

BEFORE THE BOARD OF COUNTY COMMISSIONERS
FOR COLUMBIA COUNTY, OREGON

In the Matter of Application CU 15-01 by)
Enerfin Resources Northwest for a)
Conditional Use Permit for a New Natural) FINAL ORDER NO. 14-2015
Gas Well in the PF-80 Zone)

WHEREAS, on July , 2014, Enerfin Resources Northwest (the “Applicant”) submitted an application for a Conditional Use for the drilling and operation of a new natural gas well on property zoned Primary Forest (PF-80) in the Mist-Birkenfeld area and identified as Tax Map ID 6N5W09-00-00500; and

WHEREAS, Planning staff deemed the application complete on July 7, 2014; and

WHEREAS, following proper notice, the Planning Commission held a hearing on the application on September 8, 2014. The Planning Commission then closed the hearing but left the record open for seven days for written evidence and testimony. The Planning Commission continued the matter to October 6, 2014; and

WHEREAS, on October 9, 2014, the Planning Commission issued a final order approving the application with conditions. The final order was mailed to all parties entitled to notice of the decision; and

WHEREAS, on October 16, 2014, adjacent property owner Sam Semerjian timely submitted an appeal of the Planning Commission’s final order; and

WHEREAS, the application was then scheduled for a hearing on appeal before the Board of Commissioners on November 26, 2014, and notice of the hearing was published and sent. At the request of the Applicant and following the Applicant’s limited waiver of the 150-day deadline pursuant to ORS 215.427, the County continued the hearing to January 21, 2015; and

WHEREAS, on January 21, 2015, the Board held a public hearing on the application at its regularly scheduled meeting and received evidence and testimony. The Board then closed the hearing, left the record open for a limited duration for written testimony and evidence, and continued the matter to March 11, 2015 for deliberation; and

WHEREAS, on February 9, 2015, the Applicant filed a limited waiver to further extend the 150-day deadline to April 8, 2015; and

WHEREAS, on March 11, 2015, the Board deliberated and voted unanimously to

tentatively approve the application subject to conditions as presented in staff's revised recommendation.

NOW, THEREFORE, based on the evidence submitted and received into the record on this matter, the Board of County Commissioners adopts the following findings and conclusions in support of its decision:

1. The findings and conclusions in the Staff Report dated January 14, 2015, attached hereto as Exhibit A and incorporated herein by this reference, as amended by the Staff Report dated March 4, 2015, attached hereto as Exhibit B and incorporated herein by this reference, to the extent the findings and conclusions are consistent with the Board's decision; and
2. The Supplemental Findings, attached hereto as Exhibit C and incorporated herein by this reference.

NOW, THEREFORE, based on the evidence in the record and the findings and conclusions herein, the Board of County Commissioners hereby **APPROVES** this application for a natural gas well (CU 15-01) with the following conditions:

1. This permit shall become void 4 years from the date of the final decision if exploration has not begun on the property in substantial compliance with the conditions herein set out. Extensions of time may be granted by the Planning Director if requested in writing before the expiration date and if the applicant was not responsible for the failure to develop.
2. If the applicant applies for a drilling permit for any other site, besides the preferred site in this application, within the approved 160 acre quarter section, any other site will require further review applying the standards and requirements of Columbia County.
3. Prior to operations, the applicant shall obtain the proper permits from DOGAMI and the Oregon State Forestry Department.
4. The applicant shall meet the following fire safety requirements determined by the Mist-Birkenfeld Rural Fire Protection District (RFPD): (a) The applicant shall have the easement access route to the well site approved by the RFPD to avoid curtailment of fire services; (b) The Fleming Pond and its water source for fire protection shall not be compromised; (c) The well site shall be inspected by the RFPD prior to any drilling operations, and the applicant shall notify the RFPD as to the exact date and location of drilling operations at least three days prior to the commencement of said activities; and (d) The applicant shall notify the RFPD when they have vacated the site.

5. The applicant shall not encroach in the identified riparian corridor of the river for any development, including well drilling, road building and well pad construction.
6. The applicant shall maintain a 50 feet setback of any development from Fleming Pond, associated wetlands and top bank of the unnamed stream.
7. The applicant shall assume responsibility for any damages from wildlife to the gas well development and the site.
8. If gas well is developed for production, the production equipment and any structures shall be screened with appropriate sized bushes and trees from the adjoining farm use to the southwest, and a sound proofing shed or wall shall be placed to abate noise in that direction.
9. The applicant shall closely follow and implement the Emergency Management Plan developed with Mist-Birkenfeld Fire District and emergency responders.

Related with Protection of the Pond and Water Quality of the Area

10. All waste water from either drilling or producing operations shall be contained, removed on completion and properly disposed of during and after well development;
11. All mud pit material shall be contained and removed on completion and properly disposed of;
12. The drill pad shall be removed after well development except that portion used for production facilities;
13. The applicant has entered a Road Use and Indemnification Agreement with the Mist-Birkenfeld Fire District which protects Fleming Pond from damage due to well development activities. If the pond is damaged, curtailing an adequate fire fighting water supply, it can be a basis for revocation of this Conditional Use Permit.
14. Prior to beginning well drilling activities, the applicant shall analyze the water in Fleming Pond to determine the presence of any contaminants. The applicant shall test the water quality of the pond once again during drilling operations and once after the drilling operation is complete. In the event the subsequent testing reveals the presence of any contaminant that did not show up in the original test and the contaminant is of a type used in the applicant's drilling fluids listed in Mist Field Drilling Chemicals submitted October 2014, the applicant will immediately shut down, notify the County and effected agencies, and implement best management practices to resolve and clean-up the detected contaminant.

Related to Flood Protection & Abandonment

15. Prior to drilling operations, the applicant shall obtain a Floodplain Development Permit from the County. Failure to meet conditions of the Floodplain Development Permit can be a basis for revocation of this Conditional Use Permit.
16. If natural gas is not discovered, the well shall be abandoned in accordance with DOGAMI' s regulations and the well site returned to its original condition.

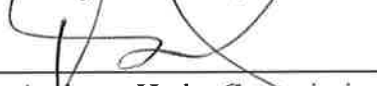
Dated this 15th day of April, 2015.

BOARD OF COUNTY COMMISSIONERS
FOR COLUMBIA COUNTY, OREGON

Approved as to form

By: 
Office of County Counsel

By: 
Henry Heimuller, Chair

By: 
Anthony Hyde, Commissioner

By: 
Earl Fisher, Commissioner

EXHIBIT A

COLUMBIA COUNTY BOARD OF COMMISSIONERS
STAFF REPORT
January 14, 2015
Conditional Use Permit - PF-80 Zone
APPEAL HEARING

HEARING DATE: January 21, 2015

FILE NUMBER: CU 15-01 - Natural Gas Well

APPLICANT: Enerfin Resources Northwest Limited Partnership
49774 Road 426, Suite B
Oakhurst, CA 93644

OWNER: Bruce R. Fleming
7527 SE La View Drive
Portland, OR 97219
Tax Lots: 6509-000-00400 and
00500, both sides of river

LOCATION: The SW 1/4 of Section 9, 6N5W of WM
The preferred site is located approximately two miles northeast of Birkenfeld and approximately three miles northwest of Mist. The proposed well site is in the vicinity of the Mist Birkenfeld RFPD main station and Fleming Pond, water source for fire protection.

REQUEST: The drilling of a new natural gas well and associated natural gas production activities in the PF-80 Zone

TAX MAP NOS.: 6N5W09-00-00500, Preferred Site

ZONING: Primary Forest (PF-80)

APPLICATION COMPLETE: July 7, 2014 **150 DAY DEADLINE:** December 8, 2014
(Applicant waived the 150 day deadline to accommodate a January hearing date)

APPLICABLE REVIEW CRITERIA:

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BACKGROUND:

Enerfin Resources Northwest Limited Partnership has submitted a Conditional Use Permit application to allow for the drilling and operations of a new natural gas well within the Mist Gas Field. The Mist Gas Field consists of numerous existing gas production wells in the Nehalem Valley and two natural gas storage areas, and according to the Oregon Department of Geology and Mineral Industries (DOGAMI) has “produced over 65 billion cubic feet of gas since its discovery in 1979.” Exhibit A of Enerfin’s Application requests natural gas well drilling and operation for a new well in the 160 acre quarter section of 6N5W Section 9 which is located less than half a mile west of the Flora Bruer Natural Gas Storage area and amidst other gas producing wells. There are nine property owners within the application 1/4 section; but, the applicant has pin-pointed a preferred well site on the Bruce Fleming property, 6509-00-00500, 41 acres with no structures except an improved pond with weirs, pump equipment and fencing. Historically, the subject property has been used for agricultural purposes, mainly in pasture and hay crop. Starting approximately 10 or more years, ago this Fleming property received significant habitat enhancement funding. Through the US Department of Agriculture and various other state and federal programs, including the Conservation Reserve Enhancement Program (CREP), trees were planted and other habitat restoration work was accomplished along the property’s riparian area of the Nehalem River. A fence to partition the enhanced riparian area from the hay & pasture field was established, and a pond (Fleming Pond) was constructed along a small tributary in the western corner, primarily for a fire protection water source. The Mist-Birkenfeld Fire main station is adjacent to the east. The pond project area also contains wetland mitigation areas and provides water lines for livestock watering troughs. The proposed gas well site is in a pasture area along Hwy. 202 that has no immediate wetlands or riparian attributes; but, on both sides to the north and south, the proposed well site has significant resource improvements to wetlands and habitat enhancement/conservation. To the south is Fleming Pond and to the north is a conservation enhancement area associated with the Nehalem River riparian area.

The Planning Commission approved this application (CU 15-01) on October 8, 2014 with usual conditions that have been imposed on other gas well applications. Those conditions of approval included obtaining a State DOGAMI drill permit and coordination activities with various state and local agencies for oversight and emergency preparedness. In addition the Planning Commission review process required Enerfin to produce a list of chemicals used in the gas drilling project and an Flood Elevation Certificate. The Certificate determined the well site to be in the 100 year Flood Hazard zone with approximately 9-18 inches flood water at the well site.

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The applicant has described operations associated with the natural gas well as follows:

All operations shall be conducted under the auspices and requirements of a DOGAMI drilling permit and all other permits required by various federal, state or local governmental agencies. A drill pad approximately 200' - 300' by 300' - 500' will be constructed. Removal of any trees or other vegetation shall be strictly limited to the immediate drill pad and any necessary access road. Site clearing of vegetation and the operation of all machinery will be conducted under the auspices of an Oregon Department of Forestry permit which shall be obtained prior to commencing any operations hereunder. The well location will be subject to a Surface Access Agreement which will be negotiated with the surface landowner prior to the commencement of any operations hereunder. All operations shall strictly adhere to the obligations of said agreement.

The location will be graded and rocked to control and/or prevent any drainage or soil erosion. A mud pit conforming to DOGAMI specifications will be constructed and adequately lined as part of a "closed" mud system which adequately controls any water/ fluids utilized and/or produced during drilling. No toxic chemicals are used in the drilling fluids and any additives are food grade and non-toxic. All materials brought to the surface during drilling are non-toxic and will have no effect on the environment. Operations will have no effect on any streams or wetlands or their riparian zones within proximity to the drill site.

Trucking activity may occur for 2 - 3 weeks while the location is built, the drill rig is moved to the site, rigged up and the well drilled. Water for this project will be contracted for and trucked to location from outside the drilling area. Approximately 3,000 barrels of water will be utilized during drilling, primarily for the mixing and maintenance of the drilling fluids. The drilling system is a "closed" system and recycles the water for use on subsequent wells.

Approximately 16 - 20 men, working in shifts, will be involved in the round-the-clock drilling phase of the operation. Portable chemical toilets will be utilized for sewage handling. No onsite housing of staff is utilized. All crew members not actively working a shift on the rig are housed off-site in local motels.

The well will be evaluated by mud logging analysis while drilling, which consists of monitoring drill rate in feet per hour, cuttings examination and gas measurement of the drilling fluid. At the total depth of the well, wireline tools will be used to further evaluate the potential for natural gas production.

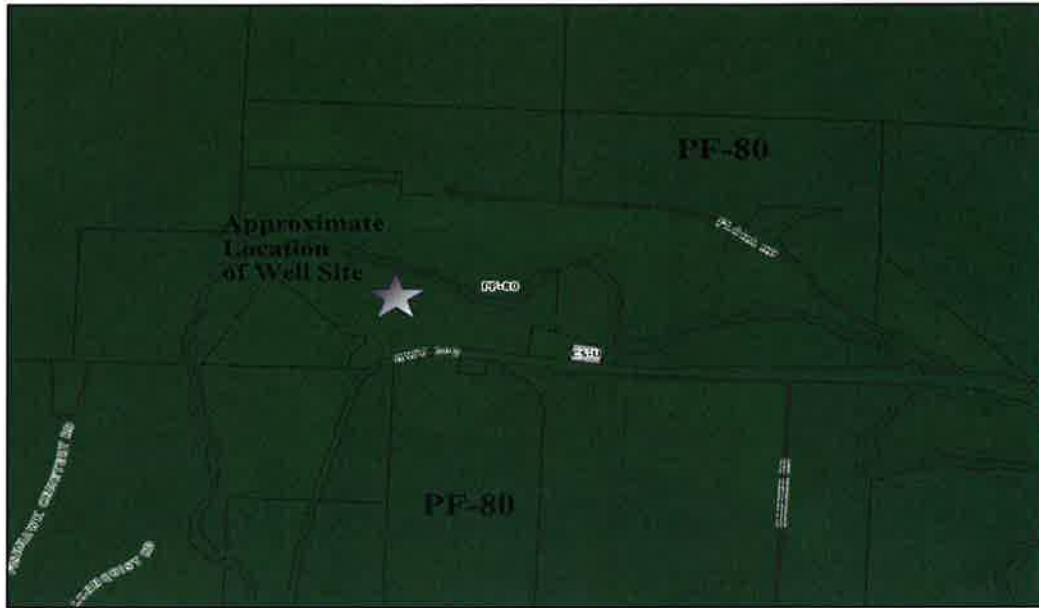
If commercial quantities of natural gas are not present, the well will be abandoned according to DOGAMI specifications, the drilling rig will be moved off the site, the drilling fluid will be disposed of or treated in accordance to DEQ guidelines and the location will be restored as closely to its original condition as possible.

If the potential for gas production is evident, production casing will be run and cemented. The well will be tested and if sufficient production is proven, a pipeline route will be surveyed and an easement will be obtained to construct the pipeline and connect the well to the existing gathering system. Once the well has been adequately tested, the rig will be removed from the location, the drilling fluid will be disposed/treated per DEQ guidelines and the drill pad will be reduced to minimum size. The well head assembly and valve "tree" and any necessary equipment for safe and economic production of the well shall remain on the reduced site during the production phase of the well. Regular visits by operations personnel will be made to ensure that all operations are running safely and efficiently. Continuing access to the drill sites will be from existing roads. As production pressures decline, DEQ approved natural gas driven compression will be utilized to meet pipeline pressures until the recovery of the gas becomes uneconomical.

Once all economically recoverable gas has been produced, the well will be abandoned per DOGAMI requirements. Restoration of the drill site after the well has been plugged and abandoned will be performed in accordance with DOGAMI rules and regulations as well as obligations under existing Surface Use Agreements entered into with surface owners.

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Zoning Map - Columbia County Web Maps (GeoMoose, 2014)



Aerial Photo (GEOMoose, 2009)



REVIEW CRITERIA & FINDINGS:

COLUMBIA COUNTY ZONING ORDINANCE:

Section 500 PRIMARY FOREST - 80

505 Conditional Uses. The following conditional uses may be allowed subject to the general review standards and process in Sections 1503 and 1603 of the Zoning Ordinance. All authorized uses and permanent structures shall also meet the applicable standards listed in Sections 506, 507, and 508 of the Zoning Ordinance and all other local, state, and federal laws pertaining to these uses.

- .2 Exploring, mining and processing of oil, gas, or other subsurface resources, as defined in ORS Chapter 520 and the mining and processing of mineral and aggregate resources as defined in ORS Chapter 517.

Finding 1: Natural gas is a subsurface resource in Columbia County. Mining, extracting and processing subsurface resources (natural gas) may be permitted in the PF-80 Zone through approval of a Conditional Use Permit by the Planning Commission, subject to Section 508 General Review Standards. Note: Sections 506 and 507 are not applicable because this application does not seek to site any dwellings or structures.

Zoning Ordinance Section 508 requires the following:

508 General Review Standards The Planning Director or hearings body shall determine that a use authorized by Sections 504 and 505 meets all of the following requirements:

- .1 The proposed use will not force significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands;

Finding 2: The proposed use should not increase the cost, force a change in, nor interfere with farming or forest uses on adjacent lands, if the applicant proceeds professionally, cautiously and the recommended/imposed conditions are satisfied. The subject property is located along the Nehalem River valley formation, in an area developed with other natural gas wells (hundred or more) and storage projects, all of which were approved through siting permits, and to the county's knowledge none of these gas facilities have forced significant changes in farming or forestry for nearby property owners. Despite the historic drilling of any or all of these older gas wells, dating back to 1979, forest and farm management practices adjacent to the existing sites have been and will be continued. In the Mist and Birkenfeld areas, gas well sites have become a norm and most of the farmers and loggers have grown to operate their farms or forestry with the wells on their land. There is no evidence presented that gas well use precludes the opportunity to use surrounding parcels for the primary purposes of the PF-80 District. However, a couple of concerns have been raised (in the record) about impact on livestock and existing farming operations concerning the drilling chemicals used and any waste water separated, should they leak into the pond or environment. Staff is recommending a few requirements to the application for protection of adjacent farming and water quality of streams and the Nehalem River, to wit: all waste water from the drilling and producing operations shall be contained and properly disposed of during and after well development; all mud pit material shall be contained, removed on completion and properly disposed of; the drill pad shall be removed after well development; and the water quality of the pond should be analyzed for contaminants before drilling construction begins, during and again and after the drilling operation is complete to assure no contamination has entered the pond. The siting, maintenance and operation of the proposed natural gas well will result in minimal impacts to the farm land and to forest resources if the imposed conditions and assurances are adhered to.

EXHIBIT A

A new road will be constructed to access the proposed well site. The main fire station access from State Hwy 202 will be utilized and traffic will proceed to the rear of the yard, then turn west into the subject Fleming property and follow the existing tree line to the proposed well site. Approximately 800 feet of new rock road will be constructed from the fire station boundary, bisecting the subject property, along the tree line representing the farm-riparian use division line. The applicant, Enerfin Resources NW and the Mist Birkenfeld Fire Protection District have entered a Road Use and Indemnification Agreement, September 14, 2014, that specifies the road route among other things. To get to this area of the county, existing public roads will be used and will not require off-site improvements as a result of the proposed activities. The applicant has stated in the application that temporary activities associated with the drilling of the well are coordinated with landowners conducting farm or forestry activities to ensure, that from a timing standpoint, there are no conflicts with adjoining forest or farm operations.

The proposed use will not result in the withdrawal of forest lands for forest use on a permanent basis. No permanent structures will be constructed onsite; but, if natural gas is found in sufficient quantities, gas well production equipment will be set up at the well site. The applicant states there will be no discharge of waste into the air, water or soil, and the "proposed operations will not require the use of any hazardous or poisonous materials." The drillsite and drilling facilities are self-sustaining and temporary. At which time gas is depleted, or if gas is not found, the site will be returned to its original state. Furthermore, ORS 527.722(2)(c), the Oregon Forest Practices Act, permits local governments to allow physical alterations of the land for purposes of exploration or mining. The drilling and operation of natural gas wells is, therefore, consistent with forest and farm uses and the intent and purpose set forth in the Oregon Forest Practices Act. Staff finds that the criterion is met with conditions.

Continuing with Section 508 General Review Standards

- .2 The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel;

Finding 3: The proposed use will not significantly increase fire hazard if the applicant does not compromise the Fleming Fire Protection Pond for water/fire suppression; and, access to the well site is maintained as agreed by the Mist Birkenfeld Fire District. (See letter in the record and Road Use Indemnification Agreement from the Mist Birkenfeld RFPD) Also, the applicant shall take appropriate measures to ensure that the drilling and operating of a new gas well will not create a fire hazard risk as various state permits require. To further ensure fire safety, the Mist Birkenfeld Rural Fire Protection District (RFPD) requires the drill site supervisor to inform the fire district or its key personnel as to the date that the site will be occupied, the date that operations will commence, and the date that the drilling area has been vacated. This information must be provided for each well drilled. The purpose of this coordination is to give the fire district an opportunity to locate and inspect the site and to inspect the equipment operating on the site for fire safety. Once the inspection has been completed the fire district compiles the information into a packet to help fire district personnel know where to respond and what to expect in the case of an emergency. On July 21, 2014, in a conversation between LDS staff and the Assistant Fire Chief for the Mist Birkenfeld Rural Fire Protection District, the Assistant Fire Chief confirmed that Enerfin has been cooperative in supplying the requested information to the District for past gas well projects. Notification of start and stop drilling operations as required by the Mist Birkenfeld RFPD are addressed through the conditions of approval. Staff finds that the criterion is met subject to conditions.

Continuing with Section 508 General Review Standards

EXHIBIT A

- .3 A waiver of remonstrance shall be recorded with the County Clerk certifying that the owner will not remonstrate against or begin legal action or suit proceeding to cause or persuade the owner or operator of any farm or forest lands to modify the conduct of legal and accepted farm or forest operations; and

Finding 4: The applicant, Enerfin Resources Northwest Limited Partnership, is not the owner of the property on which the well will be drilled. All operations conducted by Enerfin, however, are done so with the full agreement and participation of the effected landowner(s). Landowners are not anticipated to remonstrate against or cause legal action to modify their own forest and/or farm practices. A waiver of remonstrance is not applicable to the request as submitted. Staff finds that the criterion does not apply.

Continuing with Section 508 General Review Standards

- .4 The proposed use is consistent with requirements contained in the Comprehensive Plan or implementing ordinances, including, but not limited to, regulations which apply to flood hazard areas, development within the Willamette River Greenway, development in forested areas or development in significant resource areas, such as riparian, wetlands or slide-prone areas.

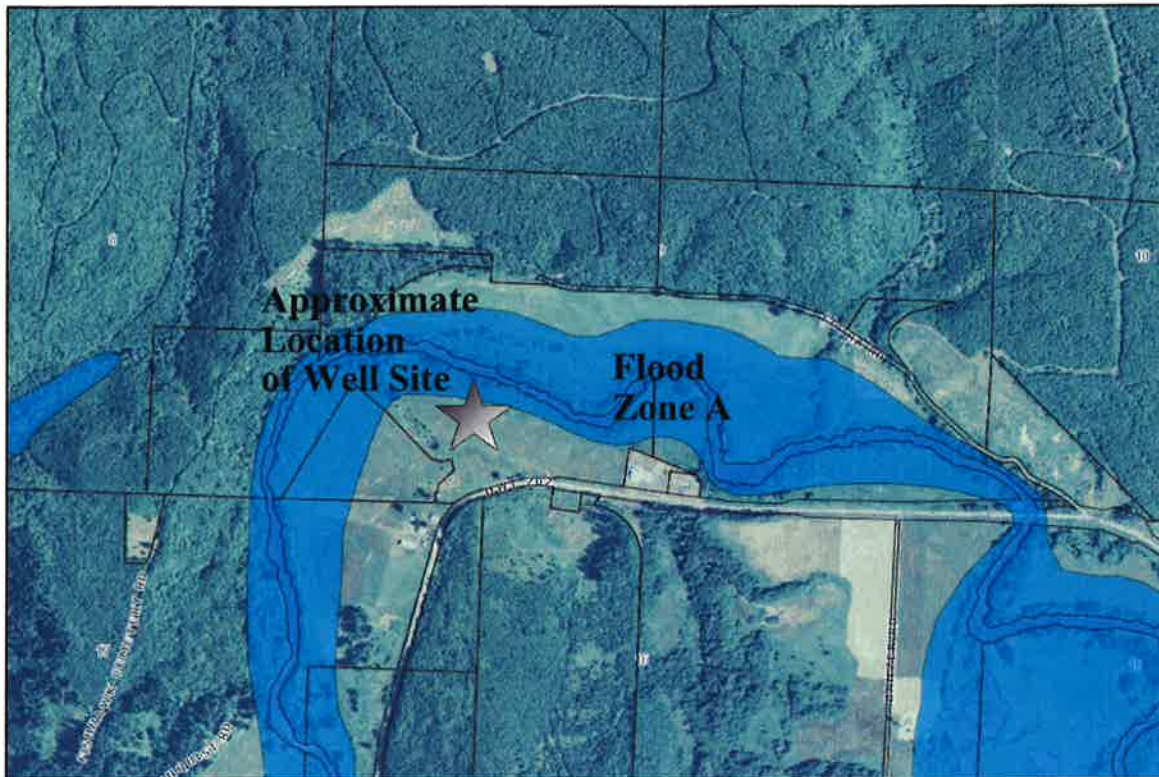
Finding 5: Columbia County's Zoning Ordinance provides land use regulations and standards to implement the goals and policies of the Comprehensive Plan. The proposal's consistency with applicable sections of the County's Zoning Ordinance are addressed through findings in this staff report. Such findings address uses permitted in the PF-80 zone, standards of development of the underlying zone, as well as standards of development relevant to overlay zones such as flood hazard areas, riparian corridors, and big game habitat. As such, as long as the proposal is found to comply with all applicable sections of the Zoning Ordinance, it will also comply with the requirements of the Comprehensive Plan. Consistency with the Comprehensive Plan is discussed in Findings 16 -20 of this Staff Report. Staff finds that the criterion is met subject to conditions.

Zoning Ordinance Section 1100 requires the following:

Section 1100 FLOOD HAZARD OVERLAY

1105 Development Permit:

- .1 A development permit shall be obtained before construction or development begins within any area of special flood hazard established in Section 1104. The permit shall be for all structures allowed by the underlying zone, including manufactured homes, as set forth in the "Definitions", and for all development including fill and other activities, also set forth in the "Definitions". The following exceptions apply for the storage of equipment or materials:
- A. Any temporary storage within any zoning district;
 - B. Permanent storage connected with residential use located out of the floodway.

Flood Plain Map - Columbia County Web Maps (GeoMoose, 2014)

Finding 6: Section 9, T6N, R5W contains a flood hazard area associated with the Nehalem River. As per FEMA Flood Insurance Rate Map (FIRM) panel 41009C0125D, the southwest quarter of Section 9 contains Flood Zone A, an area subject to inundation by the 1% annual chance flood, Zone “A” (see flood plain map above). Zone “A” is an approximate flood area with no Base Flood Elevation (BFE) established. From the FIRM map it appears that the proposed well will be located outside of the approximate flood hazard area. However, substantial evidence was presented at and since the September 8, 2014 Planning Commission hearing that the proposed location of the gas well site flooded in years past. To establish the base flood elevation in the approximate Zone “A”, on December 31, 2007, Columbia County determined that the base flood elevation (BFE) on flooded lands impacted by the Nehalem River is set as the “flood of record”, or the higher flood elevation of either the 1996 or 2007 flood events. The Elevation Certificate prepared by Reynolds Surveying dated October 1, 2014, determined that the well site was in the community determined flood hazard zone. The lowest adjacent grade to the well site was determined to be 520 feet NGVD 1929 and the base flood elevation determined to be 521.8 feet NGVD 1929, meaning the drill site was under flood water by approximately 9 inches to 1 foot 9 inches. The applicant submitted a Flood Plain Development Permit to Columbia County (LDS, Planning Division). All development within a flood hazard area is subject to the standards set forth in Section 1100 of the Columbia County Zoning Ordinance. Staff is concerned about the possibility of flood waters entering the well and during a flood event, possible large floating debris damaging the gas production equipment at the site and any emergency reaction to such an event.

Staff proposes three flood related conditions:

- 1) If drilling occurs during time periods where the potential of natural flood months are the greatest, November, December or January, all equipment used shall be tied down or otherwise prevented from floatation; and all debris, silt, mud or chemicals shall be prevented from entering flood waters.

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- 2) If gas production activities are implemented, the well head shall be sealed to an elevation of at least one foot above the Base Flood Elevation to prevent flood water from entering the well; and, all structures or equipment used in the production will be anchored by an approved tie-down device or otherwise prevented from floatation; and , extracted material, silt or chemicals shall be detained from entering flood waters.
- 3) If gas production activities are implemented, billiards or eco-blocks shall be placed to buffer the well head and any filtering/separation equipment, valves and pipes from damage of floating debris.

Staff finds the criterion is met subject to conditions.

Zoning Ordinance Section 1170 requires the following:

Section 1170 RIPARIAN CORRIDORS, WETLANDS, WATER QUALITY, AND FISH AND WILDLIFE HABITAT PROTECTION OVERLAY ZONE

1171 Riparian Corridor Standards:

- A. The inventory of Columbia County streams contained in the Oregon Department of Forestry Stream Classification Maps specifies which streams and lakes are fish-bearing. Fish-bearing lakes are identified on the map entitled, "Lakes of Columbia County." A copy of the most current Stream Classification Maps is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B) for reference. The map, "Lakes of Columbia County" is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B), and is incorporated therein. Based upon the stream and lake inventories, the following riparian corridor boundaries shall be established:
 1. Lakes. Along all fish-bearing lakes, the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.
 2. Fish-Bearing and Non-Fish Bearing Streams, Rivers and Sloughs (Less than 1,000 cfs): Along all fish-bearing streams, rivers, and sloughs with an average annual stream flow of less than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
 3. Fish-Bearing and Non-Fish-Bearing Streams, Rivers and Sloughs (Greater than 1,000 cfs). Along all streams, rivers, and sloughs with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75-feet upland from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.
 4. Other rivers, lakes, streams, and sloughs. Along all other rivers, streams, and sloughs, the riparian corridor boundary shall be 25 feet upland from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.

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5. Wetlands. Where the riparian corridor includes all or portions of a significant wetland, as identified in the State Wetlands Inventory and Local Wetlands Inventories, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland. Significant wetlands are also regulated under provisions in the Wetland Overlay Zone, Columbia County Zoning Ordinance, Section 1180.

1173 Activities Prohibited within the Riparian Corridor Boundary

In addition to the prohibitions in the underlying zone, the following activities are prohibited within a riparian corridor boundary, except as provided for in Subsections 1175 and 1176 of this Section:

- A. The alteration of a riparian corridor by grading, placement of fill material, and/or impervious surfaces, including paved or gravel parking areas, or paths, and/or the construction of buildings or other structures which require a building permit under the State of Oregon Uniform Building Code, as amended.
- B. The removal of riparian trees or vegetation.

Finding 7: The application area includes 160 acres, encompassing the Southwest Quarter of Section 9, T6N, R5W as part of this conditional use request. For the preferred site, the subject parcel adjacent to the Nehalem River, the river is classified as a large size fishbearing stream (identified by the Marshland Oregon Department of Forestry Stream Classification Maps). The Ordinance establishes a Riparian Area, a distance setback from the top bank of the river, its wetlands and riparian corridors; and, does not allow development, also in any other “stand-alone” wetlands. Generally, development setbacks are 50 to 75 feet from the top bank for fish bearing streams depending on the annual stream flow. These setback distances were established by County as a “safe harbor”, a general distance that should be applicable to all streams throughout the county. Safe harbors is a concept recommended to local governments by the Department of Land Conservation and Development (DLCD) to implement protection measures for our streams without expending significant resources for an intensive study to inventory the biological value for wildlife habitat in a corridor along a river or stream. Columbia County has not studied or produced details and inventoried riparian habitat along the Nehalem River.

The Natural Resource Conservation Service (NRCS) together with the Oregon Department of Fish and Wildlife (ODFW), Columbia Soil Conservation District (SCS) and the Upper Nehalem Watershed Council, among others did inventory the riparian corridor on the subject property and found it needed enhancement. Their inventory exceeded the County ordinance distances of 50-75 feet, for the following reason. The Nehalem River valley floor can carry tremendous amounts of run-off water from the coastal range, huge drainage basin. LIDAR imagery shows the river valley floor with many ebbs, crevices and locations of stream meanderings. To say what point was or is the top of bank for the river is difficult. The NRCS established a Conservation Reserve Enhancement Area (CREP) on the subject property and built a fence as the boundary to keep domestic stock from degrading the enhancement work and investment. Columbia County finds that the edge of the Nehalem River riparian corridor, as established by the CREP program, is the fence line separating the pasture/field from the tree line enhanced area.

The applicant is required to not encroach in the riparian corridor for any development, including well drilling, road building and well pad construction.

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Zoning Ordinance Section 1190 requires the following:

Section 1190 BIG GAME RANGE OVERLAY

1193 Development Standards:

All new development located in Major and Peripheral Big Game Habitat shall implement the following siting standards:

- .1 Dwellings and structures shall be located as near each other and existing developed areas as possible considering topography, water features, required setbacks and firebreaks.
- .2 Dwellings and structures shall be located to avoid habitat conflicts and utilize least valuable habitat areas.
- .3 Road development shall be minimized to that which is necessary to support the proposed use and the applicant shall utilize existing roads as much as possible.
- .4 The owner/occupant of the resource parcel shall assume responsibility for protection from damage by wildlife.

Finding 8: The project site is within a Peripheral Big Game Habitat Area as shown on the *Birkenfeld-Mist BEAK, Wildlife Game Habitat Map*. According to the applicant, no permanent structures will be constructed, a new access graveled road will be constructed along the fence line from the fire station to the well site. At which time the well no longer produces sufficient amounts of natural gas, the well and pipelines will be “abandoned per DOGAMI requirements...and the location will be restored to its original condition.” If sufficient amounts of gas are found and production is warranted the road and a portion of the well pad will remain and continue to be used. The producing well site will be fenced to protect big game from the separator and equipment used in transferring gas to the constructed pipelines. A small shed or wall may be needed to reduce noise and obstruct views. The applicant is proposing to locate a new well in the Mist Gas Field, an area already consisting of numerous gas wells. Initial drilling and set up of the well may temporarily disrupt big game activities, but should not result in any long-term impacts to the big game range and/or big game behavior. Once in place, impacts to habitat from the well and gas recovery system will be minimal. The overall area proposed for this new gas well has been used for natural gas exploration, storage and extraction for almost 30 years and is among other gas producing wells. Impacts to the area from an additional natural gas well will be minimal. There are several elk herds that can be regularly seen in the vicinity. The applicant shall assume responsibility for any damages to the site from wildlife. Staff finds that the criterion is met.

Continuing with Section 1190 Big Game Development Standards

- .5 Riparian and Wetland areas shall be protected in accordance with Sections 1170 and 1180.

Finding 9: As described in Finding 7 of this report, the applicant has included a 160 acre area encompassing the Southwest Quarter of Section 9, T6N, R5W as part of this conditional use request. The Nehalem River, a large size fishbearing stream (as identified by the Marshland Oregon Department of Forestry Stream Classification Maps), runs through the proposed 160 acre area and adjacent to the property proposed for a well site. The riparian corridor boundary for the Nehalem River has been determined to be the edge of the Conservation Reserve Enhancement

EXHIBIT A

Project fence line. No fill or grade development, road building or other development is allowed in the riparian Corridor or within 50 feet of Fleming pond or its associated un-named stream. Staff finds that the criterion is met subject to conditions.

Wetlands Map (PEMC and PSSC Wetlands) - Columbia County Web Maps (GeoMoose, 2014)



Continuing with Section 1190 Big Game Development Standards

- .6 Columbia County shall notify the Oregon Department of Fish and Wildlife (ODFW) of all proposed uses or activities located within the Big Game Range Habitat. The County will consider the comments and recommendations of ODFW before making a decision concerning the requested use or activity.

Finding 10: The subject property is located within an area of Peripheral Big Game Range Habitat as designated on the Wildlife Maps for the Mist-Birkenfeld area. The County notified the Oregon Department of Fish and Wildlife (ODFW) of the proposed request and received as response of “no objection” to the application as submitted. The applicant shall be required, however, to coordinate with the Oregon Department of Fish and Wildlife prior to the siting of the natural gas well and/or access roads to minimize impacts to fish and wildlife resources as a Condition of Final Approval. Staff finds that the criterion is met subject to conditions.

EXHIBIT A

Zoning Ordinance Section 1500, Discretionary Permits, requires the following:

"1503 Conditional Uses:

.5 Granting a Permit: The Commission may grant a Conditional Use Permit after conducting a public hearing, provided the applicant provides evidence substantiating that all the requirements of this ordinance relative to the proposed use are satisfied and demonstrates the proposed use also satisfies the following criteria:

A. The use is listed as a Conditional Use in the zone which is currently applied to the site;"

Finding 11: "Exploring, mining and processing of oil, gas, or other subsurface resources..." are a Conditional Use in the PF-80 zone under Section 505.2 of Columbia County's Zoning Ordinance (See Finding 1). Gas well drilling and extraction of gas is considered a conditional use in this zone. Staff finds that the criterion is met.

Continuing with Zoning Ordinance Section 1503.5

"B. The use meets the specific criteria established in the underlying zone:"

Finding 12: Compliance with the criteria of the PF-80 Zone is discussed in Findings 1 through 4 of this report. Staff finds that the criterion is met.

Continuing with Zoning Ordinance Section 1503.5

"C. The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features;"

Finding 13: The drilling activity will be in the area generally known as the Mist Gas Field where there are other gas production wells, well heads and gas storage projects. Most properties located within this area are used for resource use (commercial timber management, small farms, natural gas storage and extraction, etc...) and are not developed extensively with residential uses. The proposed drilling site provided by the applicant for the location of the gas well is located in an area that appears relatively flat in a field next to Hwy 202. The applicant states, "The site characteristics are suitable for the proposed use. Gas well drilling has been conducted in the area for many years. Drilling activities will not permanently affect any topographic feature, improvement or other natural feature." As discussed previously in this report, the proposed gas well property borders the Nehalem River to the north and an unnamed creek to the southwest with a constructed pond (Fleming Pond) for water storage. The proposed drill site is located between these two protected natural features. If recommended conditions including regulatory setbacks and prevention of waterway contamination are imposed, then the existing natural features, existing uses, and the remote nature of this part of the County make this site suitable for the proposed gas well use. Staff finds that the criterion is met with conditions.

Continuing with Zoning Ordinance Section 1503.5

"D. The site and proposed development is timely, considering the adequacy of transportation systems, public facilities, and services existing or planned for the area affected by the use."

Finding 14: The proposed activity will not require new public facilities or services. Existing County roads and/or

EXHIBIT A

State Highway will be used for access to the site. A new access for the drill site will be provided through the Mist-Birkenfeld Fire station and a gravel access road will be constructed to the specific drill site. Where public roads are used, the small number of vehicle trips associated with the use will not place an inappropriate burden on the roadways. As discussed in the "operations description" provided by the applicant, "Trucking operations may occur for 2 - 3 weeks while the location is built, the drill rig is moved to the site, rigged up and the well drilled." Following the temporary drill process, truck traffic to and from the site is less frequent, consisting mostly of visits from operations personnel. Water will be provided by and sewage disposed of by the applicant. According to the applicant, "Water for this project will be contracted for and trucked to location from outside the drilling area...Portable chemical toilets will be utilized for sewage handling..." The proposed natural gas operations will not require improvements to existing transportation or public facilities and services in the area. Staff finds that the criterion is met.

Continuing with Zoning Ordinance Section 1503.5

- "E. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district;"

Finding 15: The PF-80 zoning district allows a number of uses, with primary uses (uses permitted outright) focused on the propagation, harvesting and management of forest and farm products and uses associated with soil, air and water conservation and fish and wildlife management. Other uses are allowed subject to administrative review, including single family dwellings and fire stations. Specific uses permitted in the PF-80 zone are defined in Chapter 215 of Oregon Revised Statutes (ORS) and in Sections 503, 504 and 505 of Columbia County's Zoning Ordinance. The proposed gas well would not seem to alter the character of the overall Nehalem valley area, as a huge investment of property use in the area is already developed for natural gas production and storage activities. Forestry, farming and natural gas operations have existed (together) in this area for many years.

The neighboring property owner to the west has expressed concerns of how the proposed gas well at this location could or will substantially impact their living environment and farm. His comments are listed later in this Staff Report under comments; but, a few identified impacts are addressed here as potentially altering the character of the surrounding area. 1) The gas well drilling may compromise the Fleming pond, a source of water for his stock. Staff response: as measured with Google Maps, the closest point of Fleming pond, the dam, is 360 feet from the proposed well site. The pond and especially the creek flowing from the pond is down-gradient from the proposed well and any of the proposed chemicals and materials used in well construction could conceivably travel on the ground surface to enter the pond. More likely, materials used in the drilling process by injecting the product into the well could possibly find its way to the surface or enter the pond underground through subsurface fractures or aquifers. The applicant has already entered a Road Use and Indemnification Agreement with Mist Birkenfeld Fire District which states that Enerfin will pay for all damages to the Pond, the Pond liner or the water source of the Pond. Staff recommends that the indemnification also include water quality free from contaminants related to the gas well or its construction. Water quality samples should be analyzed for a specified range of contaminants - before well construction starts for a baseline, then once during well construction to mitigate any recordings of contaminants if found, then again after the well is constructed.

2) The drill site is within sight and sound distance of the single family residence and adjacent to livestock. A separator and heater device, producing noise, will remain on site if the well is a producer. Staff response: the applicant submitted rebuttal comments on the decibel level of similar production equipment and concluded that the unit would not be detectable over 200 feet away from the well/production equipment site. Nevertheless, staff talked

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with several property owners in the Birkenfeld area with gas wells on their property and they said that the hissing sound of the production unit could be heard at several hundred yards, but it was low in volume and not obnoxious. They have just gotten used to it. Staff recommends that a condition be placed that the gas production site be screened with bushes & trees from the adjoining farm use and a sound proofing shed or wall be placed to abate noise and lighting emissions. Staff finds that this criterion is met with conditions.

Continuing with Zoning Ordinance Section 1503.5

"F. The proposal satisfies the goals and policies of the Comprehensive Plan which apply to the proposed use;"

COLUMBIA COUNTY COMPREHENSIVE PLAN:

PART IV FOREST LANDS

GOAL: To conserve forest lands for forest uses.

Finding 16: This application conserves forest lands for forest uses because it uses an existing/designated area that is already approved for resource drilling and subsurface natural gas storage. Furthermore, the proposed use deals with a subsurface resource and will have little impact on above ground forest resources. The operation will not result in the withdrawal of forest lands or forest uses on a temporary or permanent basis. Staff finds that the criterion is met.

Continuing with the Columbia County Comprehensive Plan

PART X ECONOMY

GOALS:

1. To strengthen and diversify the economy of Columbia County and insure stable economic growth.
2. To utilize Columbia County's natural resources and advantages for expanding and diversifying the economic base.

POLICIES: It shall be a policy of the County to:

7. Protect identified aggregate resources until they are extracted, and plan for the reclamation and future productive uses of those sites.

Finding 17: According to DOGAMI, the Mist Gas Field has been of significant economic importance to the County, producing over 65 billion cubic feet of gas since its discovery in 1979, with a value of about \$125 million. Currently, there are multiple gas producing wells and two underground natural gas storage projects in the Mist Gas Field. Enerfin Resources Northwest Limited Partnership (LP) supplies natural gas to Northwest Natural for distribution to customers. Northwest Natural gas then delivers energy to more than 650,000 customers from the gas reservoirs and storage projects located in the area. The continuing expansion of natural gas extraction in the County creates jobs and provides energy to the region. Additionally, a percentage of the income generated through

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production of a natural gas well is returned to the owner of the mineral rights. A new natural gas well in this area will satisfy the goals and policies of Part X (Economy) of the Comprehensive Plan by using a natural resource to expand and diversify the County's economic base. Staff finds that the criterion is met.

Continuing with the Columbia County Comprehensive Plan

PART XIV PUBLIC FACILITIES AND SERVICES

GOAL:

To plan and develop a timely, orderly, and efficient arrangement of public services as a framework for urban and rural development.

Finding 18: Only minimal development, as discussed in the "Background Section" and in Finding 14 above, will be necessary to accommodate drill equipment and infrastructure. With the exception of travel on County roadways to and from the well site, drilling and production operations associated with the proposed gas well will not require the use of public facilities and/or services. Staff finds that the criterion is met.

Continuing with the Columbia County Comprehensive Plan

PART XVI GOAL 5: OPEN SPACE, SCENIC AND HISTORIC AREAS, AND NATURAL RESOURCES

ENERGY SOURCES

GOAL:

To protect deposits of energy materials in the County and prevent injury to surrounding lands and residents.

POLICIES: It is the policy of the County to:

1. Rely on ODOGAMI to require that wells are drilled, cased, and plugged in such a manner as to ensure public safety.
2. Coordinate with ODOGAMI to conduct a comprehensive inventory of energy sources in the County, including those oil and coal deposits determined as (1B). Upon completion of this study, the County shall complete the Goal 5 process for newfound resources, and up-date zoning and other implementary ordinances to accommodate them.

Finding 19: The proposed activities are subject to the conditional use criteria outlined in Columbia County's Zoning Ordinance and to the regulations of DOGAMI. The Oil, Gas and Geothermal Regulatory and Reclamation Program at DOGAMI regulates activities associated with oil and gas operations to ensure that these activities are done in a manner which ensures "conservation of the resource, protects the environment including groundwater resources, and allocates revenue from production among owners of mineral rights in an equitable manner." Protection of energy materials and prevention of injury to surrounding lands and residents are handled through required permits and state and local regulations. Staff finds that the criterion is met subject to conditions.

Continuing with the Columbia County Comprehensive Plan

PART XVIII AIR, LAND, AND WATER RESOURCES

GOAL:

To maintain and improve land resources and the quality of the air and water of the County.

Finding 20: Columbia County's Comprehensive Plan identifies the potential for environmental consequences, including disruption of sensitive ecosystems by land disturbance and water source pollution, from gas well drilling. The proposed gas well site is in the immediate vicinity of two sensitive and protected water resources, as mentioned earlier in Finding 7. The subject property owner is participating in a multi-jurisdictional riparian and waterway enhancement project which must be maintained, and not degraded. The identified riparian corridor boundary has been fenced and the proposed well site is just within feet of the riparian setback line. The river itself is some 300 feet further to the north. A new road will be constructed for access to the well site and a drilling pad constructed next to the fence. No construction, fill or grading is allowed within the riparian corridor (fence line). The other water resource is a small unnamed creek and Fleming Pond that is 360 feet from the proposed well site. Significant agency resources were utilized to capture and sustain a 3.5 million gallon water reservoir for fire fighting uses. Staff recommends several conditions to protect the pond's integrity and water quality from possible impacts from gas drilling and production. As far as air quality, it does not appear from evidence submitted that the proposed gas well drilling or production will impact air quality. The only possible impact to air quality could be a remote possibility of a gas well head explosion and fire. The applicant in conjunction with the Fire district has an emergency plan in place for such an occurrence. Generally, the County minimizes and/or prevents such impacts by relying on federal and state agencies safety standards, specifically DOGAMI, to require compliance with gas drilling regulations and through this conditional use permit process. Approval of this application and the resulting exploration activities will have little to no effect on air and water quality if conditions are met, and will result in no permanent surface damage. The applicant has stated that at which point natural gas production ceases, the well will be abandoned and the site returned to its original state. Staff finds that the criterion is met with conditions.

Continuing with Zoning Ordinance Section 1503.5

"G. The proposal will not create any hazardous conditions."

Finding 21: The proposed drilling and operation activities will not be hazardous if precautions are taken in accordance with regulations set forth by the Oregon State Forestry Department, DOGAMI and the Mist Birkenfeld Rural Fire Protection District and recommendations set forth by the Oregon Department of Fish and Wildlife. According to the applicant, "The proposed operations will not require the use of any hazardous or poisonous materials (a list of materials/chemicals used was submitted)...in addition, the operations will not create undue hazardous conditions and will be governed by and conducted under the oversight and control of..." the aforementioned agencies.

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The applicant more specifically states:

“The location will be graded and rocked to control and/or prevent any drainage or soil erosion. A mud pit conforming to DOGAMI specifications will be constructed and adequately lined as part of a ‘closed’ mud system which adequately controls any water/fluids utilized and or produced during drilling. No toxic chemicals are used in the drilling fluids and any additives are food grade and non-toxic. All materials brought to the surface during drilling are non-toxic and will have no effect on the environment. Operations will have no effect on any streams or wetlands or their riparian zones within proximity to the drillsite...If commercial quantities of gas are not present, the well will be abandoned according to DOGAMI specifications, the drilling rig will be moved off the site, the drilling fluid will be disposed of and treated in accordance to DEQ guidelines and the location will be restored as closely to its original condition as possible.”

Finally, the applicant states that regular visits by operations personnel will be made to the site to ensure that all operations are running safely and efficiently. Staff finds that the criterion is met subject to conditions.

Continuing with Zoning Ordinance Section 1503.6:

".6 Design Review: The Commission may require the Conditional Use be subject to a site design review by the Planning Commission."

Finding 22: Staff does not recommend a Site Design Review.

COMMENTS:

Mist Birkenfeld CPAC: Letter submitted Nov 20, 2014. Maps were out dated and inaccurate, ODFW does not seem to be aware of problems with eagles or other species, concerns about the chemicals used and drilling mud pit, concerns about the taste of well water in the area, to assure and avoid appearance of conflict of interest the analysis of water quality should be done by a professional agency licensed by the state, encourage the well site to be less visible from the main highway.

Mist-Birkenfeld Rural Fire Protection District: See Attached Letter. Two concerns: 1) that a safe access be used that is compatible with the Fire District's maneuvers and 2) Fleming Pond (a source of water) not be damaged. Also, the Fire District has entered a Road Use and Indemnification Agreement with Enerfin NW.

Oregon State Forestry: No Comment

Soil and Water Conservation District: Dated September 8, 2014 received at the Planning Commission hearing.

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Concerns: 1) did not receive notice from LDS; 2) Fleming pond liner may be compromised; 3) Shale and bedrock outcropping next to pond; 3) a bypass pipe buried within the wetland; 4) impact on mitigation wetland associated with the pond.

Upper Nehalem Watershed Council: Testified at the Planning commission hearing, no written comments.

Oregon Department of Fish and Wildlife: No Objection

DOGAMI: No Comment

County Roadmaster: No Objection

County Counsel: No Comment

Building Official: No Comment

Notified Property Owners:

Sam Semerjian - 4 letters in opposition; 1) dated 9/12/14 - this is the first gas well situated on the valley floor with existing farmland, site is farmland not timberland; the Fleming Pond is used for supplying water to his cattle; the proposed well site is within visibility and hearing range of his home and adjacent to his livestock; concerns are noise, light, dust and soil disruption; we need a list of all chemicals used in process; concerns with impact on his honeybee colony. 2) dated 9/8/14 - Soil Conservation Service did not receive any notification about the well; State agency reviews have been inadequate. 3) dated 9/18/14 - Unlike the applicant said, a separator/heater device will remain at the gas well site during production; the well may compromise the integrity of Fleming Pond; the well will disturb the peace and quiet of the area; the well will pollute the water and soil; there will be light, noise and dust disturbance; negative impacts on livestock; issues with drilling a gas well in the flood zone; the list of chemicals needs oversight from agencies. 4) Letter submitted with appeal dated 10/16/14 - the County should not "rubber stamp" for gas companies, the safety of citizens and protection of the environment should take precedence; no staff inspection of the site; used outdated maps on local geography; staff report roughly knowing the location of the pond/well; the county is taking guarantees of Enerfin without efforts to verify; county needs to make certain agencies like ODFW are made aware of the drill site; concern about planning staff making significant corrections just prior to the Commission approving the application; assuming that 20 years history of gas wells in the county is a good reason not to be diligent.

Olin Younger and Elizabeth d'Aubigne - Property owner down stream on Nehalem River; Concerned about the drilling will be detrimental to their property downstream and detrimental to the entire ecosystem in this section of the valley; the drilling will cause noise up and down the valley.

Other Comments Received In 2015

Enerfin, Peggy Morgan - dated January 12, 2015 letter communicating Aerial Map showing distances from well location to the pond and Semerjian's and Map depicting other gas wells located in farmland.

Paulette Lichatowich - Letter dated January 12, 2015 attaching minutes of Energy Facility Siting Council, discussions of horizontal boring and development of "frac" in strata.

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No other comments have been received from government agencies or nearby property owners as of the date of the initial hearing of this staff report (January 14, 2015).

CONCLUSION AND RECOMMENDATION:

Of the all the issues raised during the application process the most imposing is the likelihood of adverse conditions and contaminations impacting a significant wetland/pond, close to the Nehalem River riparian area and close to a working farm with a residence. Staff finds that the adverse effects can be reduced and minimized through a set of proposed conditions.

Based on the above findings, staff and the Planning Commission recommend that the Board of Commissioners **APPROVE** this request for a natural gas well (CU 15-01) with the following conditions:

1. This permit shall become void 4 years from the date of the final decision if exploration has not begun on the property in substantial compliance with the conditions herein set out. Extensions of time may be granted by the Planning Director if requested in writing before the expiration date and if the applicant was not responsible for the failure to develop.
2. If the applicant applies for a drilling permit for any other site, besides the preferred site in this application, within the approved 160 acre quarter section, any other site will require further review applying the standards and requirements of Columbia County.
3. Prior to operations, the applicant shall obtain the proper permits from DOGAMI and the Oregon State Forestry Department.
4. The applicant shall coordinate with the Oregon Department of Fish and Wildlife prior to the siting of natural gas wells and access roads to minimize impacts to fish and wildlife resources.
5. This permit will not be valid unless the applicant meets fire safety requirements as determined by the Mist-Birkenfeld Rural Fire Protection District (RFPD). The applicant shall have the easement access route to the well site approved by the RFPD to avoid curtailment of fire services. The Fleming Pond and its water source for fire protection shall not be compromised. Also, the well site is inspected by the Mist-Birkenfeld Rural Fire Protection District prior to any drilling operations, and the applicant shall notify the RFPD as to the exact date and location of drilling operations at least three days prior to the commencement of said activities. The applicant shall notify the Fire District when they have vacated the site.
6. The applicant shall not encroach in the identified riparian corridor of the river for any development, including well drilling, road building and well pad construction.
7. The applicant shall maintain a 50 feet setback of any development from the Fleming Pond,

EXHIBIT A

associated wetlands and top bank of the unnamed stream.

8. The applicant shall assume responsibility for any damages from wildlife to the gas well development and the site.
9. If gas well is developed for production, the production equipment and any structures shall be screened with appropriate sized bushes and trees from the adjoining farm use, and, a sound proofing shad or wall shall be placed to abate noise and lighting emissions.
10. The applicant shall closely follow and implement the Emergency Management Plan developed with Mist-Birkenfeld Fire District and emergency responders.

Related with Protection of Water Quality

11. All waste water from either drilling or producing operations shall be contained, removed on completion and properly disposed of during and after well development;
12. All mud pit material shall be contained and removed on completion and properly disposed of;
13. The drill pad shall be removed after well development except that portion used for production facilities;
14. The water quantity and quality of the Fleming Pond shall not be compromised and shall be analyzed for contaminants before drilling construction begins, during and after the drilling operation is complete to assure no contamination has entered the pond. If contaminants are detected at any phase, the applicant will immediately shut down, notify the County and effected agencies, and implement best management practices to resolve and clean-up.

Related to Flood Protection

15. If drilling occurs during a time period where the potential of natural flood months are the greatest, November, December or January, all equipment used shall be tied down by approved method or otherwise prevented from floatation; and , all extracted materials, debris, silt, mud or mixtures shall be prevented from entering flood waters;
16. If gas production activities are implemented, the well head shall be sealed to an elevation of at least one foot above the Base Flood Elevation to prevent flood water from entering the well; and, all structures or equipment used in production will be anchored by an approved tie down device or otherwise prevented from floatation;
17. If gas production activities are implemented, billiards or eco-blocks shall be placed to buffer the well head and any filtering/separation equipment, valves and pipes from damage of floating debris.
18. If natural gas is not discovered, well sites shall be abandoned in accordance with DOGAMI's regulations and the well site returned to its original condition.

EXHIBIT A

Attachments

Application
Maps (as submitted by the applicant)
Zoning Map
Address Map
Vicinity Map
Mist Gas Field Map

Letters received after the Record was Copied to BOC

EXHIBIT B

To: Board of Commissioners, Deliberations March 11, 2015
RE: Appeal Hearing, Enerfin to Drill new Gas Well CU 15-01

STAFF REPORT UPDATE AND AMENDED CONDITIONS MARCH 4, 2015

Staff has read all of the testimony received during the post hearing comment and rebuttal periods, January 21, 2015 through February 18, 2015, and have not discovered any outstanding opposition issues that have not been adequately responded by the applicant. To that extent staff is not proposing to amend any of the findings of the Staff report dated January 15, 2015.

Staff is proposing to Amend some of the Conditions of initial Staff Report. The applicant proposed revisions to the conditions in their February 11, 2015 rebuttal comments, Exhibit C. Staff accepts most of these recommended changes as clearer and not changing the content. We have removed coordination with ODFW as unnecessary, revised the fire safety condition for clarity, revised the water quality condition into two conditions to emphasize both the integrity and water quality of the pond, and removed the floodplain conditions to be included only in the Floodplain Development permit.

CONCLUSION AND RECOMMENDATION:

Of the all the issues raised during the application process the most imposing is the likelihood that the well drilling may have adverse conditions and contaminations impacting a significant wetland/pond, is close to the Nehalem River riparian area and is close to a working farm with a residence. Another concern was the possibility of a wellhead fire and the ability to contain it. An issue was raised about the County's role pertaining to permits for the collection lines of producing wells into NW Natural's pipe grid. Staff finds that these concerns have been addressed and that adverse effects can be reduced and minimized through a set of proposed conditions.

Based on the findings of the staff report, staff and the Planning Commission recommend that the Board of Commissioners **APPROVE** this request for a natural gas well (CU 15-01) with the following conditions:

1. This permit shall become void 4 years from the date of the final decision if exploration has not begun on the property in substantial compliance with the conditions herein set out. Extensions of time may be granted by the Planning Director if requested in writing before the expiration date and if the applicant was not responsible for the failure to develop.
2. If the applicant applies for a drilling permit for any other site, besides the preferred site in this application, within the approved 160 acre quarter section, any other site

EXHIBIT B

will require further review applying the standards and requirements of Columbia County.

3. Prior to operations, the applicant shall obtain the proper permits from DOGAMI and the Oregon State Forestry Department.
4. The applicant shall meet the following fire safety requirements determined by the Mist-Birkenfeld Rural Fire Protection District (RFPD): (a) The applicant shall have the easement access route to the well site approved by the RFPD to avoid curtailment of fire services; (b) The Fleming Pond and its water source for fire protection shall not be compromised; (c) The well site shall be inspected by the RFPD prior to any drilling operations, and the applicant shall notify the RFPD as to the exact date and location of drilling operations at least three days prior to the commencement of said activities; and (d) The applicant shall notify the RFPD when they have vacated the site.
5. The applicant shall not encroach in the identified riparian corridor of the river for any development, including well drilling, road building and well pad construction.
6. The applicant shall maintain a 50 feet setback of any development from the Fleming Pond, associated wetlands and top bank of the unnamed stream.
7. The applicant shall assume responsibility for any damages from wildlife to the gas well development and the site.
8. If gas well is developed for production, the production equipment and any structures shall be screened with appropriate sized bushes and trees from the adjoining farm use to the southwest, and a sound proofing shed or wall shall be placed to abate noise in that direction.
9. The applicant shall closely follow and implement the Emergency Management Plan developed with Mist-Birkenfeld Fire District and emergency responders.

Related with Protection of the Pond and Water Quality of the Area

10. All waste water from either drilling or producing operations shall be contained, removed on completion and properly disposed of during and after well development;
11. All mud pit material shall be contained and removed on completion and properly disposed of;
12. The drill pad shall be removed after well development except that portion used for production facilities;

EXHIBIT B

13. The applicant has entered a Road Use and Indemnification Agreement with the Mist-Birkenfeld Fire District which protects Fleming Pond from damage due to well development activities. If the pond is damaged, curtailing an adequate fire fighting water supply, it can be a basis for revocation of this Conditional Use Permit.
14. Prior to beginning well drilling activities, the applicant shall analyze the water in Fleming Pond to determine the presence of any contaminants. The applicant shall test the water quality of the pond once again during drilling operations and once after the drilling operation is complete. In the event the subsequent testing reveals the presence of any contaminant that did not show up in the original test and the contaminate is of a type used in the applicant's drilling fluids listed in Mist Field Drilling Chemicals submitted October 2014, the applicant will immediately shut down, notify the County and effected agencies, and implement best management practices to resolve and clean-up the detected contaminate.

Related to Flood Protection & Abandonment

15. Prior to drilling operations, the applicant shall obtain a Floodplain Development Permit from the County. Failure to meet conditions of the floodplain development permit can be a basis for revocation of this Conditional Use Permit.
16. If natural gas is not discovered, the well shall be abandoned in accordance with DOGAMI's regulations and the well site returned to its original condition.

EXHIBIT C – SUPPLEMENTAL FINDINGS

I. Columbia County Zoning Code Criteria

Approval criteria for a conditional use permit must satisfy the applicable standards set forth in Columbia County Zoning Ordinance (“CCZO” or “Code”) Section 505 (conditional uses), Section 508 (general review standards), and Section 1503 (conditional use permits). Those provisions, in turn, refer to other Code provisions such as Sections 1100, 1173, and 1190 addressing floodplain development, riparian areas, and big game wildlife, respectively. Each of the applicable approval standards are re-stated below *in italics*, followed by an explanation of why the record supports a finding from the County that the standard is met.

A. CCZO Section 505

505 Conditional Uses. The following conditional uses may be allowed subject to the general review standards and process in Sections 1503 and 1603 of the Zoning Ordinance. All authorized uses and permanent structures shall also meet the applicable standards listed in Sections 506, 507, and 508 of the Zoning Ordinance and all other local, state, and federal laws pertaining to these uses.

- .2 Exploring, mining and processing of oil, gas, or other subsurface resources, as defined in ORS Chapter 520 and the mining and processing of mineral and aggregate resources as defined in ORS Chapter 517.*

Natural gas is a subsurface resource in Columbia County. Mining, extracting and processing subsurface resources (natural gas) is permissible in the PF-80 Zone through approval of a conditional use permit, subject to any applicable provisions of CCZO Sections 507 through 510. The County’s Code is consistent with state law. Specifically, OAR 660-006-0025, the Land Conservation and Development Commission’s rule establishing allowed uses in a Forest Zone, states that all activities associated with the exploration and production of gas are allowed. In this case, the location of proposed gathering lines were not identified and therefore were not reviewed through this application. If the well is a producing well, gathering lines that are necessary to transport the gas off site must be identified and approved through a separate application with the County.

B. CCZO Section 508

508 General Review Standards

The Planning Director or hearings body shall determine that a use authorized by Sections 504 and 505 meets all of the following requirements:

- .1 The proposed use will not force significant change in, or significantly increase the cost of, accepted farming or forest practices on agriculture or forest lands;*

The Board finds that this use will not force a significant change in, or increase the cost of, accepted farm or forest practices on adjacent lands. Enerfin provided the County with a figure

EXHIBIT C – SUPPLEMENTAL FINDINGS

and table depicting the subject property and other properties in the vicinity devoted to farm and forest uses. That information revealed that the surrounding properties are used for timber, grass hay, and cattle grazing. Testimony in the record also revealed an apiary of undefined size on the adjacent farm property. The record does not contain evidence of any other farm or forest uses in the area. Enerfin also provided a list of accepted practices associated with each of the identified farm and forest uses. The record does not contain evidence of any other farm or forest practices associated with those uses.

With respect to properties used for timber production, the Board finds Enerfin's use will not result in the withdrawal of any forest lands for forest use. The well will be contained wholly on pastureland, physically separated from any forested areas. The only nearby trees are in the riparian area adjacent to the Nehalem River, which are not intended for timber production. Any gathering lines, which must be reviewed and approved by the County through a separate process, required for carrying produced gas to the larger collection system will lie wholly beneath the surface and will be approved through a separate application to ensure that there is no interference with any timber operations. Based on the evidence in the record, Enerfin's use of the subject property will not impact forest practices.

The Board finds that this use will similarly have very little impact on any properties devoted to farm uses. A small amount of land on the subject property will no longer be available as pastureland because of the gravel pad that will be in place at the wellhead. The Board received testimony that the gravel pad is temporary in nature and will only be in place as long as the well is producing. Moreover, testimony indicated the gravel pad is less than one acre in size, whereas the entire property is approximately 60 acres. Livestock that currently use the pasture on the subject property will continue to be able to graze on the remainder of the property used for pasture while the well is operating, and if not a producing well, the full pasture will again be available following decommissioning of the well.

The Board received some testimony raising concerns regarding potential impacts on livestock pastured on adjacent farms. However, the Board finds the drilling or operation of a well should have no impact on accepted farming practices for livestock, which include practices such as field fencing construction and maintenance, medical treatments, feeding during times of low food sources, pasture rotations, and livestock watering. Testimony in the record indicates the adjacent fields are already fenced and separate from the subject property, and that this well will not require any changes to the current fencing configuration. The Board also finds that the well drilling process is highly regulated to avoid environmental contamination, so there will be no need for additional medical treatment or changes in watering practices caused by the well. The Board finds the drilling chemicals Enerfin uses are safe, approved by the Department of Geology and Mineral Industries ("DOGAMI") in conjunction with the Department of Environmental Quality ("DEQ"), and consist of naturally occurring or food-grade chemicals. The well drilling process itself is designed by DOGAMI to isolate the location of the well activities from the rest of the surrounding environment.

The Board finds that even if there were any potential for some environmental contamination that would impact livestock farming practices, the potential for such impacts is

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mitigated, and therefore not significant, by the conditions requiring Enerfin to contain and dispose of all mud and waste water from drilling and production operations.

The Board also received testimony raising concerns of potential impacts to the apiary on the adjacent farm property. These concerns related to light, noise, and other unspecified environmental impacts. Under the Code and state law, a farm use, and therefore a farm practice, involves the “current employment of land for the primary purpose of obtaining a profit in money...” *See, e.g.*, CCZO Section 100.29; ORS 215.203(2)(c). It was not clearly established in the record that the nearby apiary is actually a farm use conducted for profit. To the contrary, it appears more likely that the apiary is a “hobby” conducted for personal use. An apiary of commercial size requires registration with the Oregon Department of Agriculture (“ODA”). *See* OAR 603-055-0100. The record reveals that no such registration appears in ODA’s database for the area near the proposed well site.

Even considering the nearby apiary a farm use, the Board finds that neither construction nor operation of the well will cause any impacts to accepted apiary practices. As noted by testimony from Enerfin, scientific studies indicate honeybees are sensitive to artificial light only when the light is at a high intensity and close to a hive. The lights Enerfin will use will be in place only during the short period of time the well is being drilled (approximately 7 days), and they will be several hundred feet from the apiary in question. There will therefore be no need to change any apiary practices in response to the light, or even to move the bees during the drilling period. Following the drilling period, the lights will be removed. Thus, even if there is a potential for some light impacts to occur, it will be for a very short duration and not rise to any significant level.

Based on the testimony received and evidence that is in the record, the Board therefore concludes that the proposed well will not force a significant change in farm and forest practices, or significantly increase the cost of those practices.

- .2 *The proposed use will not significantly increase fire hazard or significantly increase fire suppression costs or significantly increase risks to fire suppression personnel;*

The Board finds that this use will not significantly increase fire hazards or fire suppression costs. As described in the record, fire safety begins with the initial drilling of the well, which takes place on a gravel pad that is free of combustible materials. In this specific location, fire safety is even more dramatically reduced by virtue of the nearby Mist Birkenfeld RFPD, which has a station approximately 1,500 feet from the well site. A temporary road will be constructed between the station and the well site as general access to the well, but that road will accommodate emergency vehicle access as well. The nearby Fleming Pond provides year-round availability of water for any necessary fire suppression efforts.

Testimony was submitted that indicates Enerfin works closely with the RFPD and has done so at all of its sites in the Mist Field. Specifically, Enerfin informs the fire district as to the date that the site will be occupied, the date that operations will commence, and the date that the drilling area has been vacated. The purpose of this coordination is to give the fire district an

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opportunity to locate and inspect the site and to inspect the equipment operating on the site for fire safety. Once the inspection has been completed, the fire district compiles the information into a packet to help fire district personnel know where to respond and what to expect in the case of an emergency. Staff proposed that this coordination be memorialized in a condition of approval, and the Board agrees.

The Board received testimony asserting that wells dramatically increase fire risk. Contrary testimony, which the Board finds credible, indicates that well fires primarily result from high-pressure gas that is uncontrollably released. Further testimony demonstrated that more than 250 wells have been drilled in the Mist Field and there has never been a wellhead fire because of the following factors: 1) the area is well known from a geological and engineering perspective, reducing the likelihood that unanticipated pressures will be encountered; 2) drill depths are very shallow, ranging from 2,000' to 3,500' (in this case the well will be drilled to 2,800') and down hole pressures are therefore relatively low; and 3) surface casing in the well is cemented to 500', providing an immovable anchor for the pressure control equipment on the rig.

The Board did not receive any other specific statements describing impacts to fire safety and suppression costs near the proposed well site. Based on the testimony and evidence that is in the record, the Board therefore concludes that the proposed well will not significantly increase fire hazards or anticipated fire suppression costs. The Board has also imposed a condition of approval to memorialize Enerfin's fire-safety activities. The Board finds that this criterion has been met.

C. CCZO Section 1503

CCZO Section 505, which allows gas exploration and processing as a conditional use in the PF-80 zone, requires this use to meet the general review standards in Section 1503 of the Code. With the exception of Code Section 1503.5, most of Section 1503 is procedural in nature and does not impose review standards. The Board did not receive any testimony or evidence asserting that those procedural requirements serve as approval standards.

.5 *Granting a Permit: The Commission may grant a Conditional Use Permit after conducting a public hearing, provided the applicant provides evidence substantiating that all the requirements of this ordinance relative to the proposed use are satisfied and demonstrates the proposed use also satisfies the following criteria:*

A. *The use is listed as a Conditional Use in the zone which is currently applied to the site;*

As noted above, this use is for the exploration and processing of natural gas. That use is listed in CCZO Section 505.2 as a Conditional Use. The Board did not receive any testimony to the contrary and finds this standard has been met.

B. *The use meets the specific criteria established in the underlying zone:*

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As discussed in more detail above relating to Section 505 of the Code, this use satisfies the specific criteria of the underlying PF-80 zone. The Board has received no credible evidence or testimony to the contrary. Therefore, the Board finds that this standard has been met.

C. The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features;

The Board received testimony demonstrating that the subject property is suitable for the proposed use. Although many of Enerfin's wells are in more upland, wooded areas, the record indicates that the characteristics of valley properties result in several advantages. First, the property is relatively flat and located along a major roadway, which makes it easier to access for drilling, maintenance, operation, and emergency vehicles.

Second, the flat location also results in a drilling operation that is more contained. By avoiding directional drilling, which is more often required in steeper terrain, Enerfin indicates that it has been able to reduce the amount of area required for the drill pad. This smaller footprint reduces visual impacts, as well as physical impacts to the property.

Third, the flat terrain and proximity to the road also reduces the amount of time required for drilling operations. Enerfin's initial application contemplated a drilling period of up to four weeks. During the Planning Commission proceedings, however, Enerfin identified a specific location for the well on the subject property and determined the amount of time needed for drilling will be approximately only seven days.

The Board received some testimony asserting that this site is highly constrained because of its proximity to the Nehalem River, the nearby Fleming Pond, and adjacent farm operations. However, the Board also received additional testimony demonstrating that gas exploration and production does not permanently affect any topographic feature, improvement, or other natural feature. The subject property borders the Nehalem River to the north and an unnamed creek to the southwest, with Fleming Pond to the south. All of these features will remain intact, and Enerfin will not encroach into any of these areas.

Additionally, the Board received testimony showing where wells have been drilled on similar properties in the Nehalem River valley. The Board finds that this fact alone demonstrates these kinds of sites are suited to accommodate this use.

D. The site and proposed development is timely, considering the adequacy of transportation systems, public facilities, and services existing or planned for the area affected by the use.

The Board received testimony that demonstrates the site and development is timely. Specifically, the record contains evidence that this use will not require new public facilities or services. Enerfin will use existing roads to access the site, and only construct a private road that is not part of the transportation system. Additionally, water for this project will be contracted for

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and trucked to location from outside the drilling area. Portable chemical toilets will be utilized for sewage handling.

The Board received some testimony raising a concern about increased traffic impacts. However, the record also contains evidence that where public roads are used, the small number of vehicle trips associated with the use will not place a noticeable demand on the roadways. Trucking operations may occur for 2 - 3 weeks while the location is built, the drill rig is moved to the site, rigged up and the well is drilled. Following the temporary drill process, however, truck traffic to and from the site is less frequent, consisting mostly of visits from operations personnel.

Based on the foregoing, the Board concludes that this approval standard has been met.

- E. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district.*

In determining if this approval standard has been met, the Board must first identify the character of the surrounding area and the primary uses that are listed in the underlying zoning district. The Board finds that the character of the area surrounding this use is rural in nature, consisting primarily of forest and farm uses. The underlying PF-80 zoning district allows a number of uses, with primary uses (uses permitted outright) focused on the propagation, harvesting and management of forest and farm products and uses associated with soil, air and water conservation and fish and wildlife management. Other uses are allowed subject to administrative review, including single family dwellings and fire stations.

The Board finds this use will not alter the character of the surrounding area. The record reflects that Enerfin has a successful track record of operating compatibly with other uses on the valley floor, and the Board heard direct testimony by individuals in opposition to the well that they were not even aware of the prevalence of wells in this area, confirming that the wells are very low-impact and hardly visible.

As explained in more detail above relating to CCZO Section 508.1, even if there were some impact to the farm and forest “character” of the surrounding area, such impacts would not limit, much less substantially limit, the use of surrounding properties for farm and forest uses allowed in the PF-80 zone. To the contrary, the Board finds farm and forest uses will continue to be maintained even on the subject property.

The Board received some testimony asserting that the proposed well will reduce the “peace and quiet” of the neighborhood. However, the record demonstrates that any potential impacts from the well are no greater than the impacts that already exist in the area. For example, one property owner has expressed concerns about noise emanating from the well if it begins producing gas. That property, however, is also adjacent to the highway, which is heavily utilized by logging trucks on a constant basis. The nearby mill is also audible in this area, as are other noises associated with farm and forest practices. In contrast, the record reflects that sound

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emanating from a producing well is very low and drops off steeply within a couple hundred feet of the well head. The Board finds that such a low noise level will not have any meaningful impact on the peace and quiet of the neighborhood.

Even if there is some noise impact to other uses in the area, this approval is subject to a condition requiring certain noise abatement measures to take place at the well. Based on the foregoing, the Board concludes that this approval standard has been met.

F. The proposal satisfies the goals and policies of the Comprehensive Plan which apply to the proposed use.

The County's Comprehensive Plan does not contain specific approval standards for the proposed uses such as this. The Board agrees with Staff and finds that a development proposal meeting the standards provided for in the Code will also meet the requirements of the Comprehensive Plan since the purpose of the Code is to implement the Comprehensive Plan.

The Board did not receive any testimony specifically asserting that any provision of the Comprehensive Plan serves as an approval standard applicable to Enerfin's application. Even so, the record contains evidence supporting a conclusion that the Permit is consistent with potentially-relevant Comprehensive Plan provisions. As discussed in more detail in section III. below, this use is consistent with the goals and policies of the Comprehensive Plan big game habitat, riparian areas, and flood hazard areas. The Board adopts that discussion and its related findings here as an alternative basis for concluding this approval standard has been met.

G. The proposal will not create any hazardous conditions.

The Board finds that with conditions of approval, this use will not create any hazardous conditions. Gas exploration and production is highly regulated and DOGAMI has a permitting process for the very purpose of avoiding the creation of hazardous conditions. Further, by requiring Enerfin to obtain a DOGAMI permit, which the Planning Commission made a condition of approval, this approval standard is met.

The Board received some testimony asserting that hazardous conditions will result either as a result of development in the floodplain, from well head fires, from unspecified environmental contamination, or from seismic activity. Despite that testimony, the Board finds the permitting process Enerfin must adhere to addresses each of these considerations.

Fire risk is addressed in more detail above in the portion of these findings pertaining to Section 508.2. In brief summary, the Board received testimony establishing that Enerfin coordinates with the Mist-Berkenfeld RFPD to reduce fire risk. A plethora of environmental regulatory agencies are involved in the DOGAMI permitting process. This includes DEQ, which regulates groundwater quality, surface water quality, and air quality. It also includes the Oregon State Forestry Department and ODFW. Finally, DOGAMI itself is the state agency in charge of developing seismic considerations for multiple uses. To that end, DOGAMI has promulgated certain standards, such as limiting how close a well can be to certain bodies of water. In addition to the permitting requirements of state environmental regulatory agencies, the Board has

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imposed conditions of approval to ensure Fleming Pond is inspected and tested; that the Mist-Birkenfeld Fire District Emergency Plan is followed; and that a Floodplain Development Permit is obtained.

The Board received other testimony expressing some concern about the drilling fluids that are used during the drilling process. However, Enerfin provided the Board with its proprietary list of chemicals and materials it uses during the drilling process, none of which are hazardous or poisonous. Enerfin has assured the Board that it will take other precautions as well to limit the likelihood of any hazardous conditions arising. For example, the location will be graded and rocked to control and/or prevent any drainage or soil erosion. A mud pit conforming to DOGAMI specifications will be constructed and adequately lined as part of a “closed” mud system that adequately controls any water or fluids utilized and or produced during drilling. All materials brought to the surface during drilling are non-toxic and will have no effect on the environment. Nor will drilling operations occur within streams or wetland areas, or within riparian zones in proximity to the drill site.

Based on the foregoing, the Board concludes that this approval standard has been met.

D. CCZO Section 1170 – Riparian Corridors

CCZO Section 505 requires conditional uses to meet all other applicable local, state and federal laws applicable to the use. One such local law is CCZO Section 1170, which regulates development within riparian areas and wetlands.

According to Section 1171 of the Code, the purpose of the riparian area Code provisions is “to protect and restore water bodies and their associated riparian corridors, thereby protecting and restoring the hydrological, ecological, and land conservation function these areas provide.” The first step in that process is to identify the “Riparian Corridor” associated with various water bodies. Such areas are established pursuant to Section 1172 of the Code, which require setbacks from each body of water depending on its type and size. Relevant to this application, the setback from small fishbearing streams is 50 feet from the top of bank, and the setback from larger fishbearing streams is 75 feet from the top of bank. Staff has also determined that, with respect to the Nehalem River in this area, the Riparian Corridor consists of the treed area between the river and the fence line that separates that area from the pasture. The Board did not receive any testimony asserting that Staff had incorrectly identified the appropriate Riparian Corridor and adopts Staff’s determination of the Riparian Corridor location.

The approval standards relevant to the Riparian Corridor are set forth in CCZO 1173.

1173 Activities Prohibited within the Riparian Corridor Boundary

In addition to the prohibitions in the underlying zone, the following activities are prohibited within a riparian corridor boundary, except as provided for in Subsections 1175 and 1176 of this Section:

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- A. *The alteration of a riparian corridor by grading, placement of fill material, and/or impervious surfaces, including paved or gravel parking areas, or paths, and/or the construction of buildings or other structures which require a building permit under the State of Oregon Uniform Building Code, as amended.*
- B. *The removal of riparian trees or vegetation.*

The Board finds that Enerfin's proposal satisfies the Riparian Corridor approval standards. Testimony received by the Board demonstrates that no part of Enerfin's development will encroach within an established Riparian Corridor or otherwise result in the alteration of a Riparian Corridor. The Board will impose a condition of approval in this regard.

Testimony indicates that the well itself, and the gravel pad surrounding the well, will be in the pasture area of the subject property. That area is south of the fence line establishing the edge of the Riparian Corridor along the Nehalem River. The well will also be setback several hundred feet from the unnamed creek on the property, significantly more than the minimum 50 foot setback that is required. If the well is a producing well, Enerfin will be installing gathering lines to transport the gas off site to a collection facility. The location of the gathering lines were not identified in the application and are thus not part of this approval. However, gathering lines, which are generally small-diameter lines akin to utility lines, are a permitted use in the Riparian Corridor pursuant to CCZO Section 1175.B.4. Once Enerfin determines the specific route for the gathering lines, it should seek the appropriate approval from the County.

Staff proposed conditions of approval memorializing the riparian area setbacks. Based on the foregoing, in conjunction with Staff's proposed condition, the Board concludes that this use will not encroach into any Riparian Corridor and that the approval standards in Section 1170 of the Code have been met.

E. CCZO Section 1190 – Big Game Range Overlay

CCZO Section 505 requires conditional uses to meet all other applicable local, state and federal laws applicable to the use. One such local law is CCZO Section 1190, which regulates development within the Big Game Range Overlay. The specific development standards in that Code section are set forth in Section 1193.

1193 Development Standards:

All new development located in Major and Peripheral Big Game Habitat shall implement the following siting standards:

- .1 *Dwellings and structures shall be located as near each other and existing developed areas as possible considering topography, water features, required setbacks and firebreaks.*
- .2 *Dwellings and structures shall be located to avoid habitat conflicts and utilize least valuable habitat areas.*

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- .3 *Road development shall be minimized to that which is necessary to support the proposed use and the applicant shall utilize existing roads as much as possible.*
- .4 *The owner/occupant of the resource parcel shall assume responsibility for protection from damage by wildlife.*

The Board finds that CCZO Sections 1193.1 and 1193.2 are inapplicable to Enerfin's application because they address dwellings and other occupied structures, which are not part of the proposal. The Board did not receive any testimony or evidence asserting that these Code provisions are applicable.

The Board finds that Enerfin's proposal satisfies CCZO Section 1193.3 because it minimizes road development to serve the property. As indicated above, Enerfin will develop one temporary road for site access. That road will extend from the RFPD property on the east, and head west along the fence line that separates the pasture from the forested riparian area that lies to the north of the pasture. The fence line already creates a hard boundary for the purpose of separating the pasture land from the forested land to the north, which forested land may be used by big game wildlife. By utilizing this existing barrier, Enerfin's proposal ensures that big game habitat is not further parcelized, and no potential foraging areas will be disturbed.

With respect to CCZO Section 1193.4, Staff has proposed a condition of approval to ensure that Enerfin will assume responsibility for protection from damage by wildlife. The record demonstrates that the well use, even if it were more incorporated into the big game habitat areas, would not have any impact on those areas, as evidenced by the frequent sightings of big game at other well sites.

Based on the foregoing, in conjunction with Staff's proposed condition, the Board finds that this approval standard has been met.

- .5 *Riparian and Wetland areas shall be protected in accordance with Sections 1170 and 1180.*

As noted in more detail above in the discussion relating to Riparian Corridors, the Board concludes that Enerfin's proposal satisfies the requirements in Section 1170 of the Code. The Board adopts that discussion and its related findings to conclude that this approval standard has been met.

This use also satisfies Section 1180 of the Code relating to wetland protections. Pursuant to CCZO Section 1181, the purpose of these Code provisions is to "protect significant wetlands within the identified Wetland Areas as shown on the State Wetland Inventory and Local Wetland Inventories, from filling, drainage, or other alteration which would destroy or reduce their biological value." No significant wetlands in a state or local inventory have been identified on the subject property. To the extent that any wetlands do exist associated with a riparian corridor, those wetlands will not be filled, drained, or otherwise altered, and Staff has proposed a

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condition of approval requiring a 50-foot setback from any such wetlands. The Board did not receive any credible testimony asserting Enerfin's proposed use will impact significant wetlands.

Based on the foregoing, in conjunction with Staff's proposed condition, the Board finds that this approval standard has been met.

- .6 *Columbia County shall notify the Oregon Department of Fish and Wildlife (ODFW) of all proposed uses or activities located within the Big Game Range Habitat. The County will consider the comments and recommendations of ODFW before making a decision concerning the requested use or activity.*

The record reflects that the County notified ODFW of Enerfin's proposed use. ODFW commented on the proposal and did not determine that additional design changes were warranted to further minimize potential impacts to big game habitat. ODFW will have an additional chance to weigh in on the project during the DOGAMI permitting process.

Based on the foregoing, the Board concludes that each of the applicable approval standards in Section 1190 of the Code regulating Big Game Habitat have been satisfied.

III. Comprehensive Plan Policies

Part IV of the Comprehensive Plan relates to Forest Lands and has a stated goal "To conserve forest lands for forest uses." The record reflects that although the subject property is in a forest zone, the specific property is used for farm uses, and the specific location of the well will be within an area currently used as pasture land. Location of the well on that portion of the property results in no impacts to forest lands. Further, as demonstrated above in the discussion addressing farm and forest practices, this use will not have any impacts on forest uses or forest practices on surrounding properties. This use is therefore consistent with this goal in the Comprehensive Plan.

Part X of the Comprehensive Plan addresses the Economy. Two goals within that part are:

1. To strengthen and diversify the economy of Columbia County and insure stable economic growth; and
2. To utilize Columbia County's natural resources and advantages for expanding and diversifying the economic base.

In addition to the economic information provided by Enerfin, the Board received testimony identifying the importance of gas exploration to the County's economy, both because the actual well production is an industrial development (with associated jobs and investment) and because the gas industry provides an important source of energy that can be utilized by other industries. The Board finds that those benefits ultimately strengthen, diversify, and expand the County's economic base.

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Part XIV of the Comprehensive Plan relates to public services and facilities and states the County's goal to "plan and develop a timely, orderly, and efficient arrangement of public services as a framework for urban and rural development." The Board finds the proposed use is consistent with this provision. State law limiting gas well development in this area helps ensure an efficient arrangement of public services. Because only one well is allowed in each 160-acre quarter section, well density is minimized, as are potential impacts to public services. The wells themselves are highly self-contained and do not require continuous public services. The only ongoing public service associated with producing wells is a very minimal use of the transportation system.

Part XVI of the Comprehensive Plan addresses Statewide Planning Goal 5 relating to open space, scenic and historic resources, and natural resources. Within those Goal 5 provisions, the County has a specific goal relating to energy resources with the aim of protecting deposits of energy materials in the County and preventing injury to surrounding lands and residents. In furtherance of that goal, the County expressly relies on DOGAMI "to require that wells are drilled, cased, and plugged in such a manner as to ensure public safety." In other words, this conditional use permit request directly implements this portion of the County's Comprehensive Plan because it requires Enerfin to obtain approval from DOGAMI for drilling and operation of the proposed well.

Finally, Part XVIII of the Comprehensive Plan addresses air, land, and water quality generally. As explained in more detail above, the entire state permitting process required for a gas well is primarily aimed at protecting air, land, and water quality. The Board received testimony that demonstrates this use will be developed in a manner that effectively isolates the well from the surrounding environment. That isolation ensures that the subsurface gas can be extracted and collected without escaping into the environment. The record demonstrates that the materials used and the practices followed during the drilling process ensure that no hazardous materials are introduced into the area. Further, non-gas materials extracted from the well site are disposed of in a safe and responsible manner. The entire operation is conducted outside of any sensitive areas such as riparian areas and wetlands. As explained in more detail below in section V., the well must also satisfy all floodplain regulations, which protects floodplain areas from adverse development conditions.

Based on the foregoing, the Board concludes that the proposed development is consistent with the Comprehensive Plan.

IV. Floodplain Development

Enerfin's proposed development lies within the floodplain of the Nehalem River. As such, the development must obtain a Floodplain Development Permit pursuant to Section 1100 of the Code. Although the Staff Report initially addressed the applicable floodplain approval standards, those standards do not apply to this conditional use permit request and Enerfin has applied for a Floodplain Development permit through a separate application. The County will address all floodplain provisions as part of that separate process and make issuance of that permit a condition of approval for this conditional use permit. As an alternative basis for approval, the Board finds that the floodplain approval standards in Section 1100 of the Code have been met for

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the reasons stated in Staff's reports. The Board has not received any credible testimony or evidence to the contrary.

V. Conclusion

The Board finds that Enerfin's request for the Permit, in conjunction with the conditions of approval included with these findings, meets all of the applicable criteria contained in the Columbia County Zoning Ordinance, including provisions relating to big game, riparian corridors, and flood hazard areas, as well as the goals and policies of the Columbia County Comprehensive Plan. For these reasons, the Board approves the Permit subject to conditions of approval.