBBLE 126	8S005S036W16	160
ADL 552885	Pebble East Claims Corp.	SOUTH PEBBLE 127	8S005S036W16	160
ADL 552909	Pebble East Claims Corp.	SOUTH PEBBLE 151	8S005S036W25	160
ADL 552911	Pebble East Claims Corp.	SOUTH PEBBLE 153	8S005S036W24	160
ADL 552912	Pebble East Claims Corp.	SOUTH PEBBLE 154	8S005S036W24	160
ADL 552913	Pebble East Claims Corp.	SOUTH PEBBLE 155	8S005S036W24	160
ADL 552914	Pebble East Claims Corp.	SOUTH PEBBLE 156	8S005S036W24	160
ADL 552915	Pebble East Claims Corp.	SOUTH PEBBLE 157	8S005S036W13	160
ADL 552916	Pebble East Claims Corp.	SOUTH PEBBLE 158	8S005S036W13	160
ADL 552931	Pebble East Claims Corp.	KAK 1	8S004S037W12	160
ADL 552932	Pebble East Claims Corp.	KAK 2	8S004S037W12	160
ADL 552933	Pebble East Claims Corp.	KAK 3	8S004S037W11	160
ADL 552934	Pebble East Claims Corp.	KAK 4	8S004S037W11	160
ADL 552935	Pebble East Claims Corp.	KAK 5	8S004S037W11	160
ADL 552936	Pebble East Claims Corp.	KAK 6	8S004S037W11	160
ADL 552937	Pebble East Claims Corp.	KAK 7	8S004S037W12	160
ADL 552938	Pebble East Claims Corp.	KAK 8	8S004S037W12	160
ADL 552939	Pebble East Claims Corp.	KAK 9	8S004S037W01	160
ADL 552940	Pebble East Claims Corp.	KAK 10	8S004S037W01	160
ADL 552941	Pebble East Claims Corp.	KAK 11	8S004S037W02	160
ADL 552942	Pebble East Claims Corp.	KAK 12	8S004S037W02	160
ADL 552943	Pebble East Claims Corp.	KAK 13	8S004S037W03	160
ADL 552944	Pebble East Claims Corp.	KAK 14	8S004S037W03	160
ADL 552945	Pebble East Claims Corp.	KAK 15	8S004S037W03	160
ADL 552946	Pebble East Claims Corp.	KAK 16	8S004S037W03	160
ADL 552947	Pebble East Claims Corp.	KAK 17	8S004S037W02	160
ADL 552948	Pebble East Claims Corp.	KAK 18	8S004S037W02	160
ADL 552949	Pebble East Claims Corp.	KAK 19	8S004S037W01	160
ADL 552950	Pebble East Claims Corp.	KAK 20	8S004S037W01	160
ADL 552951	Pebble East Claims Corp.	KAK 21	8S003S036W31	160
ADL 552952	Pebble East Claims Corp.	KAK 22	8S003S036W31	160
ADL 552953	Pebble East Claims Corp.	KAK 23	8S003S037W36	160
ADL 552954	Pebble East Claims Corp.	KAK 24	8S003S037W36	160
ADL 552955	Pebble East Claims Corp.	KAK 25	8S003S037W35	160
ADL 552956	Pebble East Claims Corp.	KAK 26	8S003S037W35	160
ADL 552957	Pebble East Claims Corp.	KAK 27	8S003S037W34	160
ADL 552958	Pebble East Claims Corp.	KAK 28	8S003S037W34	160
ADL 552959	Pebble East Claims Corp.	KAK 29	8S003S037W34	160
ADL 552960	Pebble East Claims Corp.	KAK 30	8S003S037W34	160
ADL 552961	Pebble East Claims Corp.	KAK 31	8S003S037W35	160
ADL 552962	Pebble East Claims Corp.	KAK 32	8S003S037W35	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 552963	Pebble East Claims Corp.	KAK 33	8S003S037W36	160
ADL 552964	Pebble East Claims Corp.	KAK 34	8S003S037W36	160
ADL 552965	Pebble East Claims Corp.	KAK 35	8S003S036W31	160
ADL 552966	Pebble East Claims Corp.	KAK 36	8S003S036W31	160
ADL 552967	Pebble East Claims Corp.	KAK 37	8S003S036W30	160
ADL 552968	Pebble East Claims Corp.	KAK 38	8S003S036W30	160
ADL 552969	Pebble East Claims Corp.	KAK 39	8S003S037W25	160
ADL 552970	Pebble East Claims Corp.	KAK 40	8S003S037W25	160
ADL 552971	Pebble East Claims Corp.	KAK 41	8S003S037W26	160
ADL 552972	Pebble East Claims Corp.	KAK 42	8S003S037W26	160
ADL 552973	Pebble East Claims Corp.	KAK 43	8S003S037W27	160
ADL 552974	Pebble East Claims Corp.	KAK 44	8S003S037W27	160
ADL 552975	Pebble East Claims Corp.	KAK 45	8S003S037W27	160
ADL 552976	Pebble East Claims Corp.	KAK 46	8S003S037W27	160
ADL 552977	Pebble East Claims Corp.	KAK 47	8S003S037W26	160
ADL 552978	Pebble East Claims Corp.	KAK 48	8S003S037W26	160
ADL 552979	Pebble East Claims Corp.	KAK 49	8S003S037W25	160
ADL 552980	Pebble East Claims Corp.	KAK 50	8S003S037W25	160
ADL 552981	Pebble East Claims Corp.	KAK 51	8S003S036W30	160
ADL 552982	Pebble East Claims Corp.	KAK 52	8S003S036W30	160
ADL 552983	Pebble East Claims Corp.	KAK 53	8S003S036W19	160
ADL 552984	Pebble East Claims Corp.	KAK 54	8S003S036W19	160
ADL 552985	Pebble East Claims Corp.	KAK 55	8S003S037W24	160
ADL 552986	Pebble East Claims Corp.	KAK 56	8S003S037W24	160
ADL 552987	Pebble East Claims Corp.	KAK 57	8S003S037W23	160
ADL 552988	Pebble East Claims Corp.	KAK 58	8S003S037W23	160
ADL 552989	Pebble East Claims Corp.	KAK 59	8S003S037W22	160
ADL 552990	Pebble East Claims Corp.	KAK 60	8S003S037W24	160
ADL 552991	Pebble East Claims Corp.	KAK 61	8S003S037W24	160
ADL 552992	Pebble East Claims Corp.	KAK 62	8S003S036W19	160
ADL 552993	Pebble East Claims Corp.	KAK 63	8S003S036W19	160
ADL 552994	Pebble East Claims Corp.	KAK 64	8S003S036W18	160
ADL 552995	Pebble East Claims Corp.	KAK 65	8S003S036W18	160
ADL 552996	Pebble East Claims Corp.	KAK 66	8S003S037W13	160
ADL 552997	Pebble East Claims Corp.	KAK 67	8S003S037W13	160
ADL 552998	Pebble East Claims Corp.	KAK 68	8S003S036W18	160
ADL 552999	Pebble East Claims Corp.	KAK 69	8S003S036W18	160
ADL 553000	Pebble East Claims Corp.	KAK 70	8S003S036W17	160
ADL 553001	Pebble East Claims Corp.	KAK 71	8S003S036W17	160
ADL 553002	Pebble East Claims Corp.	KAK 72	8S003S036W10	160
ADL 553003	Pebble East Claims Corp.	KAK 73	8S003S036W10	160
ADL 553004	Pebble East Claims Corp.	KAK 74	8S003S036W09	160
ADL 553005	Pebble East Claims Corp.	KAK 75	8S003S036W09	160
ADL 553006	Pebble East Claims Corp.	KAK 76	8S003S036W08	160
ADL 553007	Pebble East Claims Corp.	KAK 77	8S003S036W08	160
ADL 553008	Pebble East Claims Corp.	KAK 78	8S003S036W07	160
ADL 553009	Pebble East Claims Corp.	KAK 79	8S003S036W07	160
ADL 553010	Pebble East Claims Corp.	KAK 80	8S003S037W12	160
ADL 553011	Pebble East Claims Corp.	KAK 81	8S003S037W12	160
ADL 553012	Pebble East Claims Corp.	KAK 82	8S003S036W07	160
ADL 553013	Pebble East Claims Corp.	KAK 83	8S003S036W07	160
ADL 553014	Pebble East Claims Corp.	KAK 84	8S003S036W08	160
ADL 553015	Pebble East Claims Corp.	KAK 85	8S003S036W08	160
ADL 553016	Pebble East Claims Corp.	KAK 86	8S003S036W09	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 553017	Pebble East Claims Corp.	KAK 87	8S003S036W09	160
ADL 553018	Pebble East Claims Corp.	KAK 88	8S003S036W10	160
ADL 553019	Pebble East Claims Corp.	KAK 89	8S003S036W10	160
ADL 553427	Pebble East Claims Corp.	PEBA 1	8S003S033W19	160
ADL 553428	Pebble East Claims Corp.	PEBA 2	8S003S033W19	160
ADL 553429	Pebble East Claims Corp.	PEBA 3	8S003S033W20	160
ADL 553437	Pebble East Claims Corp.	PEBA 11	8S003S033W19	160
ADL 553438	Pebble East Claims Corp.	PEBA 12	8S003S033W19	160
ADL 553439	Pebble East Claims Corp.	PEBA 13	8S003S033W20	160
ADL 553447	Pebble East Claims Corp.	PEBA 21	8S003S033W30	160
ADL 553448	Pebble East Claims Corp.	PEBA 22	8S003S033W30	160
ADL 553449	Pebble East Claims Corp.	PEBA 23	8S003S033W29	160
ADL 553457	Pebble East Claims Corp.	PEBA 31	8S003S033W30	160
ADL 553458	Pebble East Claims Corp.	PEBA 32	8S003S033W30	160
ADL 553459	Pebble East Claims Corp.	PEBA 33	8S003S033W29	160
ADL 553467	Pebble East Claims Corp.	PEBA 41	8S003S034W35	160
ADL 553468	Pebble East Claims Corp.	PEBA 42	8S003S034W36	160
ADL 553469	Pebble East Claims Corp.	PEBA 43	8S003S034W36	160
ADL 553470	Pebble East Claims Corp.	PEBA 44	8S003S033W31	160
ADL 553471	Pebble East Claims Corp.	PEBA 45	8S003S033W31	160
ADL 553472	Pebble East Claims Corp.	PEBA 46	8S003S033W32	160
ADL 553478	Pebble East Claims Corp.	PEBA 52	8S003S034W35	160
ADL 553479	Pebble East Claims Corp.	PEBA 53	8S003S034W36	160
ADL 553480	Pebble East Claims Corp.	PEBA 54	8S003S034W36	160
ADL 553481	Pebble East Claims Corp.	PEBA 55	8S003S033W31	160
ADL 553482	Pebble East Claims Corp.	PEBA 56	8S003S033W32	160
ADL 553488	Pebble East Claims Corp.	PEBA 62	8S004S034W02	160
ADL 553489	Pebble East Claims Corp.	PEBA 63	8S004S034W02	160
ADL 553490	Pebble East Claims Corp.	PEBA 64	8S004S034W01	160
ADL 553491	Pebble East Claims Corp.	PEBA 65	8S004S034W01	160
ADL 553492	Pebble East Claims Corp.	PEBA 66	8S004S033W06	160
ADL 553493	Pebble East Claims Corp.	PEBA 67	8S004S033W06	160
ADL 553494	Pebble East Claims Corp.	PEBA 68	8S004S033W05	160
ADL 553500	Pebble East Claims Corp.	PEBA 74	8S004S034W05	160
ADL 553501	Pebble East Claims Corp.	PEBA 75	8S004S034W04	160
ADL 553502	Pebble East Claims Corp.	PEBA 76	8S004S034W04	160
ADL 553503	Pebble East Claims Corp.	PEBA 77	8S004S034W03	160
ADL 553504	Pebble East Claims Corp.	PEBA 78	8S004S034W03	160
ADL 553505	Pebble East Claims Corp.	PEBA 79	8S004S034W02	160
ADL 553506	Pebble East Claims Corp.	PEBA 80	8S004S034W02	160
ADL 553507	Pebble East Claims Corp.	PEBA 81	8S004S034W01	160
ADL 553508	Pebble East Claims Corp.	PEBA 82	8S004S034W01	160
ADL 553509	Pebble East Claims Corp.	PEBA 83	8S004S033W06	160
ADL 553510	Pebble East Claims Corp.	PEBA 84	8S004S033W06	160
ADL 553511	Pebble East Claims Corp.	PEBA 85	8S004S033W05	160
ADL 553517	Pebble East Claims Corp.	PEBA 91	8S004S034W08	160
ADL 553518	Pebble East Claims Corp.	PEBA 92	8S004S034W09	160
ADL 553519	Pebble East Claims Corp.	PEBA 93	8S004S034W09	160
ADL 553520	Pebble East Claims Corp.	PEBA 94	8S004S034W10	160
ADL 553521	Pebble East Claims Corp.	PEBA 95	8S004S034W10	160
ADL 553522	Pebble East Claims Corp.	PEBA 96	8S004S034W08	160
ADL 553523	Pebble East Claims Corp.	PEBA 97	8S004S034W09	160
ADL 553524	Pebble East Claims Corp.	PEBA 98	8S004S034W09	160
ADL 553525	Pebble East Claims Corp.	PEBA 99	8S004S034W10	160



**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 553526	Pebble East Claims Corp.	PEBA 100	8S004S034W10	160
ADL 553527	Pebble East Claims Corp.	PEBA 101	8S004S034W17	160
ADL 553528	Pebble East Claims Corp.	PEBA 102	8S004S034W17	160
ADL 553529	Pebble East Claims Corp.	PEBA 103	8S004S034W16	160
ADL 553530	Pebble East Claims Corp.	PEBA 104	8S004S034W16	160
ADL 553531	Pebble East Claims Corp.	PEBA 105	8S004S034W15	160
ADL 553532	Pebble East Claims Corp.	PEBA 106	8S004S034W15	160
ADL 553533	Pebble East Claims Corp.	PEBA 107	8S004S034W17	160
ADL 553534	Pebble East Claims Corp.	PEBA 108	8S004S034W17	160
ADL 553535	Pebble East Claims Corp.	PEBA 109	8S004S034W16	160
ADL 553536	Pebble East Claims Corp.	PEBA 110	8S004S034W16	160
ADL 553537	Pebble East Claims Corp.	PEBA 111	8S004S034W15	160
ADL 553538	Pebble East Claims Corp.	PEBA 112	8S004S034W15	160
ADL 553539	Pebble East Claims Corp.	PEBB 1	8S003S036W16	160
ADL 553540	Pebble East Claims Corp.	PEBB 2	8S003S036W16	160
ADL 553541	Pebble East Claims Corp.	PEBB 3	8S003S036W15	160
ADL 553542	Pebble East Claims Corp.	PEBB 4	8S003S036W15	160
ADL 553543	Pebble East Claims Corp.	PEBB 5	8S003S036W17	160
ADL 553544	Pebble East Claims Corp.	PEBB 6	8S003S036W17	160
ADL 553545	Pebble East Claims Corp.	PEBB 7	8S003S036W16	160
ADL 553546	Pebble East Claims Corp.	PEBB 8	8S003S036W16	160
ADL 553547	Pebble East Claims Corp.	PEBB 9	8S003S036W20	160
ADL 553548	Pebble East Claims Corp.	PEBB 10	8S003S036W20	160
ADL 553549	Pebble East Claims Corp.	PEBB 11	8S003S036W21	160
ADL 553550	Pebble East Claims Corp.	PEBB 12	8S003S036W21	160
ADL 553551	Pebble East Claims Corp.	PEBB 13	8S003S036W20	160
ADL 553552	Pebble East Claims Corp.	PEBB 14	8S003S036W20	160
ADL 553553	Pebble East Claims Corp.	PEBB 15	8S003S036W21	160
ADL 553554	Pebble East Claims Corp.	PEBB 16	8S003S036W29	160
ADL 553555	Pebble East Claims Corp.	PEBB 17	8S003S036W29	160
ADL 553556	Pebble East Claims Corp.	PEBB 18	8S003S036W29	160
ADL 553557	Pebble East Claims Corp.	PEBB 19	8S003S036W29	160
ADL 553558	Pebble East Claims Corp.	PEBB 20	8S003S036W32	160
ADL 553559	Pebble East Claims Corp.	PEBB 21	8S003S036W32	160
ADL 553560	Pebble East Claims Corp.	PEBB 22	8S003S036W32	160
ADL 553561	Pebble East Claims Corp.	PEBB 23	8S003S036W32	160
ADL 553562	Pebble East Claims Corp.	PEBB 24	8S004S036W06	160
ADL 553563	Pebble East Claims Corp.	PEBB 25	8S004S036W06	160
ADL 553564	Pebble East Claims Corp.	PEBB 26	8S004S036W05	160
ADL 553565	Pebble East Claims Corp.	PEBB 27	8S004S036W05	160
ADL 553566	Pebble East Claims Corp.	PEBB 28	8S004S036W06	160
ADL 553567	Pebble East Claims Corp.	PEBB 29	8S004S036W06	160
ADL 553568	Pebble East Claims Corp.	PEBB 30	8S004S036W05	160
ADL 553569	Pebble East Claims Corp.	PEBB 31	8S004S036W05	160
ADL 553570	Pebble East Claims Corp.	PEBB 32	8S004S036W07	160
ADL 553571	Pebble East Claims Corp.	PEBB 33	8S004S036W07	160
ADL 553572	Pebble East Claims Corp.	PEBB 34	8S004S036W08	160
ADL 553573	Pebble East Claims Corp.	PEBB 35	8S004S036W08	160
ADL 553574	Pebble East Claims Corp.	PEBB 36	8S004S036W07	160
ADL 553575	Pebble East Claims Corp.	PEBB 37	8S004S036W07	160
ADL 553576	Pebble East Claims Corp.	PEBB 38	8S004S036W08	160
ADL 553577	Pebble East Claims Corp.	PEBB 39	8S004S036W08	160
ADL 553578	Pebble East Claims Corp.	PEBE 1	8S002S037W25	160
ADL 553579	Pebble East Claims Corp.	PEBE 2	8S002S037W25	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 553580	Pebble East Claims Corp.	PEBE 3	8S002S037W26	160
ADL 553581	Pebble East Claims Corp.	PEBE 4	8S002S037W25	160
ADL 553582	Pebble East Claims Corp.	PEBE 5	8S002S037W25	160
ADL 553583	Pebble East Claims Corp.	PEBE 6	8S002S037W35	160
ADL 553584	Pebble East Claims Corp.	PEBE 7	8S002S037W36	160
ADL 553585	Pebble East Claims Corp.	PEBE 8	8S002S037W36	160
ADL 553586	Pebble East Claims Corp.	PEBE 9	8S002S037W36	160
ADL 553587	Pebble East Claims Corp.	PEBE 10	8S002S037W36	160
ADL 553588	Pebble East Claims Corp.	PEBF 1	8S003S038W26	160
ADL 553589	Pebble East Claims Corp.	PEBF 2	8S003S038W26	160
ADL 553590	Pebble East Claims Corp.	PEBF 3	8S003S038W25	160
ADL 553591	Pebble East Claims Corp.	PEBF 4	8S003S038W25	160
ADL 553592	Pebble East Claims Corp.	PEBF 5	8S003S037W30	160
ADL 553593	Pebble East Claims Corp.	PEBF 6	8S003S037W30	160
ADL 553594	Pebble East Claims Corp.	PEBF 7	8S003S038W26	160
ADL 553595	Pebble East Claims Corp.	PEBF 8	8S003S038W26	160
ADL 553596	Pebble East Claims Corp.	PEBF 9	8S003S038W25	160
ADL 553597	Pebble East Claims Corp.	PEBF 10	8S003S038W25	160
ADL 553598	Pebble East Claims Corp.	PEBF 11	8S003S037W30	160
ADL 553599	Pebble East Claims Corp.	PEBF 12	8S003S037W30	160
ADL 553600	Pebble East Claims Corp.	PEBF 13	8S003S037W29	160
ADL 553601	Pebble East Claims Corp.	PEBF 14	8S003S038W35	160
ADL 553602	Pebble East Claims Corp.	PEBF 15	8S003S038W35	160
ADL 553603	Pebble East Claims Corp.	PEBF 16	8S003S038W36	160
ADL 553604	Pebble East Claims Corp.	PEBF 17	8S003S038W36	160
ADL 553605	Pebble East Claims Corp.	PEBF 18	8S003S037W31	160
ADL 553606	Pebble East Claims Corp.	PEBF 19	8S003S037W31	160
ADL 553607	Pebble East Claims Corp.	PEBF 20	8S003S037W32	160
ADL 553608	Pebble East Claims Corp.	PEBF 21	8S003S038W35	160
ADL 553609	Pebble East Claims Corp.	PEBF 22	8S003S038W35	160
ADL 553610	Pebble East Claims Corp.	PEBF 23	8S003S038W36	160
ADL 553611	Pebble East Claims Corp.	PEBF 24	8S003S038W36	160
ADL 553612	Pebble East Claims Corp.	PEBF 25	8S003S037W31	160
ADL 553613	Pebble East Claims Corp.	PEBF 26	8S003S037W31	160
ADL 553614	Pebble East Claims Corp.	PEBF 27	8S003S037W32	160
ADL 553615	Pebble East Claims Corp.	SILL 6155	8S004S034W07	40
ADL 553616	Pebble East Claims Corp.	SILL 6156	8S004S034W07	40
ADL 553617	Pebble East Claims Corp.	SILL 6256	8S004S034W07	40
ADL 638779	Pebble East Claims Corp.	PEB 1	8S004S036W22	160
ADL 638780	Pebble East Claims Corp.	PEB 2	8S004S036W22	160
ADL 638781	Pebble East Claims Corp.	PEB 3	8S004S036W23	160
ADL 638782	Pebble East Claims Corp.	PEB 4	8S004S036W23	160
ADL 638783	Pebble East Claims Corp.	PEB 5	8S004S036W22	160
ADL 638784	Pebble East Claims Corp.	PEB 6	8S004S036W22	160
ADL 638785	Pebble East Claims Corp.	PEB 7	8S004S036W23	160
ADL 638786	Pebble East Claims Corp.	PEB 8	8S004S036W23	160
ADL 638791	Pebble East Claims Corp.	PEB 13	8S004S037W25	160
ADL 638792	Pebble East Claims Corp.	PEB 14	8S004S036W30	160
ADL 638793	Pebble East Claims Corp.	PEB 15	8S004S036W30	160
ADL 638794	Pebble East Claims Corp.	PEB 16	8S004S036W29	160
ADL 638795	Pebble East Claims Corp.	PEB 17	8S004S036W29	160
ADL 638796	Pebble East Claims Corp.	PEB 18	8S004S036W28	160
ADL 638797	Pebble East Claims Corp.	PEB 19	8S004S036W28	160
ADL 638798	Pebble East Claims Corp.	PEB 20	8S004S036W27	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 638799	Pebble East Claims Corp.	PEB 21	8S004S036W27	160
ADL 638800	Pebble East Claims Corp.	PEB 22	8S004S036W26	160
ADL 638801	Pebble East Claims Corp.	PEB 23	8S004S036W26	40
ADL 638802	Pebble East Claims Corp.	PEB 24	8S004S036W26	40
ADL 638807	Pebble East Claims Corp.	PEB 29	8S004S037W25	160
ADL 638808	Pebble East Claims Corp.	PEB 30	8S004S036W30	160
ADL 638809	Pebble East Claims Corp.	PEB 31	8S004S036W30	160
ADL 638810	Pebble East Claims Corp.	PEB 32	8S004S036W29	160
ADL 638811	Pebble East Claims Corp.	PEB 33	8S004S036W29	160
ADL 638812	Pebble East Claims Corp.	PEB 34	8S004S036W28	160
ADL 638813	Pebble East Claims Corp.	PEB 35	8S004S036W28	160
ADL 638814	Pebble East Claims Corp.	PEB 36	8S004S036W27	160
ADL 638815	Pebble East Claims Corp.	PEB 37	8S004S036W27	160
ADL 638816	Pebble East Claims Corp.	PEB 38	8S004S036W26	160
ADL 638821	Pebble East Claims Corp.	PEB 43	8S004S037W36	160
ADL 638822	Pebble East Claims Corp.	PEB 44	8S004S036W31	160
ADL 638823	Pebble East Claims Corp.	PEB 45	8S004S036W31	160
ADL 638824	Pebble East Claims Corp.	PEB 46	8S004S036W32	160
ADL 638825	Pebble East Claims Corp.	PEB 47	8S004S036W32	160
ADL 638826	Pebble East Claims Corp.	PEB 48	8S004S036W33	160
ADL 638827	Pebble East Claims Corp.	PEB 49	8S004S036W33	160
ADL 638828	Pebble East Claims Corp.	PEB 50	8S004S036W34	160
ADL 638829	Pebble East Claims Corp.	PEB 51	8S004S036W34	160
ADL 638830	Pebble East Claims Corp.	PEB 52	8S004S036W35	160
ADL 638835	Pebble East Claims Corp.	PEB 57	8S004S037W36	160
ADL 638836	Pebble East Claims Corp.	PEB 58	8S004S036W31	160
ADL 638837	Pebble East Claims Corp.	PEB 59	8S004S036W31	160
ADL 638838	Pebble East Claims Corp.	PEB 60	8S004S036W32	160
ADL 638839	Pebble East Claims Corp.	PEB 61	8S004S036W32	160
ADL 638840	Pebble East Claims Corp.	PEB 62	8S004S036W33	160
ADL 638841	Pebble East Claims Corp.	PEB 63	8S004S036W33	160
ADL 638842	Pebble East Claims Corp.	PEB 64	8S004S036W34	160
ADL 638843	Pebble East Claims Corp.	PEB 65	8S004S036W34	160
ADL 638844	Pebble East Claims Corp.	PEB 66	8S004S036W35	160
ADL 638848	Pebble East Claims Corp.	PEB 70	8S005S037W03	160
ADL 638849	Pebble East Claims Corp.	PEB 71	8S005S037W03	160
ADL 638850	Pebble East Claims Corp.	PEB 72	8S005S037W02	160
ADL 638851	Pebble East Claims Corp.	PEB 73	8S005S037W02	160
ADL 638852	Pebble East Claims Corp.	PEB 74	8S005S037W01	160
ADL 638853	Pebble East Claims Corp.	PEB 75	8S005S037W01	160
ADL 638854	Pebble East Claims Corp.	PEB 76	8S005S036W06	160
ADL 638855	Pebble East Claims Corp.	PEB 77	8S005S036W06	160
ADL 638856	Pebble East Claims Corp.	PEB 78	8S005S036W05	160
ADL 638857	Pebble East Claims Corp.	PEB 79	8S005S036W05	160
ADL 638858	Pebble East Claims Corp.	PEB 80	8S005S036W04	160
ADL 638862	Pebble East Claims Corp.	PEB 84	8S005S037W03	160
ADL 638863	Pebble East Claims Corp.	PEB 85	8S005S037W03	160
ADL 638864	Pebble East Claims Corp.	PEB 86	8S005S037W02	160
ADL 638865	Pebble East Claims Corp.	PEB 87	8S005S037W02	160
ADL 638866	Pebble East Claims Corp.	PEB 88	8S005S037W01	160
ADL 638867	Pebble East Claims Corp.	PEB 89	8S005S037W01	160
ADL 638868	Pebble East Claims Corp.	PEB 90	8S005S036W06	160
ADL 638869	Pebble East Claims Corp.	PEB 91	8S005S036W06	160
ADL 638870	Pebble East Claims Corp.	PEB 92	8S005S036W05	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 638871	Pebble East Claims Corp.	PEB 93	8S005S036W05	160
ADL 638872	Pebble East Claims Corp.	PEB 94	8S005S036W04	160
ADL 638873	Pebble East Claims Corp.	PEB 95	8S005S036W04	40
ADL 638874	Pebble East Claims Corp.	PEB 96	8S005S036W04	40
ADL 638875	Pebble East Claims Corp.	PEB 97	8S005S036W03	40
ADL 638882	Pebble East Claims Corp.	PEB 104	8S005S037W10	160
ADL 638883	Pebble East Claims Corp.	PEB 105	8S005S037W10	160
ADL 638884	Pebble East Claims Corp.	PEB 106	8S005S037W11	160
ADL 638885	Pebble East Claims Corp.	PEB 107	8S005S037W11	160
ADL 638886	Pebble East Claims Corp.	PEB 108	8S005S037W12	160
ADL 638887	Pebble East Claims Corp.	PEB 109	8S005S037W12	160
ADL 638888	Pebble East Claims Corp.	PEB 110	8S005S036W07	160
ADL 638889	Pebble East Claims Corp.	PEB 111	8S005S036W07	160
ADL 638890	Pebble East Claims Corp.	PEB 112	8S005S036W08	160
ADL 638891	Pebble East Claims Corp.	PEB 113	8S005S036W08	160
ADL 638892	Pebble East Claims Corp.	PEB 114	8S005S036W09	160
ADL 638893	Pebble East Claims Corp.	PEB 115	8S005S036W09	160
ADL 640061	Pebble East Claims Corp.	PEB N-1	8S004S037W24	160
ADL 640062	Pebble East Claims Corp.	PEB N-2	8S004S036W19	160
ADL 640063	Pebble East Claims Corp.	PEB N-3	8S004S036W19	160
ADL 640064	Pebble East Claims Corp.	PEB N-4	8S004S036W20	160
ADL 640065	Pebble East Claims Corp.	PEB N-5	8S004S036W20	160
ADL 640066	Pebble East Claims Corp.	PEB N-6	8S004S036W21	160
ADL 640067	Pebble East Claims Corp.	PEB N-7	8S004S036W21	160
ADL 640068	Pebble East Claims Corp.	PEB N-8	8S004S037W24	160
ADL 640069	Pebble East Claims Corp.	PEB N-9	8S004S036W19	160
ADL 640070	Pebble East Claims Corp.	PEB N-10	8S004S036W19	160
ADL 640071	Pebble East Claims Corp.	PEB N-11	8S004S036W20	160
ADL 640072	Pebble East Claims Corp.	PEB N-12	8S004S036W20	160
ADL 640073	Pebble East Claims Corp.	PEB N-13	8S004S036W21	160
ADL 640074	Pebble East Claims Corp.	PEB N-14	8S004S036W21	160
ADL 640075	Pebble East Claims Corp.	PEB N-15	8S004S037W13	160
ADL 640076	Pebble East Claims Corp.	PEB N-16	8S004S036W18	160
ADL 640077	Pebble East Claims Corp.	PEB N-17	8S004S036W18	160
ADL 640078	Pebble East Claims Corp.	PEB N-18	8S004S036W17	160
ADL 640079	Pebble East Claims Corp.	PEB N-19	8S004S036W17	160
ADL 640080	Pebble East Claims Corp.	PEB N-20	8S004S036W16	160
ADL 640081	Pebble East Claims Corp.	PEB N-21	8S004S036W16	160
ADL 640082	Pebble East Claims Corp.	PEB N-22	8S004S036W15	160
ADL 640083	Pebble East Claims Corp.	PEB N-23	8S004S036W15	160
ADL 640084	Pebble East Claims Corp.	PEB N-24	8S004S036W14	160
ADL 640085	Pebble East Claims Corp.	PEB N-25	8S004S036W14	160
ADL 640086	Pebble East Claims Corp.	PEB N-26	8S004S037W13	160
ADL 640087	Pebble East Claims Corp.	PEB N-27	8S004S036W18	160
ADL 640088	Pebble East Claims Corp.	PEB N-28	8S004S036W18	160
ADL 640089	Pebble East Claims Corp.	PEB N-29	8S004S036W17	160
ADL 640090	Pebble East Claims Corp.	PEB N-30	8S004S036W17	160
ADL 640091	Pebble East Claims Corp.	PEB N-31	8S004S036W16	160
ADL 640092	Pebble East Claims Corp.	PEB N-32	8S004S036W16	160
ADL 640093	Pebble East Claims Corp.	PEB N-33	8S004S036W15	160
ADL 640094	Pebble East Claims Corp.	PEB N-34	8S004S036W15	160
ADL 640095	Pebble East Claims Corp.	PEB N-35	8S004S036W14	160
ADL 640096	Pebble East Claims Corp.	PEB N-36	8S004S036W14	160
ADL 642027	Pebble East Claims Corp.	SOUTH PEBBLE 71	8S005S037W23	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642028	Pebble East Claims Corp.	SOUTH PEBBLE 72	8S005S037W23	160
ADL 642029	Pebble East Claims Corp.	SOUTH PEBBLE 73	8S005S037W23	160
ADL 642035	Pebble East Claims Corp.	SOUTH PEBBLE 79	8S005S036W23	160
ADL 642036	Pebble East Claims Corp.	SOUTH PEBBLE 80	8S005S036W14	160
ADL 642037	Pebble East Claims Corp.	SOUTH PEBBLE 81	8S005S036W14	160
ADL 642038	Pebble East Claims Corp.	SOUTH PEBBLE 82	8S005S036W15	160
ADL 642039	Pebble East Claims Corp.	SOUTH PEBBLE 83	8S005S036W15	160
ADL 642040	Pebble East Claims Corp.	SOUTH PEBBLE 84	8S005S037W13	160
ADL 642041	Pebble East Claims Corp.	SOUTH PEBBLE 85	8S005S037W13	160
ADL 642042	Pebble East Claims Corp.	SOUTH PEBBLE 86	8S005S037W14	160
ADL 642043	Pebble East Claims Corp.	SOUTH PEBBLE 87	8S005S037W14	160
ADL 642044	Pebble East Claims Corp.	SOUTH PEBBLE 88	8S005S037W15	160
ADL 642045	Pebble East Claims Corp.	SOUTH PEBBLE 89	8S005S037W15	160
ADL 642046	Pebble East Claims Corp.	SOUTH PEBBLE 90	8S005S037W15	160
ADL 642047	Pebble East Claims Corp.	SOUTH PEBBLE 91	8S005S037W15	160
ADL 642048	Pebble East Claims Corp.	SOUTH PEBBLE 92	8S005S037W14	160
ADL 642049	Pebble East Claims Corp.	SOUTH PEBBLE 93	8S005S037W14	160
ADL 642050	Pebble East Claims Corp.	SOUTH PEBBLE 94	8S005S037W13	160
ADL 642051	Pebble East Claims Corp.	SOUTH PEBBLE 95	8S005S037W13	160
ADL 642052	Pebble East Claims Corp.	SOUTH PEBBLE 96	8S005S036W15	160
ADL 642053	Pebble East Claims Corp.	SOUTH PEBBLE 97	8S005S036W15	160
ADL 642054	Pebble East Claims Corp.	SOUTH PEBBLE 98	8S005S036W14	160
ADL 642055	Pebble East Claims Corp.	SOUTH PEBBLE 99	8S005S036W14	160
ADL 642056	Pebble East Claims Corp.	SOUTH PEBBLE 100	8S005S036W11	160
ADL 642057	Pebble East Claims Corp.	SOUTH PEBBLE 101	8S005S036W11	160
ADL 642058	Pebble East Claims Corp.	SOUTH PEBBLE 102	8S005S036W10	160
ADL 642059	Pebble East Claims Corp.	SOUTH PEBBLE 103	8S005S036W10	160
ADL 642060	Pebble East Claims Corp.	SOUTH PEBBLE 104	8S005S036W09	160
ADL 642061	Pebble East Claims Corp.	SOUTH PEBBLE 105	8S005S036W07	160
ADL 642062	Pebble East Claims Corp.	SOUTH PEBBLE 106	8S005S036W07	160
ADL 642063	Pebble East Claims Corp.	SOUTH PEBBLE 107	8S005S037W12	160
ADL 642064	Pebble East Claims Corp.	SOUTH PEBBLE 108	8S005S037W12	160
ADL 642065	Pebble East Claims Corp.	SOUTH PEBBLE 109	8S005S037W11	160
ADL 642066	Pebble East Claims Corp.	SOUTH PEBBLE 110	8S005S037W11	160
ADL 642067	Pebble East Claims Corp.	SOUTH PEBBLE 111	8S005S037W10	160
ADL 642068	Pebble East Claims Corp.	SOUTH PEBBLE 112	8S005S037W10	160
ADL 642334	Pebble East Claims Corp.	PEB EBA 1	8S004S035W02	40
ADL 642335	Pebble East Claims Corp.	PEB EBA 2	8S004S035W02	40
ADL 642336	Pebble East Claims Corp.	PEB EBA 3	8S004S035W02	40
ADL 642337	Pebble East Claims Corp.	PEB EBA 4	8S004S035W02	40
ADL 642338	Pebble East Claims Corp.	PEB EB 1	8S003S035W35	160
ADL 642339	Pebble East Claims Corp.	PEB EB 2	8S003S035W35	160
ADL 642340	Pebble East Claims Corp.	PEB EB 3	8S003S035W35	160
ADL 642341	Pebble East Claims Corp.	PEB EB 4	8S003S035W35	160
ADL 642342	Pebble East Claims Corp.	PEB EB 5	8S003S034W31	160
ADL 642343	Pebble East Claims Corp.	PEB EB 6	8S003S034W31	160
ADL 642344	Pebble East Claims Corp.	PEB EB 7	8S003S034W32	160
ADL 642345	Pebble East Claims Corp.	PEB EB 8	8S003S034W32	160
ADL 642346	Pebble East Claims Corp.	PEB EB 9	8S003S034W33	160
ADL 642347	Pebble East Claims Corp.	PEB EB 10	8S003S034W33	160
ADL 642348	Pebble East Claims Corp.	PEB EB 11	8S003S034W31	160
ADL 642349	Pebble East Claims Corp.	PEB EB 12	8S003S034W31	160
ADL 642350	Pebble East Claims Corp.	PEB EB 13	8S003S034W32	160
ADL 642351	Pebble East Claims Corp.	PEB EB 14	8S003S034W32	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642352	Pebble East Claims Corp.	PEB EB 15	8S003S034W33	160
ADL 642353	Pebble East Claims Corp.	PEB EB 16	8S003S034W33	160
ADL 642354	Pebble East Claims Corp.	PEB EB 17	8S003S035W26	160
ADL 642355	Pebble East Claims Corp.	PEB EB 18	8S003S035W26	160
ADL 642356	Pebble East Claims Corp.	PEB EB 19	8S003S035W25	160
ADL 642357	Pebble East Claims Corp.	PEB EB 20	8S003S035W25	160
ADL 642358	Pebble East Claims Corp.	PEB EB 21	8S003S034W30	160
ADL 642359	Pebble East Claims Corp.	PEB EB 22	8S003S034W30	160
ADL 642360	Pebble East Claims Corp.	PEB EB 23	8S003S034W29	160
ADL 642361	Pebble East Claims Corp.	PEB EB 24	8S003S034W29	160
ADL 642362	Pebble East Claims Corp.	PEB EB 25	8S003S034W28	160
ADL 642363	Pebble East Claims Corp.	PEB EB 26	8S003S034W28	160
ADL 642364	Pebble East Claims Corp.	PEB EB 27	8S003S035W26	160
ADL 642365	Pebble East Claims Corp.	PEB EB 28	8S003S035W26	160
ADL 642366	Pebble East Claims Corp.	PEB EB 29	8S003S035W25	160
ADL 642367	Pebble East Claims Corp.	PEB EB 30	8S003S035W25	160
ADL 642368	Pebble East Claims Corp.	PEB EB 31	8S003S034W30	160
ADL 642369	Pebble East Claims Corp.	PEB EB 32	8S003S034W30	160
ADL 642370	Pebble East Claims Corp.	PEB EB 33	8S003S034W29	160
ADL 642371	Pebble East Claims Corp.	PEB EB 34	8S003S034W29	160
ADL 642372	Pebble East Claims Corp.	PEB EB 35	8S003S034W28	160
ADL 642373	Pebble East Claims Corp.	PEB EB 36	8S003S034W28	160
ADL 642374	Pebble East Claims Corp.	PEB EB 37	8S003S035W24	160
ADL 642375	Pebble East Claims Corp.	PEB EB 38	8S003S035W24	160
ADL 642376	Pebble East Claims Corp.	PEB EB 39	8S003S034W19	160
ADL 642377	Pebble East Claims Corp.	PEB EB 40	8S003S034W19	160
ADL 642378	Pebble East Claims Corp.	PEB EB 41	8S003S034W20	160
ADL 642379	Pebble East Claims Corp.	PEB EB 42	8S003S034W20	160
ADL 642380	Pebble East Claims Corp.	PEB EB 43	8S003S034W21	160
ADL 642381	Pebble East Claims Corp.	PEB EB 44	8S003S034W21	160
ADL 642382	Pebble East Claims Corp.	PEB EB 45	8S003S035W24	160
ADL 642383	Pebble East Claims Corp.	PEB EB 46	8S003S035W24	160
ADL 642384	Pebble East Claims Corp.	PEB EB 47	8S003S034W19	160
ADL 642385	Pebble East Claims Corp.	PEB EB 48	8S003S034W19	160
ADL 642386	Pebble East Claims Corp.	PEB EB 49	8S003S034W20	160
ADL 642387	Pebble East Claims Corp.	PEB EB 50	8S003S034W20	160
ADL 642388	Pebble East Claims Corp.	PEB EB 51	8S003S034W21	160
ADL 642389	Pebble East Claims Corp.	PEB EB 52	8S003S034W21	160
ADL 642390	Pebble East Claims Corp.	PEB EB 53	8S003S035W13	160
ADL 642391	Pebble East Claims Corp.	PEB EB 54	8S003S035W13	160
ADL 642392	Pebble East Claims Corp.	PEB EB 55	8S003S034W18	160
ADL 642393	Pebble East Claims Corp.	PEB EB 56	8S003S034W18	160
ADL 642394	Pebble East Claims Corp.	PEB EB 57	8S003S034W17	160
ADL 642395	Pebble East Claims Corp.	PEB EB 58	8S003S034W17	160
ADL 642396	Pebble East Claims Corp.	PEB EB 59	8S003S034W16	160
ADL 642397	Pebble East Claims Corp.	PEB EB 60	8S003S034W16	160
ADL 642398	Pebble East Claims Corp.	PEB EB 61	8S003S035W13	160
ADL 642399	Pebble East Claims Corp.	PEB EB 62	8S003S035W13	160
ADL 642400	Pebble East Claims Corp.	PEB EB 63	8S003S034W18	160
ADL 642401	Pebble East Claims Corp.	PEB EB 64	8S003S034W18	160
ADL 642402	Pebble East Claims Corp.	PEB EB 65	8S003S034W17	160
ADL 642403	Pebble East Claims Corp.	PEB EB 66	8S003S034W17	160
ADL 642404	Pebble East Claims Corp.	PEB EB 67	8S003S034W16	160
ADL 642405	Pebble East Claims Corp.	PEB EB 68	8S003S034W16	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642406	Pebble East Claims Corp.	PEB EB 69	8S003S035W12	160
ADL 642407	Pebble East Claims Corp.	PEB EB 70	8S003S035W12	160
ADL 642408	Pebble East Claims Corp.	PEB EB 71	8S003S034W07	160
ADL 642409	Pebble East Claims Corp.	PEB EB 72	8S003S034W07	160
ADL 642410	Pebble East Claims Corp.	PEB EB 73	8S003S034W08	160
ADL 642411	Pebble East Claims Corp.	PEB EB 74	8S003S034W08	160
ADL 642412	Pebble East Claims Corp.	PEB WB 1	8S003S036W33	160
ADL 642413	Pebble East Claims Corp.	PEB WB 2	8S003S036W33	160
ADL 642414	Pebble East Claims Corp.	PEB WB 3	8S003S036W34	160
ADL 642415	Pebble East Claims Corp.	PEB WB 4	8S003S036W34	160
ADL 642416	Pebble East Claims Corp.	PEB WB 5	8S003S036W33	160
ADL 642417	Pebble East Claims Corp.	PEB WB 6	8S003S036W33	160
ADL 642418	Pebble East Claims Corp.	PEB WB 7	8S003S036W34	160
ADL 642419	Pebble East Claims Corp.	PEB WB 8	8S003S036W34	160
ADL 642420	Pebble East Claims Corp.	PEB WB 9	8S003S036W28	160
ADL 642421	Pebble East Claims Corp.	PEB WB 10	8S003S036W28	160
ADL 642422	Pebble East Claims Corp.	PEB WB 11	8S003S036W27	160
ADL 642423	Pebble East Claims Corp.	PEB WB 12	8S003S036W27	160
ADL 642424	Pebble East Claims Corp.	PEB WB 13	8S003S036W26	160
ADL 642425	Pebble East Claims Corp.	PEB WB 14	8S003S036W26	160
ADL 642426	Pebble East Claims Corp.	PEB WB 15	8S003S036W28	160
ADL 642427	Pebble East Claims Corp.	PEB WB 16	8S003S036W28	160
ADL 642428	Pebble East Claims Corp.	PEB WB 17	8S003S036W27	160
ADL 642429	Pebble East Claims Corp.	PEB WB 18	8S003S036W27	160
ADL 642430	Pebble East Claims Corp.	PEB WB 19	8S003S036W26	160
ADL 642431	Pebble East Claims Corp.	PEB WB 20	8S003S036W26	160
ADL 642432	Pebble East Claims Corp.	PEB WB 21	8S003S036W21	160
ADL 642433	Pebble East Claims Corp.	PEB WB 22	8S003S036W22	160
ADL 642434	Pebble East Claims Corp.	PEB WB 23	8S003S036W22	160
ADL 642435	Pebble East Claims Corp.	PEB WB 24	8S003S036W23	160
ADL 642436	Pebble East Claims Corp.	PEB WB 25	8S003S036W23	160
ADL 642437	Pebble East Claims Corp.	PEB WB 26	8S003S036W22	160
ADL 642438	Pebble East Claims Corp.	PEB WB 27	8S003S036W22	160
ADL 642439	Pebble East Claims Corp.	PEB WB 28	8S003S036W23	160
ADL 642440	Pebble East Claims Corp.	PEB WB 29	8S003S036W23	160
ADL 642441	Pebble East Claims Corp.	PEB WB 30	8S003S036W15	160
ADL 642442	Pebble East Claims Corp.	PEB WB 31	8S003S036W15	160
ADL 642443	Pebble East Claims Corp.	PEB WB 32	8S003S036W14	160
ADL 642444	Pebble East Claims Corp.	PEB WB 33	8S003S036W14	160
ADL 642445	Pebble East Claims Corp.	PEB WB 34	8S003S036W14	160
ADL 642446	Pebble East Claims Corp.	PEB WB 35	8S003S036W14	160
ADL 642447	Pebble East Claims Corp.	PEB WB 36	8S003S036W11	160
ADL 642448	Pebble East Claims Corp.	PEB WB 37	8S003S036W11	160
ADL 642449	Pebble East Claims Corp.	PEB WB 38	8S003S036W11	160
ADL 642450	Pebble East Claims Corp.	PEB WB 39	8S003S036W11	160
ADL 643892	Pebble East Claims Corp.	PEB SE A1	8S004S035W31	40
ADL 643893	Pebble East Claims Corp.	PEB SE A2	8S004S035W31	40
ADL 643894	Pebble East Claims Corp.	PEB SE A3	8S004S035W31	40
ADL 643895	Pebble East Claims Corp.	PEB SE A4	8S004S035W31	40
ADL 643896	Pebble East Claims Corp.	PEB SE A5	8S004S035W31	40
ADL 643897	Pebble East Claims Corp.	PEB SE A6	8S004S035W19	40
ADL 643898	Pebble East Claims Corp.	PEB SE A7	8S004S035W19	40
ADL 643899	Pebble East Claims Corp.	PEB SE 1	8S004S035W31	160
ADL 643900	Pebble East Claims Corp.	PEB SE 2	8S004S035W32	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 643901	Pebble East Claims Corp.	PEB SE 3	8S004S035W32	160
ADL 643902	Pebble East Claims Corp.	PEB SE 4	8S004S035W31	160
ADL 643903	Pebble East Claims Corp.	PEB SE 5	8S004S035W32	160
ADL 643904	Pebble East Claims Corp.	PEB SE 6	8S004S035W32	160
ADL 643905	Pebble East Claims Corp.	PEB SE 7	8S004S035W30	160
ADL 643906	Pebble East Claims Corp.	PEB SE 8	8S004S035W30	160
ADL 643907	Pebble East Claims Corp.	PEB SE 9	8S004S035W29	160
ADL 643908	Pebble East Claims Corp.	PEB SE 10	8S004S035W29	160
ADL 643909	Pebble East Claims Corp.	PEB SE 11	8S004S035W28	160
ADL 643910	Pebble East Claims Corp.	PEB SE 12	8S004S035W28	160
ADL 643911	Pebble East Claims Corp.	PEB SE 13	8S004S035W30	160
ADL 643912	Pebble East Claims Corp.	PEB SE 14	8S004S035W30	160
ADL 643913	Pebble East Claims Corp.	PEB SE 15	8S004S035W29	160
ADL 643914	Pebble East Claims Corp.	PEB SE 16	8S004S035W29	160
ADL 643915	Pebble East Claims Corp.	PEB SE 17	8S004S035W28	160
ADL 643916	Pebble East Claims Corp.	PEB SE 18	8S004S035W28	160
ADL 643917	Pebble East Claims Corp.	PEB SE 19	8S004S035W19	160
ADL 643918	Pebble East Claims Corp.	PEB SE 20	8S004S035W19	160
ADL 643919	Pebble East Claims Corp.	PEB SE 21	8S004S035W20	160
ADL 643920	Pebble East Claims Corp.	PEB SE 22	8S004S035W20	160
ADL 643921	Pebble East Claims Corp.	PEB SE 23	8S004S035W21	160
ADL 643922	Pebble East Claims Corp.	PEB SE 24	8S004S035W21	160
ADL 643923	Pebble East Claims Corp.	PEB SE 25	8S004S035W19	160
ADL 643924	Pebble East Claims Corp.	PEB SE 26	8S004S035W20	160
ADL 643925	Pebble East Claims Corp.	PEB SE 27	8S004S035W20	160
ADL 643926	Pebble East Claims Corp.	PEB SE 28	8S004S035W21	160
ADL 643927	Pebble East Claims Corp.	PEB SE 29	8S004S035W33	160
ADL 643928	Pebble East Claims Corp.	PEB SE 30	8S004S035W33	160
ADL 643929	Pebble East Claims Corp.	PEB SE 31	8S004S035W33	160
ADL 643930	Pebble East Claims Corp.	PEB SE 32	8S004S035W33	160
ADL 643931	Pebble East Claims Corp.	PEB NW A1	8S003S036W12	40
ADL 643932	Pebble East Claims Corp.	PEB NW A2	8S003S036W12	40
ADL 643933	Pebble East Claims Corp.	PEB NW A3	8S003S036W12	40
ADL 643934	Pebble East Claims Corp.	PEB NW A4	8S003S036W12	40
ADL 643935	Pebble East Claims Corp.	PEB NW 1	8S003S036W02	160
ADL 643936	Pebble East Claims Corp.	PEB NW 2	8S003S036W02	160
ADL 643937	Pebble East Claims Corp.	PEB NW 3	8S003S036W01	160
ADL 643938	Pebble East Claims Corp.	PEB NW 4	8S003S036W01	160
ADL 643939	Pebble East Claims Corp.	PEB NW 5	8S003S036W02	160
ADL 643940	Pebble East Claims Corp.	PEB NW 6	8S003S036W02	160
ADL 643941	Pebble East Claims Corp.	PEB NW 7	8S003S036W01	160
ADL 643942	Pebble East Claims Corp.	PEB NW 8	8S003S036W01	160
ADL 643943	Pebble East Claims Corp.	PEB NW 9	8S002S036W35	160
ADL 643943	Pebble East Claims Corp.	PEB NW 9	8S002S036W35	160
ADL 643944	Pebble East Claims Corp.	PEB NW 10	8S002S036W35	160
ADL 643945	Pebble East Claims Corp.	PEB NW 11	8S002S036W36	160
ADL 643946	Pebble East Claims Corp.	PEB NW 12	8S002S036W36	160
ADL 643947	Pebble East Claims Corp.	PEB NW 13	8S002S036W35	160
ADL 643948	Pebble East Claims Corp.	PEB NW 14	8S002S036W35	160
ADL 643949	Pebble East Claims Corp.	PEB NW 15	8S002S036W36	160
ADL 643950	Pebble East Claims Corp.	PEB NW 16	8S002S036W36	160
ADL 643951	Pebble East Claims Corp.	PEB NW 17	8S002S036W26	160
ADL 643952	Pebble East Claims Corp.	PEB NW 18	8S002S036W26	160
ADL 643953	Pebble East Claims Corp.	PEB NW 19	8S002S036W25	160



**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 643954	Pebble East Claims Corp.	PEB NW 20	8S002S036W25	160
ADL 643955	Pebble East Claims Corp.	PEB NW 21	8S002S036W26	160
ADL 643956	Pebble East Claims Corp.	PEB NW 22	8S002S036W26	160
ADL 643957	Pebble East Claims Corp.	PEB NW 23	8S002S036W25	160
ADL 643958	Pebble East Claims Corp.	PEB NW 24	8S002S036W25	160
ADL 643959	Pebble East Claims Corp.	PEB NW 25	8S002S036W23	160
ADL 643960	Pebble East Claims Corp.	PEB NW 26	8S002S036W23	160
ADL 643961	Pebble East Claims Corp.	PEB NW 27	8S002S036W24	160
ADL 643962	Pebble East Claims Corp.	PEB NW 28	8S002S036W24	160
ADL 643963	Pebble East Claims Corp.	PEB NW 29	8S002S036W23	160
ADL 643964	Pebble East Claims Corp.	PEB NW 30	8S002S036W23	160
ADL 643965	Pebble East Claims Corp.	PEB NW 31	8S002S036W24	160
ADL 643966	Pebble East Claims Corp.	PEB NW 32	8S002S036W24	160
ADL 644196	Pebble East Claims Corp.	PEB SE 33	8S004S035W22	160
ADL 644197	Pebble East Claims Corp.	PEB SE 34	8S004S035W22	160
ADL 644198	Pebble East Claims Corp.	PEB SE 35	8S004S035W23	160
ADL 644199	Pebble East Claims Corp.	PEB SE 36	8S004S035W23	160
ADL 644200	Pebble East Claims Corp.	PEB SE 37	8S004S035W27	160
ADL 644201	Pebble East Claims Corp.	PEB SE 38	8S004S035W27	160
ADL 644202	Pebble East Claims Corp.	PEB SE 39	8S004S035W26	160
ADL 644203	Pebble East Claims Corp.	PEB SE 40	8S004S035W26	160
ADL 644204	Pebble East Claims Corp.	PEB SE 41	8S004S035W27	160
ADL 644205	Pebble East Claims Corp.	PEB SE 42	8S004S035W27	160
ADL 644206	Pebble East Claims Corp.	PEB SE 43	8S004S035W26	160
ADL 644207	Pebble East Claims Corp.	PEB SE 44	8S004S035W26	160
ADL 644208	Pebble East Claims Corp.	PEB SE 45	8S004S035W34	160
ADL 644209	Pebble East Claims Corp.	PEB SE 46	8S004S035W34	160
ADL 644210	Pebble East Claims Corp.	PEB SE 47	8S004S035W35	160
ADL 644211	Pebble East Claims Corp.	PEB SE 48	8S004S035W34	160
ADL 644212	Pebble East Claims Corp.	PEB SE 49	8S004S035W34	160
ADL 644213	Pebble East Claims Corp.	PEB SE 50	8S005S036W02	160
ADL 644214	Pebble East Claims Corp.	PEB SE 51	8S005S036W02	160
ADL 644215	Pebble East Claims Corp.	PEB SE 52	8S005S036W01	160
ADL 644216	Pebble East Claims Corp.	PEB SE 53	8S005S036W01	160
ADL 644217	Pebble East Claims Corp.	PEB SE 54	8S005S035W06	160
ADL 644218	Pebble East Claims Corp.	PEB SE 55	8S005S035W06	160
ADL 644219	Pebble East Claims Corp.	PEB SE 56	8S005S036W02	160
ADL 644220	Pebble East Claims Corp.	PEB SE 57	8S005S036W02	160
ADL 644221	Pebble East Claims Corp.	PEB SE 58	8S005S036W01	160
ADL 644222	Pebble East Claims Corp.	PEB SE 59	8S005S036W01	160
ADL 644223	Pebble East Claims Corp.	PEB SE 60	8S005S035W06	160
ADL 644224	Pebble East Claims Corp.	PEB SE 61	8S005S035W06	160
ADL 644225	Pebble East Claims Corp.	PEB SE A8	8S004S035W23	40
ADL 644226	Pebble East Claims Corp.	PEB SE A9	8S005S036W04	40
ADL 644227	Pebble East Claims Corp.	PEB SE A10	8S005S036W03	40
ADL 644228	Pebble East Claims Corp.	PEB SE A11	8S005S036W03	40
ADL 644229	Pebble East Claims Corp.	PEB SE A12	8S005S036W03	40
ADL 644230	Pebble East Claims Corp.	PEB SE A13	8S005S036W03	40
ADL 644231	Pebble East Claims Corp.	PEB EB 75	8S003S034W09	160
ADL 644232	Pebble East Claims Corp.	PEB EB 76	8S003S034W09	160
ADL 644233	Pebble East Claims Corp.	PEB EB 77	8S003S035W11	160
ADL 644234	Pebble East Claims Corp.	PEB EB 78	8S003S035W11	160
ADL 644235	Pebble East Claims Corp.	PEB EB 79	8S003S035W12	160
ADL 644236	Pebble East Claims Corp.	PEB EB 80	8S003S035W12	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 644237	Pebble East Claims Corp.	PEB EB 81	8S003S034W07	160
ADL 644238	Pebble East Claims Corp.	PEB EB 82	8S003S034W07	160
ADL 644239	Pebble East Claims Corp.	PEB EB 83	8S003S034W08	160
ADL 644240	Pebble East Claims Corp.	PEB EB 84	8S003S034W08	160
ADL 644241	Pebble East Claims Corp.	PEB EB 85	8S003S034W09	160
ADL 644242	Pebble East Claims Corp.	PEB EB 86	8S003S034W09	160
ADL 644243	Pebble East Claims Corp.	PEB EB 87	8S003S035W02	160
ADL 644244	Pebble East Claims Corp.	PEB EB 88	8S003S035W02	160
ADL 644245	Pebble East Claims Corp.	PEB EB 89	8S003S035W01	160
ADL 644246	Pebble East Claims Corp.	PEB EB 90	8S003S035W01	160
ADL 644247	Pebble East Claims Corp.	PEB EB 91	8S003S034W06	160
ADL 644248	Pebble East Claims Corp.	PEB EB 92	8S003S034W04	160
ADL 644249	Pebble East Claims Corp.	PEB EB 93	8S003S034W04	160
ADL 644250	Pebble East Claims Corp.	PEB EB 94	8S003S035W02	160
ADL 644251	Pebble East Claims Corp.	PEB EB 95	8S003S035W02	160
ADL 644252	Pebble East Claims Corp.	PEB EB A5	8S003S035W11	40
ADL 644253	Pebble East Claims Corp.	PEB EB A6	8S003S035W11	40
ADL 644254	Pebble East Claims Corp.	PEB EB A7	8S003S035W11	40
ADL 644255	Pebble East Claims Corp.	PEB EB A8	8S003S035W11	40
ADL 644256	Pebble East Claims Corp.	PEB WB 40	8S004S036W04	160
ADL 644257	Pebble East Claims Corp.	PEB WB 41	8S004S036W04	160
ADL 644258	Pebble East Claims Corp.	PEB WB 42	8S004S036W03	160
ADL 644259	Pebble East Claims Corp.	PEB WB 43	8S004S036W03	160
ADL 644260	Pebble East Claims Corp.	PEB WB 44	8S004S036W02	160
ADL 644261	Pebble East Claims Corp.	PEB WB 45	8S004S036W02	160
ADL 644262	Pebble East Claims Corp.	PEB WB 46	8S004S036W04	160
ADL 644263	Pebble East Claims Corp.	PEB WB 47	8S004S036W04	160
ADL 644264	Pebble East Claims Corp.	PEB WB 48	8S004S036W03	160
ADL 644265	Pebble East Claims Corp.	PEB WB 49	8S004S036W03	160
ADL 644266	Pebble East Claims Corp.	PEB WB 50	8S004S036W02	160
ADL 644267	Pebble East Claims Corp.	PEB WB 51	8S004S036W02	160
ADL 644268	Pebble East Claims Corp.	PEB WB 52	8S004S036W09	160
ADL 644269	Pebble East Claims Corp.	PEB WB 53	8S004S036W09	160
ADL 644270	Pebble East Claims Corp.	PEB WB 54	8S004S036W10	160
ADL 644271	Pebble East Claims Corp.	PEB WB 55	8S004S036W10	160
ADL 644272	Pebble East Claims Corp.	PEB WB 56	8S004S036W11	160
ADL 644273	Pebble East Claims Corp.	PEB WB 57	8S004S036W11	160
ADL 644274	Pebble East Claims Corp.	PEB WB 58	8S004S036W09	160
ADL 644275	Pebble East Claims Corp.	PEB WB 59	8S004S036W09	160
ADL 644276	Pebble East Claims Corp.	PEB WB 60	8S004S036W10	160
ADL 644277	Pebble East Claims Corp.	PEB WB 61	8S004S036W10	160
ADL 644278	Pebble East Claims Corp.	PEB WB 62	8S004S036W11	160
ADL 644279	Pebble East Claims Corp.	PEB WB 63	8S004S036W11	160
ADL 644304	Pebble East Claims Corp.	SP 193	8S005S036W12	160
ADL 644305	Pebble East Claims Corp.	SP 194	8S005S036W12	160
ADL 644306	Pebble East Claims Corp.	SP 195	8S005S036W11	160
ADL 644307	Pebble East Claims Corp.	SP 196	8S005S036W11	160
ADL 644308	Pebble East Claims Corp.	SP 197	8S005S036W10	160
ADL 644309	Pebble East Claims Corp.	SP 198	8S005S036W10	160
ADL 644310	Pebble East Claims Corp.	SP 199	8S005S036W12	160
ADL 644311	Pebble East Claims Corp.	SP 200	8S005S036W12	160
ADL 644316	Pebble East Claims Corp.	SP 205	8S005S036W13	160
ADL 644317	Pebble East Claims Corp.	SP 206	8S005S036W13	160
ADL 644371	Pebble East Claims Corp.	SP 280	8S005S037W28	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 644374	Pebble East Claims Corp.	SP 283	8S005S037W22	160
ADL 644375	Pebble East Claims Corp.	SP 284	8S005S037W22	160
ADL 644376	Pebble East Claims Corp.	SP 285	8S005S037W21	160
ADL 644377	Pebble East Claims Corp.	SP 286	8S005S037W21	160
ADL 644378	Pebble East Claims Corp.	SP 287	8S005S037W21	160
ADL 644379	Pebble East Claims Corp.	SP 288	8S005S037W21	160
ADL 644380	Pebble East Claims Corp.	SP 289	8S005S037W22	160
ADL 644381	Pebble East Claims Corp.	SP 290	8S005S037W22	160
ADL 644382	Pebble East Claims Corp.	SP 291	8S005S037W16	160
ADL 644383	Pebble East Claims Corp.	SP 292	8S005S037W16	160
ADL 644384	Pebble East Claims Corp.	SP 293	8S005S037W16	160
ADL 644385	Pebble East Claims Corp.	SP 294	8S005S037W16	160
ADL 644386	Pebble East Claims Corp.	KAK 90	8S003S037W33	160
ADL 644387	Pebble East Claims Corp.	KAK 91	8S003S037W33	160
ADL 644388	Pebble East Claims Corp.	KAK 92	8S003S037W32	160
ADL 644389	Pebble East Claims Corp.	KAK 93	8S003S037W32	160
ADL 644390	Pebble East Claims Corp.	KAK 94	8S003S037W33	160
ADL 644391	Pebble East Claims Corp.	KAK 95	8S003S037W33	160
ADL 644392	Pebble East Claims Corp.	KAK 96	8S003S037W28	160
ADL 644393	Pebble East Claims Corp.	KAK 97	8S003S037W28	160
ADL 644394	Pebble East Claims Corp.	KAK 98	8S003S037W29	160
ADL 644395	Pebble East Claims Corp.	KAK 99	8S003S037W29	160
ADL 644396	Pebble East Claims Corp.	KAK 100	8S003S037W28	160
ADL 644397	Pebble East Claims Corp.	KAK 101	8S003S037W28	160
ADL 644398	Pebble East Claims Corp.	KAK 102	8S003S037W22	160
ADL 644399	Pebble East Claims Corp.	KAK 103	8S003S037W21	160
ADL 644400	Pebble East Claims Corp.	KAK 104	8S003S037W21	160
ADL 644401	Pebble East Claims Corp.	KAK 105	8S003S037W20	160
ADL 644402	Pebble East Claims Corp.	KAK 106	8S003S036W05	160
ADL 644403	Pebble East Claims Corp.	KAK 107	8S003S036W05	160
ADL 644404	Pebble East Claims Corp.	KAK 108	8S003S036W06	160
ADL 644405	Pebble East Claims Corp.	KAK 109	8S003S036W06	160
ADL 644406	Pebble East Claims Corp.	KAK 110	8S003S037W01	160
ADL 644407	Pebble East Claims Corp.	KAK 111	8S003S037W01	160
ADL 644408	Pebble East Claims Corp.	KAK 112	8S003S036W06	160
ADL 644409	Pebble East Claims Corp.	KAK 113	8S003S036W06	160
ADL 644410	Pebble East Claims Corp.	KAK 114	8S003S036W05	160
ADL 644411	Pebble East Claims Corp.	KAK 115	8S003S036W05	160
ADL 644412	Pebble East Claims Corp.	KAK 116	8S002S036W32	160
ADL 644413	Pebble East Claims Corp.	KAK 117	8S002S036W32	160
ADL 644414	Pebble East Claims Corp.	KAK 118	8S002S036W31	160
ADL 644415	Pebble East Claims Corp.	KAK 119	8S002S036W31	160
ADL 644421	Pebble East Claims Corp.	KAK 125	8S002S036W31	160
ADL 644422	Pebble East Claims Corp.	KAK 126	8S002S036W31	160
ADL 644423	Pebble East Claims Corp.	KAK 127	8S002S036W32	160
ADL 644424	Pebble East Claims Corp.	KAK 128	8S002S036W29	160
ADL 644425	Pebble East Claims Corp.	KAK 129	8S002S036W30	160
ADL 644426	Pebble East Claims Corp.	KAK 130	8S002S036W30	160
ADL 644467	Pebble East Claims Corp.	KAK 171	8S002S036W28	160
ADL 644468	Pebble East Claims Corp.	KAK 172	8S002S036W29	160
ADL 644469	Pebble East Claims Corp.	KAK 173	8S002S036W32	160
ADL 644470	Pebble East Claims Corp.	KAK 174	8S002S036W33	160
ADL 644471	Pebble East Claims Corp.	KAK 175	8S002S036W33	160
ADL 644472	Pebble East Claims Corp.	KAK 176	8S002S036W34	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 644473	Pebble East Claims Corp.	KAK 177	8S002S036W34	160
ADL 644474	Pebble East Claims Corp.	KAK 178	8S002S036W33	160
ADL 644475	Pebble East Claims Corp.	KAK 179	8S002S036W33	160
ADL 644476	Pebble East Claims Corp.	KAK 180	8S003S036W04	160
ADL 644477	Pebble East Claims Corp.	KAK 181	8S003S036W04	160
ADL 644478	Pebble East Claims Corp.	KAK 182	8S003S036W03	160
ADL 644479	Pebble East Claims Corp.	KAK 183	8S003S036W03	160
ADL 644480	Pebble East Claims Corp.	KAK 184	8S003S036W03	160
ADL 644481	Pebble East Claims Corp.	KAK 185	8S003S036W03	160
ADL 644482	Pebble East Claims Corp.	KAK 186	8S003S036W04	160
ADL 644483	Pebble East Claims Corp.	KAK 187	8S003S036W04	160
ADL 644881	Pebble East Claims Corp.	KAK 188	8S002S036W34	160
ADL 644882	Pebble East Claims Corp.	KAK 189	8S002S036W34	160
ADL 644883	Pebble East Claims Corp.	KAK 190	8S002S036W28	160
ADL 644884	Pebble East Claims Corp.	KAK 191	8S002S036W27	160
ADL 644885	Pebble East Claims Corp.	KAK 192	8S002S036W27	160
ADL 644886	Pebble East Claims Corp.	KAK 193	8S002S036W27	160
ADL 644887	Pebble East Claims Corp.	KAK 194	8S002S036W27	160
ADL 644888	Pebble East Claims Corp.	KAK 195	8S002S036W28	160
ADL 644889	Pebble East Claims Corp.	KAK 196	8S002S036W21	160
ADL 644890	Pebble East Claims Corp.	KAK 197	8S002S036W21	160
ADL 644891	Pebble East Claims Corp.	KAK 198	8S002S036W22	160
ADL 644892	Pebble East Claims Corp.	KAK 199	8S002S036W22	160
ADL 644893	Pebble East Claims Corp.	KAK 200	8S002S036W22	160
ADL 644894	Pebble East Claims Corp.	KAK 201	8S002S036W22	160
ADL 644895	Pebble East Claims Corp.	KAK 202	8S002S036W21	160
ADL 644896	Pebble East Claims Corp.	KAK 203	8S002S036W21	160
ADL 644897	Pebble East Claims Corp.	KAK 204	8S002S036W16	160
ADL 644898	Pebble East Claims Corp.	KAK 205	8S002S036W16	160
ADL 644899	Pebble East Claims Corp.	KAK 206	8S002S036W15	160
ADL 644900	Pebble East Claims Corp.	KAK 207	8S002S036W15	160
ADL 644901	Pebble East Claims Corp.	KAK 208	8S002S036W14	160
ADL 644902	Pebble East Claims Corp.	KAK 209	8S002S036W14	160
ADL 644903	Pebble East Claims Corp.	KAK 210	8S002S036W13	160
ADL 644904	Pebble East Claims Corp.	KAK 211	8S002S036W13	160
ADL 644905	Pebble East Claims Corp.	KAK 212	8S002S036W13	160
ADL 644906	Pebble East Claims Corp.	KAK 213	8S002S036W13	160
ADL 644907	Pebble East Claims Corp.	KAK 214	8S002S036W14	160
ADL 644908	Pebble East Claims Corp.	KAK 215	8S002S036W14	160
ADL 644909	Pebble East Claims Corp.	KAK 216	8S002S036W15	160
ADL 644910	Pebble East Claims Corp.	KAK 217	8S002S036W15	160
ADL 644911	Pebble East Claims Corp.	KAK 218	8S002S036W16	160
ADL 644912	Pebble East Claims Corp.	KAK 219	8S002S036W16	160
ADL 645600	Pebble East Claims Corp.	SP 310	8S005S037W20	160
ADL 645601	Pebble East Claims Corp.	SP 311	8S005S037W20	160
ADL 645606	Pebble East Claims Corp.	SP 316	8S005S037W17	160
ADL 645607	Pebble East Claims Corp.	SP 317	8S005S037W17	160
ADL 645608	Pebble East Claims Corp.	SP 318	8S005S037W17	160
ADL 645609	Pebble East Claims Corp.	SP 319	8S005S037W17	160
ADL 646604	Pebble East Claims Corp.	PEBBLE BEACH 5942	8S003S035W18	40
ADL 646605	Pebble East Claims Corp.	PEBBLE BEACH 5943	8S003S035W18	40
ADL 646606	Pebble East Claims Corp.	PEB K 1	8S003S035W36	160
ADL 646607	Pebble East Claims Corp.	PEB K 2	8S003S035W36	160
ADL 646608	Pebble East Claims Corp.	PEB K 3	8S003S035W36	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 646609	Pebble East Claims Corp.	PEB K 4	8S003S035W36	160
ADL 646610	Pebble East Claims Corp.	PEB K 5	8S004S035W01	40
ADL 646611	Pebble East Claims Corp.	PEB K 6	8S004S035W01	40
ADL 646612	Pebble East Claims Corp.	PEB K 7	8S004S035W01	40
ADL 646613	Pebble East Claims Corp.	PEB K 8	8S004S035W01	40
ADL 646614	Pebble East Claims Corp.	PEB K 9	8S004S034W06	40
ADL 646615	Pebble East Claims Corp.	PEB K 10	8S004S034W06	40
ADL 646616	Pebble East Claims Corp.	PEB K 11	8S004S034W06	40
ADL 646617	Pebble East Claims Corp.	PEB K 12	8S004S034W06	40
ADL 648906	Pebble East Claims Corp.	PEB WB 64	8S003S036W35	160
ADL 648907	Pebble East Claims Corp.	PEB WB 65	8S003S036W35	160
ADL 648908	Pebble East Claims Corp.	PEB WB 66	8S003S036W35	160
ADL 648909	Pebble East Claims Corp.	PEB WB 67	8S003S036W35	160
ADL 649664	Pebble East Claims Corp.	KAK 220	8S002S037W23	160
ADL 649665	Pebble East Claims Corp.	KAK 221	8S002S037W23	160
ADL 649666	Pebble East Claims Corp.	KAK 222	8S002S037W22	160
ADL 649667	Pebble East Claims Corp.	KAK 223	8S002S037W22	160
ADL 649668	Pebble East Claims Corp.	KAK 224	8S002S037W21	160
ADL 649669	Pebble East Claims Corp.	KAK 225	8S002S037W21	160
ADL 649670	Pebble East Claims Corp.	KAK 226	8S002S037W20	160
ADL 649671	Pebble East Claims Corp.	KAK 227	8S002S037W21	160
ADL 649672	Pebble East Claims Corp.	KAK 228	8S002S037W21	160
ADL 649673	Pebble East Claims Corp.	KAK 229	8S002S037W22	160
ADL 649674	Pebble East Claims Corp.	KAK 230	8S002S037W22	160
ADL 649675	Pebble East Claims Corp.	KAK 231	8S002S037W23	160
ADL 649676	Pebble East Claims Corp.	KAK 232	8S002S037W23	160
ADL 649677	Pebble East Claims Corp.	KAK 233	8S002S037W26	160
ADL 649678	Pebble East Claims Corp.	KAK 234	8S002S037W26	160
ADL 649679	Pebble East Claims Corp.	KAK 235	8S002S037W27	160
ADL 649680	Pebble East Claims Corp.	KAK 236	8S002S037W27	160
ADL 649681	Pebble East Claims Corp.	KAK 237	8S002S037W28	160
ADL 649682	Pebble East Claims Corp.	KAK 238	8S002S037W28	160
ADL 649683	Pebble East Claims Corp.	KAK 239	8S002S037W29	160
ADL 649684	Pebble East Claims Corp.	KAK 240	8S002S037W29	160
ADL 649685	Pebble East Claims Corp.	KAK 241	8S002S037W29	160
ADL 649686	Pebble East Claims Corp.	KAK 242	8S002S037W29	160
ADL 649687	Pebble East Claims Corp.	KAK 243	8S002S037W28	160
ADL 649688	Pebble East Claims Corp.	KAK 244	8S002S037W28	160
ADL 649689	Pebble East Claims Corp.	KAK 245	8S002S037W27	160
ADL 649690	Pebble East Claims Corp.	KAK 246	8S002S037W27	160
ADL 649691	Pebble East Claims Corp.	KAK 247	8S002S037W26	160
ADL 649692	Pebble East Claims Corp.	KAK 248	8S002S037W35	160
ADL 649693	Pebble East Claims Corp.	KAK 249	8S002S037W34	160
ADL 649694	Pebble East Claims Corp.	KAK 250	8S002S037W34	160
ADL 649695	Pebble East Claims Corp.	KAK 251	8S002S037W33	160
ADL 649696	Pebble East Claims Corp.	KAK 252	8S002S037W33	160
ADL 649697	Pebble East Claims Corp.	KAK 253	8S002S037W32	160
ADL 649698	Pebble East Claims Corp.	KAK 254	8S002S037W32	160
ADL 649699	Pebble East Claims Corp.	KAK 255	8S002S037W32	160
ADL 649700	Pebble East Claims Corp.	KAK 256	8S002S037W32	160
ADL 649701	Pebble East Claims Corp.	KAK 257	8S002S037W33	160
ADL 649702	Pebble East Claims Corp.	KAK 258	8S002S037W33	160
ADL 649703	Pebble East Claims Corp.	KAK 259	8S002S037W34	160
ADL 649704	Pebble East Claims Corp.	KAK 260	8S002S037W34	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 649705	Pebble East Claims Corp.	KAK 261	8S002S037W35	160
ADL 649706	Pebble East Claims Corp.	KAK 262	8S002S037W35	160
ADL 649707	Pebble East Claims Corp.	KAK 263	8S003S037W01	160
ADL 649708	Pebble East Claims Corp.	KAK 264	8S003S037W02	160
ADL 649709	Pebble East Claims Corp.	KAK 265	8S003S037W02	160
ADL 649710	Pebble East Claims Corp.	KAK 266	8S003S037W03	160
ADL 649711	Pebble East Claims Corp.	KAK 267	8S003S037W03	160
ADL 649712	Pebble East Claims Corp.	KAK 268	8S003S037W04	160
ADL 649713	Pebble East Claims Corp.	KAK 269	8S003S037W04	160
ADL 649714	Pebble East Claims Corp.	KAK 270	8S003S037W05	160
ADL 649715	Pebble East Claims Corp.	KAK 271	8S003S037W05	160
ADL 649716	Pebble East Claims Corp.	KAK 272	8S003S037W05	160
ADL 649717	Pebble East Claims Corp.	KAK 273	8S003S037W05	160
ADL 649718	Pebble East Claims Corp.	KAK 274	8S003S037W04	160
ADL 649719	Pebble East Claims Corp.	KAK 275	8S003S037W04	160
ADL 649720	Pebble East Claims Corp.	KAK 276	8S003S037W03	160
ADL 649721	Pebble East Claims Corp.	KAK 277	8S003S037W03	160
ADL 649722	Pebble East Claims Corp.	KAK 278	8S003S037W02	160
ADL 649723	Pebble East Claims Corp.	KAK 279	8S003S037W02	160
ADL 649724	Pebble East Claims Corp.	KAK 280	8S003S037W01	160
ADL 649725	Pebble East Claims Corp.	KAK 281	8S003S037W12	160
ADL 649726	Pebble East Claims Corp.	KAK 282	8S003S037W11	160
ADL 649727	Pebble East Claims Corp.	KAK 283	8S003S037W11	160
ADL 649728	Pebble East Claims Corp.	KAK 284	8S003S037W10	160
ADL 649729	Pebble East Claims Corp.	KAK 285	8S003S037W10	160
ADL 649730	Pebble East Claims Corp.	KAK 286	8S003S037W09	160
ADL 649731	Pebble East Claims Corp.	KAK 287	8S003S037W09	160
ADL 649732	Pebble East Claims Corp.	KAK 288	8S003S037W08	160
ADL 649733	Pebble East Claims Corp.	KAK 289	8S003S037W08	160
ADL 649734	Pebble East Claims Corp.	KAK 290	8S003S037W08	160
ADL 649735	Pebble East Claims Corp.	KAK 291	8S003S037W08	160
ADL 649736	Pebble East Claims Corp.	KAK 292	8S003S037W09	160
ADL 649737	Pebble East Claims Corp.	KAK 293	8S003S037W09	160
ADL 649738	Pebble East Claims Corp.	KAK 294	8S003S037W10	160
ADL 649739	Pebble East Claims Corp.	KAK 295	8S003S037W10	160
ADL 649740	Pebble East Claims Corp.	KAK 296	8S003S037W11	160
ADL 649741	Pebble East Claims Corp.	KAK 297	8S003S037W11	160
ADL 649742	Pebble East Claims Corp.	KAK 298	8S003S037W12	160
ADL 649743	Pebble East Claims Corp.	KAK 299	8S003S037W13	160
ADL 649744	Pebble East Claims Corp.	KAK 300	8S003S037W14	160
ADL 649745	Pebble East Claims Corp.	KAK 301	8S003S037W14	160
ADL 649746	Pebble East Claims Corp.	KAK 302	8S003S037W15	160
ADL 649747	Pebble East Claims Corp.	KAK 303	8S003S037W15	160
ADL 649748	Pebble East Claims Corp.	KAK 304	8S003S037W16	160
ADL 649749	Pebble East Claims Corp.	KAK 305	8S003S037W16	160
ADL 649750	Pebble East Claims Corp.	KAK 306	8S003S037W17	160
ADL 649751	Pebble East Claims Corp.	KAK 307	8S003S037W17	160
ADL 649752	Pebble East Claims Corp.	KAK 308	8S003S037W17	160
ADL 649753	Pebble East Claims Corp.	KAK 309	8S003S037W17	160
ADL 649754	Pebble East Claims Corp.	KAK 310	8S003S037W16	160
ADL 649755	Pebble East Claims Corp.	KAK 311	8S003S037W16	160
ADL 649756	Pebble East Claims Corp.	KAK 312	8S003S037W15	160
ADL 649757	Pebble East Claims Corp.	KAK 313	8S003S037W15	160
ADL 649758	Pebble East Claims Corp.	KAK 314	8S003S037W14	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 649759	Pebble East Claims Corp.	KAK 315	8S003S037W14	160
ADL 649760	Pebble East Claims Corp.	KAK 316	8S003S037W13	160
ADL 649761	Pebble East Claims Corp.	KAK 317	8S003S037W23	160
ADL 649762	Pebble East Claims Corp.	KAK 318	8S003S037W23	160
ADL 649763	Pebble East Claims Corp.	KAK 319	8S003S037W22	160
ADL 649764	Pebble East Claims Corp.	KAK 320	8S003S037W22	160
ADL 649765	Pebble East Claims Corp.	KAK 321	8S003S037W21	160
ADL 649766	Pebble East Claims Corp.	KAK 322	8S003S037W21	160
ADL 649767	Pebble East Claims Corp.	KAK 323	8S003S037W20	160
ADL 649768	Pebble East Claims Corp.	KAK 324	8S003S037W20	160
ADL 649769	Pebble East Claims Corp.	KAK 325	8S003S037W20	160
ADL 649770	Pebble East Claims Corp.	KAK 326	8S003S037W29	160
ADL 657890	Pebble East Claims Corp.	KAK 327	8S004S037W04	160
ADL 657891	Pebble East Claims Corp.	KAK 328	8S004S037W04	160
ADL 657892	Pebble East Claims Corp.	KAK 329	8S004S037W04	160
ADL 657893	Pebble East Claims Corp.	KAK 330	8S004S037W09	160
ADL 657894	Pebble East Claims Corp.	KAK 331	8S004S037W10	160
ADL 657895	Pebble East Claims Corp.	KAK 332	8S004S037W10	160
ADL 657896	Pebble East Claims Corp.	KAK 333	8S004S037W10	160
ADL 657897	Pebble East Claims Corp.	KAK 334	8S004S037W10	160
ADL 657898	Pebble East Claims Corp.	KAK 335	8S004S037W09	160
ADL 657899	Pebble East Claims Corp.	KAK 336	8S004S037W16	160
ADL 657900	Pebble East Claims Corp.	KAK 337	8S004S037W15	160
ADL 657901	Pebble East Claims Corp.	KAK 338	8S004S037W15	160
ADL 657902	Pebble East Claims Corp.	KAK 339	8S004S037W14	160
ADL 657903	Pebble East Claims Corp.	KAK 340	8S004S037W14	160
ADL 657904	Pebble East Claims Corp.	KAK 341	8S004S037W13	160
ADL 657905	Pebble East Claims Corp.	KAK 342	8S004S037W13	160
ADL 657906	Pebble East Claims Corp.	KAK 343	8S004S037W14	160
ADL 657907	Pebble East Claims Corp.	KAK 344	8S004S037W14	160
ADL 657908	Pebble East Claims Corp.	KAK 345	8S004S037W15	160
ADL 657909	Pebble East Claims Corp.	KAK 346	8S004S037W15	160
ADL 657910	Pebble East Claims Corp.	KAK 347	8S004S037W16	160
ADL 657911	Pebble East Claims Corp.	KAK 348	8S004S037W21	160
ADL 657912	Pebble East Claims Corp.	KAK 349	8S004S037W22	160
ADL 657913	Pebble East Claims Corp.	KAK 350	8S004S037W22	160
ADL 657914	Pebble East Claims Corp.	KAK 351	8S004S037W23	160
ADL 657915	Pebble East Claims Corp.	KAK 352	8S004S037W23	160
ADL 657916	Pebble East Claims Corp.	KAK 353	8S004S037W24	160
ADL 657917	Pebble East Claims Corp.	KAK 354	8S004S037W24	160
ADL 657918	Pebble East Claims Corp.	KAK 355	8S004S037W23	160
ADL 657919	Pebble East Claims Corp.	KAK 356	8S004S037W23	160
ADL 657920	Pebble East Claims Corp.	KAK 357	8S004S037W22	160
ADL 657921	Pebble East Claims Corp.	KAK 358	8S004S037W22	160
ADL 657922	Pebble East Claims Corp.	KAK 359	8S004S037W21	160
ADL 657923	Pebble East Claims Corp.	KAK 360	8S004S037W28	160
ADL 657924	Pebble East Claims Corp.	KAK 361	8S004S037W27	160
ADL 657925	Pebble East Claims Corp.	KAK 362	8S004S037W27	160
ADL 657926	Pebble East Claims Corp.	KAK 363	8S004S037W26	160
ADL 657927	Pebble East Claims Corp.	KAK 364	8S004S037W26	160
ADL 657928	Pebble East Claims Corp.	KAK 365	8S004S037W25	160
ADL 657929	Pebble East Claims Corp.	KAK 366	8S004S037W25	160
ADL 657930	Pebble East Claims Corp.	KAK 367	8S004S037W26	160
ADL 657931	Pebble East Claims Corp.	KAK 368	8S004S037W26	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 657932	Pebble East Claims Corp.	KAK 369	8S004S037W27	160
ADL 657933	Pebble East Claims Corp.	KAK 370	8S004S037W27	160
ADL 657934	Pebble East Claims Corp.	KAK 371	8S004S037W28	160
ADL 657935	Pebble East Claims Corp.	KAK 372	8S004S037W33	160
ADL 657936	Pebble East Claims Corp.	KAK 373	8S004S037W34	160
ADL 657937	Pebble East Claims Corp.	KAK 374	8S004S037W34	160
ADL 657938	Pebble East Claims Corp.	KAK 375	8S004S037W35	160
ADL 657939	Pebble East Claims Corp.	KAK 376	8S004S037W35	160
ADL 657940	Pebble East Claims Corp.	KAK 377	8S004S037W36	160
ADL 657941	Pebble East Claims Corp.	KAK 378	8S004S037W36	160
ADL 657942	Pebble East Claims Corp.	KAK 379	8S004S037W35	160
ADL 657943	Pebble East Claims Corp.	KAK 380	8S004S037W35	160
ADL 657944	Pebble East Claims Corp.	KAK 381	8S004S037W34	160
ADL 657945	Pebble East Claims Corp.	KAK 382	8S004S037W34	160
ADL 657946	Pebble East Claims Corp.	KAK 383	8S004S037W33	160
ADL 657947	Pebble East Claims Corp.	KAK 384	8S005S037W06	160
ADL 657948	Pebble East Claims Corp.	KAK 385	8S005S037W05	160
ADL 657949	Pebble East Claims Corp.	KAK 386	8S005S037W05	160
ADL 657950	Pebble East Claims Corp.	KAK 387	8S005S037W04	160
ADL 657951	Pebble East Claims Corp.	KAK 388	8S005S037W04	160
ADL 657952	Pebble East Claims Corp.	KAK 389	8S005S037W04	160
ADL 657953	Pebble East Claims Corp.	KAK 390	8S005S037W04	160
ADL 657954	Pebble East Claims Corp.	KAK 391	8S005S037W05	160
ADL 657955	Pebble East Claims Corp.	KAK 392	8S005S037W05	160
ADL 657958	Pebble East Claims Corp.	KAK 395	8S005S037W08	160
ADL 657959	Pebble East Claims Corp.	KAK 396	8S005S037W08	160
ADL 657960	Pebble East Claims Corp.	KAK 397	8S005S037W09	160
ADL 657961	Pebble East Claims Corp.	KAK 398	8S005S037W09	160
ADL 657962	Pebble East Claims Corp.	KAK 399	8S005S037W09	160
ADL 657963	Pebble East Claims Corp.	KAK 400	8S005S037W09	160
ADL 657964	Pebble East Claims Corp.	KAK 401	8S005S037W08	160
ADL 657965	Pebble East Claims Corp.	KAK 402	8S005S037W08	160
ADL 663828	Pebble East Claims Corp.	KAK 136A	8S002S036W30	160
ADL 663829	Pebble East Claims Corp.	KAK 137A	8S002S036W30	160
ADL 663830	Pebble East Claims Corp.	KAK 138A	8S002S036W19	160
ADL 663831	Pebble East Claims Corp.	KAK 139A	8S002S036W19	160
ADL 663832	Pebble East Claims Corp.	KAK 144A	8S002S036W19	160
ADL 663833	Pebble East Claims Corp.	KAK 145A	8S002S036W19	160
ADL 663834	Pebble East Claims Corp.	KAK 146A	8S002S036W18	160
ADL 663835	Pebble East Claims Corp.	KAK 147A	8S002S036W18	160
ADL 663836	Pebble East Claims Corp.	KAK 158A	8S002S036W18	160
ADL 663837	Pebble East Claims Corp.	KAK 159A	8S002S036W18	160
ADL 663838	Pebble East Claims Corp.	KAK 160A	8S002S036W17	160
ADL 663839	Pebble East Claims Corp.	KAK 161A	8S002S036W17	160
ADL 663840	Pebble East Claims Corp.	KAK 162A	8S002S036W17	160
ADL 663841	Pebble East Claims Corp.	KAK 163A	8S002S036W17	160
ADL 663842	Pebble East Claims Corp.	KAK 164A	8S002S036W20	160
ADL 663843	Pebble East Claims Corp.	KAK 165A	8S002S036W20	160
ADL 663844	Pebble East Claims Corp.	KAK 166A	8S002S036W20	160
ADL 663845	Pebble East Claims Corp.	KAK 167A	8S002S036W20	160
ADL 663846	Pebble East Claims Corp.	KAK 168A	8S002S036W29	160
ADL 663847	Pebble East Claims Corp.	KAK 169A	8S002S036W29	160
ADL 663848	Pebble East Claims Corp.	KAK 170A	8S002S036W28	160
ADL 668740	Pebble East Claims Corp.	PEBA 113	8S003S033W31	160



**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 668741	Pebble East Claims Corp.	KAS 1	8S005S037W19	160
ADL 668742	Pebble East Claims Corp.	KAS 2	8S005S037W19	160
ADL 668743	Pebble East Claims Corp.	KAS 3	8S005S037W20	160
ADL 668744	Pebble East Claims Corp.	KAS 4	8S005S037W20	160
ADL 668749	Pebble East Claims Corp.	KAS 9	8S005S037W30	160
ADL 668750	Pebble East Claims Corp.	KAS 10	8S005S037W30	160
ADL 668751	Pebble East Claims Corp.	KAS 11	8S005S037W29	160
ADL 668752	Pebble East Claims Corp.	KAS 12	8S005S037W29	160
ADL 668753	Pebble East Claims Corp.	KAS 13	8S005S037W28	160
ADL 668758	Pebble East Claims Corp.	KAS 18	8S005S037W30	160
ADL 668759	Pebble East Claims Corp.	KAS 19	8S005S037W30	160
ADL 668760	Pebble East Claims Corp.	KAS 20	8S005S037W29	160
ADL 668761	Pebble East Claims Corp.	KAS 21	8S005S037W29	160
ADL 668762	Pebble East Claims Corp.	KAS 22	8S005S037W28	160
ADL 668769	Pebble East Claims Corp.	KAS 29	8S005S037W31	160
ADL 668770	Pebble East Claims Corp.	KAS 30	8S005S037W31	160
ADL 668771	Pebble East Claims Corp.	KAS 31	8S005S037W32	160
ADL 668772	Pebble East Claims Corp.	KAS 32	8S005S037W32	160
ADL 668773	Pebble East Claims Corp.	KAS 33	8S005S037W33	160
ADL 668784	Pebble East Claims Corp.	KAS 44	8S005S037W31	160
ADL 668785	Pebble East Claims Corp.	KAS 45	8S005S037W31	160
ADL 668786	Pebble East Claims Corp.	KAS 46	8S005S037W32	160
ADL 668787	Pebble East Claims Corp.	KAS 47	8S005S037W32	160
ADL 668788	Pebble East Claims Corp.	KAS 48	8S005S037W33	160
ADL 668801	Pebble East Claims Corp.	KAS 61	8S006S038W01	160
ADL 668802	Pebble East Claims Corp.	KAS 62	8S006S037W06	160
ADL 668803	Pebble East Claims Corp.	KAS 63	8S006S037W06	160
ADL 668804	Pebble East Claims Corp.	KAS 64	8S006S037W05	160
ADL 668805	Pebble East Claims Corp.	KAS 65	8S006S037W05	160
ADL 668806	Pebble East Claims Corp.	KAS 66	8S006S037W04	160
ADL 668823	Pebble East Claims Corp.	KAS 83	8S006S038W02	160
ADL 668824	Pebble East Claims Corp.	KAS 84	8S006S038W01	160
ADL 668825	Pebble East Claims Corp.	KAS 85	8S006S038W01	160
ADL 668826	Pebble East Claims Corp.	KAS 86	8S006S037W06	160
ADL 668827	Pebble East Claims Corp.	KAS 87	8S006S037W06	160
ADL 668828	Pebble East Claims Corp.	KAS 88	8S006S037W05	160
ADL 668829	Pebble East Claims Corp.	KAS 89	8S006S037W05	160
ADL 668849	Pebble East Claims Corp.	KAS 109	8S006S038W11	160
ADL 668850	Pebble East Claims Corp.	KAS 110	8S006S038W11	160
ADL 668851	Pebble East Claims Corp.	KAS 111	8S006S038W12	160
ADL 668852	Pebble East Claims Corp.	KAS 112	8S006S038W12	160
ADL 668853	Pebble East Claims Corp.	KAS 113	8S006S037W07	160
ADL 668854	Pebble East Claims Corp.	KAS 114	8S006S037W07	160
ADL 668855	Pebble East Claims Corp.	KAS 115	8S006S037W08	160
ADL 668875	Pebble East Claims Corp.	KAS 135	8S006S038W10	160
ADL 668876	Pebble East Claims Corp.	KAS 136	8S006S038W11	160
ADL 668877	Pebble East Claims Corp.	KAS 137	8S006S038W11	160
ADL 668878	Pebble East Claims Corp.	KAS 138	8S006S038W12	160
ADL 668879	Pebble East Claims Corp.	KAS 139	8S006S038W12	160
ADL 668880	Pebble East Claims Corp.	KAS 140	8S006S037W07	160
ADL 668881	Pebble East Claims Corp.	KAS 141	8S006S037W07	160
ADL 668901	Pebble East Claims Corp.	KAS 161	8S006S038W15	160
ADL 668902	Pebble East Claims Corp.	KAS 162	8S006S038W15	160
ADL 668903	Pebble East Claims Corp.	KAS 163	8S006S038W14	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 668904	Pebble East Claims Corp.	KAS 164	8S006S038W14	160
ADL 668905	Pebble East Claims Corp.	KAS 165	8S006S038W13	160
ADL 668906	Pebble East Claims Corp.	KAS 166	8S006S038W13	160
ADL 668929	Pebble East Claims Corp.	KAS 189	8S006S038W15	160
ADL 668930	Pebble East Claims Corp.	KAS 190	8S006S038W15	160
ADL 668931	Pebble East Claims Corp.	KAS 191	8S006S038W14	160
ADL 668932	Pebble East Claims Corp.	KAS 192	8S006S038W14	160
ADL 668933	Pebble East Claims Corp.	KAS 193	8S006S038W13	160
ADL 668934	Pebble East Claims Corp.	KAS 194	8S006S038W13	160
ADL 668956	Pebble East Claims Corp.	KAS 216	8S006S038W21	160
ADL 668957	Pebble East Claims Corp.	KAS 217	8S006S038W22	160
ADL 668958	Pebble East Claims Corp.	KAS 218	8S006S038W22	160
ADL 668959	Pebble East Claims Corp.	KAS 219	8S006S038W23	160
ADL 668960	Pebble East Claims Corp.	KAS 220	8S006S038W23	160
ADL 668961	Pebble East Claims Corp.	KAS 221	8S006S038W24	160
ADL 668983	Pebble East Claims Corp.	KAS 243	8S006S038W21	160
ADL 668984	Pebble East Claims Corp.	KAS 244	8S006S038W21	160
ADL 668985	Pebble East Claims Corp.	KAS 245	8S006S038W22	160
ADL 668986	Pebble East Claims Corp.	KAS 246	8S006S038W22	160
ADL 668987	Pebble East Claims Corp.	KAS 247	8S006S038W23	160
ADL 668988	Pebble East Claims Corp.	KAS 248	8S006S038W23	160
ADL 669010	Pebble East Claims Corp.	KAS 270	8S006S038W29	160
ADL 669011	Pebble East Claims Corp.	KAS 271	8S006S038W28	160
ADL 669012	Pebble East Claims Corp.	KAS 272	8S006S038W28	160
ADL 669013	Pebble East Claims Corp.	KAS 273	8S006S038W27	160
ADL 669014	Pebble East Claims Corp.	KAS 274	8S006S038W27	160
ADL 669015	Pebble East Claims Corp.	KAS 275	8S006S038W26	160
ADL 669038	Pebble East Claims Corp.	KAS 298	8S006S038W29	160
ADL 669039	Pebble East Claims Corp.	KAS 299	8S006S038W28	160
ADL 669040	Pebble East Claims Corp.	KAS 300	8S006S038W28	160
ADL 669041	Pebble East Claims Corp.	KAS 301	8S006S038W27	160
ADL 669042	Pebble East Claims Corp.	KAS 302	8S006S038W27	160
ADL 669043	Pebble East Claims Corp.	KAS 303	8S006S038W26	160
ADL 669060	Pebble East Claims Corp.	KAS 324	8S006S038W32	160
ADL 669061	Pebble East Claims Corp.	KAS 325	8S006S038W32	160
ADL 669062	Pebble East Claims Corp.	KAS 326	8S006S038W33	160
ADL 669063	Pebble East Claims Corp.	KAS 327	8S006S038W33	160
ADL 669064	Pebble East Claims Corp.	KAS 328	8S006S038W34	160
ADL 669065	Pebble East Claims Corp.	KAS 329	8S006S038W34	160
ADL 669075	Pebble East Claims Corp.	KAS 340	8S006S038W32	160
ADL 669076	Pebble East Claims Corp.	KAS 341	8S006S038W32	160
ADL 669077	Pebble East Claims Corp.	KAS 342	8S006S038W33	160
ADL 669078	Pebble East Claims Corp.	KAS 343	8S006S038W33	160
ADL 669079	Pebble East Claims Corp.	KAS 344	8S006S038W34	160
ADL 669087	Pebble East Claims Corp.	KAS 352	8S007S038W06	160
ADL 669088	Pebble East Claims Corp.	KAS 353	8S007S038W05	160
ADL 669089	Pebble East Claims Corp.	KAS 354	8S007S038W05	160
ADL 669090	Pebble East Claims Corp.	KAS 355	8S007S038W04	160
ADL 669091	Pebble East Claims Corp.	KAS 356	8S007S038W04	160
ADL 669098	Pebble East Claims Corp.	KAS 363	8S007S038W06	160
ADL 669099	Pebble East Claims Corp.	KAS 364	8S007S038W06	160
ADL 669100	Pebble East Claims Corp.	KAS 365	8S007S038W05	160
ADL 669101	Pebble East Claims Corp.	KAS 366	8S007S038W05	160
ADL 669102	Pebble East Claims Corp.	KAS 367	8S007S038W04	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 669109	Pebble East Claims Corp.	KAS 374	8S007S038W07	160
ADL 669110	Pebble East Claims Corp.	KAS 375	8S007S038W07	160
ADL 669111	Pebble East Claims Corp.	KAS 376	8S007S038W08	160
ADL 669112	Pebble East Claims Corp.	KAS 377	8S007S038W08	160
ADL 669118	Pebble East Claims Corp.	KAS 383	8S007S039W12	160
ADL 669119	Pebble East Claims Corp.	KAS 384	8S007S038W07	160
ADL 669120	Pebble East Claims Corp.	KAS 385	8S007S038W07	160
ADL 669121	Pebble East Claims Corp.	KAS 386	8S007S038W08	160
ADL 669122	Pebble East Claims Corp.	KAS 387	8S007S038W08	160
ADL 669127	Pebble East Claims Corp.	KAS 392	8S007S039W13	160
ADL 669128	Pebble East Claims Corp.	KAS 393	8S007S038W18	160
ADL 669129	Pebble East Claims Corp.	KAS 394	8S007S038W18	160
ADL 669130	Pebble East Claims Corp.	KAS 395	8S007S038W17	160
ADL 669135	Pebble East Claims Corp.	KAS 400	8S007S039W13	160
ADL 669136	Pebble East Claims Corp.	KAS 401	8S007S039W13	160
ADL 669137	Pebble East Claims Corp.	KAS 402	8S007S038W18	160
ADL 669138	Pebble East Claims Corp.	KAS 403	8S007S038W18	160
ADL 516769	Pebble West Claims Corp.	SILL 5951	8S004S035W12	40
ADL 516770	Pebble West Claims Corp.	SILL 5952	8S004S035W12	40
ADL 516779	Pebble West Claims Corp.	SILL 6051	8S004S035W12	40
ADL 516780	Pebble West Claims Corp.	SILL 6052	8S004S035W12	40
ADL 516789	Pebble West Claims Corp.	SILL 6151	8S004S035W12	40
ADL 516790	Pebble West Claims Corp.	SILL 6152	8S004S035W12	40
ADL 516797	Pebble West Claims Corp.	SILL 6247	8S004S035W11	40
ADL 516798	Pebble West Claims Corp.	SILL 6248	8S004S035W11	40
ADL 516799	Pebble West Claims Corp.	SILL 6249	8S004S035W12	40
ADL 516800	Pebble West Claims Corp.	SILL 6250	8S004S035W12	40
ADL 516801	Pebble West Claims Corp.	SILL 6251	8S004S035W12	40
ADL 516802	Pebble West Claims Corp.	SILL 6252	8S004S035W12	40
ADL 516806	Pebble West Claims Corp.	PEBBLE BEACH 5448	8S003S035W20	40
ADL 516807	Pebble West Claims Corp.	PEBBLE BEACH 5449	8S003S035W20	40
ADL 516808	Pebble West Claims Corp.	PEBBLE BEACH 5450	8S003S035W21	40
ADL 516809	Pebble West Claims Corp.	PEBBLE BEACH 5451	8S003S035W21	40
ADL 516810	Pebble West Claims Corp.	PEBBLE BEACH 5452	8S003S035W21	40
ADL 516811	Pebble West Claims Corp.	PEBBLE BEACH 5453	8S003S035W21	40
ADL 516812	Pebble West Claims Corp.	PEBBLE BEACH 5454	8S003S035W22	40
ADL 516813	Pebble West Claims Corp.	PEBBLE BEACH 5548	8S003S035W20	40
ADL 516814	Pebble West Claims Corp.	PEBBLE BEACH 5549	8S003S035W20	40
ADL 516815	Pebble West Claims Corp.	PEBBLE BEACH 5550	8S003S035W21	40
ADL 516816	Pebble West Claims Corp.	PEBBLE BEACH 5551	8S003S035W21	40
ADL 516817	Pebble West Claims Corp.	PEBBLE BEACH 5552	8S003S035W21	40
ADL 516818	Pebble West Claims Corp.	PEBBLE BEACH 5553	8S003S035W21	40
ADL 516819	Pebble West Claims Corp.	PEBBLE BEACH 5554	8S003S035W22	40
ADL 516820	Pebble West Claims Corp.	PEBBLE BEACH 5651	8S003S035W21	40
ADL 516821	Pebble West Claims Corp.	PEBBLE BEACH 5652	8S003S035W21	40
ADL 516822	Pebble West Claims Corp.	PEBBLE BEACH 5653	8S003S035W21	40
ADL 516823	Pebble West Claims Corp.	PEBBLE BEACH 5654	8S003S035W22	40
ADL 516824	Pebble West Claims Corp.	PEBBLE BEACH 5751	8S003S035W21	40
ADL 516825	Pebble West Claims Corp.	PEBBLE BEACH 5752	8S003S035W21	40
ADL 516826	Pebble West Claims Corp.	PEBBLE BEACH 5753	8S003S035W21	40
ADL 516827	Pebble West Claims Corp.	PEBBLE BEACH 5754	8S003S035W22	40
ADL 516828	Pebble West Claims Corp.	PEBBLE BEACH 5852	8S003S035W16	40
ADL 516829	Pebble West Claims Corp.	PEBBLE BEACH 5853	8S003S035W16	40
ADL 516830	Pebble West Claims Corp.	PEBBLE BEACH 5854	8S003S035W15	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 516831	Pebble West Claims Corp.	PEBBLE BEACH 5952	8S003S035W16	40
ADL 516832	Pebble West Claims Corp.	PEBBLE BEACH 5953	8S003S035W16	40
ADL 516833	Pebble West Claims Corp.	PEBBLE BEACH 5954	8S003S035W15	40
ADL 516834	Pebble West Claims Corp.	PEBBLE BEACH 6052	8S003S035W16	40
ADL 516835	Pebble West Claims Corp.	PEBBLE BEACH 6053	8S003S035W16	40
ADL 516836	Pebble West Claims Corp.	PEBBLE BEACH 6054	8S003S035W15	40
ADL 516837	Pebble West Claims Corp.	PEBBLE BEACH 6153	8S003S035W16	40
ADL 516838	Pebble West Claims Corp.	PEBBLE BEACH 6154	8S003S035W15	40
ADL 516839	Pebble West Claims Corp.	PEBBLE BEACH 4651	8S003S035W33	40
ADL 516840	Pebble West Claims Corp.	PEBBLE BEACH 4652	8S003S035W33	40
ADL 516841	Pebble West Claims Corp.	PEBBLE BEACH 4653	8S003S035W33	40
ADL 516842	Pebble West Claims Corp.	PEBBLE BEACH 4751	8S003S035W33	40
ADL 516843	Pebble West Claims Corp.	PEEBLE BEACH 4752	8S003S035W33	40
ADL 516844	Pebble West Claims Corp.	PEEBLE BEACH 4753	8S003S035W33	40
ADL 516845	Pebble West Claims Corp.	PEEBLE BEACH 4851	8S003S035W33	40
ADL 516846	Pebble West Claims Corp.	PEEBLE BEACH 4852	8S003S035W33	40
ADL 516847	Pebble West Claims Corp.	PEEBLE BEACH 4853	8S003S035W33	40
ADL 516848	Pebble West Claims Corp.	PEEBLE BEACH 4951	8S003S035W33	40
ADL 516849	Pebble West Claims Corp.	PEEBLE BEACH 4952	8S003S035W33	40
ADL 516850	Pebble West Claims Corp.	PEEBLE BEACH 4953	8S003S035W33	40
ADL 516851	Pebble West Claims Corp.	PEEBLE BEACH 5048	8S003S035W29	40
ADL 516852	Pebble West Claims Corp.	PEEBLE BEACH 5049	8S003S035W29	40
ADL 516853	Pebble West Claims Corp.	PEEBLE BEACH 5050	8S003S035W28	40
ADL 516854	Pebble West Claims Corp.	PEEBLE BEACH 5051	8S003S035W28	40
ADL 516855	Pebble West Claims Corp.	PEEBLE BEACH 5052	8S003S035W28	40
ADL 516856	Pebble West Claims Corp.	PEEBLE BEACH 5053	8S003S035W28	40
ADL 516857	Pebble West Claims Corp.	PEEBLE BEACH 5148	8S003S035W29	40
ADL 516858	Pebble West Claims Corp.	PEEBLE BEACH 5149	8S003S035W29	40
ADL 516859	Pebble West Claims Corp.	PEEBLE BEACH 5150	8S003S035W28	40
ADL 516860	Pebble West Claims Corp.	PEEBLE BEACH 5151	8S003S035W28	40
ADL 516861	Pebble West Claims Corp.	PEEBLE BEACH 5152	8S003S035W28	40
ADL 516862	Pebble West Claims Corp.	PEEBLE BEACH 5153	8S003S035W28	40
ADL 516863	Pebble West Claims Corp.	PEEBLE BEACH 5248	8S003S035W29	40
ADL 516864	Pebble West Claims Corp.	PEEBLE BEACH 5249	8S003S035W29	40
ADL 516865	Pebble West Claims Corp.	PEEBLE BEACH 5250	8S003S035W28	40
ADL 516866	Pebble West Claims Corp.	PEEBLE BEACH 5251	8S003S035W28	40
ADL 516867	Pebble West Claims Corp.	PEEBLE BEACH 5252	8S003S035W28	40
ADL 516868	Pebble West Claims Corp.	PEEBLE BEACH 5253	8S003S035W28	40
ADL 516869	Pebble West Claims Corp.	PEEBLE BEACH 5348	8S003S035W29	40
ADL 516870	Pebble West Claims Corp.	PEEBLE BEACH 5349	8S003S035W29	40
ADL 516871	Pebble West Claims Corp.	PEEBLE BEACH 5350	8S003S035W28	40
ADL 516872	Pebble West Claims Corp.	PEEBLE BEACH 5351	8S003S035W28	40
ADL 516873	Pebble West Claims Corp.	PEEBLE BEACH 5352	8S003S035W28	40
ADL 516874	Pebble West Claims Corp.	PEEBLE BEACH 5353	8S003S035W28	40
ADL 516879	Pebble West Claims Corp.	SILL 6351	8S004S035W01	40
ADL 516880	Pebble West Claims Corp.	SILL 6352	8S004S035W01	40
ADL 516888	Pebble West Claims Corp.	SILL 6451	8S004S035W01	40
ADL 516889	Pebble West Claims Corp.	SILL 6452	8S004S035W01	40
ADL 516948	Pebble West Claims Corp.	PEBBLE BEACH 3850	8S004S035W09	40
ADL 516949	Pebble West Claims Corp.	PEBBLE BEACH 3851	8S004S035W09	40
ADL 516950	Pebble West Claims Corp.	PEBBLE BEACH 3852	8S004S035W09	40
ADL 516951	Pebble West Claims Corp.	PEBBLE BEACH 3950	8S004S035W09	40
ADL 516952	Pebble West Claims Corp.	PEBBLE BEACH 3951	8S004S035W09	40
ADL 516953	Pebble West Claims Corp.	PEBBLE BEACH 3952	8S004S035W09	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 516954	Pebble West Claims Corp.	PEBBLE BEACH 4050	8S004S035W09	40
ADL 516955	Pebble West Claims Corp.	PEBBLE BEACH 4051	8S004S035W09	40
ADL 516956	Pebble West Claims Corp.	PEBBLE BEACH 4052	8S004S035W09	40
ADL 516957	Pebble West Claims Corp.	PEBBLE BEACH 4150	8S004S035W09	40
ADL 516958	Pebble West Claims Corp.	PEBBLE BEACH 4151	8S004S035W09	40
ADL 516959	Pebble West Claims Corp.	PEBBLE BEACH 4152	8S004S035W09	40
ADL 516960	Pebble West Claims Corp.	PEBBLE BEACH 4250	8S004S035W04	40
ADL 516961	Pebble West Claims Corp.	PEBBLE BEACH 4251	8S004S035W04	40
ADL 516962	Pebble West Claims Corp.	PEBBLE BEACH 4252	8S004S035W04	40
ADL 516963	Pebble West Claims Corp.	PEBBLE BEACH 4253	8S004S035W04	40
ADL 516964	Pebble West Claims Corp.	PEBBLE BEACH 4254	8S004S035W03	40
ADL 516965	Pebble West Claims Corp.	PEBBLE BEACH 4350	8S004S035W04	40
ADL 516966	Pebble West Claims Corp.	PEBBLE BEACH 4351	8S004S035W04	40
ADL 516967	Pebble West Claims Corp.	PEBBLE BEACH 4352	8S004S035W04	40
ADL 516968	Pebble West Claims Corp.	PEBBLE BEACH 4353	8S004S035W04	40
ADL 516969	Pebble West Claims Corp.	PEBBLE BEACH 4354	8S004S035W03	40
ADL 516970	Pebble West Claims Corp.	PEBBLE BEACH 4451	8S004S035W04	40
ADL 516971	Pebble West Claims Corp.	PEBBLE BEACH 4452	8S004S035W04	40
ADL 516972	Pebble West Claims Corp.	PEBBLE BEACH 4453	8S004S035W04	40
ADL 516973	Pebble West Claims Corp.	PEBBLE BEACH 4551	8S004S035W04	40
ADL 516974	Pebble West Claims Corp.	PEBBLE BEACH 4552	8S004S035W04	40
ADL 516975	Pebble West Claims Corp.	PEBBLE BEACH 4553	8S004S035W04	40
ADL 524511	Pebble West Claims Corp.	SILL 5543	8S004S035W15	40
ADL 524512	Pebble West Claims Corp.	SILL 5544	8S004S035W15	40
ADL 524515	Pebble West Claims Corp.	SILL 5643	8S004S035W15	40
ADL 524516	Pebble West Claims Corp.	SILL 5644	8S004S035W15	40
ADL 524519	Pebble West Claims Corp.	SILL 5743	8S004S035W15	40
ADL 524520	Pebble West Claims Corp.	SILL 5744	8S004S035W15	40
ADL 524523	Pebble West Claims Corp.	SILL 5843	8S004S035W15	40
ADL 524524	Pebble West Claims Corp.	SILL 5844	8S004S035W15	40
ADL 524527	Pebble West Claims Corp.	SILL 5943	8S004S035W10	40
ADL 524528	Pebble West Claims Corp.	SILL 5944	8S004S035W10	40
ADL 524531	Pebble West Claims Corp.	SILL 6043	8S004S035W10	40
ADL 524532	Pebble West Claims Corp.	SILL 6044	8S004S035W10	40
ADL 524535	Pebble West Claims Corp.	SILL 6143	8S004S035W10	40
ADL 524536	Pebble West Claims Corp.	SILL 6144	8S004S035W10	40
ADL 524539	Pebble West Claims Corp.	SILL 6243	8S004S035W10	40
ADL 524540	Pebble West Claims Corp.	SILL 6244	8S004S035W10	40
ADL 524541	Pebble West Claims Corp.	SILL 6245	8S004S035W11	40
ADL 524542	Pebble West Claims Corp.	SILL 6246	8S004S035W11	40
ADL 524543	Pebble West Claims Corp.	SILL 6343	8S004S035W03	40
ADL 524544	Pebble West Claims Corp.	SILL 6344	8S004S035W03	40
ADL 524550	Pebble West Claims Corp.	SILL 6443	8S004S035W03	40
ADL 524551	Pebble West Claims Corp.	SILL 6444	8S004S035W03	40
ADL 524557	Pebble West Claims Corp.	SILL 6543	8S004S035W03	40
ADL 524558	Pebble West Claims Corp.	SILL 6544	8S004S035W03	40
ADL 524568	Pebble West Claims Corp.	SILL 6643	8S004S035W03	40
ADL 524569	Pebble West Claims Corp.	SILL 6644	8S004S035W03	40
ADL 524579	Pebble West Claims Corp.	SILL 6743	8S003S035W34	40
ADL 524580	Pebble West Claims Corp.	SILL 6744	8S003S035W34	40
ADL 524595	Pebble West Claims Corp.	SILL 6843	8S003S035W34	40
ADL 524596	Pebble West Claims Corp.	SILL 6844	8S003S035W34	40
ADL 524611	Pebble West Claims Corp.	SILL 6943	8S003S035W34	40
ADL 524612	Pebble West Claims Corp.	SILL 6944	8S003S035W34	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 524630	Pebble West Claims Corp.	SILL 7043	8S003S035W34	40
ADL 524631	Pebble West Claims Corp.	SILL 7044	8S003S035W34	40
ADL 524649	Pebble West Claims Corp.	SILL 7143	8S003S035W27	40
ADL 524650	Pebble West Claims Corp.	SILL 7144	8S003S035W27	40
ADL 524668	Pebble West Claims Corp.	SILL 7243	8S003S035W27	40
ADL 524669	Pebble West Claims Corp.	SILL 7244	8S003S035W27	40
ADL 524684	Pebble West Claims Corp.	SILL 7343	8S003S035W27	40
ADL 524685	Pebble West Claims Corp.	SILL 7344	8S003S035W27	40
ADL 524698	Pebble West Claims Corp.	SILL 7443	8S003S035W27	40
ADL 524699	Pebble West Claims Corp.	SILL 7444	8S003S035W27	40
ADL 524712	Pebble West Claims Corp.	SILL 7543	8S003S035W22	40
ADL 524713	Pebble West Claims Corp.	SILL 7544	8S003S035W22	40
ADL 524714	Pebble West Claims Corp.	SILL 7545	8S003S035W23	40
ADL 524715	Pebble West Claims Corp.	SILL 7546	8S003S035W23	40
ADL 524716	Pebble West Claims Corp.	SILL 7547	8S003S035W23	40
ADL 524717	Pebble West Claims Corp.	SILL 7548	8S003S035W23	40
ADL 524748	Pebble West Claims Corp.	PEBBLE BEACH 3452	8S004S035W16	40
ADL 524749	Pebble West Claims Corp.	PEBBLE BEACH 3453	8S004S035W16	40
ADL 524750	Pebble West Claims Corp.	PEBBLE BEACH 3454	8S004S035W15	40
ADL 524751	Pebble West Claims Corp.	PEBBLE BEACH 3455	8S004S035W15	40
ADL 524752	Pebble West Claims Corp.	PEBBLE BEACH 3552	8S004S035W16	40
ADL 524753	Pebble West Claims Corp.	PEBBLE BEACH 3553	8S004S035W16	40
ADL 524754	Pebble West Claims Corp.	PEBBLE BEACH 3554	8S004S035W15	40
ADL 524755	Pebble West Claims Corp.	PEBBLE BEACH 3555	8S004S035W15	40
ADL 524756	Pebble West Claims Corp.	PEBBLE BEACH 3652	8S004S035W16	40
ADL 524757	Pebble West Claims Corp.	PEBBLE BEACH 3653	8S004S035W16	40
ADL 524758	Pebble West Claims Corp.	PEBBLE BEACH 3654	8S004S035W15	40
ADL 524759	Pebble West Claims Corp.	PEBBLE BEACH 3655	8S004S035W15	40
ADL 524760	Pebble West Claims Corp.	PEBBLE BEACH 3752	8S004S035W16	40
ADL 524761	Pebble West Claims Corp.	PEBBLE BEACH 3753	8S004S035W16	40
ADL 524762	Pebble West Claims Corp.	PEBBLE BEACH 3754	8S004S035W15	40
ADL 524763	Pebble West Claims Corp.	PEBBLE BEACH 3755	8S004S035W15	40
ADL 524764	Pebble West Claims Corp.	PEBBLE BEACH 3848	8S004S035W08	40
ADL 524765	Pebble West Claims Corp.	PEBBLE BEACH 3849	8S004S035W08	40
ADL 524766	Pebble West Claims Corp.	PEBBLE BEACH 3853	8S004S035W09	40
ADL 524767	Pebble West Claims Corp.	PEBBLE BEACH 3854	8S004S035W10	40
ADL 524768	Pebble West Claims Corp.	PEBBLE BEACH 3855	8S004S035W10	40
ADL 524769	Pebble West Claims Corp.	PEBBLE BEACH 3948	8S004S035W08	40
ADL 524770	Pebble West Claims Corp.	PEBBLE BEACH 3949	8S004S035W08	40
ADL 524771	Pebble West Claims Corp.	PEBBLE BEACH 3953	8S004S035W09	40
ADL 524772	Pebble West Claims Corp.	PEBBLE BEACH 3954	8S004S035W10	40
ADL 524773	Pebble West Claims Corp.	PEBBLE BEACH 3955	8S004S035W10	40
ADL 524774	Pebble West Claims Corp.	PEBBLE BEACH 4048	8S004S035W08	40
ADL 524775	Pebble West Claims Corp.	PEBBLE BEACH 4049	8S004S035W08	40
ADL 524776	Pebble West Claims Corp.	PEBBLE BEACH 4053	8S004S035W09	40
ADL 524777	Pebble West Claims Corp.	PEBBLE BEACH 4054	8S004S035W10	40
ADL 524778	Pebble West Claims Corp.	PEBBLE BEACH 4055	8S004S035W10	40
ADL 524779	Pebble West Claims Corp.	PEBBLE BEACH 4148	8S004S035W08	40
ADL 524780	Pebble West Claims Corp.	PEBBLE BEACH 4149	8S004S035W08	40
ADL 524781	Pebble West Claims Corp.	PEBBLE BEACH 4153	8S004S035W09	40
ADL 524782	Pebble West Claims Corp.	PEBBLE BEACH 4154	8S004S035W10	40
ADL 524783	Pebble West Claims Corp.	PEBBLE BEACH 4155	8S004S035W10	40
ADL 524784	Pebble West Claims Corp.	PEBBLE BEACH 4248	8S004S035W05	0
ADL 524785	Pebble West Claims Corp.	PEBBLE BEACH 4249	8S004S035W05	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 524786	Pebble West Claims Corp.	PEBBLE BEACH 4255	8S004S035W03	40
ADL 524787	Pebble West Claims Corp.	PEBBLE BEACH 4348	8S004S035W05	40
ADL 524788	Pebble West Claims Corp.	PEBBLE BEACH 4349	8S004S035W05	40
ADL 524789	Pebble West Claims Corp.	PEBBLE BEACH 4355	8S004S035W03	40
ADL 524790	Pebble West Claims Corp.	PEBBLE BEACH 4448	8S004S035W05	40
ADL 524791	Pebble West Claims Corp.	PEBBLE BEACH 4449	8S004S035W05	40
ADL 524792	Pebble West Claims Corp.	PEBBLE BEACH 4450	8S004S035W04	40
ADL 524793	Pebble West Claims Corp.	PEBBLE BEACH 4454	8S004S035W03	40
ADL 524794	Pebble West Claims Corp.	PEBBLE BEACH 4455	8S004S035W03	40
ADL 524795	Pebble West Claims Corp.	PEBBLE BEACH 4548	8S004S035W05	40
ADL 524796	Pebble West Claims Corp.	PEBBLE BEACH 4549	8S004S035W05	40
ADL 524797	Pebble West Claims Corp.	PEBBLE BEACH 4550	8S004S035W04	40
ADL 524798	Pebble West Claims Corp.	PEBBLE BEACH 4554	8S004S035W03	40
ADL 524799	Pebble West Claims Corp.	PEBBLE BEACH 4555	8S004S035W03	40
ADL 524800	Pebble West Claims Corp.	PEBBLE BEACH 4648	8S003S035W32	40
ADL 524801	Pebble West Claims Corp.	PEBBLE BEACH 4649	8S003S035W32	40
ADL 524802	Pebble West Claims Corp.	PEBBLE BEACH 4650	8S003S035W33	40
ADL 524803	Pebble West Claims Corp.	PEBBLE BEACH 4654	8S003S035W34	40
ADL 524804	Pebble West Claims Corp.	PEBBLE BEACH 4655	8S003S035W34	40
ADL 524805	Pebble West Claims Corp.	PEBBLE BEACH 4748	8S003S035W32	40
ADL 524806	Pebble West Claims Corp.	PEBBLE BEACH 4749	8S003S035W32	40
ADL 524807	Pebble West Claims Corp.	PEBBLE BEACH 4750	8S003S035W33	40
ADL 524808	Pebble West Claims Corp.	PEBBLE BEACH 4754	8S003S035W34	40
ADL 524809	Pebble West Claims Corp.	PEBBLE BEACH 4755	8S003S035W34	40
ADL 524810	Pebble West Claims Corp.	PEBBLE BEACH 4848	8S003S035W32	40
ADL 524811	Pebble West Claims Corp.	PEBBLE BEACH 4849	8S003S035W32	40
ADL 524812	Pebble West Claims Corp.	PEBBLE BEACH 4850	8S003S035W33	40
ADL 524813	Pebble West Claims Corp.	PEBBLE BEACH 4854	8S003S035W34	40
ADL 524814	Pebble West Claims Corp.	PEBBLE BEACH 4855	8S003S035W34	40
ADL 524815	Pebble West Claims Corp.	PEBBLE BEACH 4948	8S003S035W32	40
ADL 524816	Pebble West Claims Corp.	PEBBLE BEACH 4949	8S003S035W32	40
ADL 524817	Pebble West Claims Corp.	PEBBLE BEACH 4950	8S003S035W33	40
ADL 524818	Pebble West Claims Corp.	PEBBLE BEACH 4954	8S003S035W34	40
ADL 524819	Pebble West Claims Corp.	PEBBLE BEACH 4955	8S003S035W34	40
ADL 524820	Pebble West Claims Corp.	PEBBLE BEACH 5054	8S003S035W27	40
ADL 524821	Pebble West Claims Corp.	PEBBLE BEACH 5055	8S003S035W27	40
ADL 524822	Pebble West Claims Corp.	PEBBLE BEACH 5154	8S003S035W27	40
ADL 524823	Pebble West Claims Corp.	PEBBLE BEACH 5155	8S003S035W27	40
ADL 524824	Pebble West Claims Corp.	PEBBLE BEACH 5254	8S003S035W27	40
ADL 524825	Pebble West Claims Corp.	PEBBLE BEACH 5255	8S003S035W27	40
ADL 524826	Pebble West Claims Corp.	PEBBLE BEACH 5354	8S003S035W27	40
ADL 524827	Pebble West Claims Corp.	PEBBLE BEACH 5355	8S003S035W27	40
ADL 524828	Pebble West Claims Corp.	PEBBLE BEACH 5455	8S003S035W22	40
ADL 524829	Pebble West Claims Corp.	PEBBLE BEACH 5648	8S003S035W20	40
ADL 524830	Pebble West Claims Corp.	PEBBLE BEACH 5649	8S003S035W20	40
ADL 524831	Pebble West Claims Corp.	PEBBLE BEACH 5650	8S003S035W21	40
ADL 524832	Pebble West Claims Corp.	PEBBLE BEACH 5748	8S003S035W20	40
ADL 524833	Pebble West Claims Corp.	PEBBLE BEACH 5749	8S003S035W20	40
ADL 524834	Pebble West Claims Corp.	PEBBLE BEACH 5750	8S003S035W21	40
ADL 524835	Pebble West Claims Corp.	PEBBLE BEACH 5848	8S003S035W17	40
ADL 524836	Pebble West Claims Corp.	PEBBLE BEACH 5849	8S003S035W17	40
ADL 524837	Pebble West Claims Corp.	PEBBLE BEACH 5850	8S003S035W16	40
ADL 524838	Pebble West Claims Corp.	PEBBLE BEACH 5851	8S003S035W16	40
ADL 524839	Pebble West Claims Corp.	PEBBLE BEACH 5948	8S003S035W17	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 524840	Pebble West Claims Corp.	PEBBLE BEACH 5949	8S003S035W17	40
ADL 524841	Pebble West Claims Corp.	PEBBLE BEACH 5950	8S003S035W16	40
ADL 524842	Pebble West Claims Corp.	PEBBLE BEACH 5951	8S003S035W16	40
ADL 524843	Pebble West Claims Corp.	PEBBLE BEACH 6048	8S003S035W17	40
ADL 524844	Pebble West Claims Corp.	PEBBLE BEACH 6049	8S003S035W17	40
ADL 524845	Pebble West Claims Corp.	PEBBLE BEACH 6050	8S003S035W16	40
ADL 524846	Pebble West Claims Corp.	PEBBLE BEACH 6051	8S003S035W16	40
ADL 524847	Pebble West Claims Corp.	PEBBLE BEACH 6148	8S003S035W17	40
ADL 524848	Pebble West Claims Corp.	PEBBLE BEACH 6149	8S003S035W17	40
ADL 524849	Pebble West Claims Corp.	PEBBLE BEACH 6150	8S003S035W16	40
ADL 524850	Pebble West Claims Corp.	PEBBLE BEACH 6151	8S003S035W16	40
ADL 524851	Pebble West Claims Corp.	PEBBLE BEACH 6248	8S003S035W08	40
ADL 524852	Pebble West Claims Corp.	PEBBLE BEACH 6249	8S003S035W08	40
ADL 524853	Pebble West Claims Corp.	PEBBLE BEACH 6250	8S003S035W09	40
ADL 524854	Pebble West Claims Corp.	PEBBLE BEACH 6251	8S003S035W09	40
ADL 524855	Pebble West Claims Corp.	PEBBLE BEACH 6252	8S003S035W09	40
ADL 524856	Pebble West Claims Corp.	PEBBLE BEACH 6253	8S003S035W09	40
ADL 524857	Pebble West Claims Corp.	PEBBLE BEACH 6254	8S003S035W10	40
ADL 524858	Pebble West Claims Corp.	PEBBLE BEACH 6348	8S003S035W08	40
ADL 524859	Pebble West Claims Corp.	PEBBLE BEACH 6349	8S003S035W08	40
ADL 524860	Pebble West Claims Corp.	PEBBLE BEACH 6350	8S003S035W09	40
ADL 524861	Pebble West Claims Corp.	PEBBLE BEACH 6351	8S003S035W09	40
ADL 524862	Pebble West Claims Corp.	PEBBLE BEACH 6352	8S003S035W09	40
ADL 524863	Pebble West Claims Corp.	PEBBLE BEACH 6353	8S003S035W09	40
ADL 524864	Pebble West Claims Corp.	PEBBLE BEACH 6354	8S003S035W10	40
ADL 525849	Pebble West Claims Corp.	PEBBLE BEACH 6152	8S003S035W16	40
ADL 531355	Pebble West Claims Corp.	PEBBLE BEACH 3642	8S004S035W18	40
ADL 531356	Pebble West Claims Corp.	PEBBLE BEACH 3643	8S004S035W18	40
ADL 531357	Pebble West Claims Corp.	PEBBLE BEACH 3644	8S004S035W18	40
ADL 531358	Pebble West Claims Corp.	PEBBLE BEACH 3645	8S004S035W18	40
ADL 531359	Pebble West Claims Corp.	PEBBLE BEACH 3742	8S004S035W18	40
ADL 531360	Pebble West Claims Corp.	PEBBLE BEACH 3743	8S004S035W18	40
ADL 531361	Pebble West Claims Corp.	PEBBLE BEACH 3744	8S004S035W18	40
ADL 531362	Pebble West Claims Corp.	PEBBLE BEACH 3745	8S004S035W18	40
ADL 531363	Pebble West Claims Corp.	PEBBLE BEACH 3842	8S004S035W07	40
ADL 531364	Pebble West Claims Corp.	PEBBLE BEACH 3843	8S004S035W07	40
ADL 531365	Pebble West Claims Corp.	PEBBLE BEACH 3844	8S004S035W07	40
ADL 531366	Pebble West Claims Corp.	PEBBLE BEACH 3845	8S004S035W07	40
ADL 531367	Pebble West Claims Corp.	PEBBLE BEACH 3846	8S004S035W08	40
ADL 531368	Pebble West Claims Corp.	PEBBLE BEACH 3847	8S004S035W08	40
ADL 531369	Pebble West Claims Corp.	PEBBLE BEACH 3942	8S004S035W07	40
ADL 531370	Pebble West Claims Corp.	PEBBLE BEACH 3943	8S004S035W07	40
ADL 531371	Pebble West Claims Corp.	PEBBLE BEACH 3944	8S004S035W07	40
ADL 531372	Pebble West Claims Corp.	PEBBLE BEACH 3945	8S004S035W07	40
ADL 531373	Pebble West Claims Corp.	PEBBLE BEACH 3946	8S004S035W08	40
ADL 531374	Pebble West Claims Corp.	PEBBLE BEACH 3947	8S004S035W08	40
ADL 531375	Pebble West Claims Corp.	PEBBLE BEACH 4042	8S004S035W07	40
ADL 531376	Pebble West Claims Corp.	PEBBLE BEACH 4043	8S004S035W07	40
ADL 531377	Pebble West Claims Corp.	PEBBLE BEACH 4044	8S004S035W07	40
ADL 531378	Pebble West Claims Corp.	PEBBLE BEACH 4045	8S004S035W07	40
ADL 531379	Pebble West Claims Corp.	PEBBLE BEACH 4046	8S004S035W08	40
ADL 531380	Pebble West Claims Corp.	PEBBLE BEACH 4047	8S004S035W08	40
ADL 531381	Pebble West Claims Corp.	PEBBLE BEACH 4142	8S004S035W07	40
ADL 531382	Pebble West Claims Corp.	PEBBLE BEACH 4143	8S004S035W07	40



**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 531383	Pebble West Claims Corp.	PEBBLE BEACH 4144	8S004S035W07	40
ADL 531384	Pebble West Claims Corp.	PEBBLE BEACH 4145	8S004S035W07	40
ADL 531385	Pebble West Claims Corp.	PEBBLE BEACH 4146	8S004S035W08	40
ADL 531386	Pebble West Claims Corp.	PEBBLE BEACH 4147	8S004S035W08	40
ADL 531387	Pebble West Claims Corp.	PEBBLE BEACH 4244	8S004S035W06	40
ADL 531388	Pebble West Claims Corp.	PEBBLE BEACH 4245	8S004S035W06	40
ADL 531389	Pebble West Claims Corp.	PEBBLE BEACH 4246	8S004S035W05	40
ADL 531390	Pebble West Claims Corp.	PEBBLE BEACH 4247	8S004S035W05	40
ADL 531391	Pebble West Claims Corp.	PEBBLE BEACH 4344	8S004S035W06	40
ADL 531392	Pebble West Claims Corp.	PEBBLE BEACH 4345	8S004S035W06	40
ADL 531393	Pebble West Claims Corp.	PEBBLE BEACH 4346	8S004S035W05	40
ADL 531394	Pebble West Claims Corp.	PEBBLE BEACH 4347	8S004S035W05	40
ADL 531395	Pebble West Claims Corp.	PEBBLE BEACH 4444	8S004S035W06	40
ADL 531396	Pebble West Claims Corp.	PEBBLE BEACH 4445	8S004S035W06	40
ADL 531397	Pebble West Claims Corp.	PEBBLE BEACH 4446	8S004S035W05	40
ADL 531398	Pebble West Claims Corp.	PEBBLE BEACH 4447	8S004S035W05	40
ADL 531399	Pebble West Claims Corp.	PEBBLE BEACH 4544	8S004S035W06	40
ADL 531400	Pebble West Claims Corp.	PEBBLE BEACH 4547	8S004S035W05	40
ADL 531401	Pebble West Claims Corp.	PEBBLE BEACH 4644	8S003S035W31	40
ADL 531402	Pebble West Claims Corp.	PEBBLE BEACH 4645	8S003S035W31	40
ADL 531403	Pebble West Claims Corp.	PEBBLE BEACH 4646	8S003S035W32	40
ADL 531404	Pebble West Claims Corp.	PEBBLE BEACH 4647	8S003S035W32	40
ADL 531405	Pebble West Claims Corp.	PEBBLE BEACH 4744	8S003S035W31	40
ADL 531406	Pebble West Claims Corp.	PEBBLE BEACH 4745	8S003S035W31	40
ADL 531407	Pebble West Claims Corp.	PEBBLE BEACH 4746	8S003S035W32	40
ADL 531408	Pebble West Claims Corp.	PEBBLE BEACH 4747	8S003S035W32	40
ADL 531409	Pebble West Claims Corp.	PEBBLE BEACH 4844	8S003S035W31	40
ADL 531410	Pebble West Claims Corp.	PEBBLE BEACH 4845	8S003S035W31	40
ADL 531411	Pebble West Claims Corp.	PEBBLE BEACH 4846	8S003S035W32	40
ADL 531412	Pebble West Claims Corp.	PEBBLE BEACH 4847	8S003S035W32	40
ADL 531413	Pebble West Claims Corp.	PEBBLE BEACH 4944	8S003S035W31	40
ADL 531414	Pebble West Claims Corp.	PEBBLE BEACH 4945	8S003S035W31	40
ADL 531415	Pebble West Claims Corp.	PEBBLE BEACH 4946	8S003S035W32	40
ADL 531416	Pebble West Claims Corp.	PEBBLE BEACH 4947	8S003S035W32	40
ADL 531417	Pebble West Claims Corp.	PEBBLE BEACH 5044	8S003S035W30	40
ADL 531418	Pebble West Claims Corp.	PEBBLE BEACH 5045	8S003S035W30	40
ADL 531419	Pebble West Claims Corp.	PEBBLE BEACH 5046	8S003S035W29	40
ADL 531420	Pebble West Claims Corp.	PEBBLE BEACH 5047	8S003S035W29	40
ADL 531421	Pebble West Claims Corp.	PEBBLE BEACH 5144	8S003S035W30	40
ADL 531422	Pebble West Claims Corp.	PEBBLE BEACH 5145	8S003S035W30	40
ADL 531423	Pebble West Claims Corp.	PEBBLE BEACH 5146	8S003S035W29	40
ADL 531424	Pebble West Claims Corp.	PEBBLE BEACH 5147	8S003S035W29	40
ADL 531425	Pebble West Claims Corp.	PEBBLE BEACH 5244	8S003S035W30	40
ADL 531426	Pebble West Claims Corp.	PEBBLE BEACH 5245	8S003S035W30	40
ADL 531427	Pebble West Claims Corp.	PEBBLE BEACH 5246	8S003S035W29	40
ADL 531428	Pebble West Claims Corp.	PEBBLE BEACH 5247	8S003S035W29	40
ADL 531429	Pebble West Claims Corp.	PEBBLE BEACH 5344	8S003S035W30	40
ADL 531430	Pebble West Claims Corp.	PEBBLE BEACH 5345	8S003S035W30	40
ADL 531431	Pebble West Claims Corp.	PEBBLE BEACH 5346	8S003S035W29	40
ADL 531432	Pebble West Claims Corp.	PEBBLE BEACH 5347	8S003S035W29	40
ADL 531433	Pebble West Claims Corp.	PEBBLE BEACH 5444	8S003S035W19	40
ADL 531434	Pebble West Claims Corp.	PEBBLE BEACH 5445	8S003S035W19	40
ADL 531435	Pebble West Claims Corp.	PEBBLE BEACH 5446	8S003S035W20	40
ADL 531436	Pebble West Claims Corp.	PEBBLE BEACH 5447	8S003S035W20	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 531437	Pebble West Claims Corp.	PEBBLE BEACH 5544	8S003S035W19	40
ADL 531438	Pebble West Claims Corp.	PEBBLE BEACH 5545	8S003S035W19	40
ADL 531439	Pebble West Claims Corp.	PEBBLE BEACH 5546	8S003S035W20	40
ADL 531440	Pebble West Claims Corp.	PEBBLE BEACH 5547	8S003S035W20	40
ADL 531441	Pebble West Claims Corp.	PEBBLE BEACH 5644	8S003S035W19	40
ADL 531442	Pebble West Claims Corp.	PEBBLE BEACH 5645	8S003S035W19	40
ADL 531443	Pebble West Claims Corp.	PEBBLE BEACH 5646	8S003S035W20	40
ADL 531444	Pebble West Claims Corp.	PEBBLE BEACH 5647	8S003S035W20	40
ADL 531445	Pebble West Claims Corp.	PEBBLE BEACH 5744	8S003S035W19	40
ADL 531446	Pebble West Claims Corp.	PEBBLE BEACH 5745	8S003S035W19	40
ADL 531447	Pebble West Claims Corp.	PEBBLE BEACH 5746	8S003S035W20	40
ADL 531448	Pebble West Claims Corp.	PEBBLE BEACH 5747	8S003S035W20	40
ADL 531449	Pebble West Claims Corp.	PEBBLE BEACH 5844	8S003S035W18	40
ADL 531450	Pebble West Claims Corp.	PEBBLE BEACH 5845	8S003S035W18	40
ADL 531451	Pebble West Claims Corp.	PEBBLE BEACH 5846	8S003S035W17	40
ADL 531452	Pebble West Claims Corp.	PEBBLE BEACH 5847	8S003S035W17	40
ADL 531453	Pebble West Claims Corp.	PEBBLE BEACH 5944	8S003S035W18	40
ADL 531454	Pebble West Claims Corp.	PEBBLE BEACH 5945	8S003S035W18	40
ADL 531455	Pebble West Claims Corp.	PEBBLE BEACH 5946	8S003S035W17	40
ADL 531456	Pebble West Claims Corp.	PEBBLE BEACH 5947	8S003S035W17	40
ADL 531457	Pebble West Claims Corp.	PEBBLE BEACH 6044	8S003S035W18	40
ADL 531458	Pebble West Claims Corp.	PEBBLE BEACH 6045	8S003S035W18	40
ADL 531459	Pebble West Claims Corp.	PEBBLE BEACH 6046	8S003S035W17	40
ADL 531460	Pebble West Claims Corp.	PEBBLE BEACH 6047	8S003S035W17	40
ADL 531461	Pebble West Claims Corp.	PEBBLE BEACH 6144	8S003S035W18	40
ADL 531462	Pebble West Claims Corp.	PEBBLE BEACH 6145	8S003S035W18	40
ADL 531463	Pebble West Claims Corp.	PEBBLE BEACH 6146	8S003S035W17	40
ADL 531464	Pebble West Claims Corp.	PEBBLE BEACH 6147	8S003S035W17	40
ADL 531648	Pebble West Claims Corp.	PEBBLE BEACH 4545	8S004S035W06	40
ADL 531649	Pebble West Claims Corp.	PEBBLE BEACH 4546	8S004S035W05	40
ADL 540399	Pebble West Claims Corp.	PEBBLE BEACH 5555	8S003S035W22	40
ADL 540400	Pebble West Claims Corp.	PEBBLE BEACH 5655	8S003S035W22	40
ADL 540401	Pebble West Claims Corp.	PEBBLE BEACH 5755	8S003S035W22	40
ADL 540402	Pebble West Claims Corp.	PEBBLE BEACH 5855	8S003S035W15	40
ADL 540403	Pebble West Claims Corp.	PEBBLE BEACH 5955	8S003S035W15	40
ADL 540404	Pebble West Claims Corp.	PEBBLE BEACH 6055	8S003S035W15	40
ADL 540405	Pebble West Claims Corp.	PEBBLE BEACH 6155	8S003S035W15	40
ADL 540406	Pebble West Claims Corp.	PEBBLE BEACH 6255	8S003S035W10	40
ADL 540407	Pebble West Claims Corp.	PEBBLE BEACH 6355	8S003S035W10	40
ADL 540408	Pebble West Claims Corp.	PEBBLE BEACH 6448	8S003S035W08	40
ADL 540409	Pebble West Claims Corp.	PEBBLE BEACH 6449	8S003S035W08	40
ADL 540410	Pebble West Claims Corp.	PEBBLE BEACH 6450	8S003S035W09	40
ADL 540411	Pebble West Claims Corp.	PEBBLE BEACH 6451	8S003S035W09	40
ADL 540412	Pebble West Claims Corp.	PEBBLE BEACH 6452	8S003S035W09	40
ADL 540413	Pebble West Claims Corp.	PEBBLE BEACH 6453	8S003S035W09	40
ADL 540414	Pebble West Claims Corp.	PEBBLE BEACH 6454	8S003S035W10	40
ADL 540415	Pebble West Claims Corp.	PEBBLE BEACH 6455	8S003S035W10	40
ADL 540416	Pebble West Claims Corp.	PEBBLE BEACH 6548	8S003S035W08	40
ADL 540417	Pebble West Claims Corp.	PEBBLE BEACH 6549	8S003S035W08	40
ADL 540418	Pebble West Claims Corp.	PEBBLE BEACH 6550	8S003S035W09	40
ADL 540419	Pebble West Claims Corp.	PEBBLE BEACH 6551	8S003S035W09	40
ADL 540420	Pebble West Claims Corp.	PEBBLE BEACH 6552	8S003S035W09	40
ADL 540421	Pebble West Claims Corp.	PEBBLE BEACH 6553	8S003S035W09	40
ADL 540422	Pebble West Claims Corp.	PEBBLE BEACH 6554	8S003S035W10	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 540423	Pebble West Claims Corp.	PEBBLE BEACH 6555	8S003S035W10	40
ADL 540424	Pebble West Claims Corp.	SILL 7643	8S003S035W22	40
ADL 540425	Pebble West Claims Corp.	SILL 7644	8S003S035W22	40
ADL 540426	Pebble West Claims Corp.	SILL 7645	8S003S035W23	40
ADL 540427	Pebble West Claims Corp.	SILL 7646	8S003S035W23	40
ADL 540428	Pebble West Claims Corp.	SILL 7647	8S003S035W23	40
ADL 540429	Pebble West Claims Corp.	SILL 7648	8S003S035W23	40
ADL 540430	Pebble West Claims Corp.	SILL 7743	8S003S035W22	40
ADL 540431	Pebble West Claims Corp.	SILL 7744	8S003S035W22	40
ADL 540432	Pebble West Claims Corp.	SILL 7745	8S003S035W23	40
ADL 540433	Pebble West Claims Corp.	SILL 7746	8S003S035W23	40
ADL 540434	Pebble West Claims Corp.	SILL 7747	8S003S035W23	40
ADL 540435	Pebble West Claims Corp.	SILL 7748	8S003S035W23	40
ADL 540436	Pebble West Claims Corp.	SILL 7843	8S003S035W22	40
ADL 540437	Pebble West Claims Corp.	SILL 7844	8S003S035W22	40
ADL 540438	Pebble West Claims Corp.	SILL 7845	8S003S035W23	40
ADL 540439	Pebble West Claims Corp.	SILL 7846	8S003S035W23	40
ADL 540440	Pebble West Claims Corp.	SILL 7847	8S003S035W23	40
ADL 540441	Pebble West Claims Corp.	SILL 7848	8S003S035W23	40
ADL 540442	Pebble West Claims Corp.	SILL 7943	8S003S035W15	40
ADL 540443	Pebble West Claims Corp.	SILL 7944	8S003S035W15	40
ADL 540444	Pebble West Claims Corp.	SILL 7945	8S003S035W14	40
ADL 540445	Pebble West Claims Corp.	SILL 7946	8S003S035W14	40
ADL 540446	Pebble West Claims Corp.	SILL 7947	8S003S035W14	40
ADL 540447	Pebble West Claims Corp.	SILL 7948	8S003S035W14	40
ADL 540448	Pebble West Claims Corp.	SILL 8043	8S003S035W15	40
ADL 540449	Pebble West Claims Corp.	SILL 8044	8S003S035W15	40
ADL 540450	Pebble West Claims Corp.	SILL 8045	8S003S035W14	40
ADL 540451	Pebble West Claims Corp.	SILL 8046	8S003S035W14	40
ADL 540452	Pebble West Claims Corp.	SILL 8047	8S003S035W14	40
ADL 540453	Pebble West Claims Corp.	SILL 8048	8S003S035W14	40
ADL 540454	Pebble West Claims Corp.	SILL 8143	8S003S035W15	40
ADL 540455	Pebble West Claims Corp.	SILL 8144	8S003S035W15	40
ADL 540456	Pebble West Claims Corp.	SILL 8145	8S003S035W14	40
ADL 540457	Pebble West Claims Corp.	SILL 8146	8S003S035W14	40
ADL 540458	Pebble West Claims Corp.	SILL 8147	8S003S035W14	40
ADL 540459	Pebble West Claims Corp.	SILL 8148	8S003S035W14	40
ADL 540460	Pebble West Claims Corp.	SILL 8243	8S003S035W15	40
ADL 540461	Pebble West Claims Corp.	SILL 8244	8S003S035W15	40
ADL 540462	Pebble West Claims Corp.	SILL 8245	8S003S035W14	40
ADL 540463	Pebble West Claims Corp.	SILL 8246	8S003S035W14	40
ADL 540464	Pebble West Claims Corp.	SILL 8247	8S003S035W14	40
ADL 540465	Pebble West Claims Corp.	SILL 8248	8S003S035W14	40
ADL 540466	Pebble West Claims Corp.	SILL 8343	8S003S035W10	40
ADL 540467	Pebble West Claims Corp.	SILL 8344	8S003S035W10	40
ADL 540468	Pebble West Claims Corp.	SILL 8443	8S003S035W10	40
ADL 540469	Pebble West Claims Corp.	SILL 8444	8S003S035W10	40
ADL 540470	Pebble West Claims Corp.	SILL 8543	8S003S035W10	40
ADL 540471	Pebble West Claims Corp.	SILL 8544	8S003S035W10	40
ADL 540472	Pebble West Claims Corp.	SILL 8643	8S003S035W10	40
ADL 540473	Pebble West Claims Corp.	SILL 8644	8S003S035W10	40
ADL 541245	Pebble West Claims Corp.	PB 113	8S004S035W18	40
ADL 541246	Pebble West Claims Corp.	PB 114	8S004S035W18	40
ADL 541247	Pebble West Claims Corp.	PB 115	8S004S035W18	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 541248	Pebble West Claims Corp.	PB 116	8S004S035W18	40
ADL 541249	Pebble West Claims Corp.	PB 117	8S004S035W18	40
ADL 541250	Pebble West Claims Corp.	PB 118	8S004S035W18	40
ADL 541251	Pebble West Claims Corp.	PB 119	8S004S035W18	40
ADL 541252	Pebble West Claims Corp.	PB 120	8S004S035W18	40
ADL 542561	Pebble West Claims Corp.	PEBBLE BEACH 4856	8S003S035W34	4
ADL 542562	Pebble West Claims Corp.	PEBBLE BEACH 4956	8S003S035W34	4
ADL 542563	Pebble West Claims Corp.	PEBBLE BEACH 5056	8S003S035W27	4
ADL 542564	Pebble West Claims Corp.	PEBBLE BEACH 5156	8S003S035W27	4
ADL 542565	Pebble West Claims Corp.	PEBBLE BEACH 5256	8S003S035W27	4
ADL 542566	Pebble West Claims Corp.	PEBBLE BEACH 5356	8S003S035W27	4
ADL 542567	Pebble West Claims Corp.	PEBBLE BEACH 5456	8S003S035W22	4
ADL 542568	Pebble West Claims Corp.	PEBBLE BEACH 5556	8S003S035W22	4
ADL 542569	Pebble West Claims Corp.	PEBBLE BEACH 5656	8S003S035W22	4
ADL 542570	Pebble West Claims Corp.	PEBBLE BEACH 5756	8S003S035W22	4
ADL 542571	Pebble West Claims Corp.	PEBBLE BEACH 5856	8S003S035W15	4
ADL 542572	Pebble West Claims Corp.	PEBBLE BEACH 5956	8S003S035W15	4
ADL 542573	Pebble West Claims Corp.	PEBBLE BEACH 6056	8S003S035W15	4
ADL 542574	Pebble West Claims Corp.	PEBBLE BEACH 6156	8S003S035W15	4
ADL 542575	Pebble West Claims Corp.	PEBBLE BEACH 6256	8S003S035W10	4
ADL 542576	Pebble West Claims Corp.	PEBBLE BEACH 6356	8S003S035W10	4
ADL 542577	Pebble West Claims Corp.	PEBBLE BEACH 6456	8S003S035W10	4
ADL 542578	Pebble West Claims Corp.	PEBBLE BEACH 6556	8S003S035W10	4
ADL 542579	Pebble West Claims Corp.	PEBBLE BEACH 4642	8S003S035W31	40
ADL 542580	Pebble West Claims Corp.	PEBBLE BEACH 4643	8S003S035W31	40
ADL 542581	Pebble West Claims Corp.	PEBBLE BEACH 4742	8S003S035W31	40
ADL 542582	Pebble West Claims Corp.	PEBBLE BEACH 4743	8S003S035W31	40
ADL 542583	Pebble West Claims Corp.	PEBBLE BEACH 4842	8S003S035W31	40
ADL 542584	Pebble West Claims Corp.	PEBBLE BEACH 4843	8S003S035W31	40
ADL 542585	Pebble West Claims Corp.	PEBBLE BEACH 4942	8S003S035W31	40
ADL 542586	Pebble West Claims Corp.	PEBBLE BEACH 4943	8S003S035W31	40
ADL 542587	Pebble West Claims Corp.	PEBBLE BEACH 5042	8S003S035W30	40
ADL 542588	Pebble West Claims Corp.	PEBBLE BEACH 5043	8S003S035W30	40
ADL 542589	Pebble West Claims Corp.	PEBBLE BEACH 5142	8S003S035W30	40
ADL 542590	Pebble West Claims Corp.	PEBBLE BEACH 5143	8S003S035W30	40
ADL 542591	Pebble West Claims Corp.	PEBBLE BEACH 5242	8S003S035W30	40
ADL 542592	Pebble West Claims Corp.	PEBBLE BEACH 5243	8S003S035W30	40
ADL 542593	Pebble West Claims Corp.	PEBBLE BEACH 5342	8S003S035W30	40
ADL 542594	Pebble West Claims Corp.	PEBBLE BEACH 5343	8S003S035W30	40
ADL 542595	Pebble West Claims Corp.	PEBBLE BEACH 5442	8S003S035W19	40
ADL 542596	Pebble West Claims Corp.	PEBBLE BEACH 5443	8S003S035W19	40
ADL 542597	Pebble West Claims Corp.	PEBBLE BEACH 5542	8S003S035W19	40
ADL 542598	Pebble West Claims Corp.	PEBBLE BEACH 5543	8S003S035W19	40
ADL 542599	Pebble West Claims Corp.	PEBBLE BEACH 5642	8S003S035W19	40
ADL 542600	Pebble West Claims Corp.	PEBBLE BEACH 5643	8S003S035W19	40
ADL 542601	Pebble West Claims Corp.	PEBBLE BEACH 5742	8S003S035W19	40
ADL 542602	Pebble West Claims Corp.	PEBBLE BEACH 5743	8S003S035W19	40
ADL 542603	Pebble West Claims Corp.	PEBBLE BEACH 5842	8S003S035W18	40
ADL 542604	Pebble West Claims Corp.	PEBBLE BEACH 5843	8S003S035W18	40
ADL 552917	Pebble West Claims Corp.	SOUTH PEBBLE 159	8S005S035W18	160
ADL 552918	Pebble West Claims Corp.	SOUTH PEBBLE 160	8S005S035W18	160
ADL 552919	Pebble West Claims Corp.	SOUTH PEBBLE 161	8S005S035W17	160
ADL 552920	Pebble West Claims Corp.	SOUTH PEBBLE 162	8S005S035W17	160
ADL 552921	Pebble West Claims Corp.	SOUTH PEBBLE 163	8S005S035W17	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 552922	Pebble West Claims Corp.	SOUTH PEBBLE 164	8S005S035W17	160
ADL 552923	Pebble West Claims Corp.	SOUTH PEBBLE 165	8S005S035W08	160
ADL 552924	Pebble West Claims Corp.	SOUTH PEBBLE 166	8S005S035W08	160
ADL 552925	Pebble West Claims Corp.	SOUTH PEBBLE 167	8S005S035W08	160
ADL 552926	Pebble West Claims Corp.	SOUTH PEBBLE 168	8S005S035W08	160
ADL 552927	Pebble West Claims Corp.	SOUTH PEBBLE 169	8S005S035W05	160
ADL 552928	Pebble West Claims Corp.	SOUTH PEBBLE 170	8S005S035W05	160
ADL 552929	Pebble West Claims Corp.	SOUTH PEBBLE 171	8S005S035W05	160
ADL 552930	Pebble West Claims Corp.	SOUTH PEBBLE 172	8S005S035W05	160
ADL 566247	Pebble West Claims Corp.	PEBBLE BEACH 1936	8S005S036W04	40
ADL 566248	Pebble West Claims Corp.	PEBBLE BEACH 1937	8S005S036W04	40
ADL 566249	Pebble West Claims Corp.	PEBBLE BEACH 1938	8S005S036W03	40
ADL 566250	Pebble West Claims Corp.	PEBBLE BEACH 1939	8S005S036W03	40
ADL 566251	Pebble West Claims Corp.	PEBBLE BEACH 1940	8S005S036W03	40
ADL 566252	Pebble West Claims Corp.	PEBBLE BEACH 1941	8S005S036W03	40
ADL 566287	Pebble West Claims Corp.	PEBBLE BEACH 2036	8S005S036W04	40
ADL 566288	Pebble West Claims Corp.	PEBBLE BEACH 2037	8S005S036W04	40
ADL 566289	Pebble West Claims Corp.	PEBBLE BEACH 2038	8S005S036W03	40
ADL 566290	Pebble West Claims Corp.	PEBBLE BEACH 2039	8S005S036W03	40
ADL 566291	Pebble West Claims Corp.	PEBBLE BEACH 2040	8S005S036W03	40
ADL 566292	Pebble West Claims Corp.	PEBBLE BEACH 2041	8S005S036W03	40
ADL 566327	Pebble West Claims Corp.	PEBBLE BEACH 2136	8S005S036W04	40
ADL 566328	Pebble West Claims Corp.	PEBBLE BEACH 2137	8S005S036W04	40
ADL 566329	Pebble West Claims Corp.	PEBBLE BEACH 2138	8S005S036W03	40
ADL 566330	Pebble West Claims Corp.	PEBBLE BEACH 2139	8S005S036W03	40
ADL 566331	Pebble West Claims Corp.	PEBBLE BEACH 2140	8S005S036W03	40
ADL 566332	Pebble West Claims Corp.	PEBBLE BEACH 2141	8S005S036W03	40
ADL 566367	Pebble West Claims Corp.	PEBBLE BEACH 2236	8S004S036W35	40
ADL 566368	Pebble West Claims Corp.	PEBBLE BEACH 2237	8S004S036W35	40
ADL 566369	Pebble West Claims Corp.	PEBBLE BEACH 2238	8S004S036W36	40
ADL 566370	Pebble West Claims Corp.	PEBBLE BEACH 2239	8S004S036W36	40
ADL 566371	Pebble West Claims Corp.	PEBBLE BEACH 2240	8S004S036W36	40
ADL 566372	Pebble West Claims Corp.	PEBBLE BEACH 2241	8S004S036W36	40
ADL 566373	Pebble West Claims Corp.	PEBBLE BEACH 2242	8S004S035W31	40
ADL 566407	Pebble West Claims Corp.	PEBBLE BEACH 2336	8S004S036W35	40
ADL 566408	Pebble West Claims Corp.	PEBBLE BEACH 2337	8S004S036W35	40
ADL 566409	Pebble West Claims Corp.	PEBBLE BEACH 2338	8S004S036W36	40
ADL 566410	Pebble West Claims Corp.	PEBBLE BEACH 2339	8S004S036W36	40
ADL 566411	Pebble West Claims Corp.	PEBBLE BEACH 2340	8S004S036W36	40
ADL 566412	Pebble West Claims Corp.	PEBBLE BEACH 2341	8S004S036W36	40
ADL 566413	Pebble West Claims Corp.	PEBBLE BEACH 2342	8S004S035W31	40
ADL 566447	Pebble West Claims Corp.	PEBBLE BEACH 2436	8S004S036W35	40
ADL 566448	Pebble West Claims Corp.	PEBBLE BEACH 2437	8S004S036W35	40
ADL 566449	Pebble West Claims Corp.	PEBBLE BEACH 2438	8S004S036W36	40
ADL 566450	Pebble West Claims Corp.	PEBBLE BEACH 2439	8S004S036W36	40
ADL 566451	Pebble West Claims Corp.	PEBBLE BEACH 2440	8S004S036W36	40
ADL 566452	Pebble West Claims Corp.	PEBBLE BEACH 2441	8S004S036W36	40
ADL 566453	Pebble West Claims Corp.	PEBBLE BEACH 2442	8S004S035W31	40
ADL 566487	Pebble West Claims Corp.	PEBBLE BEACH 2536	8S004S036W35	40
ADL 566488	Pebble West Claims Corp.	PEBBLE BEACH 2537	8S004S036W35	40
ADL 566489	Pebble West Claims Corp.	PEBBLE BEACH 2538	8S004S036W36	40
ADL 566490	Pebble West Claims Corp.	PEBBLE BEACH 2539	8S004S036W36	40
ADL 566491	Pebble West Claims Corp.	PEBBLE BEACH 2540	8S004S036W36	40
ADL 566492	Pebble West Claims Corp.	PEBBLE BEACH 2541	8S004S036W36	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 566527	Pebble West Claims Corp.	PEBBLE BEACH 2636	8S004S036W26	40
ADL 566528	Pebble West Claims Corp.	PEBBLE BEACH 2637	8S004S036W26	40
ADL 566529	Pebble West Claims Corp.	PEBBLE BEACH 2638	8S004S036W25	40
ADL 566530	Pebble West Claims Corp.	PEBBLE BEACH 2639	8S004S036W25	40
ADL 566531	Pebble West Claims Corp.	PEBBLE BEACH 2640	8S004S036W25	40
ADL 566532	Pebble West Claims Corp.	PEBBLE BEACH 2641	8S004S036W25	40
ADL 566567	Pebble West Claims Corp.	PEBBLE BEACH 2736	8S004S036W26	40
ADL 566568	Pebble West Claims Corp.	PEBBLE BEACH 2737	8S004S036W26	40
ADL 566569	Pebble West Claims Corp.	PEBBLE BEACH 2738	8S004S036W25	40
ADL 566570	Pebble West Claims Corp.	PEBBLE BEACH 2739	8S004S036W25	40
ADL 566571	Pebble West Claims Corp.	PEBBLE BEACH 2740	8S004S036W25	40
ADL 566572	Pebble West Claims Corp.	PEBBLE BEACH 2741	8S004S036W25	40
ADL 566607	Pebble West Claims Corp.	PEBBLE BEACH 3138	8S004S036W24	40
ADL 566608	Pebble West Claims Corp.	PEBBLE BEACH 3139	8S004S036W24	40
ADL 566609	Pebble West Claims Corp.	PEBBLE BEACH 3140	8S004S036W24	40
ADL 566610	Pebble West Claims Corp.	PEBBLE BEACH 3141	8S004S036W24	40
ADL 566637	Pebble West Claims Corp.	PEBBLE BEACH 2938	8S004S036W25	40
ADL 566638	Pebble West Claims Corp.	PEBBLE BEACH 2939	8S004S036W25	40
ADL 566639	Pebble West Claims Corp.	PEBBLE BEACH 2940	8S004S036W25	40
ADL 566640	Pebble West Claims Corp.	PEBBLE BEACH 2941	8S004S036W25	40
ADL 566655	Pebble West Claims Corp.	PEBBLE BEACH 2836	8S004S036W26	40
ADL 566656	Pebble West Claims Corp.	PEBBLE BEACH 2837	8S004S036W26	40
ADL 566657	Pebble West Claims Corp.	PEBBLE BEACH 2838	8S004S036W25	40
ADL 566658	Pebble West Claims Corp.	PEBBLE BEACH 2839	8S004S036W25	40
ADL 566659	Pebble West Claims Corp.	PEBBLE BEACH 2840	8S004S036W25	40
ADL 566660	Pebble West Claims Corp.	PEBBLE BEACH 2841	8S004S036W25	40
ADL 566697	Pebble West Claims Corp.	PEBBLE BEACH 3238	8S004S036W24	40
ADL 566698	Pebble West Claims Corp.	PEBBLE BEACH 3239	8S004S036W24	40
ADL 566699	Pebble West Claims Corp.	PEBBLE BEACH 3240	8S004S036W24	40
ADL 566700	Pebble West Claims Corp.	PEBBLE BEACH 3241	8S004S036W24	40
ADL 566701	Pebble West Claims Corp.	PEBBLE BEACH 3242	8S004S035W19	40
ADL 566737	Pebble West Claims Corp.	PEBBLE BEACH 3038	8S004S036W24	40
ADL 566738	Pebble West Claims Corp.	PEBBLE BEACH 3039	8S004S036W24	40
ADL 566739	Pebble West Claims Corp.	PEBBLE BEACH 3040	8S004S036W24	40
ADL 566740	Pebble West Claims Corp.	PEBBLE BEACH 3041	8S004S036W24	40
ADL 566751	Pebble West Claims Corp.	PEBBLE BEACH 3252	8S004S035W21	40
ADL 566752	Pebble West Claims Corp.	PEBBLE BEACH 3253	8S004S035W21	40
ADL 566753	Pebble West Claims Corp.	PEBBLE BEACH 3254	8S004S035W22	40
ADL 566754	Pebble West Claims Corp.	PEBBLE BEACH 3255	8S004S035W22	40
ADL 566767	Pebble West Claims Corp.	PEBBLE BEACH 3338	8S004S036W24	40
ADL 566768	Pebble West Claims Corp.	PEBBLE BEACH 3339	8S004S036W24	40
ADL 566769	Pebble West Claims Corp.	PEBBLE BEACH 3340	8S004S036W24	40
ADL 566770	Pebble West Claims Corp.	PEBBLE BEACH 3341	8S004S036W24	40
ADL 566771	Pebble West Claims Corp.	PEBBLE BEACH 3342	8S004S035W19	40
ADL 566781	Pebble West Claims Corp.	PEBBLE BEACH 3352	8S004S035W21	40
ADL 566782	Pebble West Claims Corp.	PEBBLE BEACH 3353	8S004S035W21	40
ADL 566783	Pebble West Claims Corp.	PEBBLE BEACH 3354	8S004S035W22	40
ADL 566784	Pebble West Claims Corp.	PEBBLE BEACH 3355	8S004S035W22	40
ADL 566793	Pebble West Claims Corp.	PEBBLE BEACH 3438	8S004S036W13	40
ADL 566794	Pebble West Claims Corp.	PEBBLE BEACH 3439	8S004S036W13	40
ADL 566795	Pebble West Claims Corp.	PEBBLE BEACH 3440	8S004S036W13	40
ADL 566796	Pebble West Claims Corp.	PEBBLE BEACH 3441	8S004S036W13	40
ADL 566797	Pebble West Claims Corp.	PEBBLE BEACH 3446	8S004S035W17	40
ADL 566798	Pebble West Claims Corp.	PEBBLE BEACH 3447	8S004S035W17	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 566799	Pebble West Claims Corp.	PEBBLE BEACH 3448	8S004S035W17	40
ADL 566800	Pebble West Claims Corp.	PEBBLE BEACH 3449	8S004S035W17	40
ADL 566801	Pebble West Claims Corp.	PEBBLE BEACH 3450	8S004S035W16	40
ADL 566802	Pebble West Claims Corp.	PEBBLE BEACH 3451	8S004S035W16	40
ADL 566811	Pebble West Claims Corp.	PEBBLE BEACH 3538	8S004S036W13	40
ADL 566812	Pebble West Claims Corp.	PEBBLE BEACH 3539	8S004S036W13	40
ADL 566813	Pebble West Claims Corp.	PEBBLE BEACH 3540	8S004S036W13	40
ADL 566814	Pebble West Claims Corp.	PEBBLE BEACH 3541	8S004S036W13	40
ADL 566815	Pebble West Claims Corp.	PEBBLE BEACH 3546	8S004S035W17	40
ADL 566816	Pebble West Claims Corp.	PEBBLE BEACH 3547	8S004S035W17	40
ADL 566817	Pebble West Claims Corp.	PEBBLE BEACH 3548	8S004S035W17	40
ADL 566818	Pebble West Claims Corp.	PEBBLE BEACH 3549	8S004S035W17	40
ADL 566819	Pebble West Claims Corp.	PEBBLE BEACH 3550	8S004S035W16	40
ADL 566820	Pebble West Claims Corp.	PEBBLE BEACH 3551	8S004S035W16	40
ADL 566829	Pebble West Claims Corp.	PEBBLE BEACH 3638	8S004S036W13	40
ADL 566830	Pebble West Claims Corp.	PEBBLE BEACH 3639	8S004S036W13	40
ADL 566831	Pebble West Claims Corp.	PEBBLE BEACH 3640	8S004S036W13	40
ADL 566832	Pebble West Claims Corp.	PEBBLE BEACH 3641	8S004S036W13	40
ADL 566833	Pebble West Claims Corp.	PEBBLE BEACH 3646	8S004S035W17	40
ADL 566834	Pebble West Claims Corp.	PEBBLE BEACH 3647	8S004S035W17	40
ADL 566835	Pebble West Claims Corp.	PEBBLE BEACH 3648	8S004S035W17	40
ADL 566836	Pebble West Claims Corp.	PEBBLE BEACH 3649	8S004S035W17	40
ADL 566837	Pebble West Claims Corp.	PEBBLE BEACH 3650	8S004S035W16	40
ADL 566838	Pebble West Claims Corp.	PEBBLE BEACH 3651	8S004S035W16	40
ADL 566847	Pebble West Claims Corp.	PEBBLE BEACH 3738	8S004S036W13	40
ADL 566848	Pebble West Claims Corp.	PEBBLE BEACH 3739	8S004S036W13	40
ADL 566849	Pebble West Claims Corp.	PEBBLE BEACH 3740	8S004S036W13	40
ADL 566850	Pebble West Claims Corp.	PEBBLE BEACH 3741	8S004S036W13	40
ADL 566851	Pebble West Claims Corp.	PEBBLE BEACH 3746	8S004S035W17	40
ADL 566852	Pebble West Claims Corp.	PEBBLE BEACH 3747	8S004S035W17	40
ADL 566853	Pebble West Claims Corp.	PEBBLE BEACH 3748	8S004S035W17	40
ADL 566854	Pebble West Claims Corp.	PEBBLE BEACH 3749	8S004S035W17	40
ADL 566855	Pebble West Claims Corp.	PEBBLE BEACH 3750	8S004S035W16	40
ADL 566856	Pebble West Claims Corp.	PEBBLE BEACH 3751	8S004S035W16	40
ADL 566865	Pebble West Claims Corp.	PEBBLE BEACH 3838	8S004S036W12	40
ADL 566866	Pebble West Claims Corp.	PEBBLE BEACH 3839	8S004S036W12	40
ADL 566867	Pebble West Claims Corp.	PEBBLE BEACH 3840	8S004S036W12	40
ADL 566868	Pebble West Claims Corp.	PEBBLE BEACH 3841	8S004S036W12	40
ADL 566877	Pebble West Claims Corp.	PEBBLE BEACH 3938	8S004S036W12	40
ADL 566878	Pebble West Claims Corp.	PEBBLE BEACH 3939	8S004S036W12	40
ADL 566879	Pebble West Claims Corp.	PEBBLE BEACH 3940	8S004S036W12	40
ADL 566880	Pebble West Claims Corp.	PEBBLE BEACH 3941	8S004S036W12	40
ADL 566889	Pebble West Claims Corp.	PEBBLE BEACH 4038	8S004S036W12	40
ADL 566890	Pebble West Claims Corp.	PEBBLE BEACH 4039	8S004S036W12	40
ADL 566891	Pebble West Claims Corp.	PEBBLE BEACH 4040	8S004S036W12	40
ADL 566892	Pebble West Claims Corp.	PEBBLE BEACH 4041	8S004S036W12	40
ADL 566901	Pebble West Claims Corp.	PEBBLE BEACH 4138	8S004S036W12	40
ADL 566902	Pebble West Claims Corp.	PEBBLE BEACH 4139	8S004S036W12	40
ADL 566903	Pebble West Claims Corp.	PEBBLE BEACH 4140	8S004S036W12	40
ADL 566904	Pebble West Claims Corp.	PEBBLE BEACH 4141	8S004S036W12	40
ADL 566905	Pebble West Claims Corp.	PEBBLE BEACH 4238	8S004S036W01	40
ADL 566906	Pebble West Claims Corp.	PEBBLE BEACH 4239	8S004S036W01	40
ADL 566907	Pebble West Claims Corp.	PEBBLE BEACH 4240	8S004S036W01	40
ADL 566908	Pebble West Claims Corp.	PEBBLE BEACH 4241	8S004S036W01	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 566909	Pebble West Claims Corp.	PEBBLE BEACH 4242	8S004S035W06	40
ADL 566910	Pebble West Claims Corp.	PEBBLE BEACH 4243	8S004S035W06	40
ADL 566911	Pebble West Claims Corp.	PEBBLE BEACH 4338	8S004S036W01	40
ADL 566912	Pebble West Claims Corp.	PEBBLE BEACH 4339	8S004S036W01	40
ADL 566913	Pebble West Claims Corp.	PEBBLE BEACH 4340	8S004S036W01	40
ADL 566914	Pebble West Claims Corp.	PEBBLE BEACH 4341	8S004S036W01	40
ADL 566915	Pebble West Claims Corp.	PEBBLE BEACH 4342	8S004S035W06	40
ADL 566916	Pebble West Claims Corp.	PEBBLE BEACH 4343	8S004S035W06	40
ADL 566917	Pebble West Claims Corp.	PEBBLE BEACH 4438	8S004S036W01	40
ADL 566918	Pebble West Claims Corp.	PEBBLE BEACH 4439	8S004S036W01	40
ADL 566919	Pebble West Claims Corp.	PEBBLE BEACH 4440	8S004S036W01	40
ADL 566920	Pebble West Claims Corp.	PEBBLE BEACH 4441	8S004S036W01	40
ADL 566921	Pebble West Claims Corp.	PEBBLE BEACH 4442	8S004S035W06	40
ADL 566922	Pebble West Claims Corp.	PEBBLE BEACH 4443	8S004S035W06	40
ADL 566923	Pebble West Claims Corp.	PEBBLE BEACH 4538	8S004S036W01	40
ADL 566924	Pebble West Claims Corp.	PEBBLE BEACH 4539	8S004S036W01	40
ADL 566925	Pebble West Claims Corp.	PEBBLE BEACH 4540	8S004S036W01	40
ADL 566926	Pebble West Claims Corp.	PEBBLE BEACH 4541	8S004S036W01	40
ADL 566927	Pebble West Claims Corp.	PEBBLE BEACH 4542	8S004S035W06	40
ADL 566928	Pebble West Claims Corp.	PEBBLE BEACH 4543	8S004S035W06	40
ADL 566929	Pebble West Claims Corp.	PEBBLE BEACH 4638	8S003S036W36	40
ADL 566930	Pebble West Claims Corp.	PEBBLE BEACH 4639	8S003S036W36	40
ADL 566931	Pebble West Claims Corp.	PEBBLE BEACH 4640	8S003S036W36	40
ADL 566932	Pebble West Claims Corp.	PEBBLE BEACH 4641	8S003S036W36	40
ADL 566933	Pebble West Claims Corp.	PEBBLE BEACH 4738	8S003S036W36	40
ADL 566934	Pebble West Claims Corp.	PEBBLE BEACH 4739	8S003S036W36	40
ADL 566935	Pebble West Claims Corp.	PEBBLE BEACH 4740	8S003S036W36	40
ADL 566936	Pebble West Claims Corp.	PEBBLE BEACH 4741	8S003S036W36	40
ADL 566937	Pebble West Claims Corp.	PEBBLE BEACH 4838	8S003S036W36	40
ADL 566938	Pebble West Claims Corp.	PEBBLE BEACH 4839	8S003S036W36	40
ADL 566939	Pebble West Claims Corp.	PEBBLE BEACH 4840	8S003S036W36	40
ADL 566940	Pebble West Claims Corp.	PEBBLE BEACH 4841	8S003S036W36	40
ADL 566941	Pebble West Claims Corp.	PEBBLE BEACH 4938	8S003S036W36	40
ADL 566942	Pebble West Claims Corp.	PEBBLE BEACH 4939	8S003S036W36	40
ADL 566943	Pebble West Claims Corp.	PEBBLE BEACH 4940	8S003S036W36	40
ADL 566944	Pebble West Claims Corp.	PEBBLE BEACH 4941	8S003S036W36	40
ADL 566945	Pebble West Claims Corp.	PEBBLE BEACH 5038	8S003S036W25	40
ADL 566946	Pebble West Claims Corp.	PEBBLE BEACH 5039	8S003S036W25	40
ADL 566947	Pebble West Claims Corp.	PEBBLE BEACH 5040	8S003S036W25	40
ADL 566948	Pebble West Claims Corp.	PEBBLE BEACH 5041	8S003S036W25	40
ADL 566949	Pebble West Claims Corp.	PEBBLE BEACH 5138	8S003S036W25	40
ADL 566950	Pebble West Claims Corp.	PEBBLE BEACH 5139	8S003S036W25	40
ADL 566951	Pebble West Claims Corp.	PEBBLE BEACH 5140	8S003S036W25	40
ADL 566952	Pebble West Claims Corp.	PEBBLE BEACH 5141	8S003S036W25	40
ADL 566953	Pebble West Claims Corp.	PEBBLE BEACH 5238	8S003S036W25	40
ADL 566954	Pebble West Claims Corp.	PEBBLE BEACH 5239	8S003S036W25	40
ADL 566955	Pebble West Claims Corp.	PEBBLE BEACH 5240	8S003S036W25	40
ADL 566956	Pebble West Claims Corp.	PEBBLE BEACH 5241	8S003S036W25	40
ADL 566957	Pebble West Claims Corp.	PEBBLE BEACH 5338	8S003S036W25	40
ADL 566958	Pebble West Claims Corp.	PEBBLE BEACH 5339	8S003S036W25	40
ADL 566959	Pebble West Claims Corp.	PEBBLE BEACH 5340	8S003S036W25	40
ADL 566960	Pebble West Claims Corp.	PEBBLE BEACH 5341	8S003S036W25	40
ADL 566961	Pebble West Claims Corp.	PEBBLE BEACH 5438	8S003S036W24	40
ADL 566962	Pebble West Claims Corp.	PEBBLE BEACH 5439	8S003S036W24	40



**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 566963	Pebble West Claims Corp.	PEBBLE BEACH 5440	8S003S036W24	40
ADL 566964	Pebble West Claims Corp.	PEBBLE BEACH 5441	8S003S036W24	40
ADL 566965	Pebble West Claims Corp.	PEBBLE BEACH 5538	8S003S036W24	40
ADL 566966	Pebble West Claims Corp.	PEBBLE BEACH 5539	8S003S036W24	40
ADL 566967	Pebble West Claims Corp.	PEBBLE BEACH 5540	8S003S036W24	40
ADL 566968	Pebble West Claims Corp.	PEBBLE BEACH 5541	8S003S036W24	40
ADL 566969	Pebble West Claims Corp.	PEBBLE BEACH 5638	8S003S036W24	40
ADL 566970	Pebble West Claims Corp.	PEBBLE BEACH 5639	8S003S036W24	40
ADL 566971	Pebble West Claims Corp.	PEBBLE BEACH 5640	8S003S036W24	40
ADL 566972	Pebble West Claims Corp.	PEBBLE BEACH 5641	8S003S036W24	40
ADL 566973	Pebble West Claims Corp.	PEBBLE BEACH 5738	8S003S036W24	40
ADL 566974	Pebble West Claims Corp.	PEBBLE BEACH 5739	8S003S036W24	40
ADL 566975	Pebble West Claims Corp.	PEBBLE BEACH 5740	8S003S036W24	40
ADL 566976	Pebble West Claims Corp.	PEBBLE BEACH 5741	8S003S036W24	40
ADL 566977	Pebble West Claims Corp.	PEBBLE BEACH 5838	8S003S036W13	40
ADL 566978	Pebble West Claims Corp.	PEBBLE BEACH 5839	8S003S036W13	40
ADL 566979	Pebble West Claims Corp.	PEBBLE BEACH 5840	8S003S036W13	40
ADL 566980	Pebble West Claims Corp.	PEBBLE BEACH 5841	8S003S036W13	40
ADL 566981	Pebble West Claims Corp.	PEBBLE BEACH 5938	8S003S036W13	40
ADL 566982	Pebble West Claims Corp.	PEBBLE BEACH 5939	8S003S036W13	40
ADL 566983	Pebble West Claims Corp.	PEBBLE BEACH 5940	8S003S036W13	40
ADL 566984	Pebble West Claims Corp.	PEBBLE BEACH 5941	8S003S036W13	40
ADL 566985	Pebble West Claims Corp.	PEBBLE BEACH 6038	8S003S036W13	40
ADL 566986	Pebble West Claims Corp.	PEBBLE BEACH 6039	8S003S036W13	40
ADL 566987	Pebble West Claims Corp.	PEBBLE BEACH 6040	8S003S036W13	40
ADL 566988	Pebble West Claims Corp.	PEBBLE BEACH 6041	8S003S036W13	40
ADL 566989	Pebble West Claims Corp.	PEBBLE BEACH 6042	8S003S035W18	40
ADL 566990	Pebble West Claims Corp.	PEBBLE BEACH 6043	8S003S035W18	40
ADL 566991	Pebble West Claims Corp.	PEBBLE BEACH 6138	8S003S036W13	40
ADL 566992	Pebble West Claims Corp.	PEBBLE BEACH 6139	8S003S036W13	40
ADL 566993	Pebble West Claims Corp.	PEBBLE BEACH 6140	8S003S036W13	40
ADL 566994	Pebble West Claims Corp.	PEBBLE BEACH 6141	8S003S036W13	40
ADL 566995	Pebble West Claims Corp.	PEBBLE BEACH 6142	8S003S035W18	40
ADL 566996	Pebble West Claims Corp.	PEBBLE BEACH 6143	8S003S035W18	40
ADL 566997	Pebble West Claims Corp.	PEBBLE BEACH 6238	8S003S036W12	40
ADL 566998	Pebble West Claims Corp.	PEBBLE BEACH 6239	8S003S036W12	40
ADL 566999	Pebble West Claims Corp.	PEBBLE BEACH 6240	8S003S036W12	40
ADL 567000	Pebble West Claims Corp.	PEBBLE BEACH 6241	8S003S036W12	40
ADL 567001	Pebble West Claims Corp.	PEBBLE BEACH 6242	8S003S035W07	40
ADL 567002	Pebble West Claims Corp.	PEBBLE BEACH 6243	8S003S035W07	40
ADL 567003	Pebble West Claims Corp.	PEBBLE BEACH 6244	8S003S035W07	40
ADL 567004	Pebble West Claims Corp.	PEBBLE BEACH 6245	8S003S035W07	40
ADL 567005	Pebble West Claims Corp.	PEBBLE BEACH 6246	8S003S035W08	40
ADL 567006	Pebble West Claims Corp.	PEBBLE BEACH 6247	8S003S035W08	40
ADL 567007	Pebble West Claims Corp.	PEBBLE BEACH 6338	8S003S036W12	40
ADL 567008	Pebble West Claims Corp.	PEBBLE BEACH 6339	8S003S036W12	40
ADL 567009	Pebble West Claims Corp.	PEBBLE BEACH 6340	8S003S036W12	40
ADL 567010	Pebble West Claims Corp.	PEBBLE BEACH 6341	8S003S036W12	40
ADL 567011	Pebble West Claims Corp.	PEBBLE BEACH 6342	8S003S035W07	40
ADL 567012	Pebble West Claims Corp.	PEBBLE BEACH 6343	8S003S035W07	40
ADL 567013	Pebble West Claims Corp.	PEBBLE BEACH 6344	8S003S035W07	40
ADL 567014	Pebble West Claims Corp.	PEBBLE BEACH 6345	8S003S035W07	40
ADL 567015	Pebble West Claims Corp.	PEBBLE BEACH 6346	8S003S035W08	40
ADL 567016	Pebble West Claims Corp.	PEBBLE BEACH 6347	8S003S035W08	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 567017	Pebble West Claims Corp.	PEBBLE BEACH 6438	8S003S036W12	40
ADL 567018	Pebble West Claims Corp.	PEBBLE BEACH 6439	8S003S036W12	40
ADL 567019	Pebble West Claims Corp.	PEBBLE BEACH 6440	8S003S036W12	40
ADL 567020	Pebble West Claims Corp.	PEBBLE BEACH 6441	8S003S036W12	40
ADL 567021	Pebble West Claims Corp.	PEBBLE BEACH 6442	8S003S035W07	40
ADL 567022	Pebble West Claims Corp.	PEBBLE BEACH 6443	8S003S035W07	40
ADL 567023	Pebble West Claims Corp.	PEBBLE BEACH 6444	8S003S035W07	40
ADL 567024	Pebble West Claims Corp.	PEBBLE BEACH 6445	8S003S035W07	40
ADL 567025	Pebble West Claims Corp.	PEBBLE BEACH 6446	8S003S035W08	40
ADL 567026	Pebble West Claims Corp.	PEBBLE BEACH 6447	8S003S035W08	40
ADL 567035	Pebble West Claims Corp.	PEBBLE BEACH 6546	8S003S035W08	40
ADL 567036	Pebble West Claims Corp.	PEBBLE BEACH 6547	8S003S035W08	40
ADL 567045	Pebble West Claims Corp.	PEBBLE BEACH 6646	8S003S035W05	40
ADL 567046	Pebble West Claims Corp.	PEBBLE BEACH 6647	8S003S035W05	40
ADL 567047	Pebble West Claims Corp.	PEBBLE BEACH 6648	8S003S035W05	40
ADL 567048	Pebble West Claims Corp.	PEBBLE BEACH 6649	8S003S035W05	40
ADL 567049	Pebble West Claims Corp.	PEBBLE BEACH 6650	8S003S035W04	40
ADL 567050	Pebble West Claims Corp.	PEBBLE BEACH 6651	8S003S035W04	40
ADL 567051	Pebble West Claims Corp.	PEBBLE BEACH 6652	8S003S035W04	40
ADL 567052	Pebble West Claims Corp.	PEBBLE BEACH 6653	8S003S035W04	40
ADL 567053	Pebble West Claims Corp.	PEBBLE BEACH 6654	8S003S035W03	40
ADL 567054	Pebble West Claims Corp.	PEBBLE BEACH 6655	8S003S035W03	40
ADL 567055	Pebble West Claims Corp.	PEBBLE BEACH 6656	8S003S035W03	4
ADL 567064	Pebble West Claims Corp.	PEBBLE BEACH 6746	8S003S035W05	40
ADL 567065	Pebble West Claims Corp.	PEBBLE BEACH 6747	8S003S035W05	40
ADL 567066	Pebble West Claims Corp.	PEBBLE BEACH 6748	8S003S035W05	40
ADL 567067	Pebble West Claims Corp.	PEBBLE BEACH 6749	8S003S035W05	40
ADL 567068	Pebble West Claims Corp.	PEBBLE BEACH 6750	8S003S035W04	40
ADL 567069	Pebble West Claims Corp.	PEBBLE BEACH 6751	8S003S035W04	40
ADL 567083	Pebble West Claims Corp.	PEBBLE BEACH 6846	8S003S035W05	40
ADL 567084	Pebble West Claims Corp.	PEBBLE BEACH 6847	8S003S035W05	40
ADL 567085	Pebble West Claims Corp.	PEBBLE BEACH 6848	8S003S035W05	40
ADL 567086	Pebble West Claims Corp.	PEBBLE BEACH 6849	8S003S035W05	40
ADL 567087	Pebble West Claims Corp.	PEBBLE BEACH 6850	8S003S035W04	40
ADL 567088	Pebble West Claims Corp.	PEBBLE BEACH 6851	8S003S035W04	40
ADL 567102	Pebble West Claims Corp.	PEBBLE BEACH 6946	8S003S035W05	40
ADL 567103	Pebble West Claims Corp.	PEBBLE BEACH 6947	8S003S035W05	40
ADL 567104	Pebble West Claims Corp.	PEBBLE BEACH 6948	8S003S035W05	40
ADL 567105	Pebble West Claims Corp.	PEBBLE BEACH 6949	8S003S035W05	40
ADL 567106	Pebble West Claims Corp.	PEBBLE BEACH 6950	8S003S035W04	40
ADL 567107	Pebble West Claims Corp.	PEBBLE BEACH 6951	8S003S035W04	40
ADL 567841	Pebble West Claims Corp.	SILL 5343	8S004S035W22	40
ADL 567842	Pebble West Claims Corp.	SILL 5344	8S004S035W22	40
ADL 567843	Pebble West Claims Corp.	SILL 5345	8S004S035W23	40
ADL 567844	Pebble West Claims Corp.	SILL 5346	8S004S035W23	40
ADL 567845	Pebble West Claims Corp.	SILL 5347	8S004S035W23	40
ADL 567855	Pebble West Claims Corp.	SILL 5443	8S004S035W22	40
ADL 567856	Pebble West Claims Corp.	SILL 5444	8S004S035W22	40
ADL 567857	Pebble West Claims Corp.	SILL 5445	8S004S035W23	40
ADL 567858	Pebble West Claims Corp.	SILL 5446	8S004S035W23	40
ADL 567859	Pebble West Claims Corp.	SILL 5447	8S004S035W23	40
ADL 567860	Pebble West Claims Corp.	SILL 5448	8S004S035W23	40
ADL 567869	Pebble West Claims Corp.	SILL 5545	8S004S035W14	40
ADL 567870	Pebble West Claims Corp.	SILL 5546	8S004S035W14	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 567871	Pebble West Claims Corp.	SILL 5547	8S004S035W14	40
ADL 567872	Pebble West Claims Corp.	SILL 5548	8S004S035W14	40
ADL 567873	Pebble West Claims Corp.	SILL 5549	8S004S035W13	40
ADL 567881	Pebble West Claims Corp.	SILL 5645	8S004S035W14	40
ADL 567882	Pebble West Claims Corp.	SILL 5646	8S004S035W14	40
ADL 567883	Pebble West Claims Corp.	SILL 5647	8S004S035W14	40
ADL 567884	Pebble West Claims Corp.	SILL 5648	8S004S035W14	40
ADL 567885	Pebble West Claims Corp.	SILL 5649	8S004S035W13	40
ADL 567886	Pebble West Claims Corp.	SILL 5650	8S004S035W13	40
ADL 567893	Pebble West Claims Corp.	SILL 5745	8S004S035W14	40
ADL 567894	Pebble West Claims Corp.	SILL 5746	8S004S035W14	40
ADL 567895	Pebble West Claims Corp.	SILL 5747	8S004S035W14	40
ADL 567896	Pebble West Claims Corp.	SILL 5748	8S004S035W14	40
ADL 567897	Pebble West Claims Corp.	SILL 5749	8S004S035W13	40
ADL 567898	Pebble West Claims Corp.	SILL 5750	8S004S035W13	40
ADL 567905	Pebble West Claims Corp.	SILL 5845	8S004S035W14	40
ADL 567906	Pebble West Claims Corp.	SILL 5846	8S004S035W14	40
ADL 567907	Pebble West Claims Corp.	SILL 5847	8S004S035W14	40
ADL 567908	Pebble West Claims Corp.	SILL 5848	8S004S035W14	40
ADL 567909	Pebble West Claims Corp.	SILL 5849	8S004S035W13	40
ADL 567910	Pebble West Claims Corp.	SILL 5850	8S004S035W13	40
ADL 567911	Pebble West Claims Corp.	SILL 5851	8S004S035W13	40
ADL 567917	Pebble West Claims Corp.	SILL 5945	8S004S035W11	40
ADL 567918	Pebble West Claims Corp.	SILL 5946	8S004S035W11	40
ADL 567919	Pebble West Claims Corp.	SILL 5947	8S004S035W11	40
ADL 567920	Pebble West Claims Corp.	SILL 5948	8S004S035W11	40
ADL 567921	Pebble West Claims Corp.	SILL 5949	8S004S035W12	40
ADL 567922	Pebble West Claims Corp.	SILL 5950	8S004S035W12	40
ADL 567923	Pebble West Claims Corp.	SILL 5953	8S004S034W07	40
ADL 567927	Pebble West Claims Corp.	SILL 6045	8S004S035W11	40
ADL 567928	Pebble West Claims Corp.	SILL 6046	8S004S035W11	40
ADL 567929	Pebble West Claims Corp.	SILL 6047	8S004S035W11	40
ADL 567930	Pebble West Claims Corp.	SILL 6048	8S004S035W11	40
ADL 567931	Pebble West Claims Corp.	SILL 6049	8S004S035W12	40
ADL 567932	Pebble West Claims Corp.	SILL 6050	8S004S035W12	40
ADL 567933	Pebble West Claims Corp.	SILL 6053	8S004S034W07	40
ADL 567937	Pebble West Claims Corp.	SILL 6145	8S004S035W11	40
ADL 567938	Pebble West Claims Corp.	SILL 6146	8S004S035W11	40
ADL 567939	Pebble West Claims Corp.	SILL 6147	8S004S035W11	40
ADL 567940	Pebble West Claims Corp.	SILL 6148	8S004S035W11	40
ADL 567941	Pebble West Claims Corp.	SILL 6149	8S004S035W12	40
ADL 567942	Pebble West Claims Corp.	SILL 6150	8S004S035W12	40
ADL 567943	Pebble West Claims Corp.	SILL 6153	8S004S034W07	40
ADL 567944	Pebble West Claims Corp.	SILL 6154	8S004S034W07	40
ADL 567947	Pebble West Claims Corp.	SILL 6253	8S004S034W07	40
ADL 567948	Pebble West Claims Corp.	SILL 6254	8S004S034W07	40
ADL 567949	Pebble West Claims Corp.	SILL 6255	8S004S034W07	40
ADL 567951	Pebble West Claims Corp.	SILL 6345	8S004S035W02	40
ADL 567952	Pebble West Claims Corp.	SILL 6346	8S004S035W02	40
ADL 567953	Pebble West Claims Corp.	SILL 6347	8S004S035W02	40
ADL 567954	Pebble West Claims Corp.	SILL 6348	8S004S035W02	40
ADL 567955	Pebble West Claims Corp.	SILL 6349	8S004S035W01	40
ADL 567956	Pebble West Claims Corp.	SILL 6350	8S004S035W01	40
ADL 567957	Pebble West Claims Corp.	SILL 6353	8S004S034W06	40

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 567958	Pebble West Claims Corp.	SILL 6354	8S004S034W06	40
ADL 567959	Pebble West Claims Corp.	SILL 6355	8S004S034W06	40
ADL 567960	Pebble West Claims Corp.	SILL 6356	8S004S034W06	40
ADL 567961	Pebble West Claims Corp.	SILL 6445	8S004S035W02	40
ADL 567962	Pebble West Claims Corp.	SILL 6446	8S004S035W02	40
ADL 567963	Pebble West Claims Corp.	SILL 6447	8S004S035W02	40
ADL 567964	Pebble West Claims Corp.	SILL 6448	8S004S035W02	40
ADL 567965	Pebble West Claims Corp.	SILL 6449	8S004S035W01	40
ADL 567966	Pebble West Claims Corp.	SILL 6450	8S004S035W01	40
ADL 567967	Pebble West Claims Corp.	SILL 6453	8S004S034W06	40
ADL 567968	Pebble West Claims Corp.	SILL 6454	8S004S034W06	40
ADL 567969	Pebble West Claims Corp.	SILL 6455	8S004S034W06	40
ADL 567970	Pebble West Claims Corp.	SILL 6456	8S004S034W06	40
ADL 567971	Pebble West Claims Corp.	SILL 6545	8S004S035W02	40
ADL 567972	Pebble West Claims Corp.	SILL 6546	8S004S035W02	40
ADL 567973	Pebble West Claims Corp.	SILL 6547	8S004S035W02	40
ADL 567974	Pebble West Claims Corp.	SILL 6548	8S004S035W02	40
ADL 567975	Pebble West Claims Corp.	SILL 6549	8S004S035W01	40
ADL 567976	Pebble West Claims Corp.	SILL 6550	8S004S035W01	40
ADL 567977	Pebble West Claims Corp.	SILL 6551	8S004S035W01	40
ADL 567978	Pebble West Claims Corp.	SILL 6552	8S004S035W01	40
ADL 567979	Pebble West Claims Corp.	SILL 6553	8S004S034W06	40
ADL 567980	Pebble West Claims Corp.	SILL 6554	8S004S034W06	40
ADL 567981	Pebble West Claims Corp.	SILL 6555	8S004S034W06	40
ADL 567982	Pebble West Claims Corp.	SILL 6556	8S004S034W06	40
ADL 568175	Pebble West Claims Corp.	SILL 8345	8S003S035W11	40
ADL 568176	Pebble West Claims Corp.	SILL 8346	8S003S035W11	40
ADL 568177	Pebble West Claims Corp.	SILL 8347	8S003S035W11	40
ADL 568178	Pebble West Claims Corp.	SILL 8348	8S003S035W11	40
ADL 568255	Pebble West Claims Corp.	SILL 8743	8S003S035W03	40
ADL 568256	Pebble West Claims Corp.	SILL 8744	8S003S035W03	40
ADL 642753	Pebble West Claims Corp.	BC 265	8S003S038W22	160
ADL 642754	Pebble West Claims Corp.	BC 266	8S003S038W23	160
ADL 642755	Pebble West Claims Corp.	BC 267	8S003S038W23	160
ADL 642756	Pebble West Claims Corp.	BC 268	8S003S038W24	160
ADL 642757	Pebble West Claims Corp.	BC 269	8S003S038W24	160
ADL 642758	Pebble West Claims Corp.	BC 270	8S003S037W19	160
ADL 642759	Pebble West Claims Corp.	BC 271	8S003S037W19	160
ADL 642764	Pebble West Claims Corp.	BC 276	8S003S038W22	160
ADL 642765	Pebble West Claims Corp.	BC 277	8S003S038W23	160
ADL 642766	Pebble West Claims Corp.	BC 278	8S003S038W23	160
ADL 642767	Pebble West Claims Corp.	BC 279	8S003S038W24	160
ADL 642768	Pebble West Claims Corp.	BC 280	8S003S038W24	160
ADL 642769	Pebble West Claims Corp.	BC 281	8S003S037W19	160
ADL 642770	Pebble West Claims Corp.	BC 282	8S003S037W19	160
ADL 642775	Pebble West Claims Corp.	BC 287	8S003S038W15	160
ADL 642776	Pebble West Claims Corp.	BC 288	8S003S038W14	160
ADL 642777	Pebble West Claims Corp.	BC 289	8S003S038W14	160
ADL 642778	Pebble West Claims Corp.	BC 290	8S003S038W13	160
ADL 642779	Pebble West Claims Corp.	BC 291	8S003S038W13	160
ADL 642780	Pebble West Claims Corp.	BC 292	8S003S037W18	160
ADL 642781	Pebble West Claims Corp.	BC 293	8S003S037W18	160
ADL 642786	Pebble West Claims Corp.	BC 298	8S003S038W15	160
ADL 642787	Pebble West Claims Corp.	BC 299	8S003S038W14	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642788	Pebble West Claims Corp.	BC 300	8S003S038W14	160
ADL 642789	Pebble West Claims Corp.	BC 301	8S003S038W13	160
ADL 642790	Pebble West Claims Corp.	BC 302	8S003S038W13	160
ADL 642791	Pebble West Claims Corp.	BC 303	8S003S037W18	160
ADL 642792	Pebble West Claims Corp.	BC 304	8S003S037W18	160
ADL 642797	Pebble West Claims Corp.	BC 309	8S003S038W10	160
ADL 642798	Pebble West Claims Corp.	BC 310	8S003S038W11	160
ADL 642799	Pebble West Claims Corp.	BC 311	8S003S038W11	160
ADL 642800	Pebble West Claims Corp.	BC 312	8S003S038W12	160
ADL 642801	Pebble West Claims Corp.	BC 313	8S003S038W12	160
ADL 642802	Pebble West Claims Corp.	BC 314	8S003S037W07	160
ADL 642803	Pebble West Claims Corp.	BC 315	8S003S037W07	160
ADL 642808	Pebble West Claims Corp.	BC 320	8S003S038W10	160
ADL 642809	Pebble West Claims Corp.	BC 321	8S003S038W11	160
ADL 642810	Pebble West Claims Corp.	BC 322	8S003S038W11	160
ADL 642811	Pebble West Claims Corp.	BC 323	8S003S038W12	160
ADL 642812	Pebble West Claims Corp.	BC 324	8S003S038W12	160
ADL 642813	Pebble West Claims Corp.	BC 325	8S003S037W07	160
ADL 642814	Pebble West Claims Corp.	BC 326	8S003S037W07	160
ADL 642819	Pebble West Claims Corp.	BC 331	8S003S038W03	160
ADL 642820	Pebble West Claims Corp.	BC 332	8S003S038W02	160
ADL 642821	Pebble West Claims Corp.	BC 333	8S003S038W02	160
ADL 642822	Pebble West Claims Corp.	BC 334	8S003S038W01	160
ADL 642823	Pebble West Claims Corp.	BC 335	8S003S038W01	160
ADL 642824	Pebble West Claims Corp.	BC 336	8S003S037W06	160
ADL 642825	Pebble West Claims Corp.	BC 337	8S003S037W06	160
ADL 642826	Pebble West Claims Corp.	BC 338	8S003S035W06	160
ADL 642827	Pebble West Claims Corp.	BC 339	8S003S035W06	160
ADL 642832	Pebble West Claims Corp.	BC 344	8S003S038W03	160
ADL 642833	Pebble West Claims Corp.	BC 345	8S003S038W02	160
ADL 642834	Pebble West Claims Corp.	BC 346	8S003S038W02	160
ADL 642835	Pebble West Claims Corp.	BC 347	8S003S038W01	160
ADL 642836	Pebble West Claims Corp.	BC 348	8S003S038W01	160
ADL 642837	Pebble West Claims Corp.	BC 349	8S003S037W06	160
ADL 642838	Pebble West Claims Corp.	BC 350	8S003S037W06	160
ADL 642839	Pebble West Claims Corp.	BC 351	8S003S035W06	160
ADL 642840	Pebble West Claims Corp.	BC 352	8S003S035W06	160
ADL 642841	Pebble West Claims Corp.	BC 353	8S003S035W04	160
ADL 642842	Pebble West Claims Corp.	BC 354	8S003S035W03	160
ADL 642843	Pebble West Claims Corp.	BC 355	8S003S035W03	160
ADL 642848	Pebble West Claims Corp.	BC 360	8S002S038W34	160
ADL 642849	Pebble West Claims Corp.	BC 361	8S002S038W35	160
ADL 642850	Pebble West Claims Corp.	BC 362	8S002S038W35	160
ADL 642851	Pebble West Claims Corp.	BC 363	8S002S038W36	160
ADL 642852	Pebble West Claims Corp.	BC 364	8S002S038W36	160
ADL 642853	Pebble West Claims Corp.	BC 365	8S002S037W31	160
ADL 642854	Pebble West Claims Corp.	BC 366	8S002S037W31	160
ADL 642855	Pebble West Claims Corp.	BC 367	8S002S035W31	160
ADL 642856	Pebble West Claims Corp.	BC 368	8S002S035W31	160
ADL 642857	Pebble West Claims Corp.	BC 369	8S002S035W32	160
ADL 642858	Pebble West Claims Corp.	BC 370	8S002S035W32	160
ADL 642859	Pebble West Claims Corp.	BC 371	8S002S035W33	160
ADL 642860	Pebble West Claims Corp.	BC 372	8S002S035W33	160
ADL 642861	Pebble West Claims Corp.	BC 373	8S002S035W34	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642862	Pebble West Claims Corp.	BC 374	8S002S035W34	160
ADL 642867	Pebble West Claims Corp.	BC 379	8S002S038W34	160
ADL 642868	Pebble West Claims Corp.	BC 380	8S002S038W35	160
ADL 642869	Pebble West Claims Corp.	BC 381	8S002S038W35	160
ADL 642870	Pebble West Claims Corp.	BC 382	8S002S038W36	160
ADL 642871	Pebble West Claims Corp.	BC 383	8S002S038W36	160
ADL 642872	Pebble West Claims Corp.	BC 384	8S002S037W31	160
ADL 642873	Pebble West Claims Corp.	BC 385	8S002S037W31	160
ADL 642874	Pebble West Claims Corp.	BC 386	8S002S035W31	160
ADL 642875	Pebble West Claims Corp.	BC 387	8S002S035W31	160
ADL 642876	Pebble West Claims Corp.	BC 388	8S002S035W32	160
ADL 642877	Pebble West Claims Corp.	BC 389	8S002S035W32	160
ADL 642878	Pebble West Claims Corp.	BC 390	8S002S035W33	160
ADL 642879	Pebble West Claims Corp.	BC 391	8S002S035W33	160
ADL 642880	Pebble West Claims Corp.	BC 392	8S002S035W34	160
ADL 642881	Pebble West Claims Corp.	BC 393	8S002S035W34	160
ADL 642886	Pebble West Claims Corp.	BC 398	8S002S038W27	160
ADL 642887	Pebble West Claims Corp.	BC 399	8S002S038W26	160
ADL 642888	Pebble West Claims Corp.	BC 400	8S002S038W26	160
ADL 642889	Pebble West Claims Corp.	BC 401	8S002S038W25	160
ADL 642890	Pebble West Claims Corp.	BC 402	8S002S038W25	160
ADL 642891	Pebble West Claims Corp.	BC 403	8S002S037W30	160
ADL 642892	Pebble West Claims Corp.	BC 404	8S002S037W30	160
ADL 642893	Pebble West Claims Corp.	BC 405	8S002S035W30	160
ADL 642894	Pebble West Claims Corp.	BC 406	8S002S035W30	160
ADL 642895	Pebble West Claims Corp.	BC 407	8S002S035W29	160
ADL 642896	Pebble West Claims Corp.	BC 408	8S002S035W29	160
ADL 642897	Pebble West Claims Corp.	BC 409	8S002S035W28	160
ADL 642898	Pebble West Claims Corp.	BC 410	8S002S035W28	160
ADL 642899	Pebble West Claims Corp.	BC 411	8S002S035W27	160
ADL 642900	Pebble West Claims Corp.	BC 412	8S002S035W27	160
ADL 642905	Pebble West Claims Corp.	BC 417	8S002S038W27	160
ADL 642906	Pebble West Claims Corp.	BC 418	8S002S038W26	160
ADL 642907	Pebble West Claims Corp.	BC 419	8S002S038W26	160
ADL 642908	Pebble West Claims Corp.	BC 420	8S002S038W25	160
ADL 642909	Pebble West Claims Corp.	BC 421	8S002S038W25	160
ADL 642910	Pebble West Claims Corp.	BC 422	8S002S037W30	160
ADL 642911	Pebble West Claims Corp.	BC 423	8S002S037W30	160
ADL 642912	Pebble West Claims Corp.	BC 424	8S002S035W30	160
ADL 642913	Pebble West Claims Corp.	BC 425	8S002S035W30	160
ADL 642914	Pebble West Claims Corp.	BC 426	8S002S035W29	160
ADL 642915	Pebble West Claims Corp.	BC 427	8S002S035W29	160
ADL 642916	Pebble West Claims Corp.	BC 428	8S002S035W28	160
ADL 642917	Pebble West Claims Corp.	BC 429	8S002S035W28	160
ADL 642918	Pebble West Claims Corp.	BC 430	8S002S035W27	160
ADL 642919	Pebble West Claims Corp.	BC 431	8S002S035W27	160
ADL 642924	Pebble West Claims Corp.	BC 436	8S002S038W22	160
ADL 642925	Pebble West Claims Corp.	BC 437	8S002S038W23	160
ADL 642926	Pebble West Claims Corp.	BC 438	8S002S038W23	160
ADL 642927	Pebble West Claims Corp.	BC 439	8S002S038W24	160
ADL 642928	Pebble West Claims Corp.	BC 440	8S002S038W24	160
ADL 642929	Pebble West Claims Corp.	BC 441	8S002S037W19	160
ADL 642930	Pebble West Claims Corp.	BC 442	8S002S037W19	160
ADL 642931	Pebble West Claims Corp.	BC 443	8S002S037W20	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642932	Pebble West Claims Corp.	BC 444	8S002S035W19	160
ADL 642933	Pebble West Claims Corp.	BC 445	8S002S035W19	160
ADL 642934	Pebble West Claims Corp.	BC 446	8S002S035W20	160
ADL 642935	Pebble West Claims Corp.	BC 447	8S002S035W20	160
ADL 642936	Pebble West Claims Corp.	BC 448	8S002S035W21	160
ADL 642937	Pebble West Claims Corp.	BC 449	8S002S035W21	160
ADL 642938	Pebble West Claims Corp.	BC 450	8S002S035W22	160
ADL 642939	Pebble West Claims Corp.	BC 451	8S002S035W22	160
ADL 642944	Pebble West Claims Corp.	BC 456	8S002S038W22	160
ADL 642945	Pebble West Claims Corp.	BC 457	8S002S038W23	160
ADL 642946	Pebble West Claims Corp.	BC 458	8S002S038W23	160
ADL 642947	Pebble West Claims Corp.	BC 459	8S002S038W24	160
ADL 642948	Pebble West Claims Corp.	BC 460	8S002S038W24	160
ADL 642949	Pebble West Claims Corp.	BC 461	8S002S037W19	160
ADL 642950	Pebble West Claims Corp.	BC 462	8S002S037W19	160
ADL 642951	Pebble West Claims Corp.	BC 463	8S002S037W20	160
ADL 642952	Pebble West Claims Corp.	BC 464	8S002S037W20	160
ADL 642953	Pebble West Claims Corp.	BC 465	8S002S035W19	160
ADL 642954	Pebble West Claims Corp.	BC 466	8S002S035W19	160
ADL 642955	Pebble West Claims Corp.	BC 467	8S002S035W20	160
ADL 642956	Pebble West Claims Corp.	BC 468	8S002S035W20	160
ADL 642957	Pebble West Claims Corp.	BC 469	8S002S035W21	160
ADL 642958	Pebble West Claims Corp.	BC 470	8S002S035W21	160
ADL 642959	Pebble West Claims Corp.	BC 471	8S002S035W22	160
ADL 642960	Pebble West Claims Corp.	BC 472	8S002S035W22	160
ADL 642964	Pebble West Claims Corp.	BC 476	8S002S038W15	160
ADL 642965	Pebble West Claims Corp.	BC 477	8S002S038W14	160
ADL 642966	Pebble West Claims Corp.	BC 478	8S002S038W14	160
ADL 642967	Pebble West Claims Corp.	BC 479	8S002S038W13	160
ADL 642968	Pebble West Claims Corp.	BC 480	8S002S038W13	160
ADL 642969	Pebble West Claims Corp.	BC 481	8S002S037W18	160
ADL 642970	Pebble West Claims Corp.	BC 482	8S002S037W18	160
ADL 642971	Pebble West Claims Corp.	BC 483	8S002S037W17	160
ADL 642972	Pebble West Claims Corp.	BC 484	8S002S037W17	160
ADL 642973	Pebble West Claims Corp.	BC 485	8S002S037W16	160
ADL 642974	Pebble West Claims Corp.	BC 486	8S002S037W16	160
ADL 642975	Pebble West Claims Corp.	BC 487	8S002S037W15	160
ADL 642976	Pebble West Claims Corp.	BC 488	8S002S035W18	160
ADL 642977	Pebble West Claims Corp.	BC 489	8S002S035W18	160
ADL 642978	Pebble West Claims Corp.	BC 490	8S002S035W17	160
ADL 642979	Pebble West Claims Corp.	BC 491	8S002S035W17	160
ADL 642980	Pebble West Claims Corp.	BC 492	8S002S035W16	160
ADL 642981	Pebble West Claims Corp.	BC 493	8S002S035W16	160
ADL 642982	Pebble West Claims Corp.	BC 494	8S002S035W15	160
ADL 642983	Pebble West Claims Corp.	BC 495	8S002S035W15	160
ADL 642987	Pebble West Claims Corp.	BC 499	8S002S038W15	160
ADL 642988	Pebble West Claims Corp.	BC 500	8S002S038W14	160
ADL 642989	Pebble West Claims Corp.	BC 501	8S002S038W14	160
ADL 642990	Pebble West Claims Corp.	BC 502	8S002S038W13	160
ADL 642991	Pebble West Claims Corp.	BC 503	8S002S038W13	160
ADL 642992	Pebble West Claims Corp.	BC 504	8S002S037W18	160
ADL 642993	Pebble West Claims Corp.	BC 505	8S002S037W18	160
ADL 642994	Pebble West Claims Corp.	BC 506	8S002S037W17	160
ADL 642995	Pebble West Claims Corp.	BC 507	8S002S037W17	160

**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 642996	Pebble West Claims Corp.	BC 508	8S002S037W16	160
ADL 642997	Pebble West Claims Corp.	BC 509	8S002S037W16	160
ADL 642998	Pebble West Claims Corp.	BC 510	8S002S037W15	160
ADL 642999	Pebble West Claims Corp.	BC 511	8S002S035W18	160
ADL 643000	Pebble West Claims Corp.	BC 512	8S002S035W18	160
ADL 643001	Pebble West Claims Corp.	BC 513	8S002S035W17	160
ADL 643002	Pebble West Claims Corp.	BC 514	8S002S035W17	160
ADL 643003	Pebble West Claims Corp.	BC 515	8S002S035W16	160
ADL 643004	Pebble West Claims Corp.	BC 516	8S002S035W16	160
ADL 643005	Pebble West Claims Corp.	BC 517	8S002S035W15	160
ADL 643006	Pebble West Claims Corp.	BC 518	8S002S035W15	160
ADL 643432	Pebble West Claims Corp.	BC 1001	8S003S035W07	40
ADL 643433	Pebble West Claims Corp.	BC 1002	8S003S035W07	40
ADL 643434	Pebble West Claims Corp.	BC 1003	8S003S035W07	40
ADL 643435	Pebble West Claims Corp.	BC 1004	8S003S035W07	40
ADL 643436	Pebble West Claims Corp.	BC 1005	8S003S035W04	40
ADL 643437	Pebble West Claims Corp.	BC 1006	8S003S035W04	40
ADL 643438	Pebble West Claims Corp.	BC 1007	8S003S035W03	40
ADL 643439	Pebble West Claims Corp.	BC 1008	8S003S035W03	40
ADL 643440	Pebble West Claims Corp.	BC 1009	8S003S035W03	40
ADL 643441	Pebble West Claims Corp.	BC 1010	8S003S035W03	40
ADL 644284	Pebble West Claims Corp.	SP 173	8S005S035W09	160
ADL 644285	Pebble West Claims Corp.	SP 174	8S005S035W09	160
ADL 644286	Pebble West Claims Corp.	SP 175	8S005S035W09	160
ADL 644287	Pebble West Claims Corp.	SP 176	8S005S035W09	160
ADL 644288	Pebble West Claims Corp.	SP 177	8S005S035W03	160
ADL 644289	Pebble West Claims Corp.	SP 178	8S005S035W03	160
ADL 644290	Pebble West Claims Corp.	SP 179	8S005S035W04	160
ADL 644291	Pebble West Claims Corp.	SP 180	8S005S035W04	160
ADL 644292	Pebble West Claims Corp.	SP 181	8S005S035W04	160
ADL 644293	Pebble West Claims Corp.	SP 182	8S005S035W04	160
ADL 644294	Pebble West Claims Corp.	SP 183	8S005S035W03	160
ADL 644295	Pebble West Claims Corp.	SP 184	8S005S035W03	160
ADL 644296	Pebble West Claims Corp.	SP 185	8S004S035W36	160
ADL 644297	Pebble West Claims Corp.	SP 186	8S004S035W36	160
ADL 644298	Pebble West Claims Corp.	SP 187	8S004S035W35	160
ADL 644299	Pebble West Claims Corp.	SP 188	8S004S035W35	160
ADL 644300	Pebble West Claims Corp.	SP 189	8S004S035W35	160
ADL 644301	Pebble West Claims Corp.	SP 190	8S004S035W36	160
ADL 644302	Pebble West Claims Corp.	SP 191	8S005S035W07	160
ADL 644303	Pebble West Claims Corp.	SP 192	8S005S035W07	160
ADL 644312	Pebble West Claims Corp.	SP 201	8S005S035W07	160
ADL 644313	Pebble West Claims Corp.	SP 202	8S005S035W07	160
ADL 644314	Pebble West Claims Corp.	SP 203	8S005S035W18	160
ADL 644315	Pebble West Claims Corp.	SP 204	8S005S035W18	160
ADL 644318	Pebble West Claims Corp.	SP 207	8S004S035W36	160
ADL 644319	Pebble West Claims Corp.	SP 208	8S004S035W25	160
ADL 644320	Pebble West Claims Corp.	SP 209	8S004S035W25	160
ADL 644321	Pebble West Claims Corp.	SP 210	8S004S035W25	160
ADL 644322	Pebble West Claims Corp.	SP 216	8S004S035W25	160
ADL 644323	Pebble West Claims Corp.	SP 225	8S004S035W24	160
ADL 644324	Pebble West Claims Corp.	SP 226	8S004S035W24	160
ADL 644325	Pebble West Claims Corp.	SP 227	8S004S034W19	160
ADL 644326	Pebble West Claims Corp.	SP 228	8S004S034W19	160



**Appendix A**  
**Mineral Properties List**

Case ID	Customer Name	Claim Name	MTRSC	Acres
ADL 644327	Pebble West Claims Corp.	SP 229	8S004S034W19	160
ADL 644328	Pebble West Claims Corp.	SP 230	8S004S034W19	160
ADL 644329	Pebble West Claims Corp.	SP 231	8S004S035W24	160
ADL 644330	Pebble West Claims Corp.	SP 232	8S004S035W24	160
ADL 644331	Pebble West Claims Corp.	SP 235	8S004S035W13	160
ADL 644332	Pebble West Claims Corp.	SP 236	8S004S034W18	160
ADL 644333	Pebble West Claims Corp.	SP 237	8S004S034W18	160
ADL 644334	Pebble West Claims Corp.	SP 238	8S004S034W18	160
ADL 644335	Pebble West Claims Corp.	SP 239	8S004S034W18	160
ADL 644336	Pebble West Claims Corp.	SP 245	8S004S034W07	160
ADL 644733	Pebble West Claims Corp.	SOUTH PEBBLE 234	8S004S035W13	40
ADL 644734	Pebble West Claims Corp.	SOUTH PEBBLE 240	8S004S035W13	40
ADL 644735	Pebble West Claims Corp.	SOUTH PEBBLE 241	8S004S035W13	40
ADL 644736	Pebble West Claims Corp.	SOUTH PEBBLE 242	8S004S035W13	40
ADL 644737	Pebble West Claims Corp.	SOUTH PEBBLE 243	8S004S034W07	40
ADL 644738	Pebble West Claims Corp.	SOUTH PEBBLE 244	8S004S034W07	40
ADL 645612	Pebble West Claims Corp.	SP 322	8S004S034W08	160
ADL 645613	Pebble West Claims Corp.	SP 323	8S004S034W08	160
ADL 645614	Pebble West Claims Corp.	SP 324	8S004S034W05	160
ADL 645615	Pebble West Claims Corp.	SP 325	8S004S034W05	160
ADL 645616	Pebble West Claims Corp.	SP 326	8S004S034W05	160
ADL 645617	Pebble West Claims Corp.	SP 327	8S004S034W04	160
ADL 645618	Pebble West Claims Corp.	SP 328	8S004S034W04	160
ADL 645619	Pebble West Claims Corp.	SP 329	8S004S034W03	160
ADL 645620	Pebble West Claims Corp.	SP 330	8S004S034W03	160
ADL 645621	Pebble West Claims Corp.	SP 331	8S003S034W35	160
ADL 645622	Pebble West Claims Corp.	SP 332	8S003S034W34	160
ADL 645623	Pebble West Claims Corp.	SP 333	8S003S034W34	160
ADL 645624	Pebble West Claims Corp.	SP 334	8S003S034W34	160
ADL 645625	Pebble West Claims Corp.	SP 335	8S003S034W34	160
ADL 645626	Pebble West Claims Corp.	SP 336	8S003S034W35	160
ADL 645627	Pebble West Claims Corp.	SP 337	8S003S034W25	160
ADL 645628	Pebble West Claims Corp.	SP 338	8S003S034W25	160
ADL 645629	Pebble West Claims Corp.	SP 339	8S003S034W26	160
ADL 645630	Pebble West Claims Corp.	SP 340	8S003S034W26	160
ADL 645631	Pebble West Claims Corp.	SP 341	8S003S034W27	160
ADL 645632	Pebble West Claims Corp.	SP 342	8S003S034W27	160
ADL 645633	Pebble West Claims Corp.	SP 343	8S003S034W27	160
ADL 645634	Pebble West Claims Corp.	SP 344	8S003S034W27	160
ADL 645635	Pebble West Claims Corp.	SP 345	8S003S034W26	160
ADL 645636	Pebble West Claims Corp.	SP 346	8S003S034W26	160
ADL 645637	Pebble West Claims Corp.	SP 347	8S003S034W25	160
ADL 645638	Pebble West Claims Corp.	SP 348	8S003S034W25	160
ADL 645639	Pebble West Claims Corp.	SP 349	8S003S034W24	160
ADL 645640	Pebble West Claims Corp.	SP 350	8S003S034W24	160
ADL 645641	Pebble West Claims Corp.	SP 351	8S003S034W23	160
ADL 645642	Pebble West Claims Corp.	SP 352	8S003S034W23	160
ADL 645643	Pebble West Claims Corp.	SP 353	8S003S034W22	160
ADL 645644	Pebble West Claims Corp.	SP 354	8S003S034W22	160
ADL 645645	Pebble West Claims Corp.	SP 355	8S003S034W22	160
ADL 645646	Pebble West Claims Corp.	SP 356	8S003S034W22	160
ADL 645647	Pebble West Claims Corp.	SP 357	8S003S034W23	160
ADL 645648	Pebble West Claims Corp.	SP 358	8S003S034W23	160
ADL 645649	Pebble West Claims Corp.	SP 359	8S003S034W24	160

**Appendix A**  
**Mineral Properties List**

<b>Case ID</b>	<b>Customer Name</b>	<b>Claim Name</b>	<b>MTRSC</b>	<b>Acres</b>
ADL 645650	Pebble West Claims Corp.	SP 360	8S003S034W24	160
ADL 645651	Pebble West Claims Corp.	SP 361	8S003S034W13	160
ADL 645652	Pebble West Claims Corp.	SP 362	8S003S034W13	160
ADL 645653	Pebble West Claims Corp.	SP 363	8S003S034W14	160
ADL 645654	Pebble West Claims Corp.	SP 364	8S003S034W14	160
ADL 645655	Pebble West Claims Corp.	SP 365	8S003S034W15	160
ADL 645656	Pebble West Claims Corp.	SP 366	8S003S034W15	160
ADL 645657	Pebble West Claims Corp.	SP 367	8S003S034W15	160
ADL 645658	Pebble West Claims Corp.	SP 368	8S003S034W15	160
ADL 645659	Pebble West Claims Corp.	SP 369	8S003S034W14	160
ADL 645660	Pebble West Claims Corp.	SP 370	8S003S034W14	160
ADL 645661	Pebble West Claims Corp.	SP 371	8S003S034W13	160
ADL 645662	Pebble West Claims Corp.	SP 372	8S003S034W13	160
ADL 649923	Pebble West Claims Corp.	BC 1171	8S002S037W15	160
ADL 649924	Pebble West Claims Corp.	BC 1172	8S002S037W14	160
ADL 649925	Pebble West Claims Corp.	BC 1173	8S002S037W14	160
ADL 649926	Pebble West Claims Corp.	BC 1174	8S002S037W13	160
ADL 649927	Pebble West Claims Corp.	BC 1175	8S002S037W13	160
ADL 649928	Pebble West Claims Corp.	BC 1176	8S002S037W15	160
ADL 649929	Pebble West Claims Corp.	BC 1177	8S002S037W14	160
ADL 649930	Pebble West Claims Corp.	BC 1178	8S002S037W14	160
ADL 649931	Pebble West Claims Corp.	BC1179	8S002S037W13	160
ADL 649932	Pebble West Claims Corp.	BC1180	8S002S037W13	160
ADL 649939	Pebble West Claims Corp.	BC1187	8S002S037W24	160
ADL 649940	Pebble West Claims Corp.	BC1188	8S002S037W24	160
ADL 649948	Pebble West Claims Corp.	BC1196	8S002S037W24	160
ADL 649949	Pebble West Claims Corp.	BC1197	8S002S037W24	160

## Appendix B

### Equipment Inventory (APMA Block 14)

**Appendix B  
Equipment List**

<b>No.</b>	<b>Make, Model, Type <sup>[a]</sup></b>	<b>Weight of Equipment and Trailers (lbs)</b>	<b>Quantity</b>	<b>Located on claim block?</b>	<b>Transporting to claim block?</b>
1	Foundex Sonic 100 Drill	8,000	1	No	Yes <sup>[b]</sup>
2	Foundex HT-750 Drill	12,000	1	No	Yes <sup>[b]</sup>
3	T&J Enterprises 1500 Drill	33,800	1	No	Yes <sup>[b]</sup>
4	Allentown Grout Plant	2,500	3	No	Yes <sup>[b]</sup>
5	Kubota Water Supply Pump	1,000	3	No	Yes <sup>[b]</sup>
6	Triplex Coring Pump	1,700	3	No	Yes <sup>[b]</sup>
7	Mud Pump	1,500	3	No	Yes <sup>[b]</sup>
8	Generac Magnum 10kW Diesel Generators	1,300	6	No	Yes <sup>[b]</sup>
9	Air Compressors	3,000	6	No	Yes <sup>[b]</sup>
10	Ingersoll Light Towers	2,400	6	No	Yes <sup>[b]</sup>

<sup>[a]</sup> Similar items may be substituted based on availability.

<sup>[b]</sup> All items transported by helicopter; no cross-country transportation required.

## Appendix C

### Temporary Field Installations and Footprints (APMA Block 19)

**Appendix C  
Temporary Structures**

<b>Location Name</b>	<b>Structures</b>	<b>ADL Nos.</b>	<b>Est. Footprint (acres)</b>	<b>Purpose</b>	<b>Distance from Surface Water (feet)</b>
Main Supply Depot	Temporary wood buildings; platform tents; general storage	516811; 516874	2.5	General storage/staging	700
West Bay 1	Temporary wood buildings	524714	0.005	Field storage	450
West Bay 3	Temporary wood building	642412	0.0025	Field storage	4,500
Watershed	Temporary wood buildings Meteorological equipment; 10-m tower; storage shed	524712	0.05	Field storage/machine shop	710
Pebble 1	Communications tower and transmitter; storage shed	524829	0.003	Meteorological station	1,500
Koktuli Repeater	storage shed	646608	0.0025	Communications	1,500
ARD Barrels	Wood platforms; plastic barrels	524713	0.0025	Field testing	490

## Appendix D

### Planned Drill Site Locations (APMA Block 21)

**Appendix D**  
**Proposed Drill Sites**

Drill ID	ADL Number	Lat_NAD83	Long_NAD83	Est. Depth
19-AB	566965	59.90198898	-155.4020233	200
19-AH	642422	59.8846283	-155.4617157	200
19-AI	642423	59.88294601	-155.4343872	200
19-AJ	642423	59.88090134	-155.4394073	200
19-AK	642428	59.89003754	-155.4549713	200
19-AL	642430	59.88799667	-155.4241638	200
19-AM	642430	59.89100266	-155.4254456	200
19-AN	642431	59.8892746	-155.4151154	200
19-AO	642436	59.89742661	-155.4166412	200
19-AP	642436	59.90165329	-155.4090424	200
19-AQ	642438	59.90737915	-155.4380341	200
19-AR	642439	59.90729141	-155.4282837	200
19-AA	566951	59.88532257	-155.3864899	200
19-AS	642440	59.90946198	-155.4136353	200
19-AT	642443	59.91208649	-155.4328156	200
19-BL	566981	59.91674042	-155.4033203	200
19-BJ	566985	59.91973495	-155.4026642	200
19-BF	642444	59.91370392	-155.4053192	200
19-BG	642444	59.91518784	-155.4110107	200
19-BA	642448	59.92675018	-155.4114075	200
19-BB	642448	59.92448044	-155.406723	200
19-BC	642448	59.92682648	-155.4133911	200
19-BD	642448	59.92438889	-155.4109192	200
19-BI	566991	59.92221069	-155.4039001	200
19-FA	516808	59.89628601	-155.312439	2000
19-FB	516809	59.8974762	-155.3085327	2000
19-FC	516810	59.89775467	-155.2985992	2000
19-FD	516811	59.89551163	-155.2934875	2000
19-FE	516819	59.89982605	-155.287674	2000
19-FF	516820	59.90246964	-155.3070831	2000
19-FG	516821	59.90319443	-155.2991638	2000
19-FN	516874	59.89344025	-155.2927551	2000
19-CF	566988	59.92015839	-155.3790436	250
19-CG	566989	59.91986847	-155.3727112	250
19-CH	566990	59.91734695	-155.3685608	250
19-CI	566995	59.92340088	-155.3754883	250
19-BH	566998	59.92759705	-155.3952026	250
19-CJ	566999	59.92458344	-155.3835297	250
19-CK	567000	59.92666626	-155.3821869	250
19-CL	567001	59.92686462	-155.3698425	250
19-CM	567004	59.92669678	-155.3540192	250
19-CN	567005	59.92413712	-155.3443146	250
19-CQ	567012	59.92995453	-155.3675537	250
19-CR	567014	59.93019104	-155.3516541	250
19-CS	567016	59.93028259	-155.3353424	250
19-CV	567021	59.9325943	-155.3739166	250



**Appendix D**  
**Proposed Drill Sites**

Drill ID	ADL Number	Lat_NAD83	Long_NAD83	Est. Depth
19-CW	567022	59.93276596	-155.3645477	250
19-CX	567024	59.93284607	-155.3497772	250
19-CY	567026	59.93306732	-155.3348846	250
19-BE	642448	59.92987061	-155.404953	250
19-CA	524851	59.92751694	-155.3322144	250
19-CB	531457	59.91811752	-155.3592377	250
19-CC	531458	59.91785431	-155.3508759	250
19-CD	531461	59.92300797	-155.3587646	250
19-CE	531464	59.92332077	-155.3382263	250
19-CO	567010	59.93081665	-155.3826752	250
19-CP	567010	59.93003464	-155.382019	250
19-CT	567020	59.93166733	-155.3820801	250
19-CU	567020	59.93126297	-155.3809357	250
19-ES	524832	59.90771866	-155.3270264	120
19-EQ	524835	59.91268921	-155.3276825	150
19-EE	531450	59.9105072	-155.3492279	200
19-ED	531451	59.91057587	-155.343338	200
19-EW	516814	59.9021759	-155.3192291	120
19-ER	524835	59.91045761	-155.3267212	120
19-FH	516823	59.9048996	-155.2894287	300
19-FI	516823	59.9043808	-155.2871704	300
19-FJ	516823	59.90378952	-155.2849121	300
19-FP	540400	59.90339661	-155.2836609	300
19-FQ	540400	59.90284348	-155.2823486	300
19-FR	540430	59.90542984	-155.2701111	300
19-FS	540438	59.90829849	-155.2584839	300
19-FT	540442	59.91205597	-155.2703552	300
19-FU	540443	59.91027069	-155.2635803	300
19-FV	540444	59.91284943	-155.2578125	300
19-FW	540445	59.91214371	-155.2526398	300
19-FX	540448	59.91318893	-155.2749176	300
19-EV	516859	59.88631439	-155.3153229	200
19-FK	516856	59.88307571	-155.2950439	200
19-FL	516862	59.88779068	-155.2949829	200
19-FM	516862	59.88587189	-155.2968445	200
19-FO	524822	59.88586426	-155.2887726	200
19-EU	516864	59.88795853	-155.3249512	100
19-ET	516869	59.89484406	-155.3294067	100
19-EP	524840	59.91649246	-155.3262329	120
19-EN	531426	59.89054871	-155.3506622	250
19-EM	531427	59.88888931	-155.3414764	250
19-EH	531440	59.90163422	-155.3359222	250
19-EB	542600	59.9046402	-155.3668976	250
19-EA	542602	59.90743256	-155.3642578	250
19-EL	531429	59.89331055	-155.361145	250
19-EK	531432	59.89360428	-155.339325	250

**Appendix D  
Proposed Drill Sites**

<b>Drill ID</b>	<b>ADL Number</b>	<b>Lat_NAD83</b>	<b>Long_NAD83</b>	<b>Est. Depth</b>
19-EJ	531436	59.8979454	-155.3362885	250
19-EI	531438	59.90004349	-155.349823	250
19-EG	531443	59.90457153	-155.3469543	250
19-EF	531446	59.90675735	-155.3548584	250
19-EC	542596	59.89677048	-155.3676147	250
19-EO	531425	59.88829803	-155.3557129	250
19-DB	566955	59.89041138	-155.3886871	250
19-DC	566956	59.88983917	-155.381424	250
19-DE	566968	59.89921951	-155.3825531	250
19-DF	642426	59.89299774	-155.4845734	250
19-DG	642428	59.89455414	-155.448349	250
19-DH	642432	59.89936447	-155.4676514	250
19-DI	642434	59.89598846	-155.4356995	250
19-DK	642435	59.89875793	-155.4308472	250
19-DJ	642438	59.90314865	-155.4347229	250
19-DA	553553	59.90050888	-155.4784088	250
19-AC	642413	59.86830139	-155.4627838	250
19-AD	642414	59.87328339	-155.4546204	250
19-AE	642414	59.86820221	-155.4580994	250
19-AF	642418	59.87504196	-155.4537659	250
19-BO	566978	59.91074371	-155.3930511	100
19-BN	566979	59.91257477	-155.3869781	100
19-BM	566980	59.91162872	-155.3791656	100
19-AG	642421	59.8845253	-155.4701996	100
19-GA	524852	59.92725754	-155.3224945	100
19-GB	524854	59.92730713	-155.3104248	100
19-GC	524860	59.92894363	-155.3175964	100
19-BP	542603	59.91309357	-155.3714905	100
19-BK	566983	59.91643143	-155.3854065	250

## Appendix E

### Proposed Water Sources (APMA Block 21)

**Appendix E**  
**Water Sources Legal Description**

<b>Watershed</b>	<b>Water Source ID</b>	<b>MTRSC 1/4 1/4</b>	<b>Crossing?</b>	<b>Dredging</b>	<b>Intake?</b>
NFK	S43	S003S036W 23 NE SW	No	No	Yes
NFK	S43	S003S036W 23 NW SE	No	No	Yes
NFK	S43	S003S036W 11 NW SE	No	No	Yes
NFK	S43	S003S036W 27 SE NE	No	No	Yes
NFK	S43	S003S036W 11 SW SE	No	No	Yes
NFK	S43	S003S036W 11 SE SE	No	No	Yes
NFK	S43	S003S036W 23 SW NE	No	No	Yes
NFK	S43	S003S036W 14 NE NE	No	No	Yes
NFK	S43	S003S036W 13 NW NW	No	No	Yes
NFK	S43	S003S036W 13 SW NW	No	No	Yes
NFK	S43	S003S036W 14 SW SE	No	No	Yes
NFK	S43	S003S036W 14 SE SE	No	No	Yes
NFK	S43	S003S036W 14 NE SE	No	No	Yes
NFK	S43	S003S036W 13 NW SW	No	No	Yes
NFK	S43	S003S036W 23 NW NE	No	No	Yes
NFK	S43	S003S036W 23 SW SW	No	No	Yes
NFK	S43	S003S036W 23 SE SW	No	No	Yes
NFK	S43	S003S036W 27 NE NE	No	No	Yes
NFK	S43	S003S036W 26 NW NW	No	No	Yes
NFK	S43	S003S036W 27 SW NE	No	No	Yes
NFK	S43	S003S036W 27 NW SE	No	No	Yes
NFK	S43	S003S036W 27 SE SW	No	No	Yes
NFK	S43	S003S036W 27 SW SE	No	No	Yes
NFK	S43	S003S036W 34 NE NW	No	No	Yes
SFK	S15	S003S035W 22 NE SW	No	No	Yes
SFK	S15	S003S035W 22 SE SW	No	No	Yes
SFK	S15	S003S035W 22 NW SW	No	No	Yes
SFK	S15	S003S035W 27 NE NW	No	No	Yes
SFK	S16	S003S035W 21 SW SW	No	No	Yes
SFK	S16	S003S035W 21 SE SW	No	No	Yes
SFK	S16	S003S035W 20 SE NE	No	No	Yes
SFK	S16	S003S035W 21 SW NW	No	No	Yes
SFK	S16	S003S035W 21 NW SW	No	No	Yes
SFK	S16	S003S035W 28 NE NW	No	No	Yes
SFK	S16	S003S035W 28 NW NE	No	No	Yes
SFK	S16	S003S035W 28 NE NE	No	No	Yes
SFK	S16	S003S035W 28 SE NE	No	No	Yes
NFK	S44	S003S036W 11 SW SE	No	No	Yes
NFK	S44	S003S036W 11 SE SE	No	No	Yes
NFK	S44	S003S036W 12 SW SW	No	No	Yes
NFK	S44	S003S036W 12 SE SW	No	No	Yes
NFK	S44	S003S035W 19 NW NE	No	No	Yes
NFK	S44	S003S036W 13 NE NW	No	No	Yes
NFK	S44	S003S036W 13 NW NE	No	No	Yes
NFK	S44	S003S036W 13 NE NE	No	No	Yes
NFK	S44	S003S035W 18 NW NW	No	No	Yes
NFK	S44	S003S035W 18 NE NW	No	No	Yes
NFK	S44	S003S035W 18 SE NW	No	No	Yes
NFK	S44	S003S035W 18 SW SE	No	No	Yes
NFK	S44	S003S035W 18 NE SW	No	No	Yes
NFK	S44	S003S035W 18 NW SE	No	No	Yes
NFK	S44	S003S035W 19 SW NE	No	No	Yes
NFK	S44	S003S035W 19 NW SE	No	No	Yes
NFK	S44	S003S035W 19 NE SE	No	No	Yes
NFK	S44	S003S035W 19 SE SE	No	No	Yes
NFK	S44	S003S035W 30 NE NE	No	No	Yes
NFK	S44	S003S035W 30 SE NE	No	No	Yes

**Appendix E**  
**Water Sources Legal Description**

<b>Watershed</b>	<b>Water Source ID</b>	<b>MTRSC 1/4 1/4</b>	<b>Crossing?</b>	<b>Dredging</b>	<b>Intake?</b>
NFK	S45	S003S036W 12 SW NE	No	No	Yes
NFK	S45	S003S036W 12 SE NE	No	No	Yes
NFK	S45	S003S036W 12 NE SE	No	No	Yes
NFK	S45	S003S036W 12 SE SE	No	No	Yes
NFK	S45	S003S035W 7 SW SW	No	No	Yes
NFK	S45	S003S035W 7 SE SW	No	No	Yes
NFK	S45	S003S035W 7 SW SE	No	No	Yes
NFK	S45	S003S035W 7 SE SE	No	No	Yes
NFK	S45	S003S035W 8 SW SW	No	No	Yes
NFK	S45	S003S035W 8 SE SW	No	No	Yes
NFK	S45	S003S035W 8 SW SE	No	No	Yes
NFK	S45	S003S035W 8 SE SE	No	No	Yes
SFK	S57	S003S035W 30 NW SW	No	No	Yes
SFK	S57	S003S035W 30 NE SW	No	No	Yes
SFK	S57	S003S035W 30 NW SE	No	No	Yes
SFK	S57	S003S036W 25 SW SE	No	No	Yes
SFK	S57	S003S036W 25 SE SE	No	No	Yes
SFK	S57	S003S035W 30 SW SW	No	No	Yes
SFK	S57	S003S035W 30 SW SE	No	No	Yes
SFK	S57	S003S036W 36 NW NE	No	No	Yes
SFK	S57	S003S035W 31 NW NE	No	No	Yes
SFK	S18	S003S035W 28 NE SW	No	No	Yes
SFK	S18	S003S035W 28 NW SE	No	No	Yes
SFK	S18	S003S035W 28 SW NW	No	No	Yes
SFK	S18	S003S035W 28 SE NW	No	No	Yes
SFK	S18	S003S035W 28 SW SE	No	No	Yes
SFK	S18	S003S035W 28 SE SE	No	No	Yes
UTC	S21	S003S035W 23 NW NW	No	No	Yes
UTC	S21	S003S035W 23 NE NW	No	No	Yes
UTC	S21	S003S035W 15 SE SE	No	No	Yes
UTC	S21	S003S035W 14 SW SW	No	No	Yes
UTC	S21	S003S035W 15 NW SE	No	No	Yes
UTC	S21	S003S035W 15 NE SE	No	No	Yes
UTC	S8	S003S035W 22 NW NE	No	No	Yes
UTC	S8	S003S035W 22 NE NE	No	No	Yes
UTC	S8	S003S035W 15 SE SE	No	No	Yes
UTC	S8	S003S035W 22 NW NW	No	No	Yes
UTC	S8	S003S035W 22 NE NW	No	No	Yes
UTC	S8	S003S035W 22 SW NW	No	No	Yes
UTC	S9	S003S035W 15 SW SE	No	No	Yes
UTC	S9	S003S035W 15 SE SE	No	No	Yes
UTC	S9	S003S035W 15 NE SW	No	No	Yes
UTC	S9	S003S035W 15 NW SE	No	No	Yes
SFK	S103	S003S036W 34 SE NW	No	No	Yes
SFK	S103	S003S036W 34 NW SW	No	No	Yes
SFK	S103	S003S036W 34 NE SW	No	No	Yes
SFK	S103	S003S036W 34 SW SW	No	No	Yes
SFK	S103	S004S036W 3 NW NW	No	No	Yes
SFK	S103	S004S036W 3 NE NW	No	No	Yes
SFK	S103	S004S036W 3 SE NW	No	No	Yes

**Appendix E**  
**Water Sources Legal Description**

<b>Watershed</b>	<b>Water Source ID</b>	<b>MTRSC 1/4 1/4</b>	<b>Crossing?</b>	<b>Dredging</b>	<b>Intake?</b>
NFK	P46	S003S035W 6 SW SE	No	No	Yes
NFK	P46	S003S035W 7 NE NW	No	No	Yes
NFK	P46	S003S035W 7 NW NE	No	No	Yes
NFK	P21	S003S035W 8 NE SW	No	No	Yes
NFK	P21	S003S035W 8 SE SW	No	No	Yes
NFK	P33	S003S035W 18 NE SE	No	No	Yes
NFK	P33	S003S035W 17 NW SW	No	No	Yes
SFK	P08	S003S035W 20 SE NE	No	No	Yes
NFK= North Fork Koktuli River; SFK = South Fork Koktuil River; UTC = Upper Talarik Creek					

## Appendix F

### Preliminary Water Intake Locations (APMA Block 24)

**Appendix F**  
**Water Intake Locations (Preliminary)**

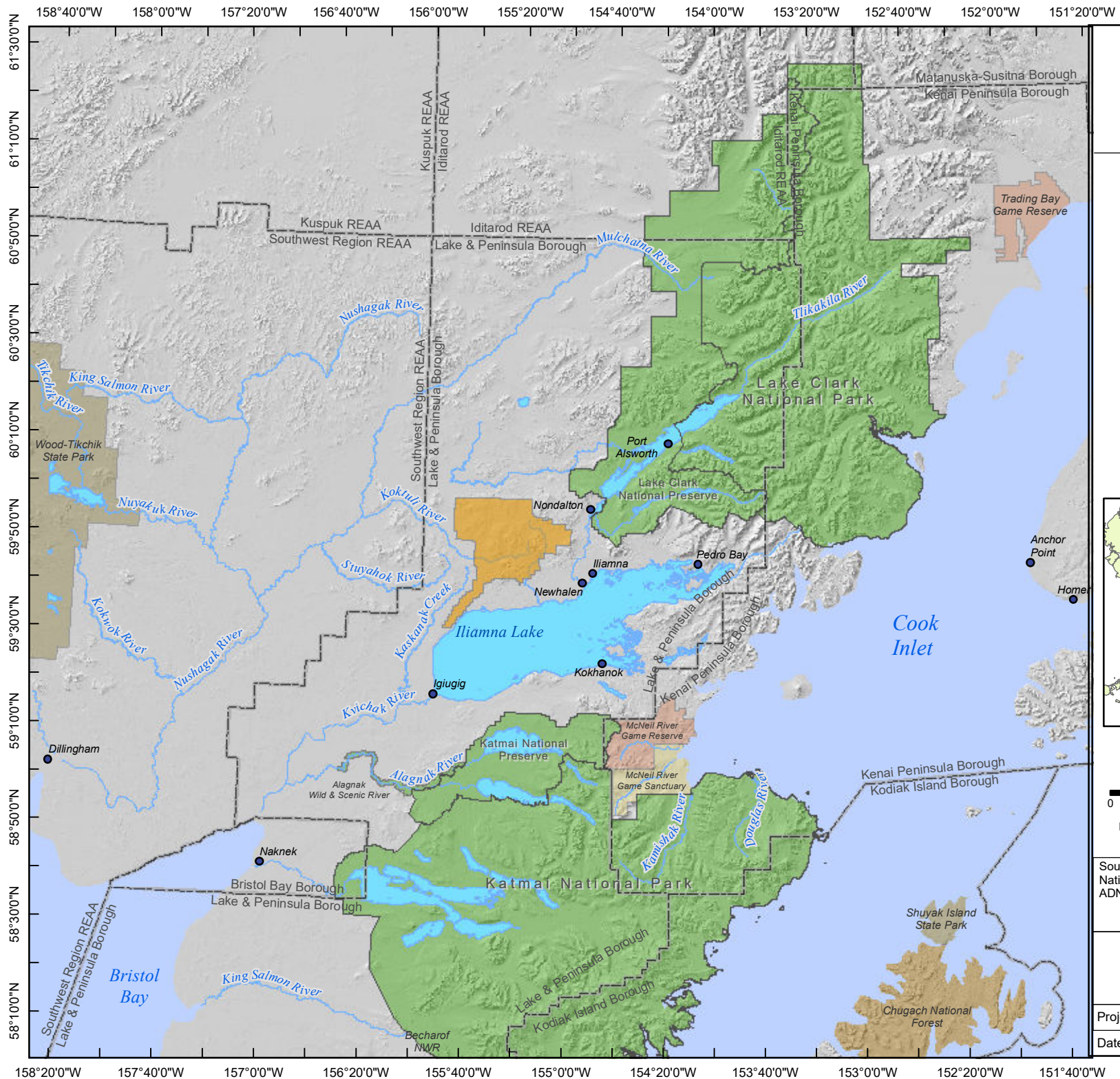
Intake No.	Water Source	Lat_NAD83	Long_NAD83	MTRSC 1/4 1/4
1	P08	59.90475464	-155.3230591	S003S035W 20 SE NE
2	P21	59.92767334	-155.3361969	S003S035W 8 NE SW
3	P33	59.91348267	-155.3480377	S003S035W 18 NE SE
4	P46	59.93634033	-155.3616943	S003S035W 7 NW NE
5	S08	59.90727615	-155.2731934	S003S035W 22 NW NE
6	S08	59.90936279	-155.2675171	S003S035W 22 NE NE
7	S08	59.90474701	-155.2865601	S003S035W 22 SW NW
8	S09	59.91284943	-155.2718506	S003S035W 15 SW SE
9	S10	59.87212753	-155.4555511	S003S036W 34 NW SW
10	S10	59.86576462	-155.4552612	S004S036W 3 NW NW
11	S15	59.8967514	-155.278183	S003S035W 22 SE SW
12	S15	59.89968491	-155.2835541	S003S035W 22 NW SW
13	S16	59.89505386	-155.3048553	S003S035W 28 NE NW
14	S16	59.89293289	-155.2989655	S003S035W 28 NW NE
15	S16	59.88851547	-155.2919006	S003S035W 28 SE NE
16	S18	59.88211441	-155.2921143	S003S035W 28 SE SE
17	S18	59.88510513	-155.2996674	S003S035W 28 NW SE
18	S21	59.91356659	-155.2639313	S003S035W 15 NE SE
19	S21	59.90895462	-155.2543793	S003S035W 23 NE NW
20	S43	59.93015671	-155.4159851	S003S036W 11 NW SE
21	S43	59.8897934	-155.4391174	S003S036W 27 SE NE
22	S43	59.92414474	-155.4081573	S003S036W 11 SE SE
23	S43	59.92559052	-155.4103088	S003S036W 11 SE SE
24	S43	59.90267181	-155.4165955	S003S036W 23 SW NE
25	S43	59.90990829	-155.4151917	S003S036W 14 SW SE
26	S43	59.91610718	-155.4044037	S003S036W 13 NW SW
27	S43	59.89657974	-155.42453	S003S036W 23 SE SW
28	S44	59.91862106	-155.3660583	S003S035W 18 SE NW
29	S44	59.90694427	-155.3575592	S003S035W 19 NW NE
30	S44	59.92378235	-155.3907166	S003S036W 13 NE NW
31	S44	59.9214859	-155.3799286	S003S036W 13 NE NE
32	S44	59.89353561	-155.3523102	S003S035W 30 NE NE
33	S44	59.8913002	-155.353302	S003S035W 30 SE NE
34	S45	59.9296608	-155.3796234	S003S036W 12 NE SE
35	S45	59.92530823	-155.3685608	S003S035W 7 SE SW
36	S45	59.92518616	-155.3460236	S003S035W 8 SW SW
37	S57	59.88634872	-155.3651428	S003S035W 30 NE SW
38	S57	59.88182449	-155.3792419	S003S036W 25 SE SE

\*Intake locations are preliminary and subject to relocation on an approved water source depending on field conditions



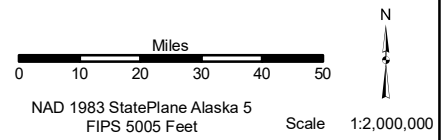
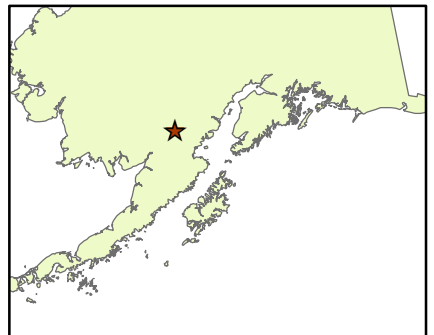
# Appendix G

## Figures



**Legend**

-  Pebble Project Mineral Claims
-  National Forest Service
-  National Park Service
-  State Game Refuge
-  State Game Sanctuary
-  State Park






Source(s):  
 National Map, USGS  
 ADNR Mineral Claims, 2018

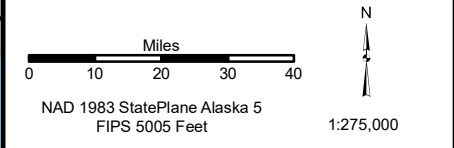
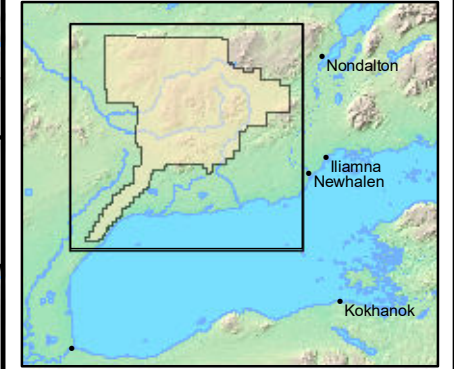
**Figure**  
**1**

**Pebble Project  
 Vicinity Map**

Project: APMA A20196118  
 Date: 12/30/2018  
 Author: TH/PLP

### Legend

-  Pebble East Claims Corp.
-  Pebble West Claims Corp.
-  Township



Source(s):  
ADNR, Alaska Mining Claims,  
2018

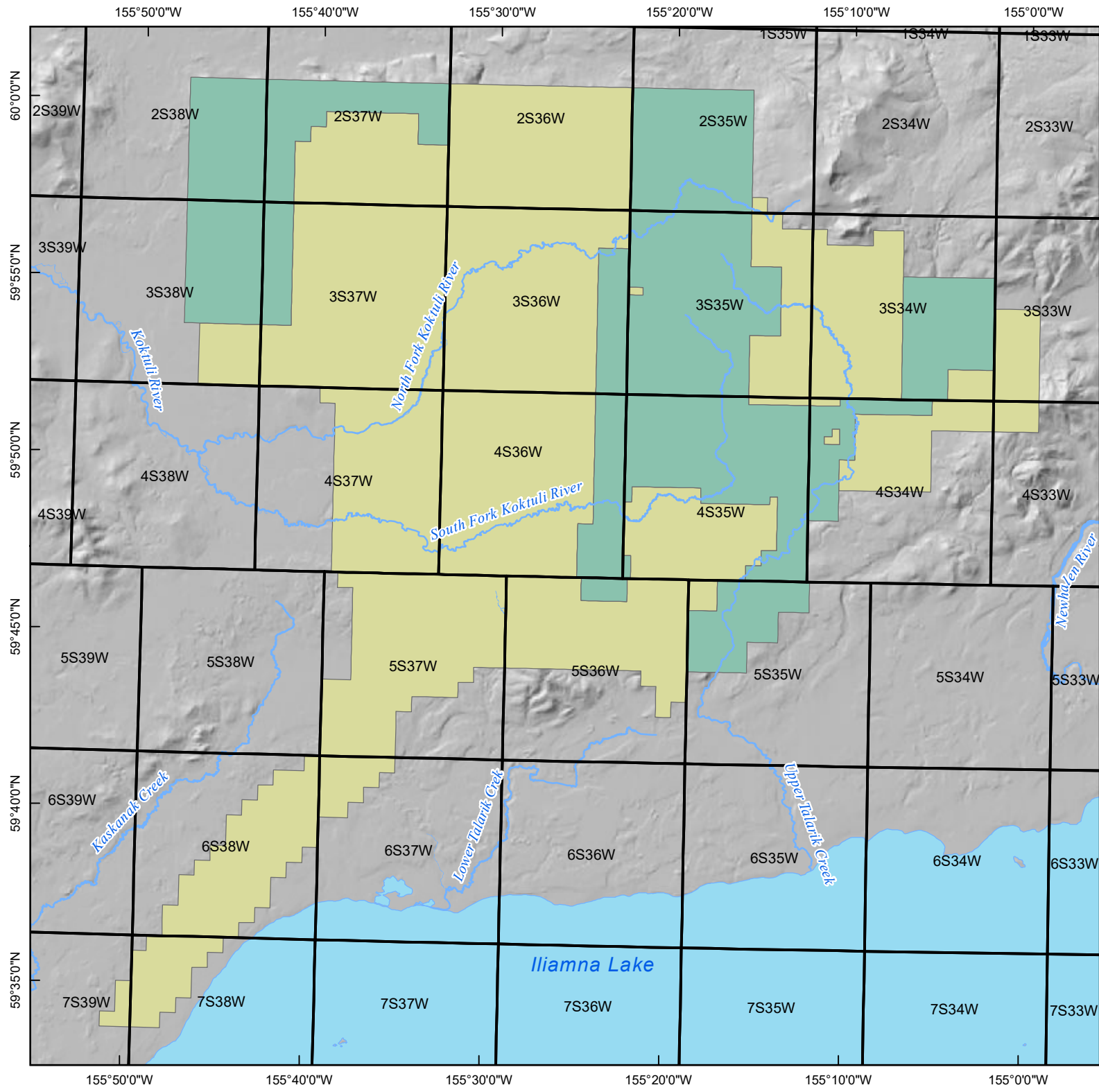
**Figure**  
**2**

## Mineral Claims: Overview

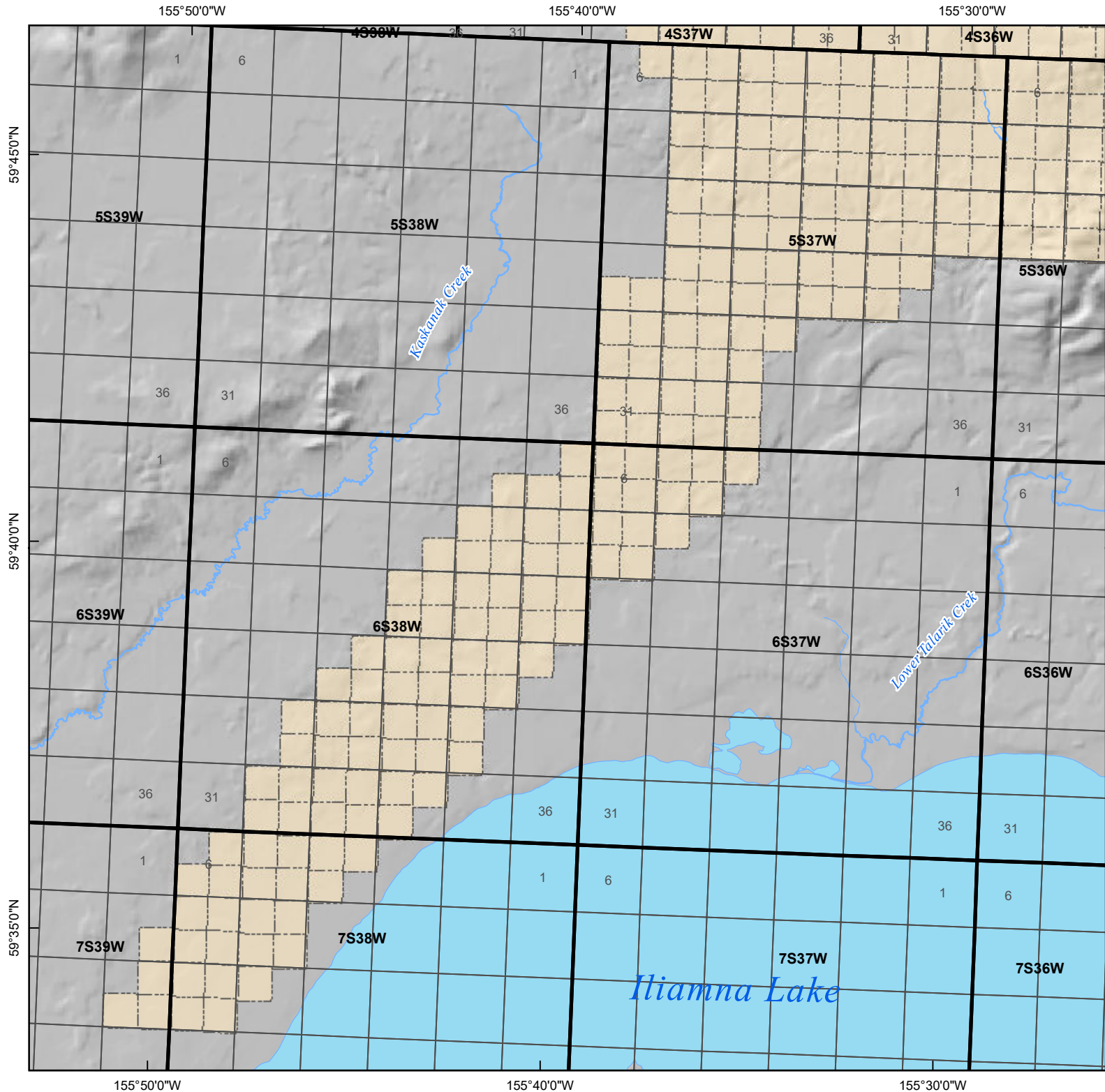
Project: APMA A20196118




Date: 12/30/2018

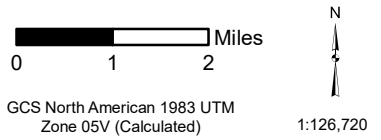
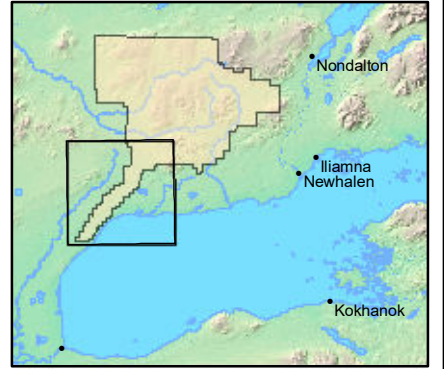
Author: TH/PLP







-  Pebble Mineral Claims
-  Township
-  Section



Source(s):  
ADNR, Alaska Mining Claims,  
2018

**Figure  
3**

**Mineral Claims:  
Southwest**

Project: APMA A20196118

Date: 12/30/2018

Author: TH/PLP

155°50'0"W

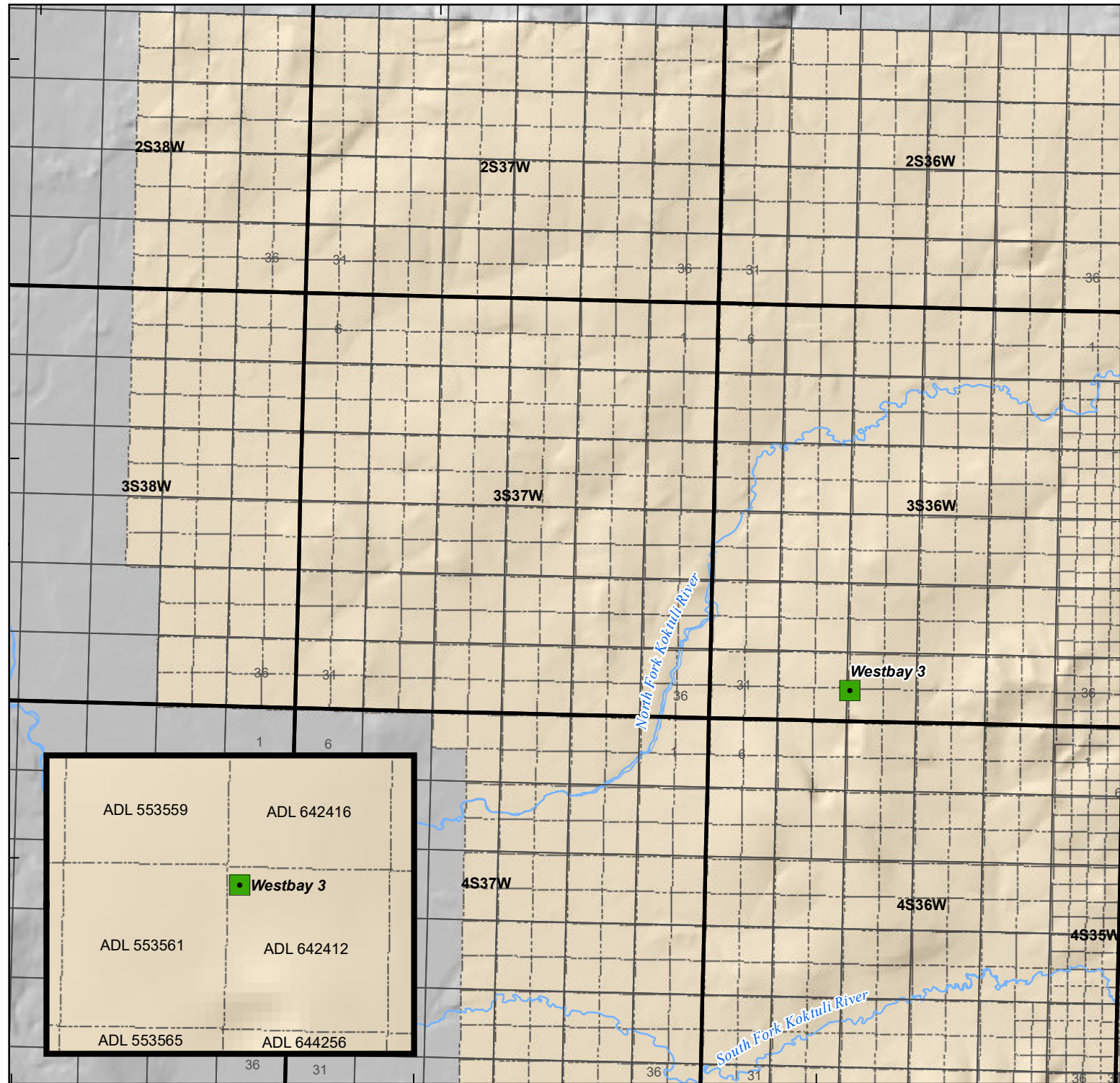
155°40'0"W





155°30'0"W

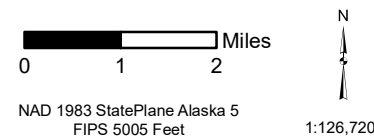
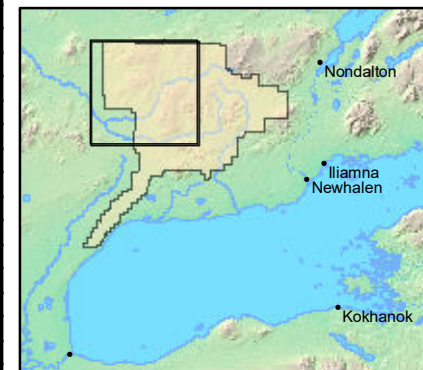
60°0'0"N

59°55'0"N

59°50'0"N



-  Pebble Project Mineral Claims
-  Secondary Storage
-  Township
-  Section



Source(s):  
 ADNR, Alaska Mining Claims,  
 2018

**Figure**  
**4**

**Mineral Claims:  
 Northwest**

Project: APMA A20196118

Date: 12/30/2018

Author: TH/PLP

Document Path: G:\GIS\PLP\_GIS\999\_Compliance4\_MXD\01\_Applications2019\APMA\04\_PLP\_Claims\_NW.mxd

155°50'0"W

155°40'0"W

155°30'0"W



155°20'0"W

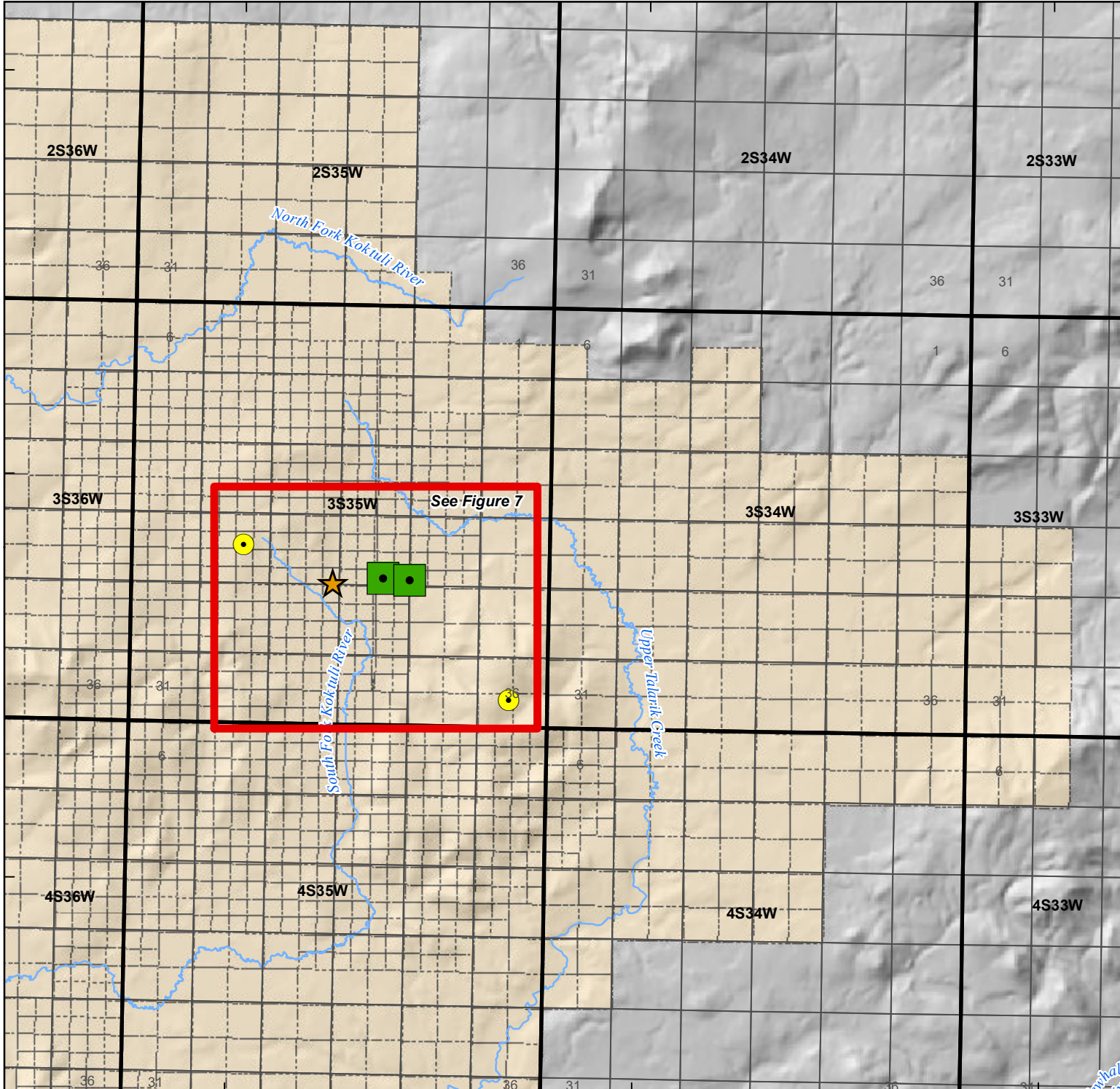
155°10'0"W







155°0'0"W

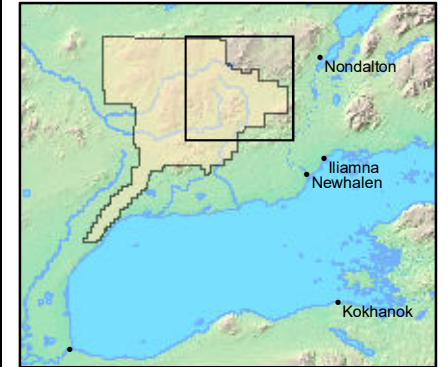
60°0'0"N

59°55'0"N

59°50'0"N



-  Pebble Project Mineral Claims
-  Met/Communications
-  Main Supply Depot
-  Secondary Storage
-  Township
-  Section



NAD 1983 StatePlane Alaska 5  
FIPS 5005 Feet

1:126,720

Source(s):  
ADNR, Alaska Mining Claims,  
2018

**Figure**  
**5**

**Mineral Claims:  
Northeast**

Project: APMA A20196118

Date: 12/30/2018

Author: TH/PLP

155°20'0"W

155°10'0"W

155°0'0"W



155°30'0"W

155°20'0"W

155°10'0"W

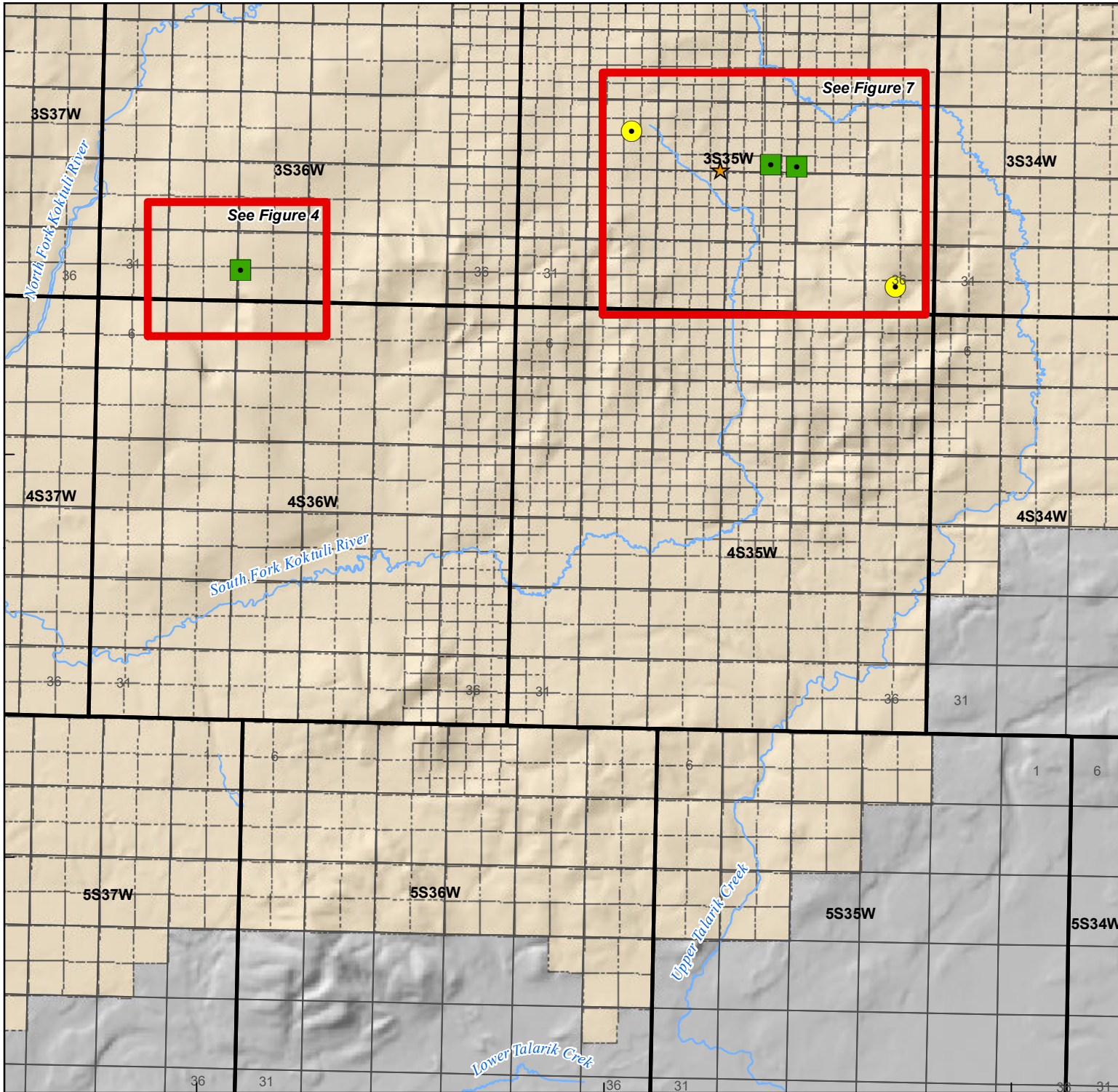
59°55'0"N

59°50'0"N

59°45'0"N

59°45'0"N

59°45'0"N









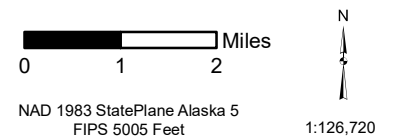
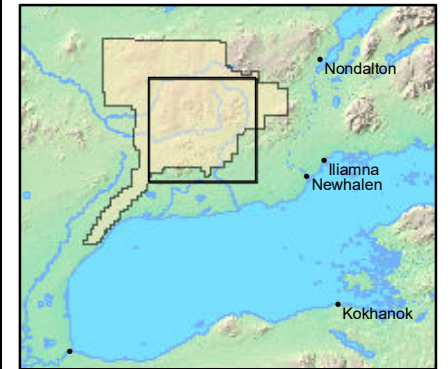
155°30'0"W

155°20'0"W

155°10'0"W



-  Pebble Project Mineral Claims
-  Met/Communications
-  Main Supply Depot
-  Secondary Storage
-  Township
-  Section



Source(s):  
ADNR, Alaska Mining Claims,  
2018

**Figure**  
**6**

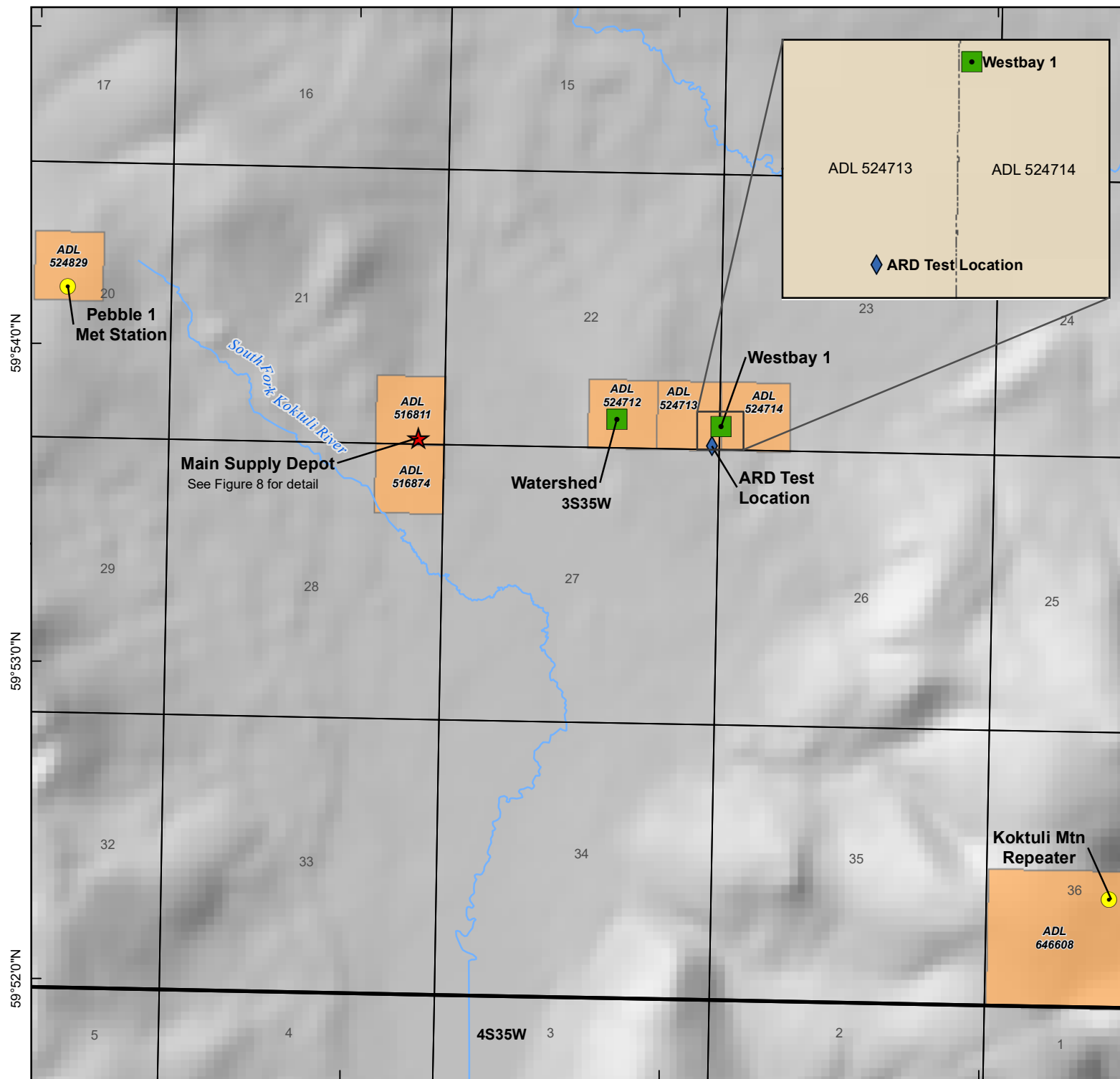
**Mineral Claims:  
Southeast**

Project: APMA A20196118

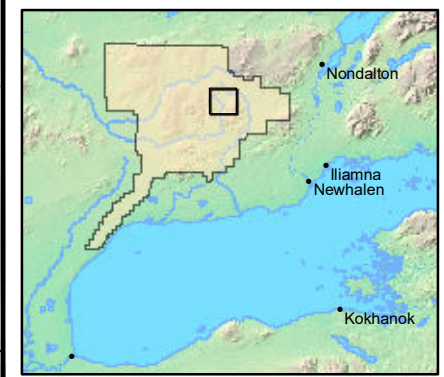
Date: 12/31/2018

Author: TH/PLP

155°20'0"W 155°18'0"W 155°16'0"W 155°14'0"W



- Claims with Surface Facilities
- Main Supply Depot
- Met/Communications
- Secondary Storage
- ARD Test Location
- Township
- Section



0 0.25 0.5 Miles  
 NAD 1983 StatePlane Alaska 5  
 FIPS 5005 Feet 1:31,680

Source(s): **Figure 7**

**Field Installations:  
 Deposit Area**

Project: APMA A20196118  
 Date: 12/30/2018 Author: TH/PLP

59°54'0"N  
 59°53'0"N  
 59°52'0"N

155°18'0"W 155°16'0"W 155°14'0"W

Document Path: G:\GIS\PLP\_GIS\999\_Compliance\4\_MXD\01\_Applications\2019 APMA\07 Field Installations Deposit.mxd

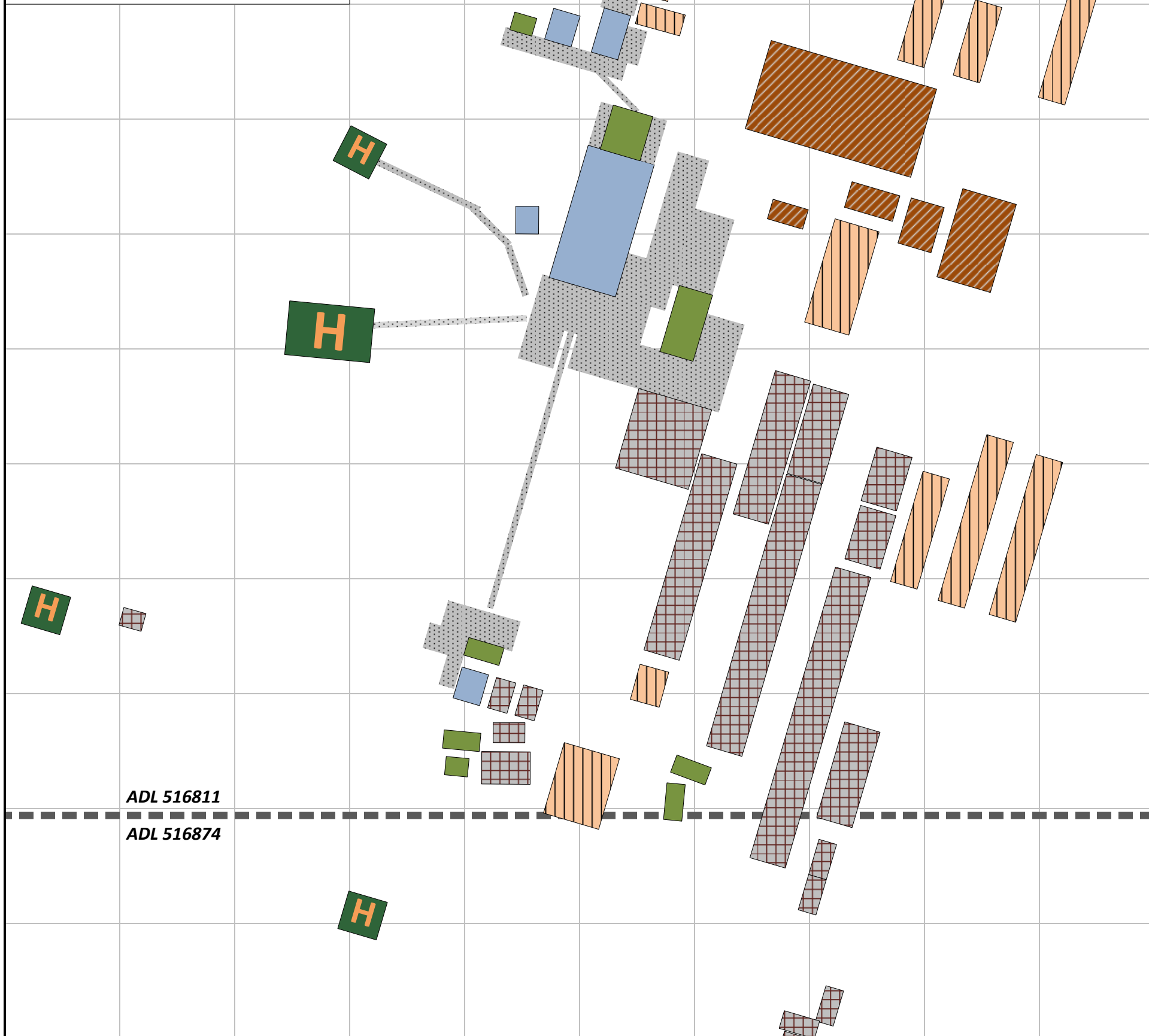


Figure 8

**MAIN SUPPLY DEPOT**

T3SR35W Secs. 21 & 28

General Layout—Sept. 2016




**Temporary Structures**


 Platform Tent

 Woodframe Building

 Drill Shed


 Helipad (wood)


 Platforms & Boardwalks

 Claim Boundary

**Laydown Areas (elevated)**

 Drill Rods

 Lumber & Dunnage

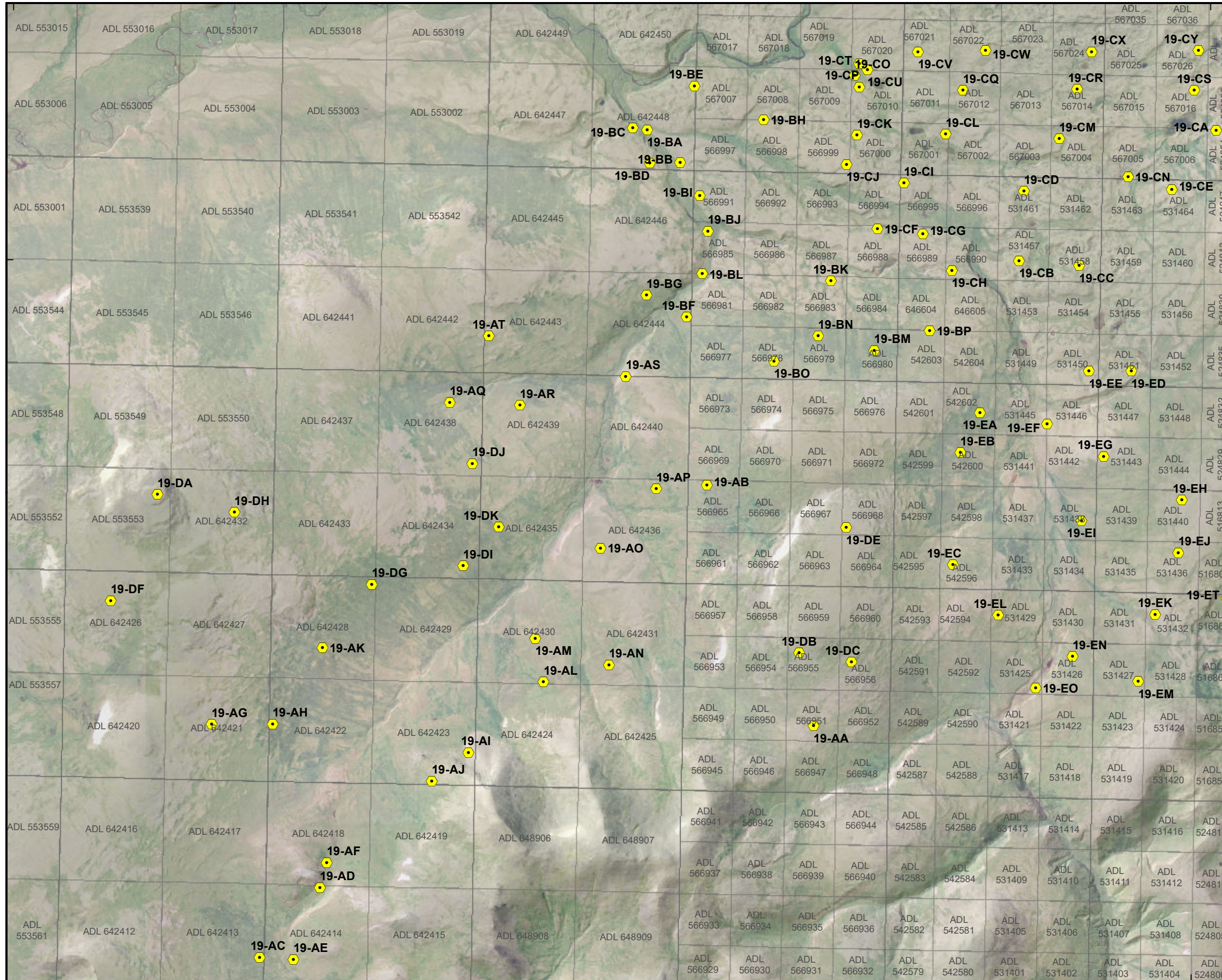
 General Storage



Scale: 1" = 50'  
(printed at 11" x 17")

Some measurements approximate





Proposed Drill Sites  
 ADL Claim Boundary

0 0.25 0.5 0.75 1 1.25 Miles  
 Scale 1:30,000  
 NAD 1983 StatePlane Alaska 5 FIPS 5005

Figure:  
**9**

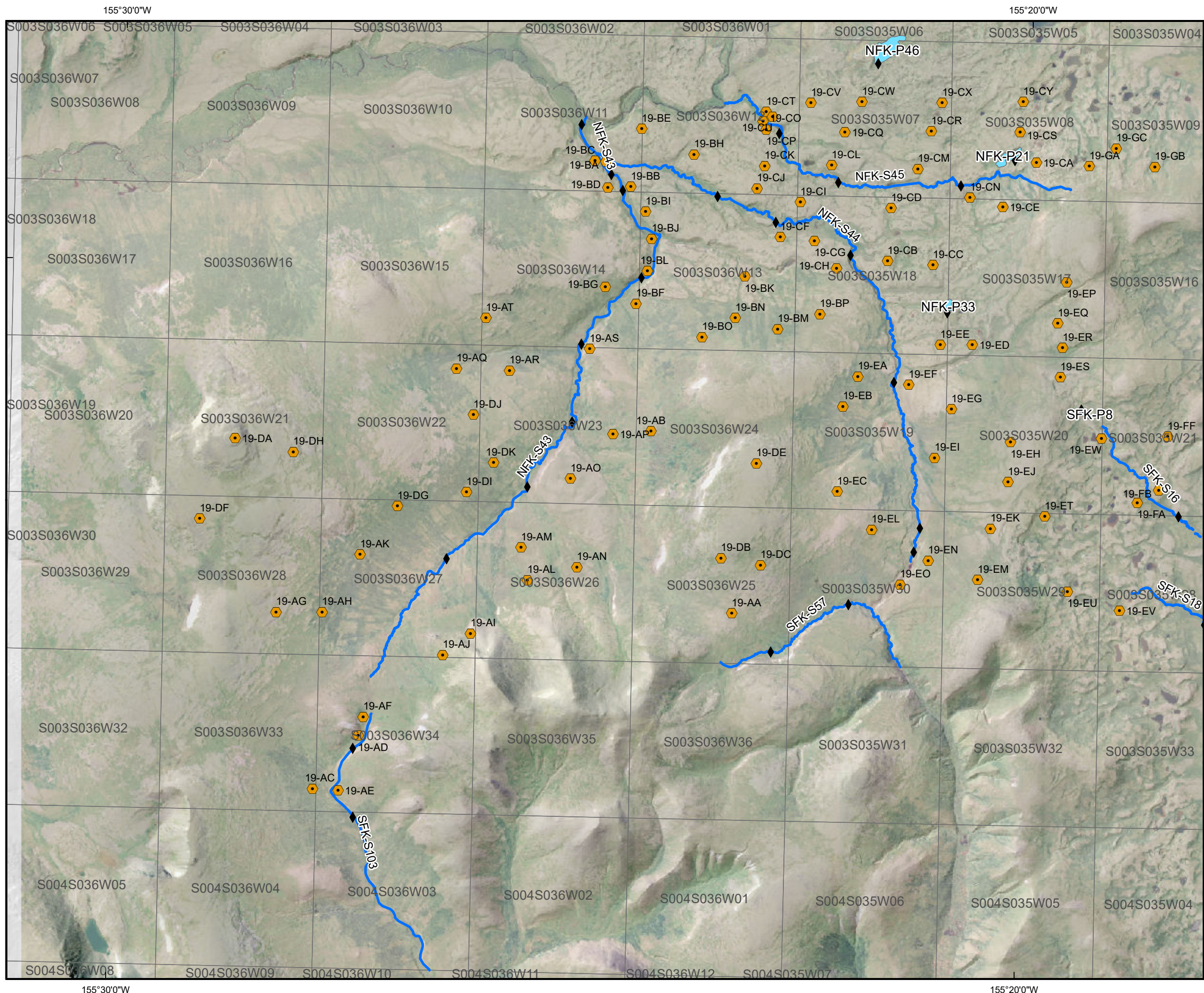
## 2019 Planned Drill Site - West





File: 2019 Preliminary Drill Program_WEST	Date: 12/30/2018
Revision:	Author: TH/PLP









-  Water Sources: Streams
-  Water Sources: Ponds
-  Preliminary Intakes
-  Proposed Drill Sites

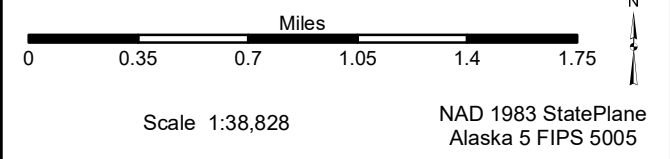


Figure:  
**11**

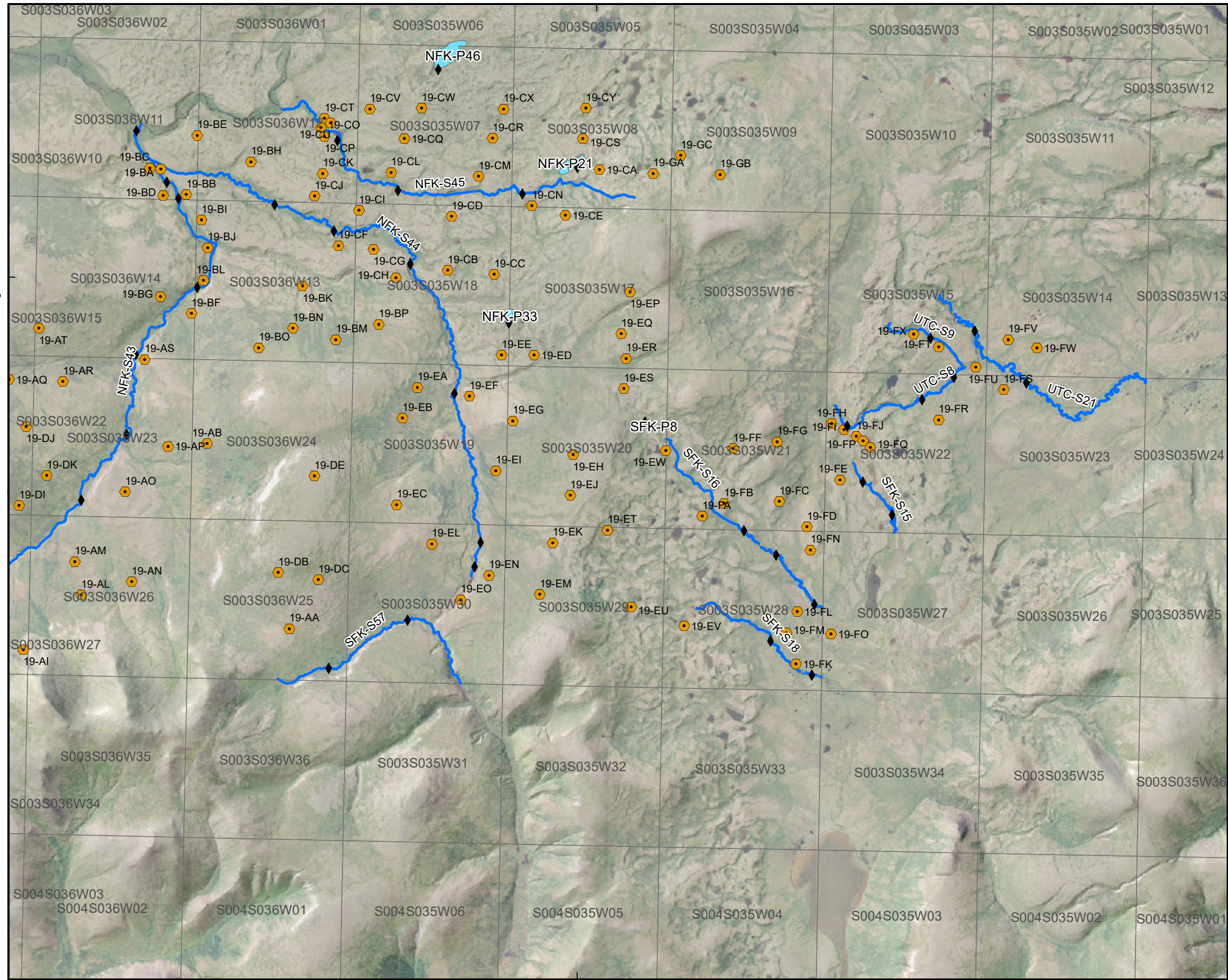
### Proposed Water Sources - West





File: 11 Water_Sources_WEST	Date: 12/30/2018
Revision:	Author: TH/PLP

Document Path: G:\GIS\PLP\_GSI\199\_Comp\Area4\_MXD\01\_Applications\2019\_APM\11\_Water\_Sources\_WEST.mxd



155°20'0"W



-  Water Sources: Streams
-  Water Sources: Ponds
-  Preliminary Intakes
-  Proposed Drill Sites

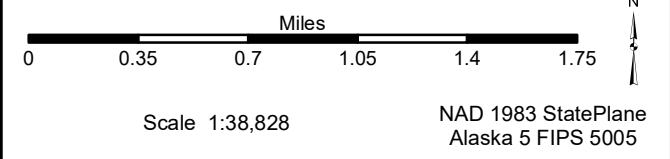


Figure:  
**12**

**Proposed Water Sources - East**

File: 11A Water_Sources_EAST	Date: 12/30/2018
Revision:	Author: TH/PLP

155°20'0"W

Document Path: G:\GIS\PLP\_GIS\109\_Comp\11A\_MXD\101\_Applications\2019\_APM\11A\_Water\_Sources\_EAST.mxd



## Appendix H

### Safety Data Sheets

# Safety Data Sheet – Barite




---

## Section 1: Product and Company Identification

---

**Product Identifier:** Barite

**Product Names:** Barite, Baryte, Bar

**Product uses:** various industrial uses

**Manufacturer:**

Industrial Mineral Company  
7268 Frasinetti Road  
Sacramento, California 95828

**Emergency Telephone Number:** 916-383-2811

**Telephone Number for Information:** 916-383-2811

---

## Section 2: Hazards Identification

---



Carcinogen



Irritant (skin and eye)

Skin Sensitizer

Respiratory Tract Irritant

**OSHA/HCS status:** This naturally occurring clay is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

**Classification of the substance of mixture:** OSHA –Carcinogenicity (inhalation) - Category 1A and Specific organ toxicity (Repeated Exposure) (Respiratory tract through inhalation) – Category 1

**Exposure limits for Crystalline Silica:** The current American Conference of Government Industrial Hygienist Threshold limit value for crystalline silica is: 0.1 mg/m<sup>3</sup>

**Signal Word:** Danger

**Hazard Statement** Cancer Hazard. Contains quartz (crystalline silica) which may cause cancer. Risk of cancer depends upon duration and level of exposure to the dust. Not an acute hazard. Prolonged inhalation of dust may cause lung injury. Inhalation of high concentrations of dust may cause mechanical irritation and discomfort of the respiratory tract. Repeated exposure may have chronic effects. Can cause skin, respiratory, and eye irritation.

**Precautionary Statement:** Wear protective gloves, eye, and respiratory protection. Avoid breathing dust.

---

## Section 3: Composition Information

---

Natural Occurring mineral, exact chemical composition varies.

Chemical Name	Common Name	CAS Number	%
Quartz (Silica)	SiO <sub>2</sub>	14808-60-7	10-12
Barite	BaSO <sub>4</sub>	13462-86-7	80-84
Mica/illite	(K,Na,Ca)(Al,Mg,Fe) <sub>2</sub> (Si,Al) <sub>4</sub> O <sub>10</sub> (OH,F) <sub>2</sub>	12001-26-2	<6
Calcite	CaCO <sub>3</sub>	13397-26-7	<2

# Safety Data Sheet – Barite



---

## Section 4: First-Aid Measures

---

**Eye Contact:** If eye contact occurs, rinse immediately with plenty of water. If irritation persists, seek medical attention

**Skin Contact:** Wash thoroughly with water. If irritation persists, seek medical attention

**Inhalation:** Move victim to fresh air in well ventilated area. If coughing or irritation persists, seek medical attention

**Ingestion:** Consult physician and/or obtain competent medical assistance

---

## Section 5 Fire Fighting Measures

---

**General Fire Hazards:** Not flammable

**Extinguishing Media:** Use appropriate extinguishing media for surrounding fire

**Special Fire Fighting Procedure:** None

---

## Section 6: Accidental Release Measures

---

**Clean-up Methods:** When dust is generated it may over expose cleanup personnel to dust. Using respirators or wetting the material is recommended. When dry sweeping use NIOSH approved respirators when dust levels exceed exposure limits

**Personal Precautions and Personal Protective Equipment:** Wear appropriate protective equipment and clothing during clean-up. If dusty conditions exist use approved respirators.

**Environmental Precautions:** Material is a natural mineral product and will not cause adverse effects to the water system other than turbidity from suspended particles.

---

## Section 7: Handling and Storage

---

**Handling Procedures:** Wear the appropriate eye protection and avoid dust contact with eyes. Minimize dust generation and accumulation. Wear the appropriate respiratory protection when in poorly ventilated areas. Use good industrial hygiene practices.

---

## Section 8: Exposure Controls/Personal Protection

---

**Airborne Exposure Limits:**

**Silica component limit**

OSHA PEL: TWA 10 mg/m<sup>3</sup> (respirable)

OSHA PEL : TWA 30 mg/m<sup>3</sup> (total dust)

CAL OSHA PEL: TWA 0.1 mg/m<sup>3</sup> (respirable)

CAL OSHA PEL: TWA 0.3 mg/m<sup>3</sup> (total dust)

**Engineering Measures:** Use local exhaust ventilation to control exposure below applicable limits

**Personal Protective Equipment (PPE):**

**Respiratory:** Avoid actions that cause dust exposure to occur. Use local or general ventilation to control exposures below applicable exposure limits. NIOSH or MSHA approved particulate filter respirators should be used. Respirator and/or filter cartridge selection should be based on the ANSI Standard Z88.2.



# Safety Data Sheet – Barite



**Eyes:** When working around activities where dust can contact the eyes, wear safety glasses or goggles to avoid eye irritation or injury. Wearing contacts without sealing goggles is not recommended.

**Skin and Body:** Protective Clothing is not essential

---

## Section 9: Physical and Chemical Properties

---

<b>Appearance:</b> Tan to grey <b>Physical state:</b> Powder <b>pH:</b> 8 <b>Melting/Freezing Point:</b> no data available <b>Evaporation Rate:</b> NA <b>Vapor Pressure (mm HG):</b> 0 (approximately) <b>Relative density:</b> NA <b>Solubility in water at 100 C:</b> 0 (approximately) <b>Decomposition temperature:</b> no data available <b>Viscosity:</b> NA	<b>Odor:</b> none <b>Odor threshold:</b> No data Available <b>Flashpoint:</b> NA <b>Boiling Point:</b> NA <b>Flammability:</b> Not Flammable <b>Vapor Density:</b> NA <b>Specific Gravity:</b> 4.1 <b>Partition coefficient:</b> No data available <b>Auto-ignition temperature:</b> NA
--	---

---

## Section 10: Stability and Reactivity

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**Reactivity:** No dangerous reactions are known under normal conditions of use

**Chemical Stability:** Stable

**Possibility of Hazardous Reactions and Conditions to Avoid:** None known

**Incompatibility:** None Known

---

## Section 11: Toxicological Information

---

### Possible Health Effects:

**Target Organs:** Skin, Eyes, and Respiratory system

**Exposure Routes:** Inhalation, skin or eye contact

### Symptoms:

**Short Term:** Shortness of breath and/or coughing associated with dust inhalation.

**Long Term Exposure (Chronic):** Steady and prolonged exposure to dust concentrations high than LTV without approved respirator could cause silicosis, a chronic disease of the lungs marked by acute fibrosis, may cause cancer based on animal data.

### Effects of Silicosis

Bronchitis/chronic obstructive Pulmonary Disorder

Increased susceptibility to Tuberculosis

Scleroderma

Possible Renal

### Symptoms of Silicosis

Shortness of breath, fever fatigue, loss of appetite, chest pain, dry non-productive cough, respiratory failure, death.

OSHA, IARC, and NTP Carcinogen Classifications				
Chemicals with recognized Carcinogen Potential	CAS#	OSHA	IARC	NTP

# Safety Data Sheet – Barite



Quartz (Crystalline Silica)	14808-60-7	Yes	Yes – Group 1	Yes
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## Section 12: Ecological Information

---

**Eco toxicity:** None Known  
**Biochemical oxygen demand (BOD5):** None known  
**Chemical oxygen demand (COD):** None known  
**Products of Biodegradation:** None known  
**Toxicity of the products of biodegradation:** None known  
**Bioaccumulation Potential:** None known  
**Potential to move from soil to groundwater:** None Know  
**Other adverse effects:** None known

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## Section 13: Disposal Considerations

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**Personal Protection:** Refer to section 8 for proper PPE when disposing of waste material  
**Appropriate disposal containers:** No special requirements  
**Appropriate disposal methods:** Disposal of this product should comply with the requirements of environmental protection and waste disposal legislation and any regional or local authority requirements.  
**Physical and chemical properties that may affect disposal:** Dust should be minimized in disposal by either transporting in seal containers or wetting dust before transport  
**Sewage disposal:** do not dispose of into sewage systems, material will settle out of water and clog pipes.  
**Special precautions for landfills or incineration activities:** None

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## Section 14: Transport Information

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Regulatory Information	UN Number	UN Proper Shipping Name	Transport Hazard Class	Packing Group Number	Bulk Transport Guidance	Special Precautions
DOT Classification	Not Regulated	-	-	-	-	-
TDG Classification	Not Regulated	-	-	-	-	-
ADR/RID Class	Not Regulated	-	-	-	-	-
IMDG Class	Not Regulated	-	-	-	-	-
IATA-DGR Class	Not Regulated	-	-	-	-	-

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## Section 15 Regulatory Information

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**TSCA – Toxic Substances Control Act – EPA** Quartz and other chemicals are listed in the TSCA Chemical Substance Inventory

# Safety Data Sheet – Barite



**California Prop. 65 WARNING:** This product contains a chemical known to the State of California to cause cancer. (Prop. 65 – California Health and Safety Code Section 2549 Et Seq)

**SARA/Title III (Emergency Planning & Community Right-to-Know Act)** This mixture contains no substances at or above the reporting threshold under section 313, based on available data.

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## Section 16: Other Information

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### Definitions

**ASTM** – American System of Testing and Materials

**OSHA** – Occupational Safety & Health Administration

**IARC** – International Agency for Research on Cancer

**NTP** – National Toxicogmail.com

**HCS** – Hazardous Communication Standard

**CAS** – Chemical Abstract Service

**ACGIH** – American Conference of Governmental Industrial Hygienists

**CAL-OSHA** – California Occupational Safety & Health Administration

**OSHA PEL** – OSHA Permissible Exposure Levels

**OSHA STEL** - spot exposure for a duration of 15 minutes, which cannot be repeated more than 4 times per day with at least 60 minutes between exposure periods.

**TLV** – Threshold Limit Value

**TWA** – Time Weighted Average

**TLV-TWA** – Time weighted average Threshold limit value

**TLV-STEL** – Short-term exposure limit Threshold limit value

**TLV-C** – Ceiling Limit – absolute limit that should not be exceeded at any time

Revisions: Existing MSDS revised to new GHS format. Revision Date 08/31/2015

The information presented herein has been compiled from sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so, nothing here in is to be construed as recommending any practice or product in violation of any patent, law, or regulation. It is the user's responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material we supply.

# Safety Data Sheet



**SECTION 1 PRODUCT AND COMPANY IDENTIFICATION**

## Delo 400 LE SAE 15W-40

**Product Use:** Diesel Engine Oil  
**Product Number(s):** 222220, 278058  
**Synonyms:** Delo 400 LE SAE 15W-40 ISOCLEAN Certified

**Company Identification**  
Chevron Products Company  
a division of Chevron U.S.A. Inc.  
6001 Bollinger Canyon Rd.  
San Ramon, CA 94583  
United States of America  
www.chevronlubricants.com

**Transportation Emergency Response**  
CHEMTREC: (800) 424-9300 or (703) 527-3887

**Health Emergency**  
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

**Product Information**  
email : lubemsds@chevron.com  
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

**SECTION 2 HAZARDS IDENTIFICATION**

**CLASSIFICATION:** Not classified as hazardous according to 29 CFR 1910.1200 (2012).

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

**SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS**

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %weight

Zinc alkyl dithiophosphate	68649-42-3	0.1 - < 2.5 %weight
01154100-5301P	Trade secret	0.1 - < 1 %weight

#### SECTION 4 FIRST AID MEASURES

##### Description of first aid measures

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

##### Most important symptoms and effects, both acute and delayed

##### IMMEDIATE HEALTH EFFECTS

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

**Ingestion:** Not expected to be harmful if swallowed.

**Inhalation:** Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

**DELAYED OR OTHER HEALTH EFFECTS:** Not classified

**Indication of any immediate medical attention and special treatment needed** Not Applicable

#### SECTION 5 FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

##### PROTECTION OF FIRE FIGHTERS:

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

#### SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

**SECTION 7 HANDLING AND STORAGE**

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Precautionary Measures:** Keep out of the reach of children.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS:**

Use in a well-ventilated area.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Nitrile Rubber, Silver Shield, Viton.

**Respiratory Protection:** No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--
Zinc alkyl dithiophosphate	Not Applicable	--	--	--	--
01154100-5301P	Not Applicable	--	--	--	--

Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

**Attention: the data below are typical values and do not constitute a specification.**

- Color:** Brown
- Physical State:** Liquid
- Odor:** Petroleum odor
- Odor Threshold:** No data available
- pH:** Not Applicable
- Vapor Pressure:** <0.01 mmHg @ 37.8 °C (100 °F)
- Vapor Density (Air = 1):** >1
- Initial Boiling Point:** 315°C (599°F)
- Solubility:** Soluble in hydrocarbons; insoluble in water
- Freezing Point:** Not Applicable
- Melting Point:** Not Applicable
- Specific Gravity:** 0.87 - 0.9 @ 15.6°C (60.1°F) / 15.6°C (60.1°F)
- Density:** 0.8806 kg/l @ 15°C (59°F) (Typical)
- Viscosity:** 14.6 mm2/s @ 100°C (212°F) (Typical)
- Evaporation Rate:** No data available
- Decomposition temperature:** No Data Available
- Octanol/Water Partition Coefficient:** No data available

**FLAMMABLE PROPERTIES:**

- Flammability (solid, gas):** No Data Available
- Flashpoint:** (Cleveland Open Cup) 204 °C (399 °F) Minimum
- Autoignition:** No data available
- Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

**SECTION 10 STABILITY AND REACTIVITY**

**Reactivity:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
**Incompatibility With Other Materials:** Not applicable  
**Hazardous Decomposition Products:** None known (None expected)  
**Hazardous Polymerization:** Hazardous polymerization will not occur.

<b>SECTION 11 TOXICOLOGICAL INFORMATION</b>
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**Information on toxicological effects**

**Serious Eye Damage/Irritation:** The eye irritation hazard is based on evaluation of data for product components.

**Skin Corrosion/Irritation:** The skin irritation hazard is based on evaluation of data for product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for product components.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for product components.

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity:** The hazard evaluation is based on data for components or a similar material.

**Reproductive Toxicity:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure:** The hazard evaluation is based on data for components or a similar material.

**ADDITIONAL TOXICOLOGY INFORMATION:**

During use in engines, contamination of oil with low levels of cancer-causing combustion products occurs. Used motor oils have been shown to cause skin cancer in mice following repeated application and continuous exposure. Brief or intermittent skin contact with used motor oil is not expected to have serious effects in humans if the oil is thoroughly removed by washing with soap and water. This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B). These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).





## SECTION 12 ECOLOGICAL INFORMATION

### ECOTOXICITY

This material is not expected to be harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

### MOBILITY

No data available.

### PERSISTENCE AND DEGRADABILITY

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material. The product has not been tested. The statement has been derived from the properties of the individual components.

### POTENTIAL TO BIOACCUMULATE

Bioconcentration Factor: No data available.  
Octanol/Water Partition Coefficient: No data available

## SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

## SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** PETROLEUM LUBRICATING OIL, NOT REGULATED AS A HAZARDOUS MATERIAL FOR TRANSPORTATION UNDER 49 CFR

**IMO/IMDG Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** PETROLEUM LUBRICATING OIL; NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO TI OR IATA DGR

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**  
Not applicable

## SECTION 15 REGULATORY INFORMATION

**EPCRA 311/312 CATEGORIES:**

1. Immediate (Acute) Health Effects:	NO
2. Delayed (Chronic) Health Effects:	NO
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NO

**REGULATORY LISTS SEARCHED:**

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.  
 Zinc alkyl dithiophosphate 03, 06

**CHEMICAL INVENTORIES:**

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), KECI (Korea), PICCS (Philippines), TSCA (United States). One or more components is listed on ELINCS (European Union). Secondary notification by the importer may be required. All other components are listed or exempted from listing on EINECS.

**NEW JERSEY RTK CLASSIFICATION:**

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Motor oil)

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

**HMIS RATINGS:** Health: 0 Flammability: 1 Reactivity: 0  
 (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**LABEL RECOMMENDATION:**

Label Category : ENGINE OIL 1 - ENG1

**REVISION STATEMENT:** This revision updates the following sections of this Safety Data Sheet: 1,16  
**Revision Date:** FEBRUARY 03, 2015

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number

ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road San Ramon, CA 94583.

**The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.**

## SAFETY DATA SHEET

**Product Trade Name:** FLY ASH

**Revision Date:** 18-Apr-2017

**Revision Number:** 18

### 1. Identification

#### 1.1. Product Identifier

**Product Trade Name:** FLY ASH  
**Synonyms** Fly Ash  
**Chemical Family:** Inorganic  
**Internal ID Code** HM000716

#### 1.2 Recommended use and restrictions on use

**Application:** Light Weight Cement Additive  
**Uses advised against** No information available

#### 1.3 Manufacturer's Name and Contact Details

##### Manufacturer/Supplier

Halliburton Energy Services Inc.  
P.O. Box 1431  
Duncan, Oklahoma 73536-0431

Halliburton Energy Services  
645 - 7th Ave SW Suite 1800  
Calgary, AB  
T2P 4G8  
Canada

**Prepared By** Chemical Stewardship  
Telephone: 1-281-871-6107  
e-mail: fdunexchem@halliburton.com

#### 1.4. Emergency telephone number

**Emergency Telephone Number:** 1-866-519-4752 or 1-760-476-3962  
Global Incident Response Access Code: 334305  
Contract Number: 14012

### 2. Hazards Identification

#### 2.1 Classification in accordance with paragraph (d) of §1910.1200

Carcinogenicity	Category 1A - H350
Specific Target Organ Toxicity - (Repeated Exposure)	Category 1 - H372

#### 2.2. Label Elements

**Hazard Pictograms**



<b>Signal Word:</b>	Danger
<b>Hazard Statements</b>	H350 - May cause cancer by inhalation H372 - Causes damage to organs through prolonged or repeated exposure if inhaled
<b>Precautionary Statements</b>	
<b>Prevention</b>	P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapors/spray P264 - Wash face, hands and any exposed skin thoroughly after handling P270 - Do not eat, drink or smoke when using this product P280 - Wear protective gloves/protective clothing/eye protection/face protection
<b>Response</b>	P308 + P313 - IF exposed or concerned: Get medical advice/attention P314 - Get medical attention/advice if you feel unwell
<b>Storage</b>	P405 - Store locked up
<b>Disposal</b>	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

**2.3 Hazards not otherwise classified**

None known

**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Crystalline silica, quartz	14808-60-7	5 - 10%	Carc. 1A (H350) STOT RE 1 (H372)

The exact percentage (concentration) of the composition has been withheld as proprietary.

**4. First Aid Measures**

**4.1. Description of first aid measures**

<b>Inhalation</b>	If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
<b>Eyes</b>	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water.
<b>Ingestion</b>	Under normal conditions, first aid procedures are not required.

**4.2 Most important symptoms/effects, acute and delayed**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

**4.3. Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## 5. Fire-fighting measures

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

None - does not burn.

#### Extinguishing media which must not be used for safety reasons

None known.

### 5.2 Specific hazards arising from the substance or mixture

#### Special exposure hazards in a fire

None anticipated

### 5.3 Special protective equipment and precautions for fire-fighters

#### Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid creating and breathing dust. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

See Section 8 for additional information

### 6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

### 6.3. Methods and material for containment and cleaning up

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

## 7. Handling and storage

### 7.1. Precautions for safe handling

#### Handling Precautions

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Storage Information

Store in a cool, dry location. Store in a well ventilated area. Store locked up. Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Product has a shelf life of 36 months.

## 8. Exposure Controls/Personal Protection

### 8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Crystalline silica, quartz	14808-60-7	TWA: 50 µg/m <sup>3</sup>	TWA: 0.025 mg/m <sup>3</sup>

### 8.2 Appropriate engineering controls

#### Engineering Controls

Use approved industrial ventilation and local exhaust as required to maintain

exposures below applicable exposure limits.

**8.3 Individual protection measures, such as personal protective equipment**

<b>Personal Protective Equipment</b>	If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.
<b>Respiratory Protection</b>	Wear a NIOSH certified, European Standard EN 149 (FFP2/FFP3), AS/NZS 1715, or equivalent respirator when using this product.
<b>Hand Protection</b>	Normal work gloves.
<b>Skin Protection</b>	Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.
<b>Eye Protection</b>	Wear safety glasses or goggles to protect against exposure.
<b>Other Precautions</b>	None known.

**9. Physical and Chemical Properties**

**9.1. Information on basic physical and chemical properties**

<b>Physical State:</b> Solid	<b>Color</b>	Gray
<b>Odor:</b> Odorless	<b>Odor</b>	No information available
	<b>Threshold:</b>	

<u>Property</u>	<u>Values</u>
<u>Remarks/ - Method</u>	
<b>pH:</b>	No data available
<b>Freezing Point / Range</b>	No data available
<b>Melting Point / Range</b>	No data available
<b>Boiling Point / Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
Upper flammability limit	No data available
Lower flammability limit	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Specific Gravity</b>	2.3
<b>Water Solubility</b>	Insoluble in water
<b>Solubility in other solvents</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	No data available
<b>Decomposition Temperature</b>	No data available
<b>Viscosity</b>	No data available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

**9.2. Other information**

<b>VOC Content (%)</b>	No data available
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**10. Stability and Reactivity**

**10.1. Reactivity**

Not expected to be reactive.

**10.2. Chemical stability**

Stable

### **10.3. Possibility of hazardous reactions**

Will Not Occur

### **10.4. Conditions to avoid**

None anticipated

### **10.5. Incompatible materials**

Hydrofluoric acid.

### **10.6. Hazardous decomposition products**

Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

## **11. Toxicological Information**

### **11.1 Information on likely routes of exposure**

**Principle Route of Exposure** Eye or skin contact, inhalation.

### **11.2 Symptoms related to the physical, chemical and toxicological characteristics**

#### **Acute Toxicity**

##### **Inhalation**

Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).

Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).

##### **Eye Contact**

May cause mechanical irritation to eye.

##### **Skin Contact**

None known.

##### **Ingestion**

None known.

#### **Chronic Effects/Carcinogenicity**

**Silicosis:** Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

**Cancer Status:** The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2). There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other



internal organs) and kidney disease.

### 11.3 Toxicity data

#### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Crystalline silica, quartz	14808-60-7	> 15000 mg/kg (human)	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the skin

Substances	CAS Number	Serious eye damage/irritation
Crystalline silica, quartz	14808-60-7	Non-irritating to the eye

Substances	CAS Number	Skin Sensitization
Crystalline silica, quartz	14808-60-7	No information available.

Substances	CAS Number	Respiratory Sensitization
Crystalline silica, quartz	14808-60-7	No information available

Substances	CAS Number	Mutagenic Effects
Crystalline silica, quartz	14808-60-7	Not regarded as mutagenic.

Substances	CAS Number	Carcinogenic Effects
Crystalline silica, quartz	14808-60-7	Contains crystalline silica which may cause silicosis, a delayed and progressive lung disease. The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica with repeated respiratory exposure. Based on available scientific evidence, this substance is a threshold carcinogen with a mode of action involving indirect genotoxicity secondary to lung injury.

Substances	CAS Number	Reproductive toxicity
Crystalline silica, quartz	14808-60-7	No information available

Substances	CAS Number	STOT - single exposure
Crystalline silica, quartz	14808-60-7	No significant toxicity observed in animal studies at concentration requiring classification.

Substances	CAS Number	STOT - repeated exposure
Crystalline silica, quartz	14808-60-7	Causes damage to organs through prolonged or repeated exposure if inhaled: (Lungs)

Substances	CAS Number	Aspiration hazard
Crystalline silica, quartz	14808-60-7	Not applicable

## 12. Ecological Information

### 12.1. Toxicity

#### Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Crystalline silica, quartz	14808-60-7	EC50 (72 h) =440 mg/L (Selenastrum capricornutum)(similar substance)	LL0 (96 h) =10000 mg/L (Danio rerio)(similar substance)	No information available	LL50 (24 h) >10000 mg/L (Daphnia magna)(similar substance)

### 12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Crystalline silica, quartz	14808-60-7	The methods for determining biodegradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

Substances	CAS Number	Log Pow
Crystalline silica, quartz	14808-60-7	No information available

**12.4. Mobility in soil**

Substances	CAS Number	Mobility
Crystalline silica, quartz	14808-60-7	No information available

**12.5 Other adverse effects**

No information available

**13. Disposal Considerations**

**13.1. Waste treatment methods**

**Disposal methods** Bury in a licensed landfill according to federal, state, and local regulations.  
**Contaminated Packaging** Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

**14. Transport Information**

**US DOT**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**Canadian TDG**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**IMDG/IMO**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**IATA/ICAO**

**UN Number** Not restricted  
**UN proper shipping name:** Not restricted  
**Transport Hazard Class(es):** Not applicable  
**Packing Group:** Not applicable  
**Environmental Hazards:** Not applicable

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable

**Special Precautions for User** None

**15. Regulatory Information****US Regulations**

**US TSCA Inventory** All components listed on inventory or are exempt.

**TSCA Significant New Use Rules - S5A2**

Substances	CAS Number	TSCA Significant New Use Rules - S5A2
Crystalline silica, quartz	14808-60-7	Not applicable

**EPA SARA Title III Extremely Hazardous Substances**

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Crystalline silica, quartz	14808-60-7	Not applicable

**EPA SARA (311,312) Hazard Class**

Chronic Health Hazard

**EPA SARA (313) Chemicals**

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Crystalline silica, quartz	14808-60-7	Not applicable	Not applicable

**EPA CERCLA/Superfund Reportable Spill Quantity**

Substances	CAS Number	CERCLA RQ
Crystalline silica, quartz	14808-60-7	Not applicable

**EPA RCRA Hazardous Waste Classification**

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

**California Proposition 65**

Substances	CAS Number	California Proposition 65
Crystalline silica, quartz	14808-60-7	carcinogen

**U.S. State Right-to-Know Regulations**

Substances	CAS Number	MA Right-to-Know Law	NJ Right-to-Know Law	PA Right-to-Know Law
Crystalline silica, quartz	14808-60-7	Carcinogen Extraordinarily hazardous	1660	Present

**NFPA Ratings:** Health 0, Flammability 0, Reactivity 0

**HMIS Ratings:** Health 0\*, Flammability 0, Reactivity 0

**Canadian Regulations**

**Canadian Domestic Substances** All components listed on inventory or are exempt.

List (DSL)

**16. Other information****Preparation Information**

**Prepared By** Chemical Stewardship  
Telephone: 1-281-871-6107  
e-mail: fdunexchem@halliburton.com

**Revision Date:** 18-Apr-2017

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**Reason for Revision** SDS sections updated:  
1

**Additional information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

bw – body weight

CAS – Chemical Abstracts Service

d - day

EC50 – Effective Concentration 50%

ErC50 – Effective Concentration growth rate 50%

h - hour

LC50 – Lethal Concentration 50%

LD50 – Lethal Dose 50%

LL50 – Lethal Loading 50%

mg/kg – milligram/kilogram

mg/L – milligram/liter

mg/m<sup>3</sup> - milligram/cubic meter

mm - millimeter

mmHg - millimeter mercury

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OEL – Occupational Exposure Limit

PEL – Permissible Exposure Limit

ppm – parts per million

STEL – Short Term Exposure Limit

TWA – Time-Weighted Average

UN – United Nations

w/w - weight/weight

**Key literature references and sources for data**

[www.ChemADVISOR.com/](http://www.ChemADVISOR.com/)

OSHA

NZ CCID

ECHA C&L

**Disclaimer Statement**

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

**End of Safety Data Sheet**

# Safety Data Sheet



## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### Chevron Hydraulic Oil AW 32, 46, 68

**Product Use:** Hydraulic Oil

**Product Number(s):** 255673, 255674, 255675, 293130, 293131, 293132

**Company Identification**

Chevron Products Company  
a division of Chevron U.S.A. Inc.  
6001 Bollinger Canyon Rd.  
San Ramon, CA 94583  
United States of America  
[www.chevronlubricants.com](http://www.chevronlubricants.com)

**Transportation Emergency Response**

CHEMTREC: (800) 424-9300 or (703) 527-3887

**Health Emergency**

Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623

**Product Information**

email : [lubemsds@chevron.com](mailto:lubemsds@chevron.com)  
Product Information: 1 (800) 582-3835, [LUBETEK@chevron.com](mailto:LUBETEK@chevron.com)

## SECTION 2 HAZARDS IDENTIFICATION

**CLASSIFICATION:** Not classified as hazardous according to 29 CFR 1910.1200 (2012).

**HAZARDS NOT OTHERWISE CLASSIFIED:** Not Applicable

### SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Highly refined mineral oil (C15 - C50)	Mixture	70 - 99 %weight

### SECTION 4 FIRST AID MEASURES

#### Description of first aid measures

**Eye:** No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.

**Skin:** No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.

**Ingestion:** No specific first aid measures are required. Do not induce vomiting. As a precaution, get medical advice.

**Inhalation:** No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

#### Most important symptoms and effects, both acute and delayed

##### IMMEDIATE HEALTH EFFECTS

**Eye:** Not expected to cause prolonged or significant eye irritation.

**Skin:** Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin. High-Pressure Equipment Information: Accidental high-velocity injection under the skin of materials of this type may result in serious injury. Seek medical attention at once should an accident like this occur. The initial wound at the injection site may not appear to be serious at first; but, if left untreated, could result in disfigurement or amputation of the affected part.

**Ingestion:** Not expected to be harmful if swallowed.

**Inhalation:** Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

**DELAYED OR OTHER HEALTH EFFECTS:** Not classified

#### Indication of any immediate medical attention and special treatment needed

**Note to Physicians:** In an accident involving high-pressure equipment, this product may be injected under the skin. Such an accident may result in a small, sometimes bloodless, puncture wound. However, because of its driving force, material injected into a fingertip can be deposited into the palm of the hand. Within 24 hours, there is usually a great deal of swelling, discoloration, and intense throbbing pain. Immediate treatment at a surgical emergency center is recommended.

## SECTION 5 FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Unusual Fire Hazards:** Leaks/ruptures in high pressure system using materials of this type can create a fire hazard when in the vicinity of ignition sources (eg. open flame, pilot lights, sparks, or electric arcs).

### PROTECTION OF FIRE FIGHTERS:

**Fire Fighting Instructions:** This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

**Combustion Products:** Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material.

**Spill Management:** Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

**General Handling Information:** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.

**Precautionary Measures:** DO NOT USE IN HIGH PRESSURE SYSTEMS in the vicinity of flames, sparks and hot surfaces. Use only in well ventilated areas. Keep container closed.

**Static Hazard:** Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.

**Container Warnings:** Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose

such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

**GENERAL CONSIDERATIONS:**

Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**ENGINEERING CONTROLS:**

Use in a well-ventilated area.

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye/Face Protection:** No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.

**Skin Protection:** No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: 4H (PE/EVAL), Silver Shield, Viton, Nitrile Rubber.

**Respiratory Protection:** No respiratory protection is normally required.

If user operations generate an oil mist, determine if airborne concentrations are below the occupational exposure limit for mineral oil mist. If not, wear an approved respirator that provides adequate protection from the measured concentrations of this material. For air-purifying respirators use a particulate cartridge. Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

**Occupational Exposure Limits:**

Component	Agency	TWA	STEL	Ceiling	Notation
Highly refined mineral oil (C15 - C50)	OSHA Z-1	5 mg/m3	--	--	--
Highly refined mineral oil (C15 - C50)	ACGIH	5 mg/m3	10 mg/m3	--	--

Consult local authorities for appropriate values.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**



Attention: the data below are typical values and do not constitute a specification.

**Color:** Colorless to yellow  
**Physical State:** Liquid  
**Odor:** Petroleum odor  
**Odor Threshold:** No data available  
**pH:** Not Applicable  
**Vapor Pressure:** <0.01 mmHg @ 37.8 °C (100 °F)  
**Vapor Density (Air = 1):** >1  
**Initial Boiling Point:** 315°C (599°F)  
**Solubility:** Soluble in hydrocarbon solvents; insoluble in water.  
**Freezing Point:** Not Applicable  
**Melting Point:** No data available  
**Density:** 0.87 kg/l @ 15°C (59°F) (Typical)  
**Viscosity:** 28.80 mm<sup>2</sup>/s @ 40°C (104°F) Minimum  
**Coefficient of Therm. Expansion / °F:** No data available  
**Evaporation Rate:** No data available  
**Decomposition temperature:** No data available  
**Octanol/Water Partition Coefficient:** No data available

**FLAMMABLE PROPERTIES:**

**Flammability (solid, gas):** No Data Available  
  
**Flashpoint:** (Cleveland Open Cup) 170 °C (338 °F) Minimum  
**Autoignition:** No data available  
**Flammability (Explosive) Limits (% by volume in air):** Lower: Not Applicable Upper: Not Applicable

**SECTION 10 STABILITY AND REACTIVITY**

**Reactivity:** May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.  
**Chemical Stability:** This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.  
**Incompatibility With Other Materials:** Not applicable  
**Hazardous Decomposition Products:** None known (None expected)  
**Hazardous Polymerization:** Hazardous polymerization will not occur.

**SECTION 11 TOXICOLOGICAL INFORMATION**

**Information on toxicological effects**  
**Serious Eye Damage/Irritation:** The eye irritation hazard is based on evaluation of data for product components.  
**Skin Corrosion/Irritation:** The skin irritation hazard is based on evaluation of data for product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for product components.

**Acute Dermal Toxicity:** The acute dermal toxicity hazard is based on evaluation of data for product components.

**Acute Oral Toxicity:** The acute oral toxicity hazard is based on evaluation of data for product components.

**Acute Inhalation Toxicity:** The acute inhalation toxicity hazard is based on evaluation of data for product components.

**Acute Toxicity Estimate:** Not Determined

**Germ Cell Mutagenicity:** The hazard evaluation is based on data for components or a similar material.

**Carcinogenicity:** The hazard evaluation is based on data for components or a similar material.

**Reproductive Toxicity:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Single Exposure:** The hazard evaluation is based on data for components or a similar material.

**Specific Target Organ Toxicity - Repeated Exposure:** The hazard evaluation is based on data for components or a similar material.

**ADDITIONAL TOXICOLOGY INFORMATION:**

This product contains petroleum base oils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils requires a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

These oils have not been classified by the American Conference of Governmental Industrial Hygienists (ACGIH) as: confirmed human carcinogen (A1), suspected human carcinogen (A2), or confirmed animal carcinogen with unknown relevance to humans (A3).

**SECTION 12 ECOLOGICAL INFORMATION**

**ECOTOXICITY**

This material is not expected to be harmful to aquatic organisms.

The product has not been tested. The statement has been derived from the properties of the individual components.

**MOBILITY**

No data available.



**PERSISTENCE AND DEGRADABILITY**

This material is not expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.

The product has not been tested. The statement has been derived from the properties of the individual components.

**POTENTIAL TO BIOACCUMULATE**

Bioconcentration Factor: No data available.

Octanol/Water Partition Coefficient: No data available

**SECTION 13 DISPOSAL CONSIDERATIONS**

Use material for its intended purpose or recycle if possible. Oil collection services are available for used oil recycling or disposal. Place contaminated materials in containers and dispose of in a manner consistent with applicable regulations. Contact your sales representative or local environmental or health authorities for approved disposal or recycling methods.

**SECTION 14 TRANSPORT INFORMATION**

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**DOT Shipping Description:** NOT REGULATED AS A HAZARDOUS MATERIAL UNDER 49 CFR

**IMO/IMDG Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER THE IMDG CODE

**ICAO/IATA Shipping Description:** NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORT UNDER ICAO

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:**  
Not applicable

**SECTION 15 REGULATORY INFORMATION**

<b>EPCRA 311/312 CATEGORIES:</b>	1. Immediate (Acute) Health Effects:	NO
	2. Delayed (Chronic) Health Effects:	NO
	3. Fire Hazard:	NO
	4. Sudden Release of Pressure Hazard:	NO
	5. Reactivity Hazard:	NO

**REGULATORY LISTS SEARCHED:**

- 01-1=IARC Group 1
- 01-2A=IARC Group 2A
- 01-2B=IARC Group 2B
- 02=NTP Carcinogen
- 03=EPCRA 313
- 04=CA Proposition 65
- 05=MA RTK
- 06=NJ RTK
- 07=PA RTK

No components of this material were found on the regulatory lists above.

**CHEMICAL INVENTORIES:**

All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States).

**NEW JERSEY RTK CLASSIFICATION:**

Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: PETROLEUM OIL (Hydraulic oil)

**SECTION 16 OTHER INFORMATION**

**NFPA RATINGS:** Health: 0 Flammability: 1 Reactivity: 0

**HMIS RATINGS:** Health: 0 Flammability: 1 Reactivity: 0  
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, \*- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

**REVISION STATEMENT:** This revision updates the following sections of this Safety Data Sheet: 1 - 16  
**Revision Date:** FEBRUARY 05, 2016

**ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:**

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on	OSHA - Occupational Safety and Health Administration

Cancer	
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road San Ramon, CA 94583.

**The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.**

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product information**

Product Name : Jet A Aviation Fuel  
Material : 1102484, 1103429, 1102481, 1103418, 1102485, 1102483,  
1102482, 1024254, 1024255, 1024256, 1024257, 1104981,  
1104992

Use : Fuel

**Company** : Chevron Phillips Chemical Company LP  
Specialty Chemicals  
10001 Six Pines Drive  
The Woodlands, TX 77380

**Emergency telephone:****Health:**

866.442.9628 (North America)

1.832.813.4984 (International)

**Transport:**

CHEMTREC 800.424.9300 or 703.527.3887(int'l)

Asia: +800 CHEMCALL (+800 2436 2255) China:+86-21-22157316

EUROPE: BIG +32.14.584545 (phone) or +32.14583516 (telefax)

South America SOS-Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600

Responsible Department : Product Safety and Toxicology Group

E-mail address : SDS@CPChem.com

Website : www.CPChem.com

**SECTION 2: Hazards identification****Classification of the substance or mixture**

This product has been classified in accordance with the hazard communication standard 29 CFR 1910.1200; the SDS and labels contain all the information as required by the standard.

**Emergency Overview****Danger**

**Form:** Liquid    **Physical state:** Liquid    **Color:** Clear light yellow

OSHA Hazards : Flammable Liquid, Carcinogen, Mild skin irritant, Aspiration hazard, Delayed target organ effects

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

**Classification**

: Flammable liquids , Category 3  
 Skin irritation , Category 2  
 Carcinogenicity , Category 2  
 Specific target organ systemic toxicity - single exposure ,  
 Category 3 , Central nervous system  
 Specific target organ systemic toxicity - repeated exposure ,  
 Category 1 , Eyes, Blood  
 Aspiration hazard , Category 1

**Labeling**

Symbol(s)



Signal Word

: Danger

Hazard Statements

: H226: Flammable liquid and vapor.  
 H304: May be fatal if swallowed and enters airways.  
 H315: Causes skin irritation.  
 H336: May cause drowsiness or dizziness.  
 H351: Suspected of causing cancer.  
 H372: Causes damage to organs (Eyes, Blood) through  
 prolonged or repeated exposure.

Precautionary Statements

: **Prevention:**  
 P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been  
 read and understood.  
 P210 Keep away from heat/sparks/open flames/hot surfaces.  
 No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof electrical/ ventilating/ lighting/  
 equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P260 Do not breathe dust/fume/gas/mist/vapor/spray.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ protective clothing/ eye  
 protection/ face protection.  
**Response:**  
 P301 + P310 IF SWALLOWED: Immediately call a POISON  
 CENTER/doctor.  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off  
 immediately all contaminated clothing. Rinse skin with  
 water/shower.  
 P304 + P340 + P312 IF INHALED: Remove person to fresh  
 air and keep comfortable for breathing. Call a POISON  
 CENTER/doctor if you feel unwell.  
 P308 + P313 IF exposed or concerned: Get medical advice/  
 attention.  
 P331 Do NOT induce vomiting.  
 P332 + P313 If skin irritation occurs: Get medical advice/

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

attention.

P362 Take off contaminated clothing and wash before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Carcinogenicity:****IARC**

Group 2B: Possibly carcinogenic to humans

Naphthalene 91-20-3

**NTP**

Reasonably anticipated to be a human carcinogen

Naphthalene 91-20-3

**ACGIH**

Confirmed animal carcinogen with unknown relevance to humans

Kerosene C9-C16 8008-20-6

**SECTION 3: Composition/information on ingredients**

Synonyms : Aviation Turbine Fuel A  
Kerosene Turbine Fuel  
Kerosene  
Jet A-1 Fuel  
Jet A Fuel

Molecular formula : UVCB

Component	CAS-No.	Weight %
Kerosene C9-C16	8008-20-6	100
Naphthalene	91-20-3	0 - 3

**SECTION 4: First aid measures**

General advice : Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled : Consult a physician after significant exposure. If unconscious place in recovery position and seek medical advice.

In case of skin contact : If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.



**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

If swallowed : Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.  
Keep respiratory tract clear. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.

**SECTION 5: Firefighting measures**

Flash point : 37.8 °C (100.0 °F)

Autoignition temperature : 210 °C (410 °F)

Suitable extinguishing media : Alcohol-resistant foam. Carbon dioxide (CO<sub>2</sub>). Dry chemical.

Unsuitable extinguishing media : High volume water jet.

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.

Fire and explosion protection : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Hazardous decomposition products : Hydrocarbons. Carbon oxides.

**SECTION 6: Accidental release measures**

Personal precautions : Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions : Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

**SECTION 7: Handling and storage****Handling**

Advice on safe handling : Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

**Storage**

Requirements for storage areas and containers : No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

**SECTION 8: Exposure controls/personal protection****Ingredients with workplace control parameters****US**

Ingredients	Basis	Value	Control parameters	Note
Kerosene C9-C16	ACGIH	TWA	200 mg/m3	CNS impair, URT irr, skin irr, P, A3, Skin, varies.
	OSHA Z-1	TWA	500 ppm, 2,000 mg/m3	(b).
	OSHA Z-1-A	TWA	400 ppm, 1,600 mg/m3	
Naphthalene	ACGIH	TWA	10 ppm,	hematologic eff, URT irr, eye irr, eye dam, (), A4, Skin,
	ACGIH	STEL	15 ppm,	hematologic eff, URT irr, eye irr, eye dam, (), A4, Skin,
	OSHA Z-1	TWA	10 ppm, 50 mg/m3	(b).
	OSHA Z-1-A	TWA	10 ppm, 50 mg/m3	
	OSHA Z-1-A	STEL	15 ppm, 75 mg/m3	

- ( ) Adopted values or notations enclosed are those for which changes are proposed in the NIC  
 (b) The value in mg/m3 is approximate.  
 A3 Confirmed animal carcinogen with unknown relevance to humans  
 A4 Not classifiable as a human carcinogen  
 CNS impair Central Nervous System impairment  
 eye dam Eye damage  
 eye irr Eye irritation  
 hematologic eff Hematologic effects  
 P Application restricted to conditions in which there are negligible aerosol exposures  
 Skin Danger of cutaneous absorption  
 skin irr Skin irritation  
 URT irr Upper Respiratory Tract irritation

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

varies varies

**Immediately Dangerous to Life or Health Concentrations (IDLH)**

Substance name	CAS-No.	Control parameters	Update
Naphthalene	91-20-3	Immediately Dangerous to Life or Health Concentration Value 250 ppm	1995-03-01

**Engineering measures**

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

**Personal protective equipment**

- Respiratory protection : Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.
- Hand protection : The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : Eye wash bottle with pure water. Tightly fitting safety goggles.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.
- Hygiene measures : When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****Appearance**

- Form : Liquid  
Physical state : Liquid

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

Color	: Clear light yellow
<b>Safety data</b>	
Flash point	: 37.8 °C (100.0 °F)
Lower explosion limit	: 0.6 %(V)
Upper explosion limit	: 4.7 %(V)
Oxidizing properties	: no
Autoignition temperature	: 210 °C (410 °F)
Molecular formula	: UVCB
Molecular weight	: Not applicable
pH	: Not applicable
Pour point	: No data available
Boiling point/boiling range	: 149 - 300 °C (300 - 572 °F)
Vapor pressure	: 0.40 MMHG
Relative density	: 0.775 at 20 °C (68 °F)
Density	: 806.5 g/l
Water solubility	: Negligible
Partition coefficient: n-octanol/water	: No data available
Viscosity, kinematic	: 1.5 cSt at 20 °C (68 °F)
Relative vapor density	: 4.5 (Air = 1.0)
Evaporation rate	: 1
Percent volatile	: > 99 %

**SECTION 10: Stability and reactivity**

Chemical stability : This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

Conditions to avoid : Heat, flames and sparks.

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

- Materials to avoid : May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
- Hazardous decomposition products : Hydrocarbons  
Carbon oxides
- Other data : No decomposition if stored and applied as directed.

**SECTION 11: Toxicological information**

- Jet A Aviation Fuel**  
**Acute oral toxicity** : LD50: > 5,000 mg/kg  
Species: Rat
- Acute inhalation toxicity**  
Kerosene C9-C16 : LC50: > 5.2 mg/l  
Exposure time: 4 h  
Species: Rat
- Acute dermal toxicity**  
Kerosene C9-C16 : LD50: >2000 milligram per kilogram  
Species: Rabbit
- Jet A Aviation Fuel**  
**Skin irritation** : May cause skin irritation in susceptible persons.
- Jet A Aviation Fuel**  
**Eye irritation** : Vapors may cause irritation to the eyes, respiratory system and the skin.
- Jet A Aviation Fuel**  
**Sensitization** : No adverse effects expected.
- Repeated dose toxicity**  
Kerosene C9-C16 : Species: Rabbit  
Application Route: Dermal  
Dose: 0, 200, 1000, 2000 mg/kg  
Exposure time: 28 day  
Number of exposures: 3 times/wk  
Lowest observable effect level: 1,000 mg/kg
- Carcinogenicity**  
Kerosene C9-C16 : Species: Mouse  
Dose: 0, 28.5, 50, 100%  
Exposure time: 104 wks  
Number of exposures: 2, 4, or 7 times/wk  
Remarks: Weak dermal carcinogen
- Naphthalene : Species: Mouse  
Sex: male

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

Dose: 10, 30 ppm  
 Exposure time: 105 weeks  
 Number of exposures: 6 hours/day, 5 days/week  
 Test substance: yes  
 Print Date: No information available.  
 Remarks: No evidence of carcinogenicity

Species: Mouse  
 Sex: female  
 Dose: 10, 30 ppm  
 Exposure time: 105 weeks  
 Number of exposures: 6 hours/day, 5 days/week  
 Test substance: yes  
 Print Date: No information available.  
 Remarks: increased incidence of alveolar/bronchiolar adenomas

Species: Rat  
 Sex: male and female  
 Dose: 10, 30, 60 ppm  
 Exposure time: 105 weeks  
 Number of exposures: 6 hours/day, 5 days/week  
 Test substance: yes  
 Print Date: No information available.  
 Remarks: nose respiratory epithelial adenoma, increased incidence of olfactory neuroblastomas

**Developmental Toxicity**

Kerosene C9-C16 : Species: Rat  
 Application Route: Inhalation  
 Dose: 0, 106, 364 ppm  
 Exposure time: 6 hrs/d  
 Test period: GD 6-15  
 NOAEL Teratogenicity: 364 ppm  
 NOAEL Maternal: 364 ppm

Naphthalene : Species: Rabbit  
 Application Route: oral gavage  
 Dose: 40, 200, 400 mg/kg  
 Test period: 29 d, GD 6-18  
 NOAEL Teratogenicity: 400 mg/kg

**Jet A Aviation Fuel  
Aspiration toxicity**

: May be fatal if swallowed and enters airways.  
 Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard.

**CMR effects**

Naphthalene : Carcinogenicity: Limited evidence of carcinogenicity in animal studies

**Jet A Aviation Fuel  
Further information**

: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

may decrease the skin.

**SECTION 12: Ecological information****Toxicity to fish**

Kerosene C9-C16 : LL50: 2 - 5 mg/l  
 Exposure time: 96 h  
 Species: Oncorhynchus mykiss (rainbow trout)  
 Method: OECD Test Guideline 203

Naphthalene LC50: 3.2 mg/l  
 Exposure time: 96 h  
 Species: Pimephales promelas (fathead minnow)

**Toxicity to daphnia and other aquatic invertebrates**

Kerosene C9-C16 : EL50: 1.4 mg/l  
 Exposure time: 48 h  
 Species: Daphnia magna (Water flea)  
 Method: OECD Test Guideline 202

Naphthalene LC50: 2.16 mg/l  
 Exposure time: 48 h  
 Species: Daphnia magna (Water flea)

**Toxicity to algae**

Kerosene C9-C16 : EL50: 1 - 3 mg/l  
 Exposure time: 72 h  
 Species: Raphidocellus subcapitata (algae)  
 Method: OECD Test Guideline 201

Naphthalene EC50: 2.96 mg/l  
 Exposure time: 48 h  
 Species: Selenastrum capricornutum (algae)

**Elimination information (persistence and degradability)**

Biodegradability : Expected to be ultimately biodegradable

**Ecotoxicology Assessment**

Acute aquatic toxicity  
 Kerosene C9-C16 : Toxic to aquatic life.

Naphthalene : Very toxic to aquatic life.

Chronic aquatic toxicity  
 Kerosene C9-C16 : Toxic to aquatic life with long lasting effects.

Naphthalene : Very toxic to aquatic life with long lasting effects.

Additional ecological : Toxic to aquatic life with long lasting effects.

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

information

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

**SECTION 13: Disposal considerations**

The information in this SDS pertains only to the product as shipped.

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

**Product** : The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

**Contaminated packaging** : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

**SECTION 14: Transport information**

**The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).**

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, III

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, III, (37.8 °C), MARINE POLLUTANT, (KEROSENE)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, III

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS, (KEROSENE)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, III, ENVIRONMENTALLY HAZARDOUS,



**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

(KEROSENE)

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**

UN1863, FUEL, AVIATION, TURBINE ENGINE, 3, III, ENVIRONMENTALLY HAZARDOUS, (KEROSENE)

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code****SECTION 15: Regulatory information****National legislation**

**SARA 311/312 Hazards** : Acute Health Hazard  
Chronic Health Hazard

**EPCRA - EMERGENCY PLANNING COMMUNITY RIGHT - TO - KNOW**

CERCLA Reportable Quantity : 3333 lbs  
Naphthalene

SARA 302 Reportable Quantity : This material does not contain any components with a SARA 302 RQ.

SARA 302 Threshold Planning Quantity : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304 Reportable Quantity : This material does not contain any components with a section 304 EHS RQ.

SARA 313 Ingredients : The following components are subject to reporting levels established by SARA Title III, Section 313:  
: Naphthalene - 91-20-3

**Clean Air Act**

Ozone-Depletion Potential : This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMII Intermediate or Final VOC's (40 CFR 60.489).

**US State Regulations****Pennsylvania Right To Know**

: Kerosene C9-C16 - 8008-20-6  
Naphthalene - 91-20-3

**New Jersey Right To Know**

: Kerosene C9-C16 - 8008-20-6  
Naphthalene - 91-20-3

**California Prop. 65  
Ingredients**

: WARNING! This product contains a chemical known in the State of California to cause cancer.

**Notification status**

Europe REACH	:	This mixture contains only ingredients which have been subject to a pre-registration according to Regulation (EU) No. 1907/2006 (REACH).
Switzerland CH INV	:	On the inventory, or in compliance with the inventory
United States of America TSCA	:	On TSCA Inventory
Canada DSL	:	All components of this product are on the Canadian DSL
Australia AICS	:	On the inventory, or in compliance with the inventory
New Zealand NZIoC	:	On the inventory, or in compliance with the inventory
Japan ENCS	:	On the inventory, or in compliance with the inventory
Korea KECI	:	On the inventory, or in compliance with the inventory
Philippines PICCS	:	On the inventory, or in compliance with the inventory
China IECSC	:	On the inventory, or in compliance with the inventory

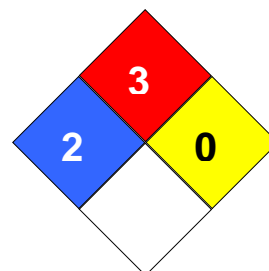
**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

**SECTION 16: Other information**

**NFPA Classification** : Health Hazard: 2  
Fire Hazard: 3  
Reactivity Hazard: 0

**Further information**

Legacy SDS Number : 1975

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LD50	Lethal Dose 50%
AICS	Australia, Inventory of Chemical Substances	LOAEL	Lowest Observed Adverse Effect Level
DSL	Canada, Domestic Substances List	NFPA	National Fire Protection Agency
NDSL	Canada, Non-Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
CNS	Central Nervous System	NTP	National Toxicology Program
CAS	Chemical Abstract Service	NZIoC	New Zealand Inventory of Chemicals
EC50	Effective Concentration	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration 50%	NOEC	No Observed Effect Concentration
EGEST	EOSCA Generic Exposure Scenario Tool	OSHA	Occupational Safety & Health Administration
EOSCA	European Oilfield Specialty Chemicals Association	PEL	Permissible Exposure Limit
EINECS	European Inventory of Existing Chemical Substances	PICCS	Philippines Inventory of Commercial Chemical Substances
MAK	Germany Maximum Concentration Values	PRNT	Presumed Not Toxic
GHS	Globally Harmonized System	RCRA	Resource Conservation Recovery Act
>=	Greater Than or Equal To	STEL	Short-term Exposure Limit
IC50	Inhibition Concentration 50%	SARA	Superfund Amendments and Reauthorization Act.
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
IECSC	Inventory of Existing Chemical	TWA	Time Weighted Average

**Jet A Aviation Fuel**

Version 2.2

Revision Date 2016-05-17

	Substances in China		
ENCS	Japan, Inventory of Existing and New Chemical Substances	TSCA	Toxic Substance Control Act
KECI	Korea, Existing Chemical Inventory	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
<=	Less Than or Equal To	WHMIS	Workplace Hazardous Materials Information System
LC50	Lethal Concentration 50%		

## MATERIAL SAFETY DATA SHEET

Product Trade Name: **QUIK-GEL®**

Revision Date: 03-Jan-2008

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: QUIK-GEL®  
Synonyms: None  
Chemical Family: Mineral  
Application: Viscosifier  
Manufacturer/Supplier: Baroid Fluid Services  
Product Service Line of Halliburton  
P.O. Box 1675  
Houston, TX 77251  
Telephone: (281) 871-4000  
Emergency Telephone: (281) 575-5000

Prepared By: Chemical Compliance  
Telephone: 1-580-251-4335  
e-mail: fdunexchem@halliburton.com

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
Bentonite	1302-78-9	60 - 100%	Not applicable	Not applicable
Crystalline silica, quartz	14808-60-7	1 - 5%	0.025 mg/m <sup>3</sup>	10 mg/m <sup>3</sup> %SiO <sub>2</sub> + 2
Crystalline silica, cristobalite	14464-46-1	0 - 1%	0.025 mg/m <sup>3</sup>	1/2 x 10 mg/m <sup>3</sup> %SiO <sub>2</sub> + 2
Crystalline silica, tridymite	15468-32-3	0 - 1%	0.05 mg/m <sup>3</sup>	1/2 x 10 mg/m <sup>3</sup> %SiO <sub>2</sub> + 2

More restrictive exposure limits may be enforced by some states, agencies, or other authorities.

### 3. HAZARDS IDENTIFICATION

#### Hazard Overview

**CAUTION! - ACUTE HEALTH HAZARD**

May cause eye and respiratory irritation.

**DANGER! - CHRONIC HEALTH HAZARD**

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease.

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposures below recommended exposure limits. Wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Review the Material Safety Data Sheet (MSDS) for this product, which has been provided to your employer.

### 4. FIRST AID MEASURES

#### Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

#### Skin

Wash with soap and water. Get medical attention if irritation persists.

#### Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

#### Ingestion

Under normal conditions, first aid procedures are not required.

#### Notes to Physician

Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

Flash Point/Range (F): Not Determined

Flash Point/Range (C): Not Determined

Flash Point Method: Not Determined

Autoignition Temperature (F): Not Determined

Autoignition Temperature (C): Not Determined

Flammability Limits in Air - Lower (%): Not Determined

Flammability Limits in Air - Upper (%): Not Determined

Fire Extinguishing Media All standard firefighting media.

Special Exposure Hazards Not applicable.

Special Protective Equipment for Fire-Fighters Not applicable.

NFPA Ratings: Health 0, Flammability 0, Reactivity 0

HMIS Ratings: Health 0\*, Flammability 0, Physical Hazard 0, PPE: E

### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures None known.

**Procedure for Cleaning / Absorption**

Collect using dustless method and hold for appropriate disposal. Consider possible toxic or fire hazards associated with contaminating substances and use appropriate methods for collection, storage and disposal.

**7. HANDLING AND STORAGE**

**Handling Precautions**

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH certified, European Standard En 149, or equivalent respirator when using this product. Material is slippery when wet.

**Storage Information**

Use good housekeeping in storage and work areas to prevent accumulation of dust. Close container when not in use. Keep from excessive heat. Do not reuse empty container.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls**

Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits listed in Section 2.

**Respiratory Protection**

Wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product.

**Hand Protection**

Normal work gloves.

**Skin Protection**

Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.

**Eye Protection**

Wear safety glasses or goggles to protect against exposure.

**Other Precautions**

None known.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Powder
<b>Color:</b>	Various
<b>Odor:</b>	Mild earthy
<b>pH:</b>	8-10
<b>Specific Gravity @ 20 C (Water=1):</b>	2.6
<b>Density @ 20 C (lbs./gallon):</b>	Not Determined
<b>Bulk Density @ 20 C (lbs/ft3):</b>	47.6-72.1
<b>Boiling Point/Range (F):</b>	Not Determined
<b>Boiling Point/Range (C):</b>	Not Determined
<b>Freezing Point/Range (F):</b>	Not Determined
<b>Freezing Point/Range (C):</b>	Not Determined
<b>Vapor Pressure @ 20 C (mmHg):</b>	Not Determined
<b>Vapor Density (Air=1):</b>	Not Determined
<b>Percent Volatiles:</b>	Not Determined
<b>Evaporation Rate (Butyl Acetate=1):</b>	Not Determined
<b>Solubility in Water (g/100ml):</b>	Slightly soluble
<b>Solubility in Solvents (g/100ml):</b>	Not Determined
<b>VOCs (lbs./gallon):</b>	Not Determined
<b>Viscosity, Dynamic @ 20 C (centipoise):</b>	Not Determined
<b>Viscosity, Kinematic @ 20 C (centistrokes):</b>	Not Determined
<b>Partition Coefficient/n-Octanol/Water:</b>	Not Determined

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Molecular Weight (g/mole): Not Determined

## 10. STABILITY AND REACTIVITY

<b>Stability Data:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Conditions to Avoid</b>	None anticipated
<b>Incompatibility (Materials to Avoid)</b>	Hydrofluoric acid.
<b>Hazardous Decomposition Products</b>	Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).
<b>Additional Guidelines</b>	Not Applicable

## 11. TOXICOLOGICAL INFORMATION

<b>Principle Route of Exposure</b>	Eye or skin contact, inhalation.
<b>Inhalation</b>	<p>Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A).</p> <p>Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below).</p>
<b>Skin Contact</b>	May cause mechanical skin irritation.
<b>Eye Contact</b>	May cause eye irritation.
<b>Ingestion</b>	None known
<b>Aggravated Medical Conditions</b>	Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to quartz dust.



**Chronic Effects/Carcinogenicity** Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

**Other Information** For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, pages 761-768 (1997).

#### **Toxicity Tests**

<b>Oral Toxicity:</b>	Not determined
<b>Dermal Toxicity:</b>	Not determined
<b>Inhalation Toxicity:</b>	Not determined
<b>Primary Irritation Effect:</b>	Not determined
<b>Carcinogenicity</b>	Refer to <u>IARC Monograph 68, Silica, Some Silicates and Organic Fibres</u> (June 1997).
<b>Genotoxicity:</b>	Not determined
<b>Reproductive / Developmental Toxicity:</b>	Not determined

## **12. ECOLOGICAL INFORMATION**

**Mobility (Water/Soil/Air)** Not determined

**Persistence/Degradability** Not determined

**Bio-accumulation** Not Determined

#### **Ecotoxicological Information**

**Acute Fish Toxicity:** TLM96: 10000 ppm (Oncorhynchus mykiss)  
**Acute Crustaceans Toxicity:** Not determined

<b>Acute Algae Toxicity:</b>	Not determined
<b>Chemical Fate Information</b>	Not determined
<b>Other Information</b>	Not applicable

**13. DISPOSAL CONSIDERATIONS**

<b>Disposal Method</b>	Bury in a licensed landfill according to federal, state, and local regulations.
<b>Contaminated Packaging</b>	Follow all applicable national or local regulations.

**14. TRANSPORT INFORMATION**

**Land Transportation**

**DOT**  
Not restricted

**Canadian TDG**  
Not restricted

**ADR** Not restricted

**Air Transportation**

**ICAO/IATA** Not restricted

**Sea Transportation**

**IMDG** Not restricted

**Other Shipping Information**

**Labels:** None

**15. REGULATORY INFORMATION**

**US Regulations**

<b>US TSCA Inventory</b>	All components listed on inventory.
<b>EPA SARA Title III Extremely Hazardous Substances</b>	Not applicable
<b>EPA SARA (311,312) Hazard Class</b>	Acute Health Hazard Chronic Health Hazard
<b>EPA SARA (313) Chemicals</b>	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	Not applicable.
<b>EPA RCRA Hazardous Waste Classification</b>	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
<b>California Proposition 65</b>	The California Proposition 65 regulations apply to this product.

<b>MA Right-to-Know Law</b>	One or more components listed.
<b>NJ Right-to-Know Law</b>	One or more components listed.
<b>PA Right-to-Know Law</b>	One or more components listed.
<b>Canadian Regulations</b>	
<b>Canadian DSL Inventory</b>	All components listed on inventory.
<b>WHMIS Hazard Class</b>	D2A Very Toxic Materials Crystalline silica

## 16. OTHER INFORMATION

### The following sections have been revised since the last issue of this MSDS

Not applicable

#### Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

#### Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

**\*\*\*END OF MSDS\*\*\***



# Material Safety Data Sheet For Portland Cement

## Section I - Identity

**Manufacturer's name and address:** Ash Grove Cement Company 11011 Cody Overland Park, KS 66210

**Emergency Telephone Number:** (913) 451-8900

**Chemical Name and Synonyms:** Portland Cement (CAS #65997-15-1)

**Trade Name and Synonyms:** Type I, IA, II, III, V

**Revision Date:** March 2010 (This revision supercedes all previous versions)

**Chemical Family:** Calcium Salts

**Formula:** Portland cement consists of finely ground portland cement clinker mixed with a small amount of calcium sulfate (gypsum) to control set. No specific formula applies to portland cement.

## Section II - Hazardous Ingredients

**Ingredients:** Substances similar to the following are known to be present in portland cement:

3CaO.SiO<sub>2</sub> (CAS # 12168-85-3)  
2CaO.SiO<sub>2</sub> (CAS # 10034-77-2)  
3CaO.Al<sub>2</sub>O<sub>3</sub> (CAS # 12042-78-3)  
4CaO.Al<sub>2</sub>O<sub>3</sub>.Fe<sub>2</sub>O<sub>3</sub> (CAS # 12068-35-8)  
CaSO<sub>4</sub>.XH<sub>2</sub>O (CAS # 13397-24-5)

Small amounts of CaO, MgO, K<sub>2</sub>SO<sub>4</sub>, Na<sub>2</sub>SO<sub>4</sub> may also be present.

### Hazardous Components(s):

Substance	CAS Number	OSHA PEL	ACGIH TLV-TWA	MSHA Exposure Limits
Portland Cement – total dust	65997-15-1	15 mg/m <sup>3</sup>	1 mg/m <sup>3</sup> (2010) * (Respirable Dust)	10 mg/m <sup>3</sup>
Portland Cement - respirable dust	65997-15-1	5 mg/m <sup>3</sup>	Not Applicable	Not Applicable
Quartz	14808-60-7	10 mg/m <sup>3</sup> (% silica + 2)	0.025 mg/m <sup>3</sup> (2006) (respirable fraction)	10 mg/m <sup>3</sup> (% silica + 2)

**Note:** Some portland cements may contain small amounts of crystalline silica (slightly more than 0.1%).

\* Applicable if <1% crystalline silica is present.

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### Section III - Physical Data

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**Boiling Point:** Not applicable.

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not applicable.

**Solubility in Water:** Slight (0.1-1.0%)

**pH (in water) (ASTM D 1293-95):** 12 - 13

**Specific Gravity: (H<sub>2</sub>O=1)** 2.9 - 3.1

**Evaporation Rate:** Not applicable.

**Appearance and Odor:** Gray powder; no odor.

**Melting Point:** Not applicable

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### Section IV - Fire and Explosion Hazard Data

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**Flash Point:** Portland cement is noncombustible and not explosive.

**Flammable or Explosive Limits:** Not applicable.

**Extinguishing Media:** Not applicable

**Special Firefighting Procedures:** Not applicable. (Although portland cement poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.)

**Unusual Fire and Explosion Hazards:** Not applicable.

**Lower Explosive Limit:** Not applicable.

**Upper Explosive Limit:** Not applicable.

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### Section V - Health Hazard Data

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**Acute Effects:** Wet cement on unprotected skin, whether direct or through saturated clothing, can cause severe, third degree caustic burns. **NOTE: Portland cement burns skin with little warning; discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. The severity of the burn may not be detected until several hours after the damage begins.** Dry portland cement can produce mild irritation to severe burns of the eye; it can irritate the upper respiratory system.

**Chronic Effects:** Dry portland cement can cause inflammation of the lining of the nose and the cornea. Repeated exposure to portland cement may result in drying of the skin and may lead to thickening, cracking, or fissuring of the skin. Hypersensitive individuals may develop an allergic dermatitis (possibly due to trace amounts of hexavalent chromium at less than 0.005%). This reaction may appear in several forms including a mild rash to severe skin ulcers. Persons already sensitized may react to their first contact with the product. Other persons may experience this effect after years of exposure to portland cement products.

While portland cement typically has less than 0.2% crystalline silica, other additives to portland cement and those components (e.g. aggregates) added to produce portland cement concrete may significantly increase the amount of crystalline silica that is present. Exposure to respirable crystalline silica without the use of a respirator can cause silicosis and may aggravate other lung conditions.

**Signs and Symptoms of Exposure:** Burning sensation around moist tissue areas (i.e., eyes, nose, upper respiratory system); painful burning on exposed skin that can develop with little warning. **Exposure of sufficient duration to wet portland cement can cause serious, potentially irreversible tissue (skin or eye) destruction in the form of chemical (caustic) burns, including third degree burns.** The same kind of destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry portland cement. **DO NOT ALLOW WET PORTLAND CEMENT TO GET INSIDE BOOTS, SHOES, OR GLOVES AND DO NOT ALLOW WET, SATURATED CLOTHING TO REMAIN AGAINST THE SKIN.**

**Medical Conditions Generally Aggravated by Exposure:** Pre-existing skin conditions may be worsened. Silicosis may aggravate other chronic pulmonary conditions and may increase the risk of pulmonary tuberculosis infection.

**Chemical Listed as Carcinogenic or Potential Carcinogen:** Portland cements are not considered carcinogenic.

However, the International Agency for Research on Cancer (IARC) has determined, primarily through animal studies, that silica is a known human carcinogen. The National Toxicology Program (NTP) has characterized respirable quartz silica as reasonably anticipated to be a carcinogen. OSHA does not regulate silica as a carcinogen.

**Emergency and First Aid Procedures:** Irrigate eyes immediately and repeatedly with large amount of clean water for at least 15 minutes and get prompt medical attention. Wash exposed skin areas with pH-neutral soap and clean water. Apply sterile dressings; seek medical treatment in all cases of prolonged exposure to wet portland cement, portland cement mixtures, liquids from fresh portland cement products, or prolonged wet skin exposure to dry portland cement. If ingested, consult a physician immediately. Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. In the event of inhalation, remove to fresh air. Seek medical attention if coughing and other symptoms do not subside. Inhalation of gross amounts of portland cement requires immediate medical attention.

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## Section VII-Reactivity Data

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**Stability:** Product is stable. Keep dry until used.

**Incompatibility:** Aluminum powder and other alkali and alkaline earth elements will react in wet mortar or concrete, liberating hydrogen gas. Portland cement is highly alkaline and will react with acids to produce a violent, heat-generating reaction. Toxic gases or vapors may be given off depending on the acid involved.

**Hazardous Decomposition Products:** None

**Hazardous Polymerization:** Will not occur.

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## Section VII - Spill Procedures

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**Steps to be taken in case material is spilled:** Use dry cleanup methods that do not disperse the dust into the air. Avoid breathing the dust. Emergency procedures are not required.

**Disposal Method:** Small amounts of material can be returned to the container for later use if it is not contaminated. Dispose of waste material in accordance with Federal, State and local requirements. Portland cement is not a hazardous waste as defined by the Resource Conservation and Recovery Act (40 CFR 261).

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## Section VIII - Special Protection Information

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**Respiratory Protection:** Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits.

Use NIOSH/MSHA-approved (under 30 CFR 11) or NIOSH-approved (under 42 CFR 84) respirators in poorly ventilated areas, if an applicable exposure limit is exceeded, or when dust causes discomfort or irritation. (Advisory: Respirators and filters purchased after July 10, 1998 must be certified under 42 CFR 84.)

**Ventilation:** Local exhaust can be used to control airborne dust levels.

**Eye Protection:** When engaged in activities where portland cement dust or wet portland cement or concrete could contact the eye, wear goggles or safety glasses with sideshields. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with portland cement or wet portland cement products.

**Skin Protection:** Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened (wet) portland cement products. If contact occurs, promptly wash affected area with soap and water. **DO NOT ALLOW WET PORTLAND CEMENT TO GET INSIDE BOOTS, SHOES, OR GLOVES AND DO NOT ALLOW WET, SATURATED CLOTHING TO REMAIN AGAINST THE SKIN.**

Do not rely on barrier creams; barrier creams should not be used in place of gloves. Use impervious, abrasion- and alkali-resistant gloves, boots and protective clothing to protect the skin from prolonged contact with wet portland cement in plastic concrete, mortar or slurries.

**Work/Hygienic Practices:** Periodically wash areas contacted by dry portland cement or by wet portland cement or concrete fluids with a pH neutral soap and clean, uncontaminated water. Wash again at the end of the work. If irritation occurs, immediately wash the affected area and seek treatment. If clothing becomes saturated with wet portland cement or concrete, it should be removed and replaced with clean dry clothing. Follow listed precautions as appropriate during repair or maintenance work on contaminated equipment.

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## Section IX – Transportation Information

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**Hazardous materials/proper shipping name description:**

Portland cement is not hazardous under U.S. Department of Transportation (DOT) regulations.

**Hazard class:**

Not applicable

**Identification number:**

Not applicable

**Required label text:**

Not applicable

**Hazardous substances / reportable quantities (RQ)**

Not applicable

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## Section X – Other Regulatory Information

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**Status under USDOL-OSHA Hazard Communication Standard (29 CFR 1910.1200)**

Portland cement is considered a “hazardous chemical” under this regulation and should be a part of any Hazard Communication Program.

**Status under CERCLA / Superfund 40 CFR 117 and 302**

Not listed.

**Status under SARA (Title III), Sections 311 and 312**

Portland cement qualifies as a “hazardous substance” with delayed health effects.

**Status under SARA (Title III), Section 313**

This product may contain constituents listed under SARA (Title III) Section 313, but not in amounts requiring supplier notification under 40 CFR Part 372 Subpart C.

**Status under TSCA (as of May 1997)**

Portland cement and some of the substances in portland cement are on the TSCA inventory list.

**Status under the Federal Hazardous Substances Act**

Portland cement is a “hazardous substance” subject to statutes promulgated under the subject act.

**Status under California Proposition 65**

This product contains crystalline silica and chemicals (trace metals) known to the State of California to cause cancer, birth defects or other reproductive harm. California law requires the above warning in the absence of definitive testing to prove the defined risks do not exist.

**Status under the Canadian Environmental Protection Act**

Not listed.



**Status under WHMIS**

Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class E – Corrosive Material) and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).

**Other Important Information**

Portland cement should only be used by knowledgeable persons. A key to using the product safely requires the user to recognize that portland cement reacts with water, and that some of the intermediate products of this reaction (that is, those present while portland cement is “setting”) pose a far more severe hazard than does portland cement itself.

While the information provided in this material safety data sheet is thought to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot anticipate and provide all the information that might be needed in every situation. Inexperienced product users should obtain training before using this product.

In particular, the data provided in this sheet do not address hazards that may be posed by other materials that may be added to portland cement to produce portland cement products. Users should review other relevant material safety data sheets before working with this portland cement or on portland cement products, for example portland cement concrete.

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This product neither contains nor is directly manufactured with any controlled ozone depleting substances, Class I and II.