



WR File No. CS4-128293CL
WR Doc ID 4725268

State of Washington REPORT OF EXAMINATION FOR WATER RIGHT CHANGE

Add Purpose of Use Change Season of Use	Change Place of Use	Add Points of Withdrawal
PRIORITY DATE 1913	WATER RIGHT NUMBER Water Right Claim No. 128293	
MAILING ADDRESS Caribou, LLC Attn: Lynn Barnett 3020 S. Union Avenue Tacoma WA 98409-3317	SITE ADDRESS (IF DIFFERENT) Silver Spur North Ranch c/o Erlandsen Surveying, Planning and Engineering 210 Bridge Street Brewster WA 98812	

Total Quantity Authorized for Withdrawal or Diversion

WITHDRAWAL OR DIVERSION RATE	UNITS	ANNUAL QUANTITY (AF/YR)
1.29	cfs	209.29

Purpose

PURPOSE	WITHDRAWAL OR DIVERSION RATE		UNITS	ANNUAL QUANTITY (AF/YR)		PERIOD OF USE (mm/dd)
	ADDITIVE	NON-ADDITIVE		ADDITIVE	NON-ADDITIVE	
Community domestic	161(0.36)		gpm(cfs)	57.95		Year Round
Irrigation of 46.46 acres	0.93		cfs	151.34		4/15-11/15

IRRIGATED ACRES		PUBLIC WATER SYSTEM INFORMATION	
ADDITIVE	NON-ADDITIVE	WATER SYSTEM ID	CONNECTIONS
46.46		Brewster Flat 08290	216
		Silver Spur Lodge AB915	1
		Overlook at Silver Spur AC758	11

Source Limitations

SOURCE FACILITY/DEVICE	A S	WITHDRAWAL OR DIVERSION RATE	ANNUAL QUANTITY (AF/YR)	PERIOD OF USE (mm/dd)
Pumps on Okanogan River		0.93	151.34	4/15-11/15
Well No. 1	A	0.36	57.95	Year Round
Well No. 2	A	0.36	57.95	Year Round
Well No. 3	S	0.36	57.95	Year Round

A|S: A=Alternate; S=Standby/Reserve

SOURCE FACILITY/DEVICE	PARCEL	WELL TAG	TWN	RNG	SEC	QQ Q	LATITUDE	LONGITUDE
Pumps on Okanogan River	3125150027	NA	31N	25E	15	SENW	48.15694°	119.67944°
Well No. 1	8820300100	BCC019	31N	25E	15	SENW	48.15694°	119.68111°
Well No. 2	3125340083	BBJ190	31N	25E	34	SENW	48.14388°	119.6820°
Well No. 3	3125340083		31N	25E	34	SENW	48.1434°	119.68194°

Datum: NAD83/WGS84

Source Location

COUNTY	WATERBODY	TRIBUTARY TO	WATER RESOURCE INVENTORY AREA
Okanogan	Okanogan River/alluvial aquifer	Columbia River	49

Place of Use (See Attachment 1 and 2)

PARCELS (NOT LISTED FOR SERVICE AREAS)

Irrigation

The following Parcel Numbers and (names) remain with the existing right for irrigation: - 8811820100 (Mac & Cass), 3125150027(PUD No. 1 Douglas County), 8817600400 (Taylor), 8817600200 (Vickery), 8817600300 (Klepper), all within Section 15, T. 31 N., R. 25 E.W.M. See Attachment 1.

Community Domestic

Multiple parcels within Sections 19, 20, and 30, T. 31 N., R. 25 E.W.M. See Attachment 1

LEGAL DESCRIPTION OF AUTHORIZED PLACE OF USE

Irrigation

See Attachment 2: legal descriptions, all within Section 15, T. 31 N., R. 25 E.W.M. Okanogan County.

Community Domestic Supply

See attached legal description, all within Sections 19, 20, and 30, T. 31 N., R. 25 E.W.M., Okanogan County

Proposed Works

Two pump stations on the Okanogan River will be used to irrigate 46.46 acres within the original place of use. Up to three wells will be connected to transmission pipelines and distribution lines to provide community domestic water within the Silver Spur Development.

Development Schedule

BEGIN PROJECT	COMPLETE PROJECT	PUT WATER TO FULL USE
Begun	March 1, 2024	March 1, 2025

Measurement of Water Use

How often must water use be measured?	Monthly
How often must water use data be reported to Ecology?	Annually, by January 31
What volume should be reported?	Total Annual Volume
What rate should be reported?	Annual Peak Rate of Withdrawal (gpm or cfs)

Provisions

General Provision

A maximum of 161 gpm and 57.95 acre-feet per year may be withdrawn from Wells 1, 2, and 3 for the purpose of community domestic supply at the Silver Spur Development. A maximum of 0.93 cfs may be withdrawn from the Okanogan River for the irrigation of 46.46 acres. The consumptive use associated with these acres cannot exceed 128.65 ac-ft/yr.

Wells, Well Logs and Well Construction Standards

All wells constructed in the state must meet the construction requirements of Chapter 173-160 WAC titled "Minimum Standards for the Construction and Maintenance of Wells" and Chapter 18.104 RCW titled, "Water Well Construction". Any well which is unusable, abandoned, or whose use has been permanently discontinued, or which is in such disrepair that its continued use is impractical or is an environmental, safety or public health hazard must be decommissioned.

All wells must be capped upon completion, and the Department of Ecology must be notified in order that a video scan of the completed well can be conducted. The Department of Ecology must be notified within one week of completion of the well and prior to the setting of a pump, in order to make necessary arrangements for video scanning.

All wells must be tagged with a Department of Ecology unique well identification number. If you have an existing well and it does not have a tag, please contact the well-drilling coordinator at the regional Department of Ecology office issuing this decision. This tag must remain attached to the well. If you are required to submit water measuring reports, reference this tag number.

Installation and maintenance of an access port as described in WAC 173-160- 291(3) is required.

In addition to the required access port, the applicant must install and maintain, in operating condition, an airline and pressure gage. The pressure gage must be equipped with a standard tire valve and placed in a location accessible to Department of Ecology personnel. The airline must extend from land surface to the top of the pump bowls and the total airline length must be reported to the Department of Ecology upon completion of the pump system.

Measurements, Monitoring, Metering and Reporting

An approved measuring device must be installed and maintained for each of the sources identified by this water right in accordance with the rule "Requirements for Measuring and Reporting Water Use", Chapter 173-173 WAC, which describes the requirements for data accuracy, device installation and operation, and information reporting. It also allows a water user to petition the Department of Ecology for modifications to some of the requirements.

Recorded water use data shall be submitted via the Internet. To set up an Internet reporting account, contact the Central Regional Office. If you do not have Internet access, you can still submit hard copies by contacting the Central Regional Office for forms to submit your water use data.

Department of Health Requirements

Prior to any new construction or alterations of a public water supply system, the State Board of Health rules require public water supply owners to obtain written approval from the Office of Drinking Water of the Washington State Department of Health. Please contact the Office of Drinking Water at Southwest Drinking Water Operations, 243 Israel Road S.E., PO Box 47823, Tumwater, WA 98504-7823, (360) 236-3030.

Easement and Right-of-Way

The water source and/or water transmission facilities are not wholly located upon land owned by the applicant. Issuance of a water right change authorization by this department does not convey a right of access to, or other right to use, land which the applicant does not legally possess. Obtaining such a right is a private matter between applicant and owner of that land.

Non-Additive to Confirmed Claims

The water use authorized under this filing will be considered non-additive to any water rights confirmed for said Claim as a result of a general adjudication through Superior Court, should adjudication be undertaken.

Proof of Appropriation

The water right holder must file the notice of Proof of Appropriation of Water (under which the Certificate of Change is issued) when the permanent distribution system has been constructed and the quantity of water required by the project has been put to full beneficial use. The Certificate of Change will reflect the extent of the project that has been completed. Elements of a proof inspection may include, as appropriate, the source(s), system instantaneous capacity, beneficial use(s), annual quantity, place of use, and satisfaction of provisions.

Schedule and Inspections

Department of Ecology personnel, upon presentation of proper credentials, will have access at reasonable times, to the project location, and to inspect at reasonable times, records of water use, wells, diversions, measuring devices and associated distribution systems for compliance with water law.

Real Estate Excise Tax

This decision may indicate a Real Estate Excise Tax liability for the seller of water rights. The Department of Revenue has requested notification of potentially taxable water right related actions, and therefore will be given notice of this decision, including document copies. Please contact the state Department of Revenue to obtain specific requirements for your project. Phone: (360) 570-3265. The mailing address is: Department of Revenue, Real Estate Excise Tax, PO Box 47477, Olympia WA 98504-7477
Internet: <http://dor.wa.gov/>. E-mail: REETSP@DOR.WA.GOV.

Findings of Facts

Upon reviewing the investigator’s report, I find all facts, relevant and material to the subject application, have been thoroughly investigated. Furthermore, I concur with the investigator that water is available from the source in question; that there will be no impairment of existing rights; that the purpose(s) of use are beneficial; and that there will be no detriment to the public interest.

Therefore, I ORDER approval of Application No. CS4-128293CL subject to existing rights and the provisions specified above.

Your Right To Appeal

You have a right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. “Date of receipt” is defined in RCW 43.21B.001(2).

To appeal you must do the following within 30 days of the date of receipt of the Order.

File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.
- You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Address and Location Information	
Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 111 Israel RD SW, STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

Signed at Yakima, Washington, this day of March 2013.

Mark Kemner, Section Manager
Water Resources Program
Department of Ecology, Central Region Office

INVESTIGATOR'S REPORT

BACKGROUND

Introduction

Caribou LLC (Caribou) is in the process of planning and constructing a residential development property called Silver Spur North Ranch, Phase 2 (Silver Spur). The project currently is planned for 199 residential lots, with supporting features including 250 RV sites with standard RV utilities, an internal road system, lodge, tennis courts, swimming pool, and other accessory amenities. To secure a legal source of water for the project, Caribou has applied to transfer a portion of Water Right Claim No. 128293 to the Silver Spur and access water through new wells. Caribou submitted Change Application No. CS4-128293CL requesting to add points of withdrawal, add a purpose of use, change the place of use, and extend the period of use to year round. Water Right Claim No. 128293 states that 1.29 cfs and 516 afy has been diverted from the Okanogan River for irrigation of 64.36 acres and that water use started in 1913.

The proposed change would transfer water to the Silver Spur, specifically that portion of the development located within the SE¼ of Section 19 and within Section 20, each within T. 31 N., R. 25 E.W.M. The Silver Spur development is located approximately 1½ miles southwest of the existing place of use for the Water Right Claim. This change would add wells and change the purpose and place of use and change the season of use to provide community domestic supply. The proposed wells would be located in Section 15 and Section 34, within T. 31 N., R. 25 E.W.M. The remainder of the Water Right Claim not transferred to ground water wells would continue to be used for the irrigation of 46.46 acres at the existing place of use and from the existing diversion on the Okanogan River. Caribou retained Gene St. Godard, PG, L.Hg, of Water and Natural Resource Group (WNR) to prepare Technical Memorandum dated May 15, 2012 (Technical Memorandum) summarizing the project details. This memo is available upon request.

Table 1: Attributes of the Application for Change

Attributes	Existing	Proposed
Name	Walt Duling	Caribou, LLC
Priority Date/ Change Application Date	1913	August 20, 2010
Instantaneous Quantity	1.29 cubic feet/second (cfs)	0.93 cfs for irrigation and 161 gallons/minute (gpm) (0.36 cfs) for community domestic supply
Annual Quantity	516 acre-feet/yr (afy)	447.82 afy for irrigation, and 68.18 afy for community domestic supply
Purpose of Use	Irrigation of 64.36 acres	Irrigation of 46.46 acres and community domestic supply
Period of Use	Seasonal	Seasonal for irrigation (April 15-November 15), year-round for community domestic supply
Place of Use	Portion of NW¼ Sec. 15, T31N, R25E	Portions of NW¼ Sec. 15 for irrigation, SE¼ Sec. 19, Sec. 20, and NW¼ NE¼ Sec. 30 for community domestic supply, all within T31N, R25E
Point of Diversion/ Withdrawal	E½ of NW¼, Sec. 15, T31N, R25E from Okanogan River	E½ of NW¼ Sec. 15, T31N, R25E for irrigation from Okanogan River, and wells within Sections 15 and 34, T31N, R25E for community domestic supply

Legal Requirements for Proposed Change

The following is a list of requirements that must be met prior to authorizing the proposed change.

Public Notice

Notice of this application was published in the Quad City Herald on February 9 and 16, 2012. There were no protests filed to this notice.

State Environmental Policy Act (SEPA)

Since this water right transfer is for a large development it is not categorically exempt; SEPA was addressed for the entire Silver Spur North Ranch development. A Final Mitigated Determination of Non-Significance (MDNS) was issued by Okanogan County on March 5, 2010. There was no mitigation required for water usage. The Project Description from the MDNS is as follows:

"The proponent has submitted an application for a development agreement. Development of the site includes the consolidation of 41 existing properties (approximately 766 acres) creating 220 individual lots, a 15-acre RV park, an equestrian center with stalls and stables, a recreational center with swimming pool and tennis facilities, constructing internal roads, constructing a trail system, and creating a minimum of 400 acres of open space. The project will be phased".

The above SEPA determination was amended by a Final Determination of Non-Significance (DNS) issued by Okanogan County on January 4, 2012. The appeal period expired on January 27, 2012, and no appeals were filed. The Project Summary shown on this Final DNS is as follows:

"The proposal amends the Silver Spur North Ranch Development Agreement. The amendment decreases the maximum number of residential building lots in exchange for an increased number of RV sites. Residential lots decrease from 220 to 199. RV sites increase from 15 to 250. The RV Park includes standard RV utilities, an internal road system, lodge, tennis courts, swimming pool, and other accessory amenities."

Comments on the threshold determination relating to Water Usage and Water Systems were provided by the Department of Ecology (Ecology) and the Washington State Department of Health (DOH), which are discussed below in the *Proposed Use* section.

Water Resources Statutes and Case Law

Processing of this application is based on the provisions of RCW 90.03.380, 90.44, 90.14.160, 43.21A.690 and 90.03.265 by HDR Engineering, Inc. under Ecology Cost Reimbursement Work Assignment No. HDR006 signed by Ecology on October 7, 2011, under Master Contract No. C1000189.

The Washington Supreme Court has held that Ecology, when processing an Application for Change to a Water Right, is required to make a tentative determination of extent and validity of the Claim or right. This is necessary to establish whether the Claim or right is eligible for change. R.D. Merrill v. PCHB and Okanogan Wilderness League v. Town of Twisp.

INVESTIGATION

Site Visit

On October 26, 2011, Jerry Louthain of HDR visited the site and met with Gene St. Godard, Chris Erlandsen, and Roger Erlandsen representing the applicant.

A meeting was held in Mr. Erlandsen's office to discuss the project, followed by a field visit with Mr. St. Godard to see the existing pumps for taking water from the Okanogan River and the property that has been irrigated under the existing Water Right Claim. The Silver Spur (proposed place of use) was also observed.

During the site visit, a test well was observed that has been constructed on the existing place of use within Section 15. This well is designated as Well No. 1. The log for this 8-inch diameter well shows that it was completed at 130 feet on January 20, 2011. The water well report for this well showed that the static water level was 26 feet below the top of the well on January 20, 2011, with an estimated well yield of 150 gpm. No other project wells had been drilled at the time of the site visit. One other well may be drilled as a stand-by well within the existing place of use and two other wells (one primary and one stand-by) are proposed to be drilled within Section 34 approximately three miles south of the existing place of use and point of diversion. These other two wells within Section 34 are designated as Well Nos. 2 and 3 in this report. Ultimately, it is likely that only one of these well locations (Section 15 and Section 34) will be used for the development.

The existing point of diversion on the Okanogan River is several miles upstream of Wells Dam, on the Columbia River. Pool fluctuations from Wells Dam cause a backwater pool which influence the river water levels at the existing point of diversion.

Proposed Use

The change application requests to add a proposed use of community domestic supply for the Silver Spur North Ranch Development. According to the amended SEPA Final DNS issued by Okanogan County on January 4, 2012, the proposed development is for 199 residential lots and 250 recreational vehicle (RV) sites and associated amenities for the development. The proposed development is located on 766 acres west of Old Highway 97, approximately five miles north of Brewster.

The project Development Agreement was approved by the Okanogan County Commissioners on January 11, 2011, for the Silver Spur North Ranch. Section 12 of the Development Agreement states the primary source of domestic water supply will be from an off-site water right. The Agreement also states that a Phase One plat could use on-site ground water wells to serve a maximum of 11 units and the total withdrawal from all wells could not exceed 5,000 gallons per day for domestic water supply. The Agreement also stated that the Owner has the option of using an off-site water supply for Phase One.

Ecology, DOH and the Okanogan County Health Department reviewed the Development Agreement. Ecology's comments stated that ground water use in excess of 5,000 gallons per day requires a water right and that the entire Silver Spur project water use is a single project and multiple groundwater permit-exempt wells cannot be combined for this project. The DOH comments stated that the proposed domestic water usage of 360 gallons per day per house (gpd) would be acceptable for only in-house water usage, and that 700 gpd is the water requirement if outside irrigation is included.

The total water requirement for the 199 residential lots is 71,640 gpd or 80.25 acre-feet per year (based on the DOH minimum water requirement of 360 gpd per lot). This annual quantity is more than the requested transfer of 68.18 acre-feet per year, so the projected water demand for the full development of Silver Spur North Ranch will require additional water rights. Additional proposed features for this development that will require additional water include 250 RV sites in the RV Park, lodge, a swimming pool, and other accessory amenities.

The applicant's representatives stated during the site visit on October 26, 2011, that they are only requesting approval for the amount of water to begin development and additional water rights will be required for the full build-out. The applicant's intent is to develop this property on a phased basis, based on timing for the sales of the lots and the availability of additional water rights.

Other Water Rights Appurtenant to the Proposed Place of Use

No other water rights are appurtenant to the proposed place of use (Silver Spur). Ecology confirmed this with one of their comments under Water Usage on the Final Mitigated Determination of Non-Significance Mitigation Measures relating to the Development Agreement for the Silver Spur North Ranch project. A records search was also done for Sections 19 and 20, Township 31 N., Range 25 E.W.M., and only four Ground Water Right Claims were found, which were all for small quantities of water with uses for domestic supply and stockwater.

Hydrologic/Hydrogeologic Evaluation

Regional Hydrogeology

Information on the local and regional hydrogeology is summarized from the Technical Memorandum. The project area is located within the Okanogan River Valley. The river valley is filled with river alluvium at the surface and underlying glacial or alluvial deposits of sand and gravel with some beds of lower-permeability sandy silt/clay. Ground water flows to the south following the river flow direction. Ground water typically is at a depth of 20 to 50 feet below ground surface in the valley and up to 100 feet on the valley terraces. In the project area, most wells are several hundred feet deep and produce in the range of 5 to 250 gpm. The sand and gravel aquifer is in direct hydraulic continuity with the Okanogan River. The river stage is controlled by Wells Dam on the Columbia River which forms Lake Pateros and creates a backwater into the Okanogan River. Ground water levels in wells are generally about one to two feet higher than the river stage indicating that ground water is flowing into the river. The underlying bedrock is essentially impermeable and does not host significant water bearing zones. Sequences of unconsolidated materials are generally present as valley fill and along valley walls as terraces in the Okanogan River Valley and in the Columbia River drainage to the south.

Site-Specific Hydrogeology

An 8-inch diameter test well (Well No. 1) was drilled in the NW¼ of Section 15 at the time of the site visit. The Water Well Report for this well showed that the static ground water was 26 feet below the top of the casing on January 20, 2011 and the well produced 150 gpm during development. The well was drilled to a depth of 130 feet, with a casing to 112 feet with a well screen installed from 114 to 124.5 feet. The wellhead for this well is approximately 30 feet higher in elevation than the level of the Okanogan River at its' nearest point to this well. Water level measurements from February 2011 to May 2012 show ground water levels follow the river stage indicating full hydraulic continuity with the river. During average river stage conditions, the ground water is about one to two feet higher than the

river level. During low river stage the ground water elevation is about three feet higher than the river level.

A second test well was drilled in March, 2012 within the SW¼ SE¼ Section 34, which is approximately three miles south of the test well in Section 15. This well is designated as Well No. 2. This well is located on a parcel of land that is approximately 2,000 feet west of the Okanogan River and approximately 120 feet higher in elevation than the nearest point on the Okanogan River. The Water Well Report for this well showed a static water level of 104 feet below the top of the casing on March 29, 2012, with an estimated yield of approximately 70 gpm during development of the screen. The 8-inch diameter well is drilled to a depth of 189 feet, with a casing to 166.5 feet with a well screen installed from 167 to 182 feet. Water level measurements collected from March 19, 2012, through May, 2012 indicate the well is in hydraulic continuity with and follows the stage fluctuations of the Okanogan River, with the static water level in the well generally one to two feet higher than the river level.

During a telephone conversation on October 1, 2012 with the applicant, Mr. Barnett stated that there is a possibility that the location of the production well/wells for this project may now only be at the location of the second test well in Section 34. The decision on the ultimate location of the production well for this project will be based on the proposed location of the water pipeline from the well site to the place of use and issues associated with obtaining easements to cross properties between the well site and the place of use. An additional well is also proposed to be drilled at the Section 34 site to serve as a backup or redundant well. If only the Section 15 site is used as a production well, an additional backup well will likely be drilled at this location. Any well that is not used as a production well or backup well is required will be decommissioned in accordance with Ecology requirements.

Other Water Rights Appurtenant to the Existing Place of Use

The only other water right appurtenant to the existing place of use is Ground Water Right Claim No. 128294 submitted by W.A. and Lorna Duling for a well being used for domestic supply and irrigation of 15 acres. The place of use for this Ground Water Claim is the same as the place of use described in Surface Water Right Claim No. 128293, the subject of this report (See Attachment 1 and 2).

History of Ownership of the Existing Place of Use

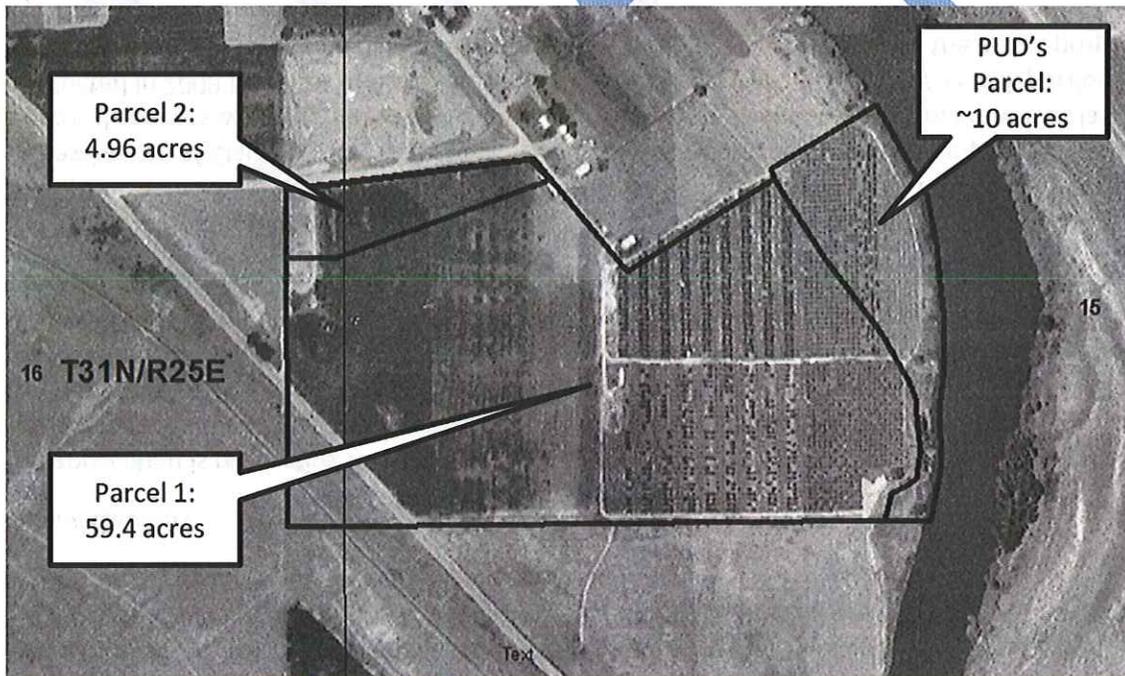
The application submitted by Mr. Barnett included a table listing all of the property owners and the number of acres irrigated under Surface Water Claim No. 128293 (See Table 3 Below). The PUD was listed as having 6.36 acres of irrigation under this Claim; however the legal description for Parcels 1 and 2 does not include the PUD's property. This place of use has had a number of changes in ownership¹ outlined below.

¹ Deeds for the following transactions were obtained from Roger Erlandsen of Erlandsen & Associates.

The parcels are depicted in Figure 1.

- 1965: Kenneth and Dorothy McPherson deeded 4.96 acres to the Dulings (Parcel 2)
- 1966: Dulings deeded 76 acres to the Public Utility District of Douglas County (PUD).
- 1967: the PUD deeded 59.4 acres back to the Dulings. These 59.4 acres (Parcel 1) did not include the easternmost parcel along the Okanogan River lying within the Wells Dam Hydroelectric Project area.
- 1974 the Dulings submitted two claims; the Surface Water Claim asserts the right to irrigate 64.36 acres and the Ground Water Claim asserts the right to irrigate 15 acres for a total of 79.36 acres. However, the identical place of use cited in both Claims (Parcel 1 and 2) is only 65.33 acres.
- 1993 the PUD issued a *Permit For Use of Wells Reservoir Area* to Roy and Ethel Riggan fruit tree farming on the parcel shown below. This Permit includes a legal description and surveyor's drawing of the easement for the surface water pump and irrigation waterlines.

Figure 1: Existing Place of Use



Water use was substantiated by review of aerial photos of several years between 1996 through 2006. The 1996 aerial shows full orchard build out in which rows of orchard trees running north and south are unobstructed by the property boundary between the Duling's Parcel 1 and the PUD's parcel. Orchards were being removed in the mid-2000's to convert all of the property from irrigated orchards to pasture land.

In reviewing the available aerial photos and property deeds, it is clear that the PUD's property has been irrigated under this Claim. Therefore, even though the acreage owned by the PUD is not included with the legal descriptions for Parcels 1 and 2, it is assumed that the 64.36 acres described on the Surface Water Claim includes the PUD's parcel. The Claim should be Amended (expanded) to include the PUD's

parcel. In doing so, the place of use would describe approximately 77 acres, of which only 64.36 acres can be irrigated under Surface Water Claim No. 128293.

Duling's Ground Water Right Claim No. 128294 is not the subject of this change and is not subject to an extent and validity analysis. However, it is clear that several wells on the property are being used for domestic purposes that include lawn and garden within Parcel 1 and 2. These uses may be considered part of the 15 acres cited on the Claim. The 79.36 total acres of irrigation cited on the Surface and Ground Water Claims more than covers the 77-acre place of use (Parcel 1 + Parcel 2 + PUD Parcel = 77 acres).

Extent and Validity

At the time of the site visit, the applicant's representatives stated there were no five-year periods after 1967 where the Claim had not been exercised. This statement was substantiated by review of air photos, power records, and deeds discussed above.

Annual Quantity

The application is requesting to add Community Domestic as a purpose of use, which requires that Ecology perform an annual consumptive quantity (ACQ) test according to RCW 90.03.380(1). The ACQ test requires that Ecology determine what was consumptively used in the past and compare that to the proposed future use. No additional consumptive use can result from Ecology's change authorization. Historic consumptive use is determined by the average of the highest two years of the last five years of continuous use.

The Technical Memorandum provided electrical records that were reviewed for the years 1999 through 2010 (see Table 2 below). Power records show that 2005 through 2009 is the most recent period of successive use of Claim No. CS4-128293CL. The electrical system at the site is comprised of two electrical services which operate two pumps in the Okanogan River. Irrigation of crops was last conducted in 2009 for all six properties included on the water right claim. Only a small portion of the right was used in 2009 during final removal and destruction of the orchards on the entire property described on the Water Right Claim.

TABLE 2: SUMMARY OF ELECTRICAL DATA

YEAR	TUPLING METER (kw/hr)	ORCHARD MANAGEMENT METER	
		(kw/hr)	TOTAL (kw/hr)
1999	47,268	23,850	71,118
2000	35,628	30,610	66,238
2001	34,452	22,550	57,002
2002	38,388	21,450	59,838
2003	21,624	20,490	42,114
2004	19,560	26,980	46,540
2005	32,676	36,720	69,396
2006	0	3,007	3,007
2007	24,360	16,292	40,652
2008	15,600	8,295	23,895
2009	0	5,321	5,321
2010	0	0	0

The total quantity of water diverted was estimated using the power consumption equation provided in WAC 173-173-160(2):

$$(V, \text{ in gallons}) V = (318,600 \text{ (kWh)} (P_{\text{eff}}) (M_{\text{eff}}))/\text{TDH}.$$

Using a pump efficiency (P_{eff}) of 75%, a motor efficiency (M_{eff}) of 75%, and a Total Dynamic Head (TDH) of 75 feet, the total volume of water pumped was calculated for the two highest years of water use in the last 5 years of continuous use: 2005 and 2007.

2005 Tupling pump

$$V = (318,600 (32,676) (0.75) (0.75))/75 = 78,079,302 \text{ gallons} = 239.6 \text{ ac-ft/yr}$$

2005 Orchard Management pump

$$V = (318,600 (36,720) (0.75) (0.75))/75 = 87,742,440 \text{ gallons} = 269.3 \text{ ac-ft/yr}$$

2005 Total Use = 508.9 ac-ft/yr

2007 Tupling pump

$$V = (318,600 (24,360) (0.75) (0.75))/75 = 58,208,220 \text{ gallons} = 178.6 \text{ ac-ft/yr}$$

2007 Orchard Management pump

$$V = (318,600 (16,292) (0.75) (0.75))/75 = 38,929,734 \text{ gallons} = 119.5 \text{ ac-ft/yr}$$

2007 Total Water Use = 298.1 ac-ft/yr

The average of these two highest years of water use is 403.5 ac-ft/yr.

These calculations assume a very high water duty of 6.3 acre-feet per acre (403.5 acre-feet/64.36 acres) and likely reflects inefficiencies in the delivery system which are not accounted for in the above equation. The power records provide a timeline of water use, but they do not speak to a reasonable per acre water duty, or consumptive use.

Another methodology for estimating water use is outlined in Ecology Water Resources Program Guidance GUID-1210 which uses the Washington Irrigation Guide (WIG). Table 3 below was taken from the Technical Memorandum. Table 3 which shows the calculated water requirements for each of the six parcels associated with Water Right Claim No. 128293. The WIG provides the Crop Irrigation Requirement (CIR) and from that the Total Irrigation Requirement (TIR) was calculated for each of the six parcels. The application methods are assumed to have a 75% efficiency rate and a 10% evaporation rate.

Table 3: Summary of Water Use calculated using the Washington Irrigation Guide

Property Owner	Irrigated Acres	Crop (sprinkler type)	Total Irrigation Requirement (ac-ft/yr)	Consumptive Use (ac-ft/yr)
Tupling	32.4	Alfalfa (wheel line)	99.65	84.70
Barnett	17.9	Apples (solid set-undertree)	68.18	57.95
PUD	6.36	Apples (solid set-undertree)	24.22	20.59
Taylor	3.6	Pears (solid set-undertree)	12.84	10.92
Vickery	2.1	Pears (solid set-undertree)	7.49	6.37
Klepper	2.0	Pears (solid set-undertree)	7.14	6.07
Total	64.36		219.52	186.60

The ACQ test requires that future consumptive water use cannot exceed historic consumptive water use, which is shown in Table 3. From Mr. Barnett's 17.9 acres, only the consumptively used portion of water, 57.95 ac-ft/yr, is available to be transferred to the Silver Spur Resort. Return flows from this property historically returned to the Okanogan River, as evidenced by the proximity to the river and the transmissive nature of the sediments. In the future, water is proposed to be pumped from wells up-gradient to the resort. Return flows at Silver Spur Resort will not immediately return to the Okanogan River and will be considered additional consumptive water use.

Mr. Barnett's 17.9 acres represents 27.81% of the water use described in Claim No. 128293 (64.36 acres ÷ 17.9 acres * 100). The remaining five properties show historic irrigation of 46.46 acres (64.36-17.9). The total water use for the remaining five properties cannot exceed 151.34 ac-ft/yr for the irrigation of 46.46 acres collectively. Total water use under Claim No. 128293 cannot exceed 209.29 ac-ft/yr.

Instantaneous Quantity

No metering records were available to verify an instantaneous quantity of 1.29 cfs cited on the Water Right Claim. This maximum rate of withdrawal for both pumps has been historically used for pumping water from the Okanogan River for irrigation on the existing place of use. 1.29 cfs, or 0.02 cfs per acre, is a reasonable diversion rate. The five other properties owners intend to continue diverting from the Okanogan River. They will be limited to a maximum of 0.93 cfs (0.02 cfs * 46.46 acres). Mr. Barnett is proposing to transfer his portion of the instantaneous quantity to Silver Spur's community domestic supply. The instantaneous quantity proposed to be changed to community domestic supply is 0.36 cfs, or 161 gpm (17.9 acres/64.36 acres x 1.29 cfs).

Impairment Considerations

The existing water rights and Water Right Claims within a one-mile radius of the two proposed points of withdrawal in Section 15 were considered. This search showed no existing state issued ground water

rights and only two Ground Water Right Claims for existing water use. Water Right Claim No. 128294 was filed by W.A. and Lorna Duling for a well for 165 gpm and 15 acre-feet per year for domestic supply and irrigation of 15 acres with a date of 1925 shown as first putting water to use. The well is located approximately ½ mile west of the proposed points of withdrawal. The other was Water Right Claim No. 000430 filed by Robert L. Starzman for 100 gpm and 2 acre-feet per year for domestic supply, with a 1915 date of first use. This well is located approximately ½ mile northwest of the existing pumping plant on the Okanogan River.

With each of these Claims being approximately ½ mile away and up-gradient from the proposed points of withdrawal in Section 15, it is not anticipated that there would be any impairment of these two Water Right Claims.

The Technical Memorandum also summarizes wells located within approximately one mile of the two sites where wells will be constructed. Fifteen wells were located in the sections adjacent to Section 15 and 21 wells were located within Section 34. These wells were all located within approximately the one mile radius of the two proposed well sites and are generally unconfined and range in depth from 25 to 230 feet.

There were several Surface Water Right Claims and surface water rights within the one-mile radius of the proposed point of withdrawal; however since this Change Application is to change a surface water source to a ground water source, there would be less impact to these other surface water rights than under the existing condition.

The Technical Memorandum reports on an analysis of the expected drawdown (decrease in ground water level) from pumping the proposed ground water supply wells on other wells located 250 feet to about two miles away. The Theis equation used conservative numbers and conditions. Predicted drawdown ranged from 0.03 to 0.4 feet at a pumping rate of about 42 gpm. This information shows that the proposed transfer would not impair existing wells.

Public Interest Considerations

This project has been thoroughly addressed through the Development Agreement and SEPA process led by Okanogan County, with the public being provided ample opportunity to express any concerns they have for this development. There were also no protests or comments filed in response to the public notice for this application.

The existing point of diversion is located downstream of the most downstream gaging station for the Okanogan River, and is within the reach of the river that is influenced by the Wells Dam located approximately 15 miles downstream on the Columbia River. By moving the location of the point of diversion for a portion of this water right to ground water wells, with one of the two proposed well locations being in the same vicinity as the existing point of diversion and the other proposed well location being approximately three miles downstream of the existing point of diversion, instead of a direct reduction in flow in the Okanogan River as there is under the existing condition, there will only be an indirect and less impact to the instream flows on the Okanogan River.

This would benefit the instream flow in the Okanogan River and the Columbia River.

It is therefore determined that this project is not detrimental to the public interest.

Consideration of Protests and Comments

There were no protests or comments filed in response to the public notice for this proposed application.

CONCLUSIONS

Water is available to be transferred to the Silver Spur Resort. This transfer would not impair existing water rights and would not be a detriment to the public welfare. Claim No. 128293 should be amended to include the PUD's parcel as part of the place of use.

RECOMMENDATIONS

Based on the information presented above, the author recommends that this request to change the point of diversion/withdrawal, place of use, purpose of use, and time of use for a portion of Claim No. 128293 be approved in the amounts, and within the limitations listed below and subject to the provisions described in the Order for Report of Examination No. CS4-128293CL, pages 1-5.

Purpose of Use and Authorized Quantities

The amount of water recommended is a maximum limit and the water user may only use that amount of water within the specified limit that is reasonable and beneficial:

Amounts

0.93 cfs and 151.34 acre-feet for irrigation of 46.46 acres located within Section 15, T. 31 N., R. 25 E.W.M.

0.36 cfs and 57.95 acre-feet for community domestic supply at the Silver Spur Development located within Section 19, 20, and 30, T. 31 N., R. 25 E.W.M.

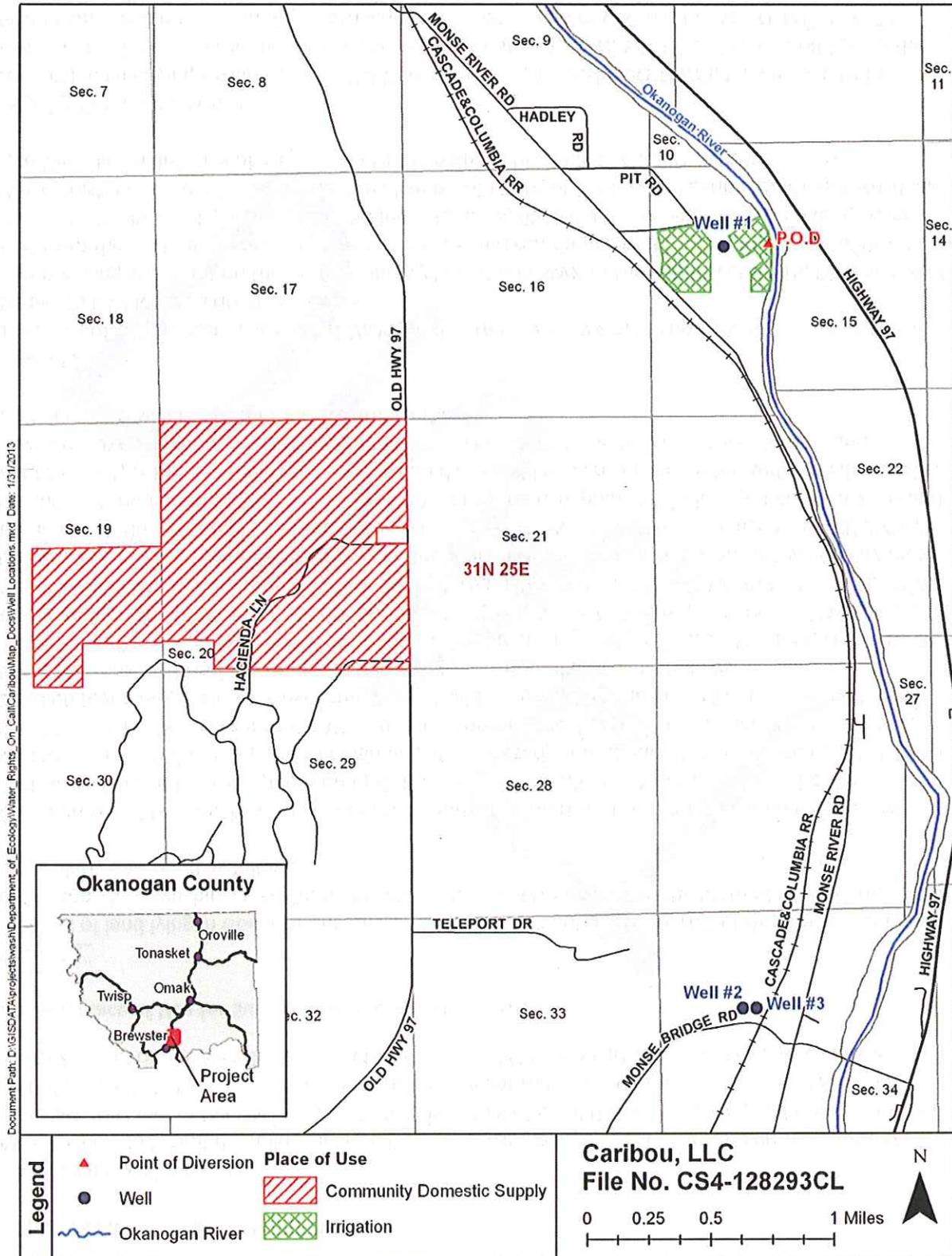
Report by: _____
Jerry Louthain, PE, HDR Engineering

Date

Reviewed by: _____
Kelsey Collins, Water Resources

Date

ATTACHMENT 1



ATTACHMENT 2: LEGAL DESCRIPTIONS

Silver Spur Development:

All of Section 20 Except the following described portions: the S1/2 SE1/4 SE1/4 NE1/4; The South 671 feet of the West 1092 feet of the SW1/4 SW1/4; the South 43.91 feet of the SE1/4 SW1/4; and the South 33.28 feet of the SW1/4 SE1/4. The SE1/4 of Section 19 except the South 638 feet of the East 1715 feet; the North 297 feet of the West 1046 feet of the NW1/4 NE1/4 Section 30, ALL in T. 31 N., R. 25 E.W.M.

Existing Place of Use for Surface Water Claim No. 128293

"Parcel 1"

A parcel of land lying in Government Lots 1 and 3 and the Southwest quarter of the Northwest quarter of Section 15, Township 31 North, Range 25, E.W.M., in Okanogan County, State of Washington, more particularly described as follows:

Commencing at the Northwest corner of the Southwest quarter of the Northwest quarter of said Section 15 (a round brass cap monument); thence S. $00^{\circ}25'29''$ E. 338.18 feet along the West line of said Section 15 to the true point of beginning of this description; thence continuing along said West line S. $00^{\circ}25'29''$ E., 982.85 feet to the West quarter corner of said Section 15; thence N. $89^{\circ}35'42''$ E. 2320.06 feet along the East-West center line of said Section 15 to the Project Boundary line for the Wells Hydroelectric Project; thence along said Project Boundary line as follows:

N. $21^{\circ}31'07''$ E., 81.26 feet; N. $54^{\circ}30'46''$ E., 108.59 feet; N. $11^{\circ}09'23''$ E., 110.55 feet; N. $21^{\circ}10'36''$ W. 58.24 feet; N. $09^{\circ}37'49''$ E. 37.00 feet; N. $09^{\circ}17'10''$ W., 157.62 feet; N. $29^{\circ}06'53''$ W., 134.00 feet; N. $33^{\circ}19'32''$ W., 185.28 feet; N. $37^{\circ}37'34''$ W., 163.03 feet; N. $36^{\circ}25'07''$ W. 207.70 feet; N. $30^{\circ}42'06''$ W., 283.73 feet; thence leaving Project Boundary line and running S. $58^{\circ}48'29''$ W. 654.67 feet; thence S. $71^{\circ}06'29''$ W., 32.38 feet; thence N. $38^{\circ}13'01''$ W., 485.20 feet; thence S. $66^{\circ}21'29''$ W., 927.66 feet; thence N. $89^{\circ}32'31''$ W., 151.30 feet to the true point of beginning. EXCEPT ROADS and EXCEPT Lot 1, Lot 2, and Lot 3 of the Crazy Rapids Short Plat, as recorded under Auditors File Number 3176675, Okanogan County (the portion of Claim No. 128293 purchased by Lynn Barnett and transferred to Silver Spur under this authorization).

"Parcel 2"

That part of Government Lot 1 (Fr. NWNW) and of the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 15, Township 31 North, Range 25 E.W.M., described as follows:

Commencing at a point on the west boundary line of said SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ Section 15, Distant 1349.68 feet from the northwest corner of said Section 15, and run thence N. $82^{\circ}02'$ E. a distance of 957.41 feet; thence S. $38^{\circ}40'30''$ E., a distance of 80 feet; thence S, $65^{\circ}54'$ W. a distance of 927.66 feet; thence West a distance of 151.3 feet to the West line of said SW $\frac{1}{4}$ of the NW $\frac{1}{4}$, Section 15; thence North along said West line a distance of 308.06 feet to the point of beginning. EXCEPT ROADS.

Douglas County PUD No. 1

A parcel of land lying within the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 15, Township 31 North, Range 25, E.W.M., described as follows: From the northeast corner of Parcel 1, go N. $58^{\circ}48'29''$ E., 419.68 feet to the Okanogan River; thence running south along the river to a point which is located N. $89^{\circ}35'42''$ E., 2320.88 feet from the southeastern corner of Parcel 1; thence northerly along the eastern boundary edge of Parcel 1 to the Point of Beginning. The eastern property line coincides with the Wells Project Boundary line described above with Parcel 1.