BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

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APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 76N 30068837 BY RC RESOURCES, INC	)))	**PRELIMINARY DETERMINATION TO GRANT PERMIT**

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On April 28, 2014, RC Resources, Inc. (Applicant) submitted Application for Beneficial Water Use Permit No. 76N 30068837 to the Kalispell Water Resources Office of the Department of Natural Resources and Conservation (Department or DNRC) for 3,000 gallons per minute (GPM) up to 833 acre-feet (AF). The Department published receipt of the Application on its website. The Department sent the Applicant a deficiency letter under § 85-2-302, Montana Code Annotated (MCA), dated October 24th, 2014. A request for a 15-day extension was received November 24th, 2014. The Applicant responded to the deficiency letter on December 4th, 2014. The Application was amended (major) on December 18th, 2014, which reset the priority date. The flow rate was reduced to 531 GPM or 1.18 cubic feet per second (CFS) and the volume to 857 AF. The flow rate was later removed. The Application was amended (major) on June 15th, 2015, which reset the priority date. Storage was added. The Department sent the Applicant a deficiency letter under § 85-2-302, Montana Code Annotated (MCA), dated November 23rd, 2015. A request for a 15-day extension was received December 7th, 2015. The Applicant responded to the deficiency letter on January 11th, 2016. The Application was determined to be correct and complete as of March 14th, 2016. The Department (Kathy Olsen, Melissa Brickl, and Nate Ward) met with the Applicant and their attorney, Holly Franz from Franz & Driscoll, PLLP, on April 19th, 2016 to clarify information within the Technical Report. An Adoption of an Existing Environmental Review for this Application was completed on June 21, 2016.

INFORMATION

The Department considered the following information submitted by the Applicant.

Application as filed:

- Groundwater Application for Beneficial Water Use Permit, Form 600
- Aquifer Testing Addendum, Variance Request and Department Variance Response

Attachments:

- Maps:
    - US Geological Survey (USGS) and aerial photography site maps which identified the place of use, proposed points of diversion, township, range, and section lines.
    - Conveyance System Figure which documented the water supply and distribution system for the project.
- Rock Creek Mine Year 15 Water Balance Figure
- The preliminary three-dimensional finite element groundwater flow model (FEFLOW 3D) summarized in the document entitled "Groundwater Modeling Assessment for the Rock Creek Project Sanders County, MT", prepared by Hydrometrics, Inc. January 2014.

Information Received after Application Filed:

- Revised Water Balance Figure dated May 15, 2014 submitted by the Applicant's representative Holly Franz of Franz & Driscoll, PLLP, received May 19, 2014.
- Additional Application Materials dated July 11, 2014 submitted by the Applicant's representative, received July 14, 2014.
- Deficiency Letter Response, dated December 2, 2014, received December 4, 2014.
- Three E-mails correcting Figures in the Deficiency Response sent by the Applicant's representative dated and received December 8, 2014.
- Amendment to Application Form from Applicant's representative dated and received December 18, 2014.
- Amendment to Application Form from Applicant's representative dated June 10, 2015, received June 15, 2015.
    - Reservoir/Place of Storage Addendum
    - Water Balance Production Year 23 Figure
    - Ore Processing Flow Chart

    - Flow data for Rock Creek, Bull River, East Fork Bull River and Copper Gulch
    - Stream gaging location map
    - Summary Table of Rock Creek Mine Permits
    - Pump specifications
    - Mining Claims and Fee Simple Land map
    - Revised three-dimensional finite element groundwater flow model (FEFLOW 3D) summarized in the document entitled "Groundwater Modeling Assessment for the Rock Creek Project Sanders County, MT", prepared by Hydrometrics, Inc. October 2014.
- Deficiency Letter Response, dated January 7, 2016 received January 11, 2016.
- E-mail and attachments from Applicant's representative dated February 22, 2016 entitled "Copper Creek USFS Flow data".
- E-mail and attachments from Applicant's representative dated March 10, 2016 entitled "76D USFS Flow Data Reports for Rock Creek & East Fork of the Bull River.
- E-mail and attachments from Applicant's representative dated March 10, 2016 entitled "76N 30068837; Follow-up to your February 26, 2016 telephone call with Doug Parker of Hydrometrics"
- E-mail from Applicant's representative dated May 19, 2016 entitled "Re. RC Resources Application". E-mail confirmed the removal of the requested flow rate from Application.
- E-mail from Applicant's representative dated June 20, 2016 entitled Re: RC Resources Condition. E-mail documented their support of the reporting condition and its associated language.

<u>Information within the Department's Possession/Knowledge:</u>

- USGS flow records for the Bull River near Noxon USGS station # 12391550. Period of record October 1972 – September 2014.
- USGS Paper 2260 entitled "Streamflow Characteristics of Mountain Streams in Western Montana.

- Basin characteristics obtained from the USGS's Stream Stats online program (USGS, 2012, The StreamStats program for Montana).
- Aquifer Test Report and Depletion Report, written by Russell Levens, Groundwater Hydrologist, Water Management Bureau.
- Legal demands for the above mentioned streams using the Department water right database
- United States Forest Service- Kootenai National Forest (USFS-KNF) Draft Supplemental Environmental Impact Statement (Draft SEIS) for the Rock Creek Project dated February 19, 2016.

The Department has fully reviewed and considered the evidence and argument submitted in this Application and preliminarily determines the following pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, MCA).

PROPOSED APPROPRIATION

FINDINGS OF FACT

1. The Rock Creek Mine is a proposed underground copper and silver mine; the mill was designed to produce 10,000 tons of ore per day. The Applicant proposes to impound groundwater within the Rock Creek Mine in underground transitory sumps and divert groundwater directly from the active mining areas or from the sumps for mining purposes January 1st thru December 31st. The Applicant will store up to 130 AF of water at any point in time within the mine during a year and divert up to 857 acre-feet (AF) of water from the mine per year. No flow rate is associated with this application; the mine is viewed as a large pit. The mine in its totality will become the point of diversion. The fully developed mine area is defined by the USFS-KNF as the mitigated mining limit (Figure 1). It is located in the S2S2 of Section 14, E2E2 Section 22, Section 23, W2W2 Section 24, W2NW Section 25, Section 26, the E2E2 Section 27, and the W2 Section 35, Township 27N, Range 32W, Sanders County, Montana.

2. Water leaves the production adit portal (surface access point) located in the N2NWNE, Section 10, Township 26N, Range 32W, Sanders County, MT via a 12-inch pipe and enters the closed loop water distribution system which conveys water to the mill site, concentrate dewatering facility, paste plant/thickener, tailings impoundment area and then back to the mill site or wastewater treatment plant. The place of use for the mill site is the N2, Section 10, Township 26N, Range 32W; for the concentrate dewatering facility and paste plant the SENE Section 28, Township 26N, Range 32W; for the tailings impoundment area Section 28 and the S2S2 of Section 21; and for the wastewater treatment plant SWSW, Sec 27, Township 26N, Range 32W, Sanders County, Montana.

3. From the mill a 4-inch pipeline conveys the concentrate slurry (35% ore to 65% water) to the concentrate dewatering facility and another 16-inch pipeline conveys the tailing slurry (ground rock no longer containing significant ore minerals; 30% rock to 70% water) to the paste plant/thickener where it is dewatered. All reclaimed water is returned to the closed process circuit for reuse and sent back to the mill (Figure 2). The "dewatered" tailings are deposited in the tailings impoundment area/tailing storage area. Precipitation that falls on the tailings storage area and seepage from the tailings is collected in under-drains consisting of both blanket and finger drains. Capture wells may be used if water flowing through the tailings storage area is substantial. Routinely 10% of the process loop water is sent to the wastewater treatment system and then discharged to the Clark Fork River. Mine water will make-up the 10% that is discharged to the waste water treatment system and/or lost via evapotranspiration/sublimation from the tailings storage area.

4. No supplemental or associated rights exist on the proposed place of use. Most on-site water is captured and recycled back into the processes loop, therefore other water rights may need to be acquired depending on what is finally permitted by other Federal and State Agencies and/or produced from the mine. The following water rights may be needed: 1) Provisional Permit for precipitation falling on tailings storage area and mill reservoir, 2) Provisional Permit for captured storm water runoff at mill site, 3) Provisional Permit for seepage from Tailings Storage area if groundwater other than tailings seepage is being intercepted, 4) Notice of

Completion of Groundwater Development (F602) for on-site potable wells, and 5) F602 or Provisional Permit for make-up well for process-loop.

5. The point of diversion is located in the Clark Fork below Flathead River Basin (76N), which is an area that is not subject to water right basin closures or controlled groundwater area restrictions. The Applicant's mine portal is 3.8 miles north east of the Clark Fork River. The Rock Creek ore body is in a low permeability meta-sedimentary rock. The ore body is overlain by Belt rock as well as unconsolidated colluvium, glacial, and alluvial deposits. Groundwater in Belt rock is found primarily in discontinuous fractures and faults and is recharged by precipitation and snow melt through overlying unconsolidated sediments.

6. The Applicant requested 857 AF for mining purposes; water will be used in the mill, concentrate dewatering facility, the paste plant/thickener, tailings impoundment area, wastewater treatment plant and for dust suppression. The total diverted volume is 100% consumed from the source. The maximum simulated annual groundwater inflow rate is 531 GPM up to 857 AF in production year 23.

7. The application will be subject to the following conditions, limitations or restrictions:

1. "The appropriator shall install a Department approved in-line flow meter at a point in the delivery line approved by the Department. Water must not be diverted until the required measuring device is in place and operating. On a form provided by the department, the appropriator shall keep a written *monthly* record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by January 31st of each year and upon request at other times during the year. Failure to submit reports may be cause for revocation of a permit or change. The records must be sent to the water resources regional office. The appropriator shall maintain the measuring device so it always operates properly and measures flow rate and volume accurately."

2. "The Appropriator shall submit biennial progress reports to the Department upon permit issuance; reports must be submitted on or before January 31st biennially. Each progress report must include: a summary of progress and timelines related to obtaining federal approval of the permittee's Plan of Operations for Mining Activities; a summary of the permittee's plans and anticipated timeline for initiating water use pursuant to the permit; a summary of any water use under the permit as of the date of the progress report; a summary of the permittee's plans and anticipated timeline for completion of the permit. The progress report must include an explanation if the plans and/or timelines included therein are different

than plans/and or timelines contained in the permit application or a previous progress report."

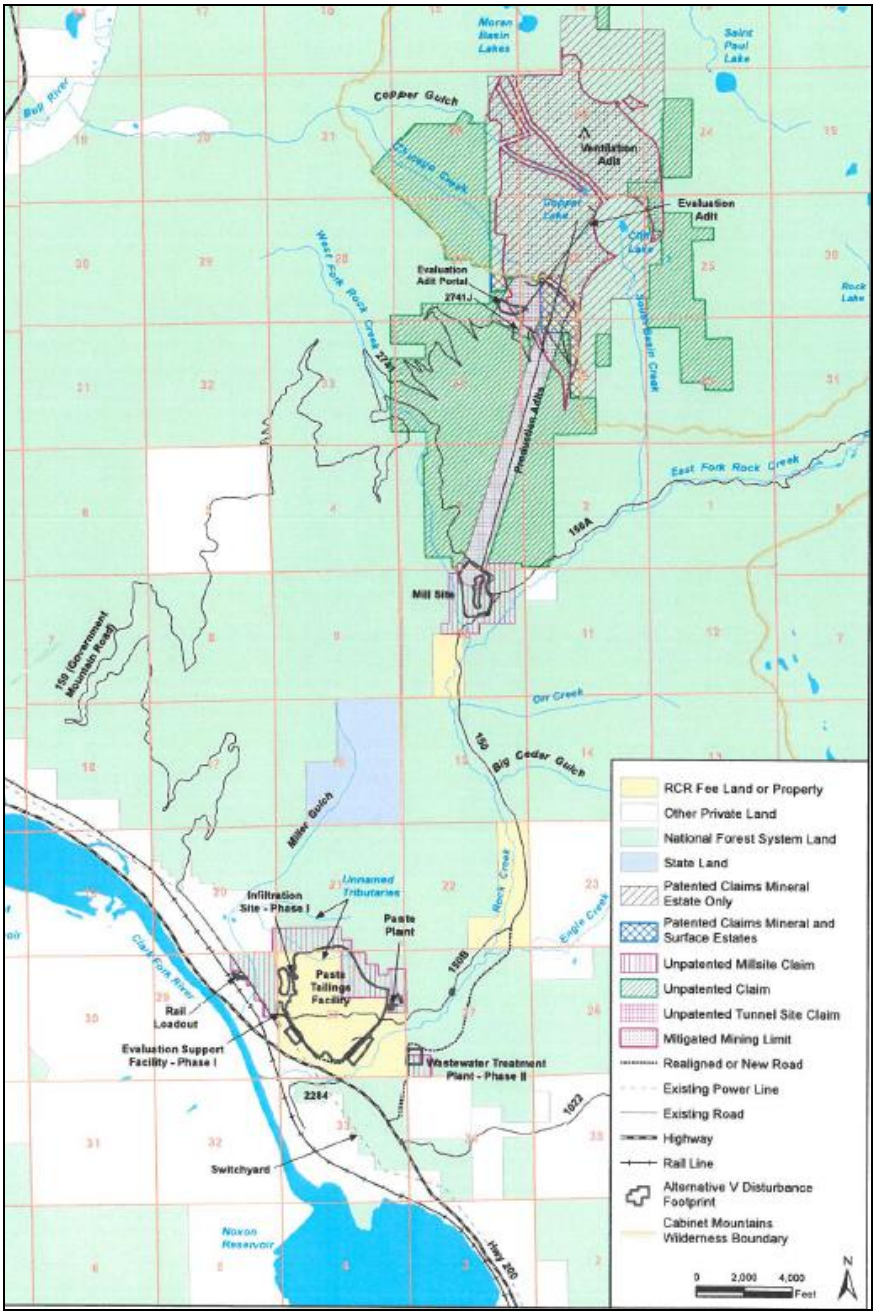

Figure 1: Map of land ownership, proposed place of use and point of diversion taken from the USFS-KNF Draft Supplemental EIS February 19, 2016, Figure 2-3, Pg 2-15

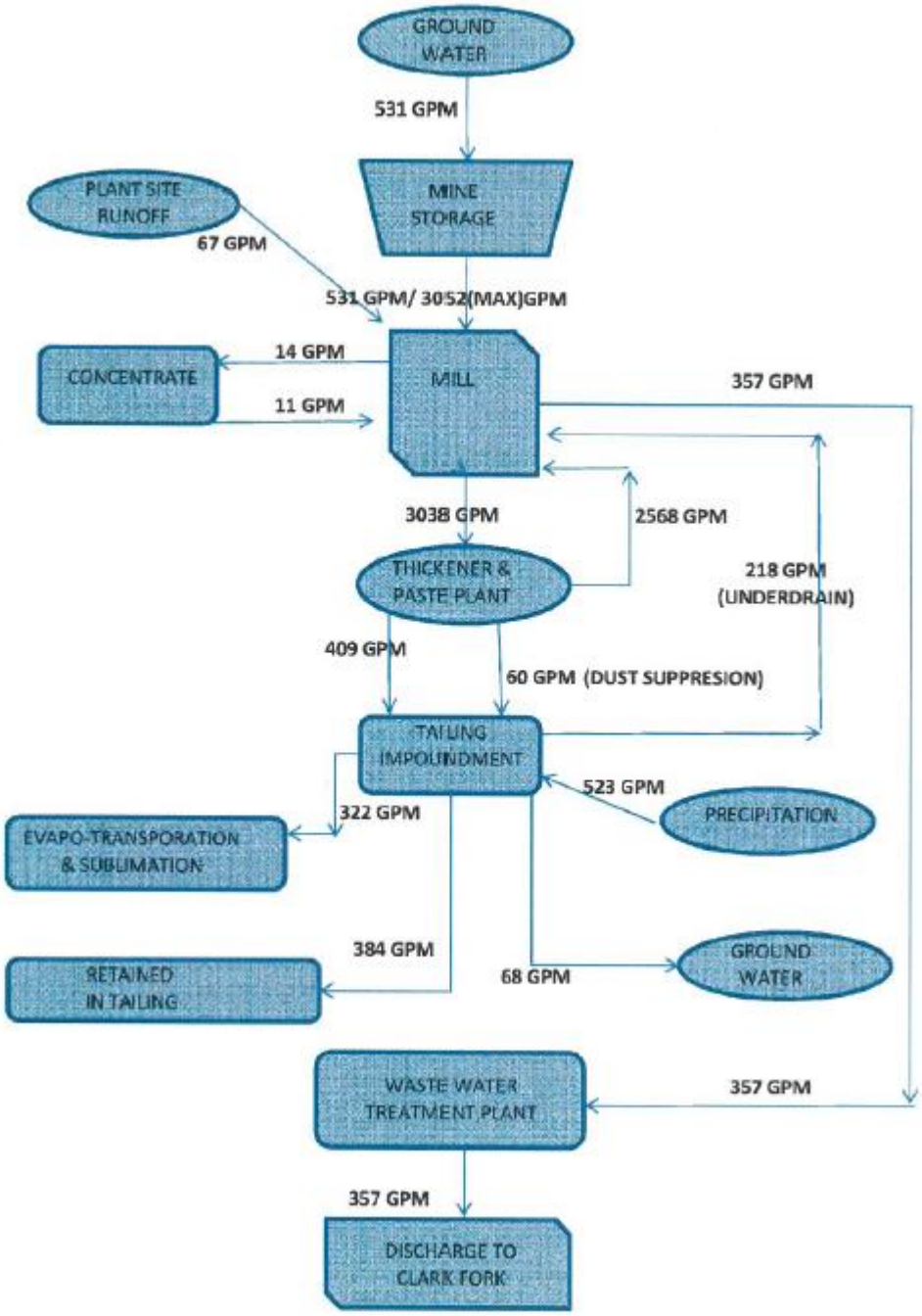

Figure 2: Rock Creek Water Balance Flow Chart Production Year 23

§ 85-2-311, MCA, BENEFICIAL WATER USE PERMIT CRITERIA

GENERAL CONCLUSIONS OF LAW

8. The Montana Constitution expressly recognizes in relevant part that:

> (1) All existing rights to the use of any waters for any useful or beneficial purpose are hereby recognized and confirmed.
> (2) The use of all water that is now or may hereafter be appropriated for sale, rent, distribution, or other beneficial use . . . shall be held to be a public use.
> (3) All surface, underground, flood, and atmospheric waters within the boundaries of the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided by law.

Mont. Const. Art. IX, §3. While the Montana Constitution recognizes the need to protect senior appropriators, it also recognizes a policy to promote the development and use of the waters of the state by the public. This policy is further expressly recognized in the water policy adopted by the Legislature codified at § 85-2-102, MCA, which states in relevant part:

> (1) Pursuant to Article IX of the Montana constitution, the legislature declares that any use of water is a public use and that the waters within the state are the property of the state for the use of its people and are subject to appropriation for beneficial uses as provided in this chapter. . . .
> (3) It is the policy of this state and a purpose of this chapter to encourage the wise use of the state's water resources by making them available for appropriation consistent with this chapter and to provide for the wise utilization, development, and conservation of the waters of the state for the maximum benefit of its people with the least possible degradation of the natural aquatic ecosystems. In pursuit of this policy, the state encourages the development of facilities that store and conserve waters for beneficial use, for the maximization of the use of those waters in Montana . . .

9. Pursuant to § 85-2-302(1), MCA, except as provided in §§ 85-2-306 and 85-2-369, MCA, a person may not appropriate water or commence construction of diversion, impoundment, withdrawal, or related distribution works except by applying for and receiving a permit from the Department. See § 85-2-102(1), MCA. An applicant in a beneficial water use permit proceeding must affirmatively prove all of the applicable criteria in § 85-2-311, MCA. Section § 85-2-311(1) states in relevant part:

… the department shall issue a permit if the applicant proves by a preponderance of evidence that the following criteria are met:

(a) (i) there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate; and

(ii) water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water;

(b) the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. In this subsection (1)(b), adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied;

(c) the proposed means of diversion, construction, and operation of the appropriation works are adequate;

(d) the proposed use of water is a beneficial use;

(e) the applicant has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit;

(f) the water quality of a prior appropriator will not be adversely affected;

(g) the proposed use will be substantially in accordance with the classification of water set for the source of supply pursuant to 75-5-301(1); and

(h) the ability of a discharge permit holder to satisfy effluent limitations of a permit issued in accordance with Title 75, chapter 5, part 4, will not be adversely affected.

(2) The applicant is required to prove that the criteria in subsections (1)(f) through (1)(h) have been met only if a valid objection is filed. A valid objection must contain substantial credible information establishing to the satisfaction of the department that the criteria in subsection (1)(f), (1)(g), or (1)(h), as applicable, may not be met. For the criteria set forth in subsection (1)(g), only the department of environmental quality or a local water quality district established under Title 7, chapter 13, part 45, may file a valid objection.

To meet the preponderance of evidence standard, "the applicant, in addition to other evidence demonstrating that the criteria of subsection (1) have been met, shall submit hydrologic or other evidence, including but not limited to water supply data, field reports, and other information developed by the applicant, the department, the U.S. geological survey, or the U.S. natural resources conservation service and other specific field studies." § 85-2-311(5), MCA (emphasis added). The determination of whether an application has satisfied the § 85-2-311, MCA criteria is committed to the discretion of the Department. Bostwick Properties, Inc. v. Montana Dept. of Natural Resources and Conservation, 2009 MT 181, ¶ 21. The Department is required grant a permit only if the § 85-2-311, MCA, criteria are proven by the applicant by a preponderance of the evidence. Id. A preponderance of evidence is "more probably than not." Hohenlohe v. DNRC, 2010 MT 203, ¶¶33, 35.

10. Pursuant to § 85-2-312, MCA, the Department may condition permits as it deems necessary to meet the statutory criteria:

> (1) (a) The department may issue a permit for less than the amount of water requested, but may not issue a permit for more water than is requested or than can be beneficially used without waste for the purpose stated in the application. The department may require modification of plans and specifications for the appropriation or related diversion or construction. The department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria listed in 85-2-311 and subject to subsection (1)(b), and it may issue temporary or seasonal permits. A permit must be issued subject to existing rights and any final determination of those rights made under this chapter.

E.g., Montana Power Co. v. Carey (1984), 211 Mont. 91, 96, 685 P.2d 336, 339 (requirement to grant applications as applied for, would result in, "uncontrolled development of a valuable natural resource" which "contradicts the spirit and purpose underlying the Water Use Act."); see also, *In the Matter of Application for Beneficial Water Use Permit No. 65779-76M by Barbara L. Sowers* (DNRC Final Order 1988)(conditions in stipulations may be included if it further compliance with statutory criteria); *In the Matter of Application for Beneficial Water Use Permit No. 42M-80600 and Application for Change of Appropriation Water Right No. 42M-036242 by Donald H. Wyrick* (DNRC Final Order 1994); Admin. R. Mont. (ARM) 36.12.207.

11. The Montana Supreme Court further recognized in Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starner (1996), 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080, *superseded by legislation on another issue*:

> Nothing in that section [85-2-313], however, relieves an applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

See also, Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order* (2011). The Supreme Court likewise explained that:

> .... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

Montana Power Co., 211 Mont. at 97-98, 685 P.2d at 340; see also Mont. Const. art. IX §3(1).

12. An appropriation, diversion, impoundment, use, restraint, or attempted appropriation, diversion, impoundment, use, or restraint contrary to the provisions of § 85-2-311, MCA is invalid. An officer, agent, agency, or employee of the state may not knowingly permit, aid, or assist in any manner an unauthorized appropriation, diversion, impoundment, use, or other restraint. A person or corporation may not, directly or indirectly, personally or through an agent, officer, or employee, attempt to appropriate, divert, impound, use, or otherwise restrain or control waters within the boundaries of this state except in accordance with this § 85-2-311, MCA. § 85-2-311(6), MCA.

13. The Department may take notice of judicially cognizable facts and generally recognized technical or scientific facts within the Department's specialized knowledge, as specifically identified in this document. ARM 36.12.221(4).

Physical Availability

FINDINGS OF FACT

14. The Department granted the Applicant a variance from conducting a 72-hour Aquifer test. In lieu of the 72-hour test, the Department used results from the Applicant supplied preliminary three-dimensional finite element groundwater flow model (FEFLOW 3D) to estimate the amount of water physically entering the mine per annum. The model encompassed the major watersheds surrounding the project area and was capable of simulating 1) groundwater inflow rates into the mine workings, 2) assessing changes in surrounding groundwater levels and 3) evaluating the general location and magnitude of depletions to streams and wilderness lakes. See the file for the document entitled "Groundwater Modeling Assessment for the Rock Creek Project, Sanders County, MT October 2014", which summarized model findings. The maximum modeled annual inflows into the mine occur in Production Year 23 and equal 531 GPM or 857 AF. The volume is the equivalent of the inflow occurring non-stop for a full year.

15. Based on the FEFLOW 3D model the proposed use will result in depletions to three drainages and four surface water sources. Modeling simulations indicate depletions will be distributed in approximately equal amounts between the East Fork of the Bull River, the Bull River (Copper Gulch), and Rock Creek. The Clark Fork River will also be affected by the proposed use; an amount of water up to 857 AF will not be discharged to the River from the above noted tributaries. The following tables summarize physical availability for the five affected sources (Tables 1 -5). See the Technical Report in the file for a summary of how discharge (median of the mean or mean monthly flow (CFS)) was estimated for each gaged and ungagged source. Volume was calculated using the Departments F615 and the following equation (CFS × 1.98 × days in the month).

Table 1: Clark Fork below Noxon Rapids Dam near Noxon USGS station No. 12391400 Median Mean Monthly Flow/Volume

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	13,905	12,890	14,785	21,160	38,030	47,320
Volume (AF)	853,489	714,622	907,503	1,256,904	2,334,281	2,810,808
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Flow (CFS)	22,280	10,720	9,992	11,240	12,605	13,335
Volume (AF)	1,367,546	657,994	593,525	689,911	748,737	815,502

Table 2: Bull River below Confluence with East Fork Bull River Median Mean Monthly Flow/Volume

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	140.9	127.4	228.7	446.7	945.5	806.3
Volume (AF)	8,648	7,062	14,037	26,532	58,037	47,892
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Flow (CFS)	341.0	139.1	93.7	86.7	97.7	145.8
Volume (AF)	20,931	8,536	5,565	5,320	5,804	8,951

Table 3: East Fork Bull River near Confluence with Bull River Mean Monthly Flow/Volume

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	20.4	20.1	22.6	86.8	203.0	227.7
Volume (AF)	1,253	1,114	1,390	5,155	12,463	13,526
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Flow (CFS)	137.7	43.9	33.9	29.7	31.3	27.9
Volume (AF)	8,453	2,693	2,011	1,821	1,862	1,713

Table 4: Rock Creek above Point of Diversion for Provisional Permit 76N 23521 Mean Monthly Flow/Volume

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	1.8	2.4	52.3	114.9	132.3	198.1
Volume (AF)	113	132	3,210	6,824	8,121	11,765
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Flow (CFS)	55.7	4.8	3.4	7.4	12.2	13.5
Volume (AF)	3,416	292	200	454	722	828

Table 5: Copper Gulch near Confluence with Bull River Mean Monthly Flow/Volume

	Jan	Feb	Mar	Apr	May	Jun
Flow (CFS)	4.8	4.3	4.9	22.1	53.1	59.6
Volume (AF)	296	237	302	1,314	3,258	3,541
	Jul	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Flow (CFS)	44.0	14.8	11.3	9.1	8.5	6.9
Volume (AF)	2,699	907	671	561	507	421

16. Based on information provided, 857 AF of groundwater is physically available for the proposed project. When looking at depletions to surface water sources; water is physically available in the Clark Fork River below Noxon Dam, Bull River below the confluence with the East Fork Bull River, East Fork Bull River, Rock Creek, and Copper Gulch.

CONCLUSIONS OF LAW

17. Pursuant to § 85-2-311(1)(a)(i), MCA, an applicant must prove by a preponderance of the evidence that "there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate."

18. It is the applicant's burden to provide the required evidence. *In the Matter of Application for Beneficial Water Use Permit No. 27665-41I by Anson* (DNRC Final Order 1987)(applicant produced no flow measurements or any other information to show the availability of water; permit denied); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005).

19. An applicant must prove that at least in some years there is water physically available at the point of diversion in the amount the applicant seeks to appropriate. *In the Matter of Application for Beneficial Water Use Permit No. 72662s76G by John Fee and Don Carlson* (DNRC Final Order 1990); *In the Matter of Application for Beneficial Water Use Permit No. 85184s76F by Wills Cattle Co. and Ed McLean* (DNRC Final Order 1994).

20. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. § 85-2-311(1)(a)(i), MCA. Finding of Fact (FOF) 14-16.

Legal Availability:

FINDINGS OF FACT

21. The Department reviewed the Applicant's FEFLOW 3D models' estimated drawdown due to the proposed use. At full mine development drawdown is greatest in the immediate mine area (500 feet) and decreases as you move away from the center of the Rock Creek ore body to a minimum drawdown contour of 5 feet. Maximum modeled drawdown extent simulations showed drawdown peaking between 4 and 35 years after completion of mining depending on the location and proximity to the ore body. No groundwater rights exist within this zone.

22. Based on the Applicant's FEFLOW 3D model depletions to surface water sources are assumed to equal the total amount of water pumped from the mine distributed evenly throughout the year. This assumption is based on the principal of capture as defined by Lohman (1972) and a year-round period of use. Depletions due to the proposed beneficial use are limited to the Bull River below the confluence with the East Fork Bull River, East Fork Bull River, Rock Creek, and Copper Gulch (Table 6). Depletions are distributed evenly throughout the year. Depletions to the Clark Fork River below Noxon Dam will result from less tributary flow and could extend up to 857 AF. Depletions to the Clark Fork River should be less than the diverted volume though because a portion of the circuit process water is treated and discharged to the River. The Department assessed all surface water legal demands on these sources (Table 8-11). No water rights exist on the East Fork Bull River or wilderness lakes. Table 7 summarizes all water rights analyzed and their respective sources.

Table 6: Monthly Depletions to Surface Water Sources

	East Fork Bull River (AF)	Bull River (Copper Gulch) (AF)	Rock Creek (AF)	Rate (each source) (CFS)
January	24.3	24.3	24.3	0.39
February	21.9	21.9	21.9	0.39
March	24.3	24.3	24.3	0.39
April	23.5	23.5	23.5	0.39
May	24.3	24.3	24.3	0.39
June	23.5	23.5	23.5	0.39
July	24.3	24.3	24.3	0.39
August	24.3	24.3	24.3	0.39
September	23.5	23.5	23.5	0.39
October	24.3	24.3	24.3	0.39
November	23.5	23.5	23.5	0.39
December	24.3	24.3	24.3	0.39
Total	**285.7**	**285.7**	**285.7**	

Table 7: Summary of all Water Rights Reviewed within the Three Surface Water Drainages Depleted by the Proposed Use and Clark Fork River

WR No.	WR Type	Source	Flow (CFS)	Volume (AF)
76N 18772	Provisional Permit	Copper Gulch	0.13	24.5
76N 23521	Provisional Permit	Rock Creek	0.02	1
76N 30753 00	Provisional Permit	Bull River	0.08	12
76N 214753 00	Statement of Claim	Bull River	0.03	1
76N 18682 00	Provisional Permit	Bull River	0.08	24
76N 42544 00	Statement of Claim	Clark Fork River	0.05	2
76N 14260 00	Statement of Claim	Clark Fork River	0.83	68.2
76N 27955 00	Provisional Permit	Clark Fork River	1.78	500
76N 25344 00	Statement of Claim	Clark Fork River	0.57	138
76N 215098 00	Statement of Claim	Clark Fork River	0.07	5
76N 32430 00	Provisional Permit	Clark Fork River	0.04	2.5
76N 100392 00	Statement of Claim	Clark Fork River	0.11	15
76N 100390 00	Statement of Claim	Clark Fork River	0.05	NA
76N 42545 00	Statement of Claim	Clark Fork River	0.06	NA
*76N 125800 00	Statement of Claim	Clark Fork River	36,000	99,978

**This water right was not considered in the numerical legal demand analysis in Table 8, but was addressed under Finding of Fact #23 thru #25.*

Table 8: Water Rights for Clark Fork River below Noxon Rapids USGS Station No. 12391400 to the Idaho Boarder

Month	USGS Station No. 12391400 Water Physically Available (CFS)	Existing Legal Demands (CFS)	Physically Available Water minus Legal Demands (CFS)	Physically Available Water minus Legal Demands (AF)
January	13,905	0.16	13,904.84	853,487
February	12,890	0.16	12,889.84	714,620
March	14,785	0.16	14,784.84	907,501
April	21,160	0.27	21,159.73	1,256,894
May	38,030	2.73	38,027.27	2,333,618
June	47,320	3.56	47,316.44	2,810,077
July	22,280	3.56	22,276.44	1,336,815
August	10,720	3.56	10,716.44	657,263
September	9,992	3.45	9,988.55	592,809
October	11,240	2.05	11,237.95	689,401
November	12,605	1.94	12,603.06	748,235
December	13,335	0.16	13,334.84	818,500

Table 9: Water Rights for Bull River downstream of confluence with East Fork Bull River to confluence with Clark Fork River

Month	Water Physically Available (CFS)	Existing Legal Demands (CFS)	Physically Available Water minus Legal Demands (CFS)	Physically Available Water minus Legal Demands (AF)
January	140.9	0.03	140.87	8,646
February	127.4	0.03	127.34	7,060
March	228.7	0.03	228.66	14,035
April	446.7	0.11	446.56	26,526
May	945.5	0.19	945.35	58,031
June	806.3	0.19	806.07	47,881
July	341.0	0.19	340.81	20,919
August	139.1	0.19	138.88	8,525
September	93.7	0.19	93.49	5,553
October	86.7	0.19	86.48	5,308
November	97.7	0.11	97.60	5,797
December	145.8	0.03	145.81	8,950

Table 10: Water Rights for Rock Creek above Point of Diversion for Permit 76N 23521 to Confluence with Clark Fork River

Month	Water Physically Available (CFS)	Existing Legal Demands (CFS)	Physically Available Water minus Legal Demands (CFS)	Physically Available Water minus Legal Demands (AF)
January	1.8	0.02	1.83	112
February	2.4	0.02	2.36	131
March	52.3	0.02	52.27	3,208
April	114.9	0.02	114.86	6,823
May	132.3	0.02	132.29	8,120
June	198.1	0.02	198.04	11,764
July	55.7	0.02	55.64	3,415
August	4.8	0.02	4.73	291
September	3.4	0.02	3.35	199
October	7.4	0.02	7.38	453
November	12.2	0.02	12.13	721
December	13.5	0.02	13.47	827

Table 11: Water Rights for Copper Gulch below USFS Monitoring Site to Confluence with Bull River

Month	Water Physically Available (CFS)	Existing Legal Demands (CFS)	Physically Available Water minus Legal Demands (CFS)	Physically Available Water minus Legal Demands (AF)
January	4.8	0.13	4.67	287
February	4.3	0.13	4.17	231
March	4.9	0.13	4.77	293
April	22.1	0.13	21.97	1,305
May	53.1	0.13	52.97	3,251
June	59.6	0.13	59.47	3,533
July	44.0	0.13	43.87	2,693
August	14.8	0.13	14.67	900
September	11.3	0.13	11.17	663
October	9.1	0.13	8.97	551
November	8.5	0.13	8.37	497
December	6.9	0.13	6.77	416

23. Avista Corporation owns the hydropower water right (76N 125800 00) for Cabinet Gorge Dam located just downstream of the Montana-Idaho border. Approximately 20 miles upstream of Cabinet Gorge Dam lies Noxon Rapids Dam. Water released through Noxon Rapids Dam enters the reservoir created by Cabinet Gorge Dam with little delay; therefore, releases from Cabinet Gorge Dam are largely controlled by flow released through the Noxon Rapids Dam. Cabinet Gorge Dam operations are complex and must accommodate many management factors. According to information contained in a FERC licensing EIS compiled in November, 1999, the reservoir has a storage capacity of 105,000 AF and an active storage capacity of 42,780 AF. Water levels fluctuate within the top 15 feet of storage depending upon inflow (Noxon Rapids releases and other tributary inflow) and outflow management decisions.

24. The water right for Cabinet Gorge Dam is for 36,000 CFS up to 99,978 AF for power generation. Clarifying remarks on the water right indicate that the water in Montana is used for storage, released as necessary for power generation, and regulation of reservoir elevation. At the claimed flow rate of 36,000 CFS, this right can be fulfilled in less than 34 hours. A review of USGS gaging data (October 1, 1995 – June 22, 2016) for the Clark Fork River immediately below Cabinet Gorge Dam indicate a minimum flow of 3,330 CFS. At 3,330 CFS, the righted volume can be fulfilled in approximately 15 days.

25. The Department finds that water in the Clark Fork River below Noxon Rapids Dam can reasonably be considered legally available during the period in which the Applicant seeks to appropriate. This finding is based on the records of the Department and other evidence available to the Department.

CONCLUSIONS OF LAW

26. Pursuant to § 85-2-311(1)(a), MCA, an applicant must prove by a preponderance of the evidence that:

(ii) water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the department and other evidence provided to the department. Legal availability is determined using an analysis involving the following factors:

(A) identification of physical water availability;

(B) identification of existing legal demands on the source of supply throughout the area of potential impact by the proposed use; and

(C) analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water.

E.g., ARM 36.12.101 and 36.12.120; Montana Power Co., 211 Mont. 91, 685 P.2d 336 (Permit granted to include only early irrigation season because no water legally available in late irrigation season); *In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson* (DNRC Final Order 1992).

27. It is the applicant's burden to present evidence to prove water can be reasonably considered legally available. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (the legislature set out the criteria (§ 85-2-311, MCA) and placed the burden of proof squarely on the applicant. The Supreme Court has instructed that those burdens are exacting.); see also Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054 (burden of proof on applicant in a change proceeding to prove required criteria); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005))(it is the applicant's burden to produce the required evidence.); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions, LLC* (DNRC Final Order 2007)(permit denied for failure to prove legal availability); see also ARM 36.12.1705.

28. Pursuant to Montana Trout Unlimited v. DNRC, 2006 MT 72, 331 Mont. 483, 133 P.3d 224, the Department recognizes the connectivity between surface water and ground water and the effect of pre-stream capture on surface water. E.g., Wesmont Developers v. DNRC, CDV-2009-823, Montana First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 7-8; *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(mitigation of depletion required), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); see also Robert and Marlene Takle v. DNRC *et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for

Ravalli County, *Opinion and Order* (June 23, 1994) (affirming DNRC denial of Applications for Beneficial Water Use Permit Nos. 76691-76H, 72842-76H, 76692-76H and 76070-76H; underground tributary flow cannot be taken to the detriment of other appropriators including surface appropriators and ground water appropriators must prove unappropriated surface water, *citing* Smith v. Duff, 39 Mont. 382, 102 P. 984 (1909), and Perkins v. Kramer, 148 Mont. 355, 423 P.2d 587 (1966)); *In the Matter of Beneficial Water Use Permit No. 80175-s76H by Tintzman* (DNRC Final Order 1993)(prior appropriators on a stream gain right to natural flows of all tributaries in so far as may be necessary to afford the amount of water to which they are entitled, *citing* Loyning v. Rankin (1946), 118 Mont. 235, 165 P.2d 1006; Granite Ditch Co. v. Anderson (1983), 204 Mont. 10, 662 P.2d 1312; Beaverhead Canal Co. v. Dillon Electric Light & Power Co. (1906), 34 Mont. 135, 85 P. 880); *In the Matter of Beneficial Water Use Permit No.* 63997-*42M by Joseph F. Crisafulli* (DNRC Final Order 1990)(since there is a relationship between surface flows and the ground water source proposed for appropriation, and since diversion by applicant's well appears to influence surface flows, the ranking of the proposed appropriation in priority must be as against all rights to surface water as well as against all groundwater rights in the drainage.) Because the applicant bears the burden of proof as to legal availability, the applicant must prove that the proposed appropriation will not result in prestream capture or induced infiltration and cannot limit its analysis to ground water.§ 85-2-311(a)(ii), MCA. Absent such proof, the applicant must analyze the legal availability of surface water in light of the proposed ground water appropriation. *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 By Utility Solutions LLC* (DNRC Final Order 2007) (permit denied); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 ; Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12.

29. Where a proposed ground water appropriation depletes surface water, applicant must prove legal availability of amount of depletion of surface water throughout the period of diversion

either through a mitigation /aquifer recharge plan to offset depletions or by analysis of the legal demands on, and availability of, water in the surface water source. Robert and Marlene Takle v. DNRC *et al.*, Cause No. DV-92-323, Montana Fourth Judicial District for Ravalli County, *Opinion and Order* (June 23, 1994); *In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 and 41H 30013629 by Utility Solutions LLC* (DNRC Final Order 2006)(permits granted), *affirmed*, Faust v. DNRC et al., Cause No. CDV-2006-886, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit 41H 30019215 by Utility Solutions LLC* (DNRC Final Order 2007*)*(permit granted), *affirmed*, Montana River Action Network et al. v. DNRC et al., Cause No. CDV-2007-602, Montana First Judicial District (2008); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions LLC* (DNRC Final Order 2007) (permit denied for failure to analyze legal availability outside of irrigation season (where mitigation applied)); *In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 by Utility Solutions LLC* (DNRC Final Order 2008); *In the Matter of Application for Beneficial Water Use Permit No. 76H-30028713 by Patricia Skergan and Jim Helmer* (DNRC Final Order 2009)(permit denied in part for failure to analyze legal availability for surface water depletion); Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 5 (Court affirmed denial of permit in part for failure to prove legal availability of stream depletion to slough and Beaverhead River); Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pgs. 11-12 ("DNRC properly determined that Wesmont cannot be authorized to divert, either directly or indirectly, 205.09 acre-feet from the Bitterroot River without establishing that the water does not belong to a senior appropriator"; applicant failed to analyze legal availability of surface water where projected surface water depletion from groundwater pumping); *In the Matter of Application for Beneficial Water Use Permit No. 76D-30045578 by GBCI Other Real Estate, LLC* (DNRC Final Order 2011) (in an open basin, applicant for a new water right can show legal availability by using a mitigation/aquifer recharge plan or by showing that any depletion to surface water by groundwater pumping will not take water already appropriated; development next to Lake Koocanusa will not take previously

appropriated water). Applicant may use water right claims of potentially affected appropriators as a substitute for "historic beneficial use" in analyzing legal availability of surface water under § 85-2-360(5), MCA. Royston, supra.

30. Applicant has proven by a preponderance of the evidence that water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, in the amount requested, based on the records of the Department and other evidence provided to the Department.§ 85-2-311(1)(a)(ii), MCA. FOF 21-25.

Adverse Effect

FINDINGS OF FACT

31. An aquifer test was not conducted. The complex nature of the fracturing and faulting of the ore body and surrounding rock do not lend itself to standard testing or modeling using simple two-dimensional analytical models. The Department used results from the FEFLOW 3D model. The model is based on limited data and will be refined and supported by more data from future hydrologic testing; however the Department found it provided a reasonable basis for evaluating permit criteria. The model encompassed the major watersheds surrounding the project area and was capable of assessing changes in surrounding groundwater levels and evaluating the general location and magnitude of depletions to streams and wilderness lakes.

32. Based on the results of the Applicant's model of full mine development, the greatest drawdown (500 feet) occurs near the center of the Rock Creek ore body. Drawdown decreases as you move away from the ore body; two miles from the center of the ore body is the minimum drawdown contour of five feet. There are no water rights for groundwater wells completed in the Belt rock (source aquifer) between the center of the ore body to the minimum drawdown contour or close to the 5 foot minimum drawdown contour.

33. To evaluate if this project will adversely affect existing water rights on the Clark Fork River, Bull River, Rock Creek and Copper Gulch the Department subtracts monthly net depletions from the flow rate/volume of water legally available on those sources. For every month of the proposed period of diversion the flow rate/volume on these sources exceed all legal

demands and the depletion associated with the proposed use. There are no water rights on the East Fork Bull River or wilderness lakes.

34. The Applicant is required by the USFS to organize and run a monitoring program and develop a mitigation plan to prevent any possible adverse effects, but should call be made the Applicant proposes the following:

1. The Applicant will consult with the landowner and provide a groundwater well as an alternative source of supply.
2. The mine will stop pumping water from the portion of the mine that potentially supplies groundwater to the drainage from which the call is made. Once pumping within the mine area has ceased, groundwater entering that portion of the mine will pool and provide recharge to the underlying and adjacent bedrock.

35. The proposed use will not adversely affect nearby wells or senior surface water users on the Clark Fork River below Noxon Dam, Bull River, Rock Creek, Copper Gulch and East Fork Bull River.

CONCLUSIONS OF LAW

36. Pursuant to § 85-2-311(1)(b), MCA, the Applicant bears the affirmative burden of proving by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. Analysis of adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied. See Montana Power Co. (1984), 211 Mont. 91, 685 P.2d 336 (purpose of the Water Use Act is to protect senior appropriators from encroachment by junior users); Bostwick Properties, Inc. ¶ 21.

37. An applicant must analyze the full area of potential impact under the § 85-2-311, MCA criteria. *In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company* (DNRC Final Order 2006). While § 85-2-361, MCA, limits the boundaries expressly required for compliance with the hydrogeologic assessment requirement, an applicant

is required to analyze the full area of potential impact for adverse effect in addition to the requirement of a hydrogeologic assessment. Id. ARM 36.12.120(8).

38. In regard to senior hydropower water rights, the facts in this application are distinguishable from those In the Matter of Application for Beneficial Water Use Permit No. 76N30010429 by Thompson River Lumber Co (2006) (TRLC) concerning the Avista Company's water rights for Noxon Reservoir. Thompson River Company's proposed diversion on the Clark Fork was surface water immediately upstream of Avista's Noxon Reservoir that had an immediate calculable adverse impact on Avista's water rights and power production. The proposed appropriation in this case is a groundwater appropriation that depletes surface water more than 150 miles upstream of Noxon Reservoir and is located above Flathead Lake and Salish-Kootenai Dam, and below the inflows from the Bureau of Reclamation's Hungry Horse Dam.

39. Section §85-2-401, MCA, makes clear that an appropriator is not entitled under the prior appropriation doctrine to protect itself from all changes in condition of water occurrence. In this basin which is not closed to surface or ground water appropriations, priority of appropriation for a large hydropower right that may otherwise prohibit future upstream development in the basin, does not, pursuant to §85-2-401, MCA, include the right to prevent the decrease of streamflow or the lowering of a water table or water level if the prior appropriator can reasonably exercise their water right under the new conditions. Here, the Department finds that Avista and Confederated Salish and Kootenai Tribes' prior appropriations in this basin, which has not been closed to appropriation by the Legislature, does not include the right to prevent this appropriation where Avista and Confederated Salish and Kootenai Tribes can reasonably exercise their hydropower water rights.

40. Applicant must prove that no prior appropriator will be adversely affected, not just the objectors. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision,* (2011) Pg. 4.

41. In analyzing adverse effect to other appropriators, an applicant may use the water rights claims of potentially affected appropriators as evidence of their "historic beneficial use." See

Matter of Application for Change of Appropriation Water Rights Nos. 101960-41S and 101967-41S by Royston (1991), 249 Mont. 425, 816 P.2d 1054.

42. It is the applicant's burden to produce the required evidence. E.g., Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 7 (legislature has placed the burden of proof squarely on the applicant); *In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC.*, (DNRC Final Order 2005). (DNRC Final Order 2005). The Department is required to grant a permit only if the § 85-2-311, MCA, criteria are proven by the applicant by a preponderance of the evidence. Bostwick Properties, Inc. ¶ 21.

43. Section 85-2-311 (1)(b) of the Water Use Act does not contemplate a de minimis level of adverse effect on prior appropriators. Wesmont Developers v. DNRC, CDV-2009-823, First Judicial District Court, *Memorandum and Order*, (2011) Pg. 8.

44. The Applicant has proven by a preponderance of the evidence that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. § 85-2-311(1)(b) , MCA. (FOF 31-35).

Adequate Diversion

FINDINGS OF FACT

45. The diversion and conveyance system was designed by the Applicant's professional mine engineers and was reviewed as part of the Montana Department of Environmental Quality/USFS-KNF Final EIS (2001) and Draft Supplemental EIS (2016).

46. Underground storage will be used to provide instantaneous flows of up to 3,052 GPM during initial startup and after mill system shutdowns. Up to 130 AF of water per annum will be stored in sumps (low spots) within the mine at full build out. These sumps will provide temporary storage of mine inflows when the mine is not operating or is operating at less than full production and will balance out seasonal variations in inflow. The location and configuration of mine sumps will change during the life of the mine as different areas are excavated.

47. Pumps will move water from active mining areas to the mine adit portal (surface access point), from active mining areas to storage areas and from storage areas to the adit portal. A fleet of submersible and horizontal centrifugal pumps with a variety of horsepower/capacity configurations and piping will be maintained. Table 12 summarizes the types of pumps used.

Table 12: Summary of Proposed Pumps Used Within the Mine

Pump Type	Quantity	Size/Capacity
Flygt 2290	2	110 hp/3,000 GPM
Flygt 5150	8	50 hp/500 GPM
Flygt 2125	12	20 hp/200 GPM
Flygt NA	12	10 hp/ 100 GPM

48. Water will leave the mine adit portal via a 12-inch steel pipe and enter the water process loop, which starts at the mill. From the mill a 4" line will transport concentrate slurry (35% ore/65% water) to the concentrate dewatering facility. Reclaimed water from the concentrate dewatering facility will be sent to the paste plant/thickener for reuse. From the mill a 16-inch pipeline conveys the tailing slurry (ground rock no longer containing significant ore minerals; 30% rock to 70% water) to the paste plant/thickener where it is dewatered. Another 16" steel pipe will return process water from the paste plant/thickener to the mill site for reuse. The dewatered tailings will be disposed of in the tailings storage area. The distance between the mill site and tailings storage area is approximately 26,500 feet with an elevation difference of approximately 400 ft. 135 feet of pressure drop exists. A Gould Vertical Industrial Turbine pump with six stages has the ability to pump 3,000 GPM and will return 2,786 GPM of waste water from the paste plant/thickener and tailings storage area back to the mill for reuse.

49. Approximately 10 percent of the flow in the process loop will be diverted to the waste water treatment plant and fresh water added from the mine to the circuit on an ongoing basis to prevent buildup of excess constituents in the processed water. Excess mine water not beneficially used will also be sent to the water treatment facility. All water sent through the treatment facility is discharged to the Clark Fork River.

50. All water entering the mill will be measured via an in-line FLOW Technology SLF-500 ultrasonic flow meter or equivalent piece of equipment. The permit will be conditioned to require the Applicant to measure and report usage to the Department yearly and submit biennial progress reports. This condition will ensure the total usage does not exceed the permitted amounts.

CONCLUSIONS OF LAW

51. Pursuant to § 85-2-311(1)(c), MCA, an Applicant must demonstrate that the proposed means of diversion, construction, and operation of the appropriation works are adequate.

52. The adequate means of diversion statutory test merely codifies and encapsulates the case law notion of appropriation to the effect that the means of diversion must be reasonably effective, i.e., must not result in a waste of the resource. *In the Matter of Application for Beneficial Water Use Permit No. 33983s41Q by Hoyt* (DNRC Final Order 1981); § 85-2-312(1)(a), MCA.

53. Applicant has proven by a preponderance of the evidence that the proposed means of diversion, construction, and operation of the appropriation works are adequate for the proposed beneficial use. § 85-2-311(1)(c), MCA (FOF 45-50).

Beneficial Use

FINDINGS OF FACT

54. The ore-processing plant will operate 24 hours a day, 7 days a week, 365 days per year for a total processing capacity of 3.5 million tons/year. An instantaneous flow rate of 3,052 GPM is required at times during the year to refill the process loop following a shutdown of the mill (Figure 2). 130 AF of storage within the mine provides enough volume for 10 restarts of the mill per year.

55. The maximum simulated annual groundwater inflow rate is 531 GPM up to 857 AF in production year 23. The volume is the equivalent of the inflow occurring non-stop for a full

year. The total diverted volume is 100% consumed from the source. The Applicant has 23 years to perfect the proposed use.

56. The Applicant requested 857 AF for mining purposes; water will be used in the mill, the paste plant/thickener, concentrate dewatering facility, tailings storage area, wastewater treatment plant and for dust suppression. The process loop water is a combination of reclaimed/recycled water, captured precipitation and/or seepage from the tailings storage area, captured storm water runoff at the mill site, and make-up water from the mine. Make-up water is required because at full build out on average over 1,000 AF of water per year is either discharge to the Clark Fork River via the waste water treatment plant (357 GPM/574.4 AF) or evapotranspiration/sublimated from the tailings storage area (523 GPM/518.4 AF). Modeling shows captured storm water, precipitation and/or seepage does not provide enough new water to the system; therefore make-up water from the mine is required.

57. The amount of water needed for beneficial use at any point in time is a function of the ore-processing production rate. The FEFLOW 3D model indicates that inflows into the mine will vary with time. Since the amount of water needed in the process loop is based on a ratio of water to solids for each step, if less water is available, the amount of ore processed can be reduced. If mine inflows and captured precipitation/seepage and storm runoff do not equal or exceed the amount of water discharged/lost from the process loop the Applicant may pursue a separate appropriation from another water source such as a make-up well to make up the difference.

58. No supplemental or associated rights exist on the proposed place of use. Most on-site water is captured and recycled back into the process loop, therefore additional water rights may need to be acquired depending on what is finally permitted by other Federal and State Agencies and/or produced from the mine. The following water rights may be needed 1) Provisional Permit for precipitation on tailings impoundment area and mill reservoir, 2) Provisional Permit for captured storm water runoff at mill site, 3) Provisional Permit for seepage from tailings storage area if groundwater other than tailings seepage is being intercepted, 4) Notice of Completion of

Groundwater Development (F602) for on-site potable wells, and 5) F602 or Provisional Permit for make-up well for process-loop.

CONCLUSIONS OF LAW

59. Under § 85-2-311(1)(d), MCA, an Applicant must prove by a preponderance of the evidence the proposed use is a beneficial use.

60. An appropriator may appropriate water only for a beneficial use. See also, § 85-2-301 MCA. It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and limit of the use. E.g., McDonald, supra; Toohey v. Campbell (1900), 24 Mont. 13, 60 P. 396. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. E.g., Bitterroot River Protective Association v. Siebel, *Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; *In The Matter Of Application For Beneficial Water Use Permit No. 43C 30007297 by Dee Deaterly* (DNRC Final Order), *affirmed other grounds*, Dee Deaterly v. DNRC *et al*, Cause No. 2007-186, Montana First Judicial District, *Order Nunc Pro Tunc on Petition for Judicial Review* (2009); Worden v. Alexander (1939), 108 Mont. 208, 90 P.2d 160; Allen v. Petrick (1924), 69 Mont. 373, 222 P. 451; *In the Matter of Application for Beneficial Water Use Permit No. 41S-105823 by French* (DNRC Final Order 2000).

61. Amount of water to be diverted must be shown precisely. Sitz Ranch v. DNRC, DV-10-13390, Fifth Judicial District Court, *Order Affirming DNRC Decision*, (2011) Pg. 3 (citing BRPA v. Siebel, 2005 MT 60, and rejecting applicant's argument that it be allowed to appropriate 800 acre-feet when a typical year would require 200-300 acre-feet).

62. The Applicant proposes to use water for mining purposes which is a recognized beneficial use § 85-2-102(4), MCA. Applicant has proven by a preponderance of the evidence that a mining use is a beneficial use and that 857 AF is the amount needed to sustain the beneficial use. § 85-2-311(1)(d), MCA (FOF 54-58).

Possessory Interest

FINDINGS OF FACT

63. The applicant signed the affidavit on the application form affirming the applicant has possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use.

CONCLUSIONS OF LAW

64. Pursuant to § 85-2-311(1)(e), MCA, an Applicant must prove by a preponderance of the evidence that it has a possessory interest or the written consent of the person with the possessory interest in the property where the water is to be put to beneficial use, or if the proposed use has a point of diversion, conveyance, or place of use on national forest system lands, the applicant has any written special use authorization required by federal law to occupy, use, or traverse national forest system lands for the purpose of diversion, impoundment, storage, transportation, withdrawal, use, or distribution of water under the permit.

65. Pursuant to ARM 36.12.1802:

> (1) An applicant or a representative shall sign the application affidavit to affirm the following:
> (a) the statements on the application and all information submitted with the application are true and correct and
> (b) except in cases of an instream flow application, or where the application is for sale, rental, distribution, or is a municipal use, or in any other context in which water is being supplied to another and it is clear that the ultimate user will not accept the supply without consenting to the use of water on the user's place of use, the applicant has possessory interest in the property where the water is to be put to beneficial use or has the written consent of the person having the possessory interest.
> (2) If a representative of the applicant signs the application form affidavit, the representative shall state the relationship of the representative to the applicant on the form, such as president of the corporation, and provide documentation that establishes the authority of the representative to sign the application, such as a copy of a power of attorney.
> (3) The department may require a copy of the written consent of the person having the possessory interest.

66. The Applicant has proven by a preponderance of the evidence that it has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use. § 85-2-311(1)(e), MCA. (FOF No. 63)

PRELIMINARY DETERMINATION

Subject to the terms, analysis, and conditions in this Order, the Department preliminarily determines that this Application for Beneficial Water Use Permit No. 76N 30068837 should be GRANTED.

The Department determines the Applicant may divert and impound groundwater by means of the mine and transitory sumps, from January 1st to December 31st up to 857 AF, from a point in S2S2 of Section 14, E2E2 Section 22, Section 23, W2W2 Section 24, W2NW Section 25, Section 26, the E2E2 Section 27, and the W2 Section 35, Township 27N, Range 32W, Sanders County, Montana for mining purposes from January 1st to December 31st. No flow rate is associated with this permit; the mine is a large pit. The place of use for the mill site is the N2, Section 10, Township 26N, Range 32W; for the concentrate dewatering facility and paste plant the SENE Section 28, Township 26N, Range 32W; for the tailings impoundment area Section 28 and the S2S2 of Section 21; and for the wastewater treatment plant SWSW, Sec 27, Township 26N, Range 32W, Sanders County, Montana. The maximum reservoir capacity of the sumps is 130 AF annually.

The application will be subject to the following conditions, limitations or restrictions:

1. "The appropriator shall install a Department approved in-line flow meter at a point in the delivery line approved by the Department. Water must not be diverted until the required measuring device is in place and operating. On a form provided by the department, the appropriator shall keep a written *monthly* record of the flow rate and volume of all water diverted, including the period of time. Records shall be submitted by January 31st of each year and upon request at other times during the year. Failure to submit reports may be cause for revocation of a permit or change. The records must be sent to the water resources regional office. The appropriator shall maintain the measuring device so it always operates properly and measures flow rate and volume accurately."

2. "The Appropriator shall submit biennial progress reports to the Department upon permit issuance; reports must be submitted on or before January 31st biennially. Each progress report must include: a summary of progress and timelines related to obtaining federal approval of the permittee's Plan of Operations for Mining Activities; a summary of the permittee's plans and anticipated timeline for initiating water use pursuant to the permit; a summary of any water use under the permit as of

the date of the progress report; a summary of the permittee's plans and anticipated timeline for completion of the permit. The progress report must include an explanation if the plans and/or timelines included therein are different than plans/and or timelines contained in the permit application or a previous progress report."

NOTICE

This Department will provide public notice of this Application and the Department's Preliminary Determination to Grant pursuant to §§ 85-2-307, MCA. The Department will set a deadline for objections to this Application pursuant to §§ 85-2-307, and -308, MCA. If this Application receives no valid objection or all valid objections are unconditionally withdrawn, the Department will grant this Application as herein approved. If this Application receives a valid objection, the application and objection will proceed to a contested case proceeding pursuant to Title 2 Chapter 4 Part 6, MCA, and § 85-2-309, MCA. If valid objections to an application are received and withdrawn with stipulated conditions and the department preliminarily determined to grant the permit or change in appropriation right, the department will grant the permit or change subject to conditions necessary to satisfy applicable criteria.

DATED this 22th day of June, 2016

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Kathy Olsen, Deputy Regional Manager
Kalispell Regional Office
Department of Natural Resources and Conservation