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## **APPRAISAL REVIEW REPORT**

**Alaska Mental Health Trust Land Exchange, Phase 1  
Federal Parcel Naukati Phase 1  
Ketchikan, Alaska**

**Date of Review Report: November 19, 2018**

**Prepared by:**

**Gregory L. Graybadger, MAI, RPRA  
USDA Forest Service, Senior Review Appraiser**



**USDA FOREST SERVICE**

## APPRAISAL REVIEW REPORT

### Introduction

On May 5, 2017, Federal legislation was passed directing the USDA Forest Service to exchange certain lands with the Alaska Mental Health Trust Authority. The legislation is The Consolidated Appropriations Act, 2017, P.L. 115-31, Div. G, Section 431(a)(2) the “Alaska Mental Health Trust Land Exchange Act of 2017,” (“the Act”).

The exchange is to be conducted in 2 phases. Phase 1 will consist of non-Federal parcels K-1 and K-2, described in the Act, and the Federal parcel named Naukati Phase 1 in the Act. Phase 1 does not provide for equalization of any difference in values. Such differences would be carried forward and addressed in Phase 2. Appraisals were needed for each of the two ownerships for Phase 1: one appraisal report for the Federal land and one appraisal report for the non-Federal land. This appraisal review report concerns the appraisal for the Federal land in Phase 1.

The Act provides for public review by stating, “...*the Secretary shall make available for public review summaries of the appraisals of the Federal land and the non-Federal land for the applicable phase.*” This appraisal review report provides the summary of the appraisal of the Federal land in Phase 1.

The appraisal and appraisal report under review were developed and reported by Charles Horan, MAI, of Horan & Company, LLC, Sitka, Alaska. Mr. Horan utilized the services of Clare Doig, CF, ACF, of Forest & Land Management, Inc., Anchorage, Alaska, to evaluate the potential timber resources. The appraiser and the appraiser’s forester considered the timber resources based upon a timber cruise performed by Pacific Northwest Forestry LLC. The Uniform Standards of Professional Appraisal Practice prohibits their discussion of the appraisal with anyone other than their Client. Any inquiries should be directed to the USDA Forest Service.

I have reviewed the appraisal report for the Federal land parcel Naukati Phase 1, as described in the Act, with an effective date of value of February 8, 2018 and a report date of November 15, 2018. As a result of this review, I **accept and approve for agency use** the appraisal report which concludes a market value opinion for this parcel, as follows:

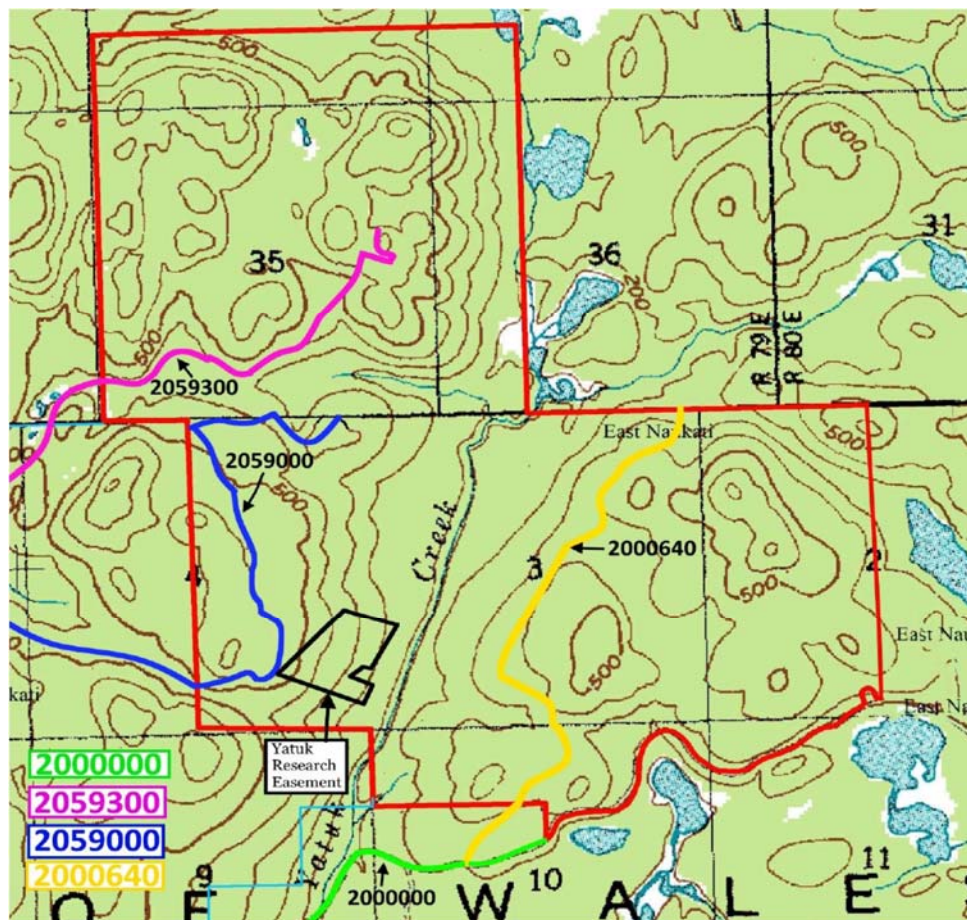
**Naukati Phase 1                      \$3,408,700**

This technical appraisal review report is presented in four sections:

- 1. APPRAISAL REPORT SUMMARY,**
- 2. APPRAISAL REVIEW PURPOSE, SCOPE, AND INTENDED USE,**
- 3. REVIEWER’S ANALYSIS, COMMENTS, AND CONCLUSIONS, AND**
- 4. REVIEWER’S CERTIFICATION AND QUALIFICATIONS.**



## 1. APPRAISAL REPORT SUMMARY



The appraisal report under review was submitted pursuant to a USDA Forest Service contract for appraisal services. The contractor/appraiser is Charles Horan, MAI of Horan & Company, Sitka, Alaska. The total document size is 306 pages and the report date is November 15, 2018. The effective date of value is February 8, 2018.

The appraisal report begins with a cover/title page, letter of transmittal, table of contents, signed certification, and an executive summary. The map shown above is from the appraisal report executive summary to assist the reader in understanding the location and configuration of the subject parcel: Photos are shown later in the appraisal report. The subject property is 2,422.64 acres of forest land on Prince of Wales Island in southeast Alaska.

### **Purpose of Appraisal and Background:**

The appraisal report presents a synopsis of the Alaska Mental Health Trust Land Exchange Act of 2017, and states that the purpose of the appraisal is to conclude an opinion of Market Value as defined at 36 CFR 254, Subpart A, 254.2 for use in the exchange.



**Hypothetical Condition and Statement of Assumptions and Limiting Conditions:**

The appraisal is made subject to one “Hypothetical Condition” identified in the appraisal report as follows:

*“The appraiser assumes that the lands and interests are in private ownership, zoned consistent with similar privately owned properties in the area, and are available for sale on the open market. As this is contrary to what exists as of the effective date of appraisal, it is noted as a hypothetical condition. The hypothetical conditions may have affected the assignment results.”*

Use of this hypothetical condition is consistent with the requirements of USPAP, UASFLA and Federal regulations relating to land exchanges. The appraisal report also specifies 12 general assumptions and limiting conditions which are ordinary and typical of real estate appraisals generally. No extraordinary assumptions are stated.

**Client:**

The appraiser’s client is the USDA Forest Service, represented by the assigned agency review appraiser.

**Intended Users:**

Intended users of the appraisal include the USDA Forest Service, the Alaska Mental Health Trust, and their authorized representatives.

**Intended Use:**

The intended use of the appraisal is to provide a credible, reliable, accurate and properly supported opinion of the market value of the subject properties, as a basis for conducting the land exchange as directed in the Alaska Mental Health Trust Land Exchange Act of 2017.

**Definition of Market Value:**

The appraisal report recites the definition and the source of the market value definition from 36 CFR 254, Subpart A, §254.2 as follows:

*“Market value means the most probable price in terms of cash, or terms equivalent to cash, which land or interests in lands should bring in a competitive and open market under all conditions requisite to a fair sale, where the buyer and seller each acts prudently and knowledgeably, and the price is not affected by undue influence.”*

A jurisdictional exception from USPAP is cited, as the opinion of market value is not linked to a specific exposure time which would otherwise be required by USPAP.

**Effective Date, Inspections and Landowner Contact:**

The report states an effective date of value of February 8, 2018, which coincides with the last date of the appraiser’s inspection of the subject property. The owner of the property which is the subject of this appraisal is the United States of America and it is managed by the USDA Forest



Service. The appraiser Charles Horan and the appraiser's forester, Clare Doig, met with USDA Forest Service personnel, in person and by telephone. The landowner's representatives were offered the opportunity to accompany the appraiser's inspection, but declined. A separate inspection of the subject property was conducted by USDA Forest Service staff members Greg Graybadger, Senior Review Appraiser, William Crawford, Regional Appraiser, and Hillary Woods, Realty Specialist, from an aerial inspection flight on October 26, 2017.

### **Property Rights Appraised:**

The estate appraised is the "as-is" fee interest, as encumbered by any existing easements, encroachments and restrictions, consisting primarily of the following:

1. A right-of-way thereon for ditches or canals constructed by the authority of the United States.
2. National Forest System Roads (NFSR) Right-of-Ways 2000640 and 2059000, both sixty-six (66) feet in width, with the latter expiring 5/5/2027.:
3. The POW Yatuk Research Easement, located within Secs. 3 and 4, which expires 5/5/2027. Its size is reported as 41.2 acres.

The appraisal report presents the appraiser's conclusion that item 1 would have no adverse impacts on the subject's value. Any impacts due to items 2 and 3 would be reflected in the analysis and calculation of the contribution of the timber component due to operational constraints, which are minimal.

### **Scope of Appraisal:**

The scope of the work used to develop the appraisal is summarized in the appraisal report. It states that the identification of the character and description of the property is based on onsite inspection, topographical maps, maps furnished by the client and Trust Land Office and other public sources. The present use of the subject property is reported as "Vacant / Timber Land, Research." The report states that the Naukati Phase 1 timber resource was evaluated by Pacific Northwest Forestry (Kim McConnell) via a timber inventory (timber cruise) in March 2018, and results were verified. Approximately 66 acres of merchantable timber were not cruised but results were inferred by comparison to adjacent land, and this process was approved by all parties. The timber resource was then appraised by Clare Doig, ACF, CF, President of Forest and Land Management, Inc. That timber appraisal was developed with ongoing collaboration of Charles Horan, who subsequently made the decision to rely upon the results. Details of the data acquired and the analysis and conclusions in the timber appraisal report are shown in the Addendum of the appraisal report. The stumpage value is the contributory value of economically merchantable timber as it stands in the forest. Its value was determined using Conversion Return Analysis, which considers the potential revenue from the sale of timber minus the costs of production. The potential revenue is affected by current prices paid, volume, species and grade. The costs include road construction, felling and bucking, yarding and



loading, hauling, sortyard, scaling, dock fee, yard rental, insurance, interest, marketing, and profit. The resulting value of the timber is the stumpage value.

After considering the stumpage value, the market is analyzed to determine the value of the underlying land, to estimate the whole property value as timberland. The direct sales approach is used to value the subject property land component exclusive of the timber. Interviews with timberland purchasers are also conducted. Sales data was identified and investigated using all available resources. Inquiries were made to assessment departments, multiple listings services were searched, interviews with realtors and appraisers were conducted, and Horan and Company's 30-year inventory of regional property sales were reviewed. The area considered also included areas beyond southeast Alaska. All sales data was verified to the extent possible. The report notes that there are very few substitutable alternative properties in this market, and that there is limited market activity for properties like the subject. Limited market activity necessitated use of some government transactions, and the required "extraordinary verification" procedures were utilized for those sales.

The report states that the Cost Approach was considered but is not applicable and is not utilized. The Cost Approach typically uses the cost of creating a substitute property, minus depreciation, as a basis for value. It is generally only useful for properties with constructed improvements. The Sales Comparison approach was applicable and was utilized to develop the value of the land component. It is based on sales of other properties as compared to the property being appraised. The Income Approach was applicable and was utilized for appraisal of the timber resource contribution to value. It is based on the relationship between the amount of income a property can generate and the property value. The scope of work utilized complies with the UASFLA, USPAP and the appraisal instructions which are included in the Addendum of the appraisal report.

**Legal Description:**

The appraisal report states that, "*The legal description and parcel acre size are as described in the Land Description Verification (LDV) form in the addenda of this report.*" The LDV in the addenda was prepared by Registered Land Surveyor George Bisset, and signed 4/11/2018 and provides the legal description for Naukati Phase 1. The legal description for Naukati Phase 1 is as follows:



Naukati Phase 1  
Legal Description  
Federal Land

Copper River Meridian, Alaska

T. 68 S., R. 79 E.,  
Sec. 25, SW $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
Sec. 26, S $\frac{1}{2}$ S $\frac{1}{2}$ ;  
Sec. 35;  
Sec. 36, W $\frac{1}{2}$ W $\frac{1}{2}$ .

Containing 1,000 acres, as shown on the plat of survey officially filed on April 3, 2018.

T. 69 S., R. 80 E.,  
Sec. 2, lot 2;  
Sec. 3;  
Sec. 4, E $\frac{1}{2}$ ;  
Sec. 10, lot 1;  
Sec. 11, lot 2.

Containing 1,422.64 acres, as shown on the plat of survey officially filed on July 1, 1991, and the plat of dependent resurvey and original survey officially filed on April 3, 2018.

Aggregating 2,422.64 acres.

**Analysis of the Market:**

The appraisal report contains a detailed analysis and explanation of the subject's market influences. It describes that areas throughout Southeast Alaska have similar economic underpinnings and supply and demand characteristics. The market is considered stable. Population trends are examined, showing generally slow growth. Regarding the remote land market, the report states, "*The outlook for this market would be for little perception of change.*" The coastal Alaska timber market was described and examined. Sources of supply are described, and the sources of demand are described. The actual timber production operations in southeast Alaska are described. The outlook for the future of the coastal Alaska timber industry is described as being at a critical point due to factors such as the reduction in supply, highlighted by the Forest Service's inability to get their annual allowable cut of economically feasible timber sales cleared, offered and sold without legal challenges by environmental groups. Recent timber sales indicate "*continuation of the timber industry, at levels of production similar to 2016-17, for*



*more than 10 years.*” Demand for wood products and logs is likely to continue. Prince of Wales Island is discussed in detail. Fishing is the longest sustained, stable industry. Mineral exploration is significant. Tourism is important, with visitors to Prince of Wales Island spending the most per capita in southeast Alaska, at \$1,724 annually. These visitors also reported the highest likelihood to return, at 79% compared to 31% for the rest of southeast Alaska. Logging has been a major industry on Prince of Wales Island since about 1951. It has been curtailed somewhat over the past 15 years due to low prices and the closure of some mills, notably the pulp mills in Sitka and Ketchikan, and reduced harvests on the Tongass National Forest. Prince of Wales Island’s road system consists of paved roads, and extensive unpaved logging roads, and connects the island’s major communities. The Inter-Island Ferry Authority connects Hollis, on the east side of the island, with Ketchikan daily. Recently, the overall island economy has been level, after a substantial drop in activity in the late 1990s and early 2000s. Population has declined slightly, but has leveled out over the past several years, between 6,400 and 6,500. Costs of constructing roads and utility infrastructure have risen, and the return on raw land is minimal. However, there are few opportunities to acquire large tracts of land such as the subject.

Prospects for future growth on Prince of Wales Island are stable to slow. The best indicators of per-acre value for this type of land would be scattered throughout this region, and other coastal Alaska communities. As rare as the sales of large tracts are within the region, the sales of land for timber development are even rarer. The best value indicators are sales throughout the region, including older sales due to the lack of quantifiable significant market change over the past 20 years or so. The appraisal methodology used in the appraisal reflects the anticipated response from market participants.

The most similar current listings of properties offered for sale were examined. Purchasers in this market are satisfying demand and competing with the global demand for export timber. This relatively sophisticated, if limited, market does not typically rely on listings or advertised offerings, because of the limited pool of market participants. This does not mean that the market is constrained. No current listings were found for truly competitive properties.

### **Property Description and Characteristics:**

The appraisal report utilizes the topographic map shown on an earlier page, above, to assist the reader in understanding the location and configuration of the subject Federal parcel Naukati Phase 1.

The legal description is also shown above, for this 2,422.64 acre tract of timber land.

The present use is specified as “*Vacant / Timber Land, Research.*” The property is remote, and utilities have not been extended to the subject property.





Accessibility and road frontage are potentially significant influences on property value. The subject property has approximately 7,650 ft. (1.45 miles) of frontage along Forest Service Road #2000000 on the southern property boundary line. Forest Service Road #2000640 extends approximately 1 mile into the southern half of the subject property in a northeasterly direction. Forest Service Road #2059300 extends approximately 6,864 ft. (1.3 miles) into the northern half of the subject property in a northeasterly direction. All three roads are mapped as open to all vehicles by the USFS.

The subject property has an irregular configuration as seen on the topographic map with outline shown on an earlier page, above. The irregular southern boundary follows the forest service road. This relatively compact site varies in east west width from 1 ¼ mile to nearly 2 miles and stretches about 2 miles north to south. Elevation ranges between approximately 50 and 800 feet above sea level. Changes in elevation are relatively gradual, as found in rolling hills-type terrain, and shown on the topographical map.

The subject property is situated in a region of karst, a type of landscape formed by the dissolution of subsurface limestone rock. This creates caves, sinkholes, and underground rivers and springs. Most of the principal cave regions in the world are karst formations. The subject property contains several smaller karst pockets, and there are a large number of the formations in the area. There are no particular management requirements for these areas, except when they are under Federal ownership. The underground waterways may feed streams containing anadromous fish.

Soils consist of both gravelly/coarse silty loams formed in glacial till. These soil types are typically found under forest vegetation and are mostly well drained.

Timber includes a mix of hemlock, spruce, and cedar trees. Other vegetation includes typical muskeg vegetation, salmonberry, and blueberry bushes, as well as various ferns and devils club. The timber characteristics of the site are not homogeneous but fragmented across the parcel. About 1043.4 acres (43%) of the site's timber has been harvested between 1970 and 2010. Nearly two thirds of this area (686 AC) has been pre-commercially thinned. Nearly half the site, about 1,159 acres (48%), has been identified as potentially merchantable timber. The remaining 9% of the site (221 acres) is timber buffers, muskeg or non-vegetated.

The appraiser reviewed the mineral potential report provided by the Forest Service geologist and mineral examiners, dated May 8, 2018, and a copy is in the addendum of the appraisal report. The mineral report observes that *"...The Naukati Phase 1 lands have low potential for locatable minerals..."* and states, *"The mineral estate should not be considered a primary factor in valuation of the subject properties. No reservation of Federal minerals is warranted for the Naukati Phase 1 Lands proposed for exchange."* The appraisal report states, *"The market has*



*not demonstrated an economic impetus to pay significant amounts for this probability of mineral value. The value of the property for other use, such as recreation or timber, significantly outweighs any priority the market would give for the subject site's mineral potential".*

The appraisal report states that the attached Water Rights Specialist Report shows no water rights on the subject property.

The appraisal report discusses the easements and reservations as described above in "Property Rights Appraised." It states that there are no known improvements, fixtures or hazardous substances on the subject property.

The appraisal report presents the Use History of the subject property, stating that the property has been managed for timber extraction and reforestation. Timber harvesting on various areas on the property started in the south west corner in 1974, more recently in the north and central areas in 1999, and one small area in 2010. Road development preceded this activity. There is a second growth research plot, the Yatuk study area, in the southwest portion of the property. It is reported that about 685.5 acres of the land has been pre-commercial thinned.

The appraisal report presents the Sales History of the subject property, stating that the property has not been sold or transferred in recent history, and was acquired by the United States from Russia in 1867 in a transaction not relevant to market activity.

The subject property is not located within a municipality that imposes the assessment and/or taxation of real estate, and it would be exempt from any such taxation due to its current ownership.

The subject property is not located within a municipality that designates zoning. Development of the timber resource would be subject to state forestry requirements.

There are 9 photos of the subject property presented in this section of the appraisal report, and a map showing the location and direction of view for each of those photos.



**Highest and Best Use:**

One of the foundations of any appraisal is the determination of the subject property's highest and best use. 36 CFR 254, Subpart A, 254.2 provides the following definition:

*“Highest and best use means an appraiser’s supported opinion of the most probable and legal use of a property, based on market evidence, as of the date of valuation.”*

The appraisal report notes that Highest and Best Use is determined using four tests, which are addressed in detail: legally permissible, physically possible, financially feasible, and maximally productive (highest value).

A wide variety of legally permissible uses are noted, and there is no zoning or other particularly burdensome limitation. The property would be available for a wide variety of legally permissible uses typical of rural and remote areas of Southeast Alaska, including resource extraction, and commercial and private recreation. The 41 acre Yatuk Study Plot easement would not alter the highest and best use as appraised, other than that it would constrain some road development for near-term logging operations.

Regarding physically possible uses, the subject has good road access, and logging road development throughout. This access makes onsite development easier for recreation or resource extraction. The gently rolling topography does not represent a significant restraint.

Potentially feasible uses include timber harvesting or other resource extraction, recreational subdivisions, commercial recreation such as lodges and hunting preserves, private recreation, and speculative holding for unspecified uses. There are no known valuable mineral resources, and speculative purchases for mineral potential would be less than \$500 per acre. Small lots are slow to sell and pricing has been flat for the past decade, and lots other than waterfront have very low prices. Holding and controlling large tracts as part of a diversified storehouse of wealth with interim uses such as for personal or commercial recreation, lodges or retreats is considered in more detail.

Maximally productive use would be that use which results in the highest value. The potential recreation-speculation use is analyzed in some detail, using Comparable Sales #1 through #4 in a sales comparison approach to value, to produce an indication of value for this use. The unit of comparison is price per acre. The value indications were: less than \$1337, similar to \$1019, similar to \$861, and greater than \$800 per acre. This indicates a rounded total property value between \$2,060,000 (\$850/ac) and \$2,500,000 (\$1050/ac). This conclusion demonstrates that the maximally-productive use is not recreation-speculation use, as this range of value is less than the concluded value as a timber-producing property. Based on this analysis, the appraisal report concludes that the highest and best use is for timber production. The concluded use is an economic use that is supported by the analysis presented.



**Larger Parcel:**

Standards require the appraiser to determine the “larger parcel” as that term is used in UASFLA, which states, “*the larger parcel, for purposes of these Standards, is defined as that tract or those tracts of land that possess a unity of ownership and have the same, or an integrated, highest and best use.*”

The subject is a large tract under Federal ownership which also owns adjacent lands. Historically these lands have been considered a timber operating tract, or speculative land for future timber operations, with some interim recreational use. Just under half the site has been clear-cut in the last 50 years, in areas scattered throughout. The remaining site is either non-timberland, or potentially merchantable timberland of varying quality. The site does not lend itself to alternative or multiple simultaneous highest and best uses in different sections. A hypothetical condition of this appraisal is that the subject is a standalone privately-owned parcel subject to the rules and regulations of private land ownership. Any benefits or detriments due to adjacent land ownership are disregarded under this hypothetical condition. The parcel as appraised is a standalone parcel. It has a single integrated highest and best use. Other properties did not meet the larger parcel requirements, and were therefore excluded. The subject covers 2422.64 acres, and is a single larger parcel.



**Timberland Value:**

The timber value, also called “stumpage” value, is the value of economically merchantable timber, as it stands in the forest, as it contributes to the total property value of the real estate. After considering the stumpage value, the market is analyzed to determine the additive value of the underlying “cutover” land to estimate the whole property’s value as timberland. Buyers of timber production properties such as the subject would typically pay a price related to the stumpage value, and some additional consideration for the fee ownership of the land.

The timber resource on the subject property was inventoried by Pacific Northwest Forestry, LLC (Kim McConnell) by a timber cruise completed in March of 2018. This cruise verified the species, volume, and grade of timber in designated areas. Based on statistical sampling, it developed a timber inventory, which in turn was used as a basis by Clare Doig, ACF, CF, of Forest and Land Management, Inc. to appraise the stumpage or standing timber on the property. Approximately 66 acres of merchantable timber were not cruised but results were extrapolated from the adjacent land, and this process was approved by all parties. The report of that timber appraisal is included in the addendum of the real estate appraisal report, and the decision to rely upon it was made by the real estate appraiser, Charles Horan, MAI. For purposes of analysis, the subject property size is rounded to 2,423 acres.

The following are reported initial observations of relevant characteristics for the timber valuation:

- The history of the 2,423 acre subject site shows that about 1,043 acres have been harvested over the last 35 years or so.
- About 1,159 acres have been identified as old growth, potentially merchantable timber. The balance of the site is either muskeg, non-vegetated, or identified as not operable for timber resource.

A closer study of the cruise data, and an economic analysis by Mr. Doig of the timber on the site through the timber appraisal process revealed that:

- The large block of second growth timber in the northern part of the site (about 750 acres) is low volume low quality old growth timber
- Three separate areas in the lower half of the site had a feasible timber resource about 551 total acres.
- The remainder the site is clear-cut (about 1,074 acres) or otherwise not operable (48 acres more or less).

The image on the following page, Figure 4.1, is excerpted from the appraisal report.



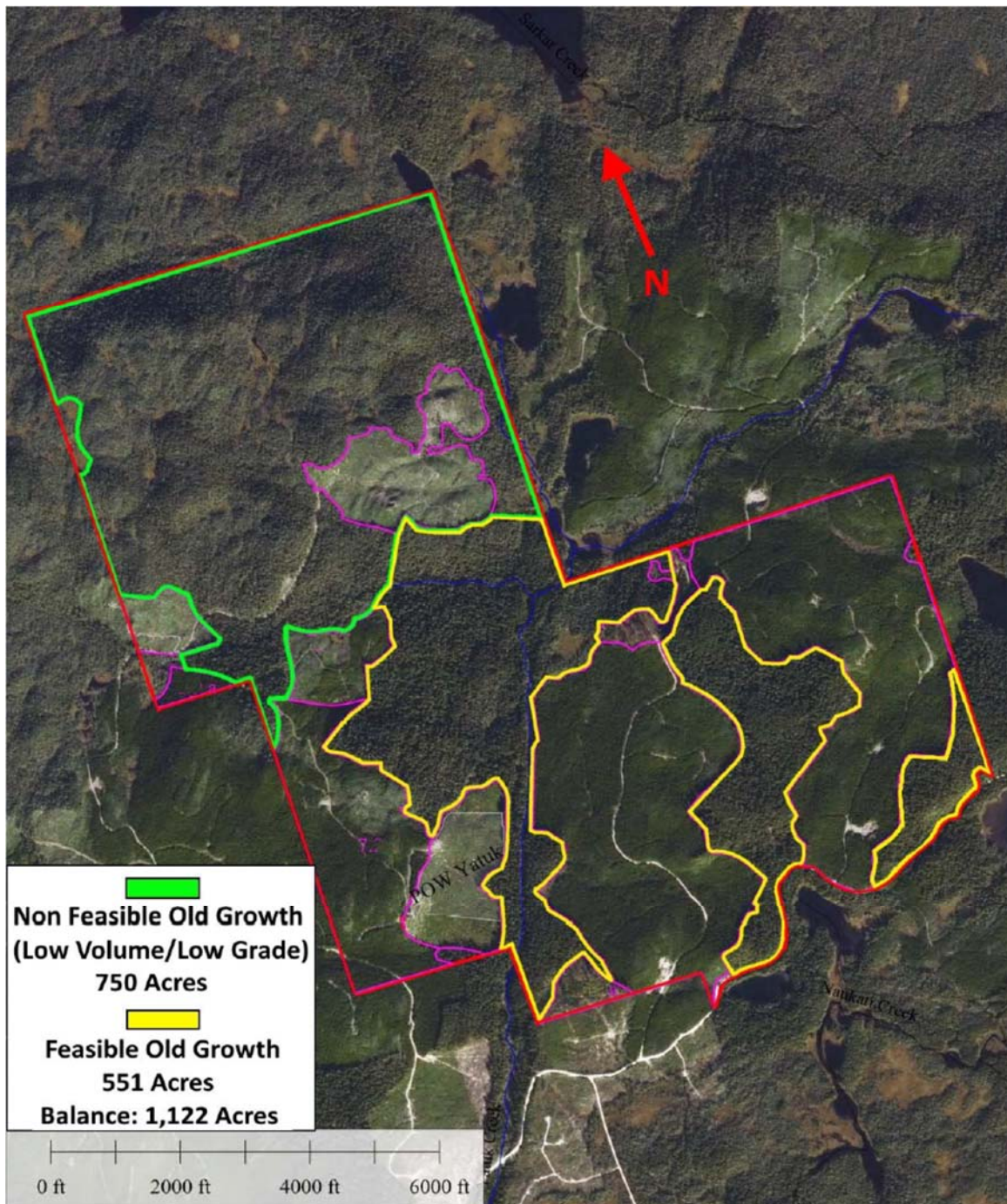


Figure 4.1 shows the locations of the various site components:

750 acres (bright green outline) consolidated “not operable” Heli Cedar Type, and Low Volume/Low Grade Timber Type.

551 acres (yellow outline) feasibly operable timber lying within 3 separate polygons  
 1,122 acres (remainder) clear-cut (1,074 acres) or otherwise not operable (48 acres)



Mr. Doig calculated the value of the merchantable timber on 551 acres, in three areas scattered across the southern part of the site, as shown on the previous page. Within the 551 acres, the timber cruise indicated 11,247 MBF of Hemlock, and 5,136 MBF of Spruce, and 883 MBF of Red Cedar. The total is 17,266 MBF overall on the 551 acres. The calculation of potential gross revenues is based on pricing by species, grades, sorts and volumes, not on averages or otherwise generalized analyses.

The timber valuation starts with the potential revenue generated through the sale of logs and then deducts all of the associated costs. These include the costs of road construction, felling and bucking, yarding, processing and loading, hauling, sortyard (unloading and decking), scaling, dock fee, yard rental, general and administrative costs including insurance, interest and marketing, and the amount attributed to the profit for undertaking the risk of the project. After deducting all of these costs from the potential gross revenue, the remainder is the stumpage value of the timber, excluding the underlying land. A prospective one-year operation is assumed, using conventional harvesting systems. The prospective gross sales revenue for the various log sorts is based on first quarter 2018 pricing, and is estimated at \$13,302,874. The logging plan would extend additional roads off of existing roads, at a total cost of \$1,297,271. Road building and timber production costs reflect the experience of operators in the region. The total of all costs, including these road costs, the logging production costs, and general and administrative costs, is estimated at \$8,773,297. The net revenue after expenses, but before any deduction for profit/risk, is \$4,529,577. The margin for profit and risk at \$100 per MBF (thousand board feet) is well-substantiated in the market. After applying that cost, the resulting indication of the stumpage timber value, based on a conversion return analysis, is \$2,802,977 rounded to \$2,803,000.

The second area of old growth, 750 acres in the northern part of the site, has less than anticipated volume and quality of timber. A standard, clear-cut, log retrieval from extended roads in this area was not deemed feasible. In order to develop a scenario with a positive return to the timber, Mr. Doig analyzed the prospects of helicopter logging this area, which would still requires some road extension and development of landing areas. Although this yields a net value of \$405,611, it does not account for the fact that there is no helicopter logging operation in the region, and mobilizing the equipment and workforce to execute the extraction would cost an additional \$180,000 to \$200,000. Clare Doig concluded: "It is unlikely that a prudent operator would contract to harvest this timber unless there was another helicopter logging operation in the vicinity". He also stated that the market simply would not tolerate this level of risk for so low of a return, and Charles Horan agrees. However, Charles Horan states that the old growth timber is a site attribute, representing a potential future opportunity.

Regarding the 1,122 acres of remainder, Charles Horan states that there is no economic timber in those areas, and that the market would not begin to put economic value on the second growth



until it was within 10 years of maturities, and therefore no timber value is attributed to those areas.

As a check and verification of the conclusions reached in the conversion return analysis, the timber appraiser conducted a market sales analysis utilizing four timber sales in southeast Alaska. These sales occurred in the past five years, and involved conventional logging, had access to developed roads and log transfer facilities, were publicly advertised for competitive bidding, and involved primarily old growth timber. Based on comparison to each of these sales, the indications for the value of the subject's timber varied significantly, but "bracketed" the value conclusion. Two sales indicated higher value and two indicated lower value. The comparable sales demonstrated that value is strongly affected by the ability to sell logs in the export market as opposed to timber sales with domestic processing requirements. The market sales analysis supported the valuation developed in the conversion return analysis.

Using a conversion return analysis, Clare Doig CF, ACF, estimated the timber stumpage value at \$2,802,977 rounded to

**\$2,803,000.**

Charles Horan, MAI, accepted the analysis and conclusion as reasonable and properly developed for the subject property and incorporated this timber value conclusion into his appraisal. It is utilized as the contributory value of the timber component for the subject property as of the effective date of the real estate appraisal, February 8, 2018.





### **Direct Sales Comparison Approach to Value of Cutover Land:**

Using the Sales Comparison Approach, sales of comparable properties are analyzed and utilized as a basis to arrive at an indication of the value of the subject property's underlying land. Sales were described and analyzed using overall sales price per acre as the unit of comparison, although total sales price was also described for each sale. Typically, differences between the comparable sales and the subject property are identified, and adjustments are applied to account for those differences which may affect market value. Cutover timberland, as used in the appraisal report, refers to land which has a highest and best use as timberland, which has been harvested of all merchantable timber. Utilizing sales which include merchantable timber, the timber value is deducted to produce a residual value allocation to the cutover land. As found in the market, cutover land could have some residual merchantable reproduction or second growth timber. This type of land would include non-merchantable old growth, buffer strips of trees along creeks and streams, critical habitats, roadways, and other sensitive areas, wetlands, and non-timbered remainder areas of the site.

In active timber markets, outright purchases of fee simple land for timber can occur often. Normally, motivated buyers and sellers would calculate what the stumpage may be worth, and then add an increment of value for the land. In Alaska, it is difficult to estimate the land component value, because timberland sales are infrequent. More often, timber rights are sold without land. The rotation time is long in Alaska, and few timber tracts are purchased with the idea of reforestation of the cutover land. Timber purchasers in Southeast Alaska assign greater risk to timberland for the following reasons:

- Lack of access and proximity to timber users, sawmills, pulp mills, etc;
- Extreme high operation risks due to remote locations;
- Relatively slow growing conditions, and
- Inferior soil quality as related to other forest regions.

### **Cutover Land - Sales**

Although sales are infrequent, the limited timberland sales in coastal Alaska shows the following range of values allocated to the cutover land portion of transactions over time. The following table of comparable sales is excerpted from the appraisal report. The unit of comparison is price per acre, which is most reflective of market participants' choices among units of comparison. The more significant sales are summarized in the following table.



TABLE 4.3 – CUTOVER LAND VALUES						
Comp (Rec #)	Location	Date	Acre Volume	Sales Price Timber Value Land Value (Percent of Fee)	AC Price Price/MBF	Allocated acre price cutover land
Comp 5 (#10584)	Mud Bay, Ketchikan	1/2013	19.69 AC 622 MBF	\$140,000 \$140,000 \$0 (0%)	\$7110/AC 225/MBF	\$0/AC
Comp 6 (#2730)	Mountain Point, Ketchikan	01/2003	145.27 AC 2,200 MBF	\$175,000 \$160,500 \$14,500 (8.3%)	\$1,205/AC \$73/MBF	\$100/AC
Comp 7 (#1397)	Seal Cove, Gravina Island	3/1993	190.4 AC 1000 MBF	\$347,000 \$327,500 \$19,500 (5.6%)	\$1823/AC \$347/MBF	\$102/AC
Comp 8 (#10401)	Thorsheim Creek, Afognak	8/2017	1953 AC 25,174 MBF	\$6,300,000 \$5,800,000 \$500,000 (7.9%)	\$3,226 /AC \$230.40 /MBF	\$256/AC
Comp 9 (#6183)	Stevenstown & IT Mines, Kasaan Peninsula	12/1998	291.85 AC 1,825 MBF	\$750,000 \$625,000 \$125,000 (16.7%)	\$2,570/AC \$342/MBF	\$428.32/AC

The property characteristics and the characteristics of these transactions were described with detailed write-ups in the Addendum of the appraisal report. This included extraordinary verifications, when required by UASFLA. The detailed write-ups included detailed descriptions, photos, topographic maps, drawings, and deeds. All comparable sales were visited in person by the appraiser and the appraiser's forester, and transactions were personally verified by the appraiser.

**Comparable sale #5** is 19.69 acres sold in January 2013 for \$140,000 or \$7,110 per acre. It had 622 MBF of timber valued at \$225/MBF accounting for the entire sales price and leaving an allocation to the cutover land at \$0. The timber value allocation was supported by an adjacent sale. It appears that the sale was slightly below market values generally. It was purchased for its timber and harvested together with an adjacent 35 acres. Relative to subject parcel Naukati Phase 1, it was considered to have inferior conditions of sale, superior location, superior effect of parcel size and it is rated overall as inferior.

**Comparable sale #6** is 145.27 acres sold in January 2003 for \$175,000 or \$1,205 per acre. It had 2,200 MBF of timber valued at \$73/MBF leaving an allocation to the cutover land at \$100 per acre. It was logged partially clear cut and partially by helicopter. Relative to subject parcel Naukati Phase 1, it was considered to have inferior conditions of sale, superior effect of parcel size, inferior access, and it is rated overall as inferior.



**Comparable sale #7** is 190.4 acres sold in March 1993 for \$347,000 or \$1,823 per acre. It had 1,000 MBF of timber valued at \$347/MBF leaving an allocation to the cutover land at \$102 per acre. It was an assemblage of mineral patents with about 45 acres suitable for logging, which has been done. Relative to subject parcel Naukati Phase 1, it was considered to have an inferior location, superior effect of parcel size, inferior access, and it is rated overall as inferior.

**Comparable sale #8** is 1953 acres sold in August 2017 for \$6,300,000 or \$3,226 per acre. It had 25,174 MBF of timber valued at \$230.40/MBF leaving an allocation to the cutover land at \$256 per acre. It is remote, about 40 miles north of Kodiak. It has a logging road about 2 miles away and otherwise is accessible by boat or float plane with 4.62 miles of ocean frontage with pocket beaches. Relative to subject parcel Naukati Phase 1, it was considered to have superior conditions of sale, inferior access, and the price was based on a superior use, and it is rated overall as superior.

**Comparable sale #9** is 291.85 acres sold in December 1998 for \$750,000 or \$2,570 per acre. It had 1,825 MBF of timber valued at \$342/MBF leaving an allocation to the cutover land at \$428.32 per acre. It is mineral patents purchased by the surrounding landowner. Relative to subject parcel Naukati Phase 1, it was considered to have superior conditions of sale, superior effect of parcel size, and it is rated overall as superior.

The comparable sales described above are deemed to be the most similar, recent and proximate to the subject property, and most representative of the market for cutover timber land. Adequate market data did not exist to support dollar or percentage amount adjustments. Because of the limited market data, quantitative adjustments for differences between the sales and the subjects would be unreliable. The comparable sales were analyzed using a qualitative analysis. If the comparable property is superior to the subject, the adjustment factor is negative. (As the indicated value for the subject property would be less than the sale price of the comparable.) If the comparable property is inferior to the subject, the adjustment factor is positive. A summation of these adjustments results in an overall indication of whether the comparable is inferior or superior to the subject. Relating this to the sales price per acre of each comparable shows that the market value of the subject should be higher or lower than that allocated sale price per acre. In this way, each comparable sale provides a separate indication regarding the market value of the subject property. Finally, each of these indications are reconciled to a final conclusion of market value.

Consideration was given to transaction characteristics and property characteristics which may have an influence on market value. Adjustments for conditions of sale were applied for atypical motivations or transaction elements. Market conditions were rated as similar, reflecting the appraiser's determination that the market was relatively flat over the time period of these sales. Property rights were rated as similar, as variations in easements or other minor issues were not



felt to impact the sales prices. Location characteristics varied significantly. Sizes of the parcels varied, and smaller parcels typically sell at higher prices per acre than larger parcels. Access varied significantly. “Paid based on Alternate Use” captures the influence on values due to differences in the potential for sale of cutover land for an alternative use. These comparisons were tabulated and an overall ranking was determined for each comparable.

The qualitative analysis described above results in the ratings for the subject parcel Naukati Phase 1 shown in the appraisal report as follows:

TABLE 4.9 - SUMMARY QUALITATIVE RATINGS FOR PRICE/ACRE											
Character	Subject	Comp 5 (#10584) Mud Bay		Comp 6 (#2730) Mtn Point		Comp 7 (#1397) Seal Cove		Comp 8 (#10401) Thorsheim		Comp 9 (#6183) Kasaan Pen.	
Total Price	Solve	\$140,000		\$175,000		\$347,000		\$6,300,000		\$750,000	
Cutover Allocation	Solve	\$0		\$14,500		\$19,500		\$500,000		\$125,000	
Cutover Acre Price	Solve	\$0/AC		\$100/AC		\$102/AC		\$256/AC		\$428/AC	
Conditions of Sale	Typical	Inf	+	Inf	+	Sim	o	Sup	-	Sup	-
Market Conditions	02/18	1/13	o	1/03	o	3/93	o	8/17	o	12/98	o
Property Rights	Fee Less Minor Res.	Sim	o	Sim	o	Sim	o	Surface	o	Sim	o
Location	Rural	Sup	-	Sim	o	Inf	+	Sim	o	Sim	o
Size (AC)	2423 AC	19	-	145	-	190	-	1953	o	292	-
Access	Forest Rd	Sim	o	Inf	+	Inf	+	Inf	+	Sim	o
Paid based on Alternate Use	Continued Forestry	No	o	No	o	No	o	Yes	-	No	o
Overall Comparison	Solve	Inferior		Inferior		Inferior		Superior		Superior	
Indicated Value of Subject	Solve	More than \$0/AC		More than \$100/AC		More than \$102/AC		Less than \$256/AC		Less than \$428/AC	

The allocation for the cutover land component indicates a range of prices from \$0/Acre to over \$428/Acre with a mid-point of \$214/Acre. The report states that the subject is bracketed by Comparable #6 at \$100/Acre, and Comparable #8 at \$256/Acre. Transactions of fee simple land for timber sales are infrequent, and allocations are rarely made, so the market variability is not surprising. The appraiser weighted the fact that the subject has 750 acres of old growth trees and some second growth has been enhanced through thinning, favoring the upper end of the range. The appraiser concludes to the contributory value of the residual cutover land at **\$250 per acre** for the subject property. This takes into account the temporary lack of use for the 41 acres encumbered by the Yatuk Study Plot, and other conditions of title previously described in this report.

The contributory cutover land value is calculated as 2,422.64 acres at \$250 per acre = \$605,660 rounded to **\$605,700**.



## VALUE CONCLUSION

In reconciling the final opinion of the market value of the subject property, the appraiser considers the quality and quantity of the data and the market value indications. The analysis considers how market participants would develop pricing for the subject property. Most timber tracts are unique in terms of the volume, species, and grade of timber, as well as operational constraints and advantages. The timber resource would be valued by market participants as reflected by the analysis presented in the appraisal report. The timber appraisal report by Clare Doig, attached in the addendum of the appraisal report, includes supporting data from the timber cruise and includes information that market decision makers would rely upon. Clare Doig's conclusions are accepted as accurate, credible, and reliable for use in the real estate appraisal by Charles Horan, MAI.

The analysis also presents an increment of value that would be appropriate to the cut-over land, as part of the overall property purchase price. The analysis of the cut-over land reflects the incremental value for this element of the transaction with a consistent, integrated use as fee simple timber land. Adding these elements together is reflective of the integrated market value, and does not violate the unit rule of UASFLA, but indicates the current market value of the total rights appraised, with an integrated highest and best use as timber land. The market value of the Federal land **Naukati Phase 1** property as of the effective date of the appraisal, February 8, 2018 is presented in the appraisal report as follows:

Estimated timber contributory value:	\$2,803,000
Indicated value of land component:	<u>\$605,700</u>
<b>Indicated total market value:</b>	<b>\$3,408,700</b>

### Appraisal Report Addendum:

The Addendum of the appraisal report contains the following items:

- 1) Statement of Work. This Appraisal Instructions and Statement of Work document was the basis of contracting for the appraisal reported here and for the other appraisals related to the exchange.
- 2) Draft Patent for conveyance of the subject property.
- 3) Naukati Phase 1 Signed LDV. This consists of one USFS Land Description Verification form dated 4/11/2018, which is the basis of the legal description and acreage used in this appraisal report for Naukati Phase 1, and three pages of surveys referenced in the LDV.



4) Floodplain/Wetlands Report. This report evaluates the wetland and floodplain resources associated with each of the parcels for each phase of the exchange associated with the Act. The appraiser analyzed this information and concluded no significant influence on market value.

5) Water Rights. This is a Water Right Specialist Report and analysis for the Federal and Non-Federal lands identified in Phase 1 of the Act. It shows only one water right, which is in the process of being relinquished. The appraiser analyzed this information and concluded no significant influence on market value.

6) Mineral Potential and Certainty Reports.

7) Timber Appraisal. This is the work product of the appraiser's forester Clare Doig presenting his analysis and conclusions regarding the timber resource on the subject property, Naukati Phase 1. It includes aerial mapping, timber cruise layout, and the software output reports from the timber cruise. This is the supporting data for the appraiser's conclusion of the amount of the timber value contribution on the subject property.

8) Comparable Sales Location Map and Write Ups. In this section the appraiser presents a map of the locations of the comparable sales analyzed in detail for development of the land value component by the Direct Sales Comparison Approach. It includes detailed write-ups of each sale with detailed descriptions, photos, topographic maps, drawings, and deeds. The sales write-ups meet or exceed the documentation standards required by UASFLA.

9) Qualifications and License. This shows a synopsis of the appraiser's qualifications, designations, certifications, education and experience. The final item in the appraisal report is a copy of the appraiser's Certified General Appraiser License issued by the State of Alaska, which is current and valid for the type of real estate appraisal services performed.

(End of appraisal summary.)

