

IN THE MATTER OF CONSIDERATION	)	FINDINGS OF FACT
OF CONDITIONAL USE APPLICATION	)	CONCLUSIONS AND DECISION
TO ESTABLISH AN EXPLORATORY	)	OF THE KLICKITAT COUNTY
NATURAL GAS WELL; CUP2007-02	)	BOARD OF ADJUSTMENT

APPLICANT: Delta Petroleum Company  
370 17<sup>th</sup> St. Suite 4300  
Denver, Colorado 80202

This matter came before the Klickitat County Board of Adjustment for consideration of a conditional use permit application in a public hearing on June 4, 2007. Based on the written record, public testimony and deliberations thereon, the Board of Adjustment finds as follows:

**FACTS**

1. Applicant/proposal: Delta Petroleum Company (“Delta”), has applied to the Klickitat County Planning Department for a conditional use permit (“CUP”) to drill an exploratory natural gas well of approximately 15,260 feet depth and construct an associated 400’ by 500’ drill pad and an approximately 2 mile long gravel access road. The applicant has submitted an oil and gas permit application (McBride 28-13 Well) to DNR (Department of Natural Resources).
2. Location: Within a portion of the SW ¼ of the NW ¼ of Section 28, T5N, R23E, W.M., Klickitat County, WA (north of intersection of Six Prong Road and Sand Ridge Road, Alderdale vicinity).
3. Landowner: McBride Ranches, Inc.
4. On site and surrounding land use: The proposed site and surrounding properties are used for agriculture.
5. On site and surrounding zoning: The proposed site and surrounding properties are zoned Extensive Agriculture. The purpose and intent of the Extensive Agriculture zone is to encourage the continued practice of farming on lands best suited for agriculture and to prevent or minimize conflicts between common agricultural practices and various nonfarm uses. Uses permitted outright include farm use, dwellings in conjunction with farm use, home occupations and commercial or industrial activity directly serving agricultural operations. Uses specifically listed as permitted per a CUP include schools, churches, golf courses, parks, utility facilities, migrant labor housing, quarries and “other uses judged by the Board of Adjustment to be consistent with the purposes and intent of this chapter and to be no more detrimental to the adjacent properties than, and of the same type and character as” the listed uses.

6. Conditional use (defined): "Conditional Use" is defined as an activity that when authorized by the board of adjustment and subject to imposition of reasonable conditions and/or restrictions, renders the use compatible with the existing and potential uses in the vicinity which are permitted outright.
7. Comprehensive Plan Designation: The proposed site is designated "Agriculture Forest" on the Generalized Land Use Plan in the County Comprehensive Plan. The purpose of this designation is to retain, or conserve, insofar as is practicable and desirable, prime agricultural and forest lands for the continued economic welfare of the farm and forest industry and residents of the county.
8. Comments: Agency comments and testimony from the public were reviewed.
9. SEPA review: The DNR has issued a DNS (Determination of Non-Significance).
10. Critical Areas Ordinance review: The site was evaluated per the Critical Areas Ordinance. A seasonal stream will be crossed by the access road.
11. The applicant has agreed to the conditions proposed as Exhibit "A" hereto.

## CONCLUSIONS

1. The proposed use is similar to quarries, mines and sand & gravel pits, which are specifically listed as conditional uses, in that a natural resource is extracted. The proposed use is no more detrimental to surrounding properties than quarries, in that noise and traffic will be generated for a period of approximately a year, whereas, noise and traffic associated with quarries and mines can extend over a period of several years.
2. The proposal is consistent with the purpose and intent of the Extensive Agriculture zone and consistent with the Comprehensive Plan, in that following completion of the gas well, the site will be restored to agricultural use within a short period of time.
3. The proposed use, with conditions, is compatible with agricultural practices which will continue in the immediate area of the proposal during the time the well is constructed.

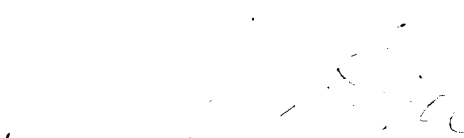
## DECISION

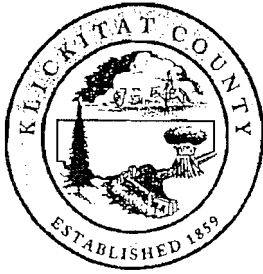
CUP2007-02 is approved, with conditions as agreed to by the applicant and attached; the applicant is Delta Petroleum Corporation.

A record of the vote is as follows:

<b>Name</b>	<b>Yes</b>	<b>No</b>	<b>Absent</b>	<b>Abstain</b>
Fred Wilkins				
Carl Allaway				
Sondra Clark				
Mike Woods				
Mike Smith				

Signed this 17 day of June, 2007.

  
\_\_\_\_\_  
Chairman, Klickitat County  
Board of Adjustment



KLICKITAT COUNTY  
PLANNING DEPARTMENT

228 W. Main St., MS: CH-17, Goldendale, Washington 98620  
VOICE: 509 773-5703 or 1 800 765-7239  
FAX: 509 773-6206

May 8, 2007

Delta Petroleum Corporation  
Terry Hoffman  
370 17<sup>th</sup> Street, Suite 4300  
Denver, Colorado 80202

RE: Exploratory Drilling Wells in Klickitat County  
McBride 28-13; Gray 31-23  
Project Conditions

Dear Ms. Hoffman:

Klickitat County appreciated the opportunity to meet with Delta Petroleum on April 2, 2007, regarding permit conditions for its McBride 28-13 exploratory drilling well proposed for east Klickitat County. As a result of this meeting, and other conversations, Delta has committed to the mitigation outlined in the attached document. The conditions have been included in the applications Delta submitted to the State Department of Resources for both the McBride 28-13 well, and the Gray 31-23 exploratory drilling well.

DNR has since issued determinations of non-significance under the State Environmental Policy Act for both wells. Based on the conditions Delta has agreed to, the County Planning Department is not appealing these determinations, or assuming lead agency status. The Planning Department will recommend inclusion of these conditions in its Staff Report to the Board of Adjustment as conditional use permit conditions, which are also based on SEPA impacts. This is consistent with the County's standard practice.

In the event there is an irreconcilable conflict between these agreed upon conditions, and conditions imposed by another agency, that cannot be resolved by the applicant's voluntary action, the County Planning Department will meet with the relevant agency and the applicant to resolve the conflict.

This correspondence confirms Delta's concurrence with this approach. Unless Delta has any concerns, please sign the second page of this letter agreement and return to the County.

Sincerely yours,


Handwritten signature of Curt Dreyer in black ink.

Curt Dreyer  
Planning Director

cc: Timothy L. McMahan

By its signature below, Delta Petroleum, Inc., confirms its agreement with the attached conditions as SEPA conditions, and with their incorporation into a conditional use permit for both the McBride 28-13 and the Gray 31-23 exploratory drilling wells proposed for location in Klickitat County. This letter agreement may be executed in duplicate.

  
\_\_\_\_\_  
Terry Hoffman, Project Manager  
Delta Petroleum Corporation

  
\_\_\_\_\_  
Greg Olson, Drilling Manager  
Delta Petroleum Corporation

Date 5/14/07

Date 5/14/07

## PROJECT CONDITIONS

<b><i>GEOTECHNICAL<sup>1</sup></i></b>	
1.	All structural foundations, buildings, and structures will be designed in accordance with the applicable seismic zone requirements (currently Seismic Zone C).
<b><i>EROSION/DUST CONTROL/STORMWATER</i></b>	
2.	Drainages in the Project area will be crossed using existing road crossings, and, if required, existing culverts will be replaced to accommodate storm events consistent with the Eastern Washington Stormwater Manual. The Project will use or upgrade existing roads where possible and minimize construction of new access roads.
3.	Drainage ditches, culverts, and stormwater facilities will be designed for year round conditions including winter snowmelt factors.
4.	Avoid clearing and grading during wet seasons or period of rainy weather.
5.	Water or other dust suppressant measures will be used, when and where appropriate.
6.	All exposed soil surfaces that are not being actively used during construction will be protected by biodegradable erosion-control mats (areas of high winds), weed-free straw or soil tackifier.
7.	Stockpiled soils will be removed or protected from wind and rain consistent with Best Management Practices, which include covering or hydroseeding and use of a soil tackifier.
8.	A water truck will be maintained on-site during construction for dust suppression.
9.	Provide a minimum of 6 inches (15 cm) of gravel surface on new Project roads to reduce wind erosion, where necessary.
10.	Traffic speeds on unpaved roads will be limited to 25 miles per hour to minimize dust generation.
11.	Prior to construction, and before building permits are issued, a stormwater drainage system will be designed in consultation with a professional engineer and submitted to the Planning Department. Construction will proceed in compliance with the design.
12.	A construction stormwater management plan, including a Stormwater Pollution Prevention Plan, will be implemented concurrent with construction and submitted to the County before building permits are issued. Prior to restoration activities, the construction stormwater pollution prevention features will be redesigned to function as permanent stormwater management components of the Project.
13.	After all earth-disturbing activities are complete, the Project site will be monitored

<sup>1</sup> These subheadings do not necessarily reflect all issues the condition is aimed to address, but are designed only for ease of reference.

	for erosion on a bi-weekly basis or after large rainfall or snowmelt events and corrective action taken, as needed.
	<b><i>WILDLIFE HABITAT/PLANTS</i></b>
14.	A contractor training program will be conducted before groundbreaking to explain restrictions protecting wildlife, habitat, and critical area features in or near the construction zone.
15.	The Project will limit construction disturbance by flagging the perimeter of the well site and access roads.
16.	Monitoring will be conducted during construction activities.
17.	After construction, the Project site will be gated to prevent unauthorized public access as necessary to secure the site.
	<b><i>SITE RESTORATION/WELL COMPLETION</i></b>
18.	<p>A Restoration Plan shall be prepared prior to issuance of building permits. At minimum, the Restoration Plan shall address the following requirements:</p> <ul style="list-style-type: none"> <li>• The Project will revegetate all disturbed areas in accordance with a reseeded/restoration and weed management plan to be developed and approved by the Klickitat County Weed Control Board, before building permits are issued and construction commenced. The plan shall be implemented and updated over the lifetime of the Project.</li> <li>• After construction, the site area will be graded to generally conform to previous contours. Permanent erosion control measures, such as water bars, will be installed as needed, and as the County requires.</li> <li>• Project site restoration will include maintaining access road width to the minimum area needed for maintenance access. As appropriate, areas of high wind or water erosion will be covered with biodegradable erosion control blanket.</li> <li>• All reseeded restored areas will be monitored for 5 years or until vegetation is reasonably established.</li> <li>• The well shall be drilled with water and water based drilling muds.</li> <li>• Mud pit waste shall be analyzed and handled consistent with the requirements of the Department of Natural Resources Oil &amp; Gas Permit issued for this project, however, at a minimum, analysis and handling shall comply with the following requirements: The solid/sludge fractions of the mud pit waste must be analyzed at a Washington Department of Ecology accredited lab. The liquid fraction will be evaporated on site. The solids fraction must be analyzed for the following analytes: total metals, including arsenic, barium, cadmium, chromium, lead mercury, selenium, and silver, chloride, sulfate, TDS, foaming agents, ph, nitrite/nitrate, dissolved oxygen, and total coliform bacteria. Additional parameters may be required after review of the SPC. If a surface film of oil is present, TPH including diesel and heavy oils will be analyzed. A Toxic Characteristic Leaching procedure</li> </ul>

(TCLP) must be conducted on the mud waste for the analytes as listed above and including TPH and oil and grease. The solids samples shall be taken as a composite sample of a minimum of 5 subsamples. The subsamples shall be taken in a line as a cross section that transects the mud pit from the point of discharge of the cuttings to the most distal extent of the pit. Each subsample shall penetrate the entire thickness of the solid fraction. Samples from the mud pits must be collected and tested in accordance with appropriate state and federal protocols. The samples must be submitted in accordance with the laboratory's QA/QC procedures and in sample containers provided by the lab. The results of the sample analyses from the solid/sludge fractions must be submitted to the Supervisor, the Washington Dept of Ecology and the County Health Dept. A fluids and solids management plan shall be developed specifically for this project and approved by Ecology and DNR.<sup>2</sup> The County Planning Department shall be consulted and coordinated with throughout this process, and receive copies of all correspondence, reports, and test results prepared to address this condition. Test results shall be used to determine mud waste disposal methods. Testing, management, and eventual disposal of the mud waste shall be consistent with Chapter 344-12 WAC, and all other applicable regulations. The County shall review the fluids and solids management plan and be provided with comment and consultation opportunities with DNR and Ecology.

***HEALTH AND SAFETY***

19. **Personal Safety:**

- Offer job-specific health and safety training, including cardio-pulmonary resuscitation, first aid, Occupational Safety and Health Administration training related to the work environment at a drilling rig, and a guidance manual on equipment inspection.
- All personnel will have site- and job-specific safety and first aid training and, during construction, prior to initiating work, "tail-gate" safety briefings will be held.
- First aid kits will be provided to each construction crew and at the construction laydown and fabrication yard.
- During construction, a Project Safety officer will be designed to monitor construction activities and Project personnel provided with cell phones or radios to provide timely communication.
- All safety training outlined above shall be repeated for new employees (including, but not limited to managers, supervisors, on-site contractors,

<sup>2</sup> The plan and all related correspondence to Ecology shall be submitted to John Stormon, Water Quality Program, Washington Department of Ecology, or his successor.



	and other workers) to ensure all personnel working on the site are adequately prepared to address emergency situations.
20.	<p><b>Health and Safety Plans:</b></p> <ul style="list-style-type: none"> <li>• An operational Health and Safety Plan will be prepared that will include: emergency notification information, locations of first aid kits, fire extinguishers, location of emergency services, and, in addition to 911, key telephone numbers.</li> <li>• A Project construction Health and Safety Plan will be prepared by each construction contractor to ensure compliance with the state and federal health and safety laws and regulations cited above. All construction workers will be trained in and follow the Project Health and Safety Plan.</li> <li>• The Health and Safety Plans will be filed with the Planning Department before building permits are issued and construction commences, and will be updated as necessary during the life of the Project.</li> </ul>
21.	Portable restrooms will be used during construction. Restroom facilities provided during operation shall comply with state and local sanitation and septic requirements.
22.	<p><b>Fire and Explosion:</b> Prior to construction, and before building permits are issued, the Project will develop and implement a Fire and Explosion Protection Plan that addresses/requires the following, at minimum:</p> <ul style="list-style-type: none"> <li>• All on-site construction and service vehicles will be equipped with a fire extinguisher, shovels, and other fire-fighting equipment during the summer fire season.</li> <li>• Firefighting equipment shall be maintained at the site, including during construction. Such equipment shall include installed and portable fire fighting equipment and personal protective equipment. A large volume water pit shall be equipped with pumps and hoses such that it could be used for fire fighting in emergencies.</li> <li>• Medical or personal injury could occur from accidents on heavy equipment, exposure to dangerous waste, etc. In any event, first aid would be given onsite (all manager, supervisors and lead personnel will be trained in first aid, including CPR) and an ambulance called immediately. Immediate medical care would be provided at area hospitals. If necessary, further medical care will be provided at larger hospitals. In emergency situations, transportation by plane or helicopter would be arranged.</li> <li>• Smoking will be restricted to designated outdoor gravel-covered areas.</li> <li>• Provides contact information for the company who will be called to address a blow out situation, and outlines standard procedures for addressing.</li> <li>• Lists contact information for the government agencies responsible for road closures and evacuations, and provides for coordinate regarding same.</li> </ul>

	<ul style="list-style-type: none"> <li>• All relevant phone numbers for emergency contacts and proximate residences shall be maintained and regularly updated in the Fire and Explosion Plan.</li> <li>• The Plan shall include provisions requiring the applicant to reimburse emergency responders for costs beyond basic life support, advanced life support, or other emergency response services not otherwise generally available and provided.</li> <li>• The Plan shall be updated as necessary. The applicant shall meet with County planning staff and the local Fire Department as needed to ensure emergency response procedures are adequate and remain current.</li> <li>• A 25-foot graveled buffer area, maintained free of vegetation, from all stored materials and equipment, is required along the drilling pad perimeter.</li> <li>• Coordination with emergency responders.</li> <li>• Coordination with the local Fire District shall be required. Applicant shall coordinate with the Fire District to establish a protocol for shutting down the well if there is an extreme fire risk situation.</li> </ul>
23.	<p><u>Oil and Hazardous Material:</u></p> <ul style="list-style-type: none"> <li>• Spill Prevention, Containment and Countermeasure Plan, to be approved by County Planning Department required before construction occurs, and before building permit issuance, which will minimize the likelihood of a spill and measures to take in the event of a spill.</li> <li>• Lubrication and maintenance of construction equipment shall occur in designated areas. Liquid-absorbing booms, sock, pads, or loose absorbent materials shall be readily available and maintained on site in the event of minor spills of fuels, oils, lubricants, and other fluids. Such fluids shall be stored in a secure area in the construction laydown and fabrication yard, in approved containers.</li> <li>• Emergency repairs required in the field will be closely supervised and oil-absorbent pads placed under the repair area.</li> <li>• Hazardous materials handling and storage procedures will comply with State of Washington and Klickitat County requirements.</li> <li>• Any small quantities of waste fluids from maintaining vehicles shall be stored in a controlled and secure area on only a temporary basis, and shall be adequately contained to prevent their release. On a periodic basis, these waste materials will be picked up or taken to a local recycler.</li> </ul>

24.	<p><b>Fueling Facility:</b></p> <ul style="list-style-type: none"> <li>• Trenches will be dug around all fuel and oil storage containers that lead to a lined pit, which would collect and contain spills and prevent any spills from migrating off-site and possibly to navigable waters. The collected liquid material would be disposed of off-site at a licensed facility.</li> <li>• Storage tanks used at the drill site shall contain no more than a total of 18,000 gallons of fuel, will be made of steel and will be equipped with corrosion resistance features, and will be grounded.</li> <li>• Fuel tanks will be located within a 24 mil. lined and bermed area, which can contain 50% of the tank contents. The tanks will be designed consistent with building and fire code requirements.</li> </ul>
25.	<p><b>Security:</b></p> <ul style="list-style-type: none"> <li>• Reserve pit will be fenced on three sides. The fourth side will be fenced once the drilling rig is removed.</li> <li>• The site will be monitored for evidence of unauthorized use and additional security will be provided as appropriate.</li> <li>• Emergency contact phone numbers for medical, fire, and law enforcement responders shall be posted. Sign shall be conspicuously posted at the entrance for viewing by on-site workers, workers delivering materials, visitors, and others.</li> </ul>
<b>NOISE</b>	
26.	<p><b>Noise:</b></p> <ul style="list-style-type: none"> <li>• Daytime noise levels at residential structures (Class A EDNA) are required by state regulations (WAC 173-60) not to exceed 60 dBA and nighttime levels are not to exceed 50 dBA. The Project shall maintain sound levels that are under the maximum levels for the adjacent receiving properties based on the receiving properties' environmental designation for noise abatement per state regulations and shall comply with applicable noise control regulations. If these standards cannot be met, the Applicant shall acquire all necessary property rights to achieve compliance. If there is a noise complaint from a resident/property owner proximate to the Project, the Applicant shall pay for a noise study to determine whether the Project is consistent with state noise regulations. The Applicant shall pay the County the estimated cost of the analysis, before the study is completed. All unexpended funds shall be returned to the Applicant. If the Project is shown to be in violation of state noise requirements, the applicant has three options: (1) shut down the project as necessary to achieve compliance; (2) obtain the necessary property rights acquired to achieve compliance; or (3) install appropriate mitigation to achieve compliance.</li> <li>• Construction will not be performed within 1,000 feet of occupied buildings on Sundays, legal holidays or between 10 p.m. and 6 a.m. on other days.</li> </ul>

	<ul style="list-style-type: none"> <li>• Pile driving or blasting will not be performed within 3,000 feet of an occupied dwelling on Sundays, holidays or between 8 p.m. and 8 a.m. on other days.</li> <li>• Idling of trucks and other heavy equipment, such as concrete delivery trucks, will be minimized to the extent possible.</li> <li>• Construction equipment will, where feasible, be equipped with noise control devices and muffled exhaust systems.</li> </ul>
	<b><i>AESTHETICS</i></b>
27.	Construction areas will be kept clean of construction debris on a daily basis. The facility will be kept free of debris and unused or broken down equipment will be stored off-site or within storage facilities.
	<b><i>CULTURAL RESOURCES</i></b>
28.	<p>Cultural Resource Mitigation:</p> <ul style="list-style-type: none"> <li>• Prior to building permit issuance, the Project will complete archaeological investigations of road corridors. Results of the surveys and mitigation measures directed toward any further resources identified are to be provided to Klickitat County prior to building permit issuance.</li> <li>• Flag and avoid historical/cultural resources during construction. The boundaries of the construction zone will be flagged with sufficient buffers to protect significant sites. Monitor construction activities to ensure that flagged historic/cultural properties are avoided.</li> <li>• The Project will design and implement scientific data recovery in the event further testing confirms eligibility of additional resources and avoidance is not feasible.</li> <li>• Project construction workers will be trained on the need to avoid cultural properties and on the procedures to follow if previously unidentified cultural properties are encountered during construction.</li> <li>• An "unanticipated Discovery Plan" will be prepared to guide response in the event previously unidentified cultural resource properties are encountered during construction. If any previously unidentified cultural resource is discovered during construction, the construction activity will cease in the vicinity of the site pending implementation of the unanticipated Discovery Plan, consultation by a qualified archeologist, and consultation with the State Office of Archaeology and Historic Preservation to identify appropriate mitigation measures such as avoidance or scientific data recovery.</li> <li>• The Project will comply with all applicable state and federal laws governing cultural resource protection.</li> </ul>
29.	If the applicant proposes to construct in areas that have not been delineated for cultural resources or critical areas, the applicant shall perform and document such delineation in a report submitted to the Planning Director prior to disturbing the

area. If significant resources cannot be avoided, the report shall propose mitigation, and disturbance of the area shall not occur until the Planning Director approves in writing.

***ROADS***

30. To the extent economically feasible, the Project will schedule construction activities to avoid the use of paved County roads during likely periods of freeze/thaw cycles and comply with temporary county weight restrictions. County roads will be limited to loads at/under legal weight restrictions, including seasonal restrictions, unless applicant provides a bond to the County and enters into a Road Haul Agreement with the Public Works Department which provides for the assessment by the County and applicant and funding by applicant of road improvements or repairs necessary to protect or restore the condition of County roads to the condition they were in before Project construction. The Road Haul Agreement will be executed before building permits are issued. At a minimum, the Road Haul Agreement will include:

- o a specified haul route listing the route, load configurations, quantity of loads, and schedules for primary and support traffic;
- o identification of structural improvements to the haul route, including roads and bridges, to allow for overweight loads;
- o a method and timeframe to assess and address needed road repairs and/or improvements; and
- o provisions for traffic control.

For County roads in the designated Haul Route, the bond amount will be calculated at \$70,000 a mile of paved County road to be used, and \$20,000 a mile of gravel county road to be used, or as approved by the Public Works Department. Applicant is responsible for damage from all traffic generated by the project (labor, vendors, etc.) and all generated traffic is required to use the single Haul Route. If needed, the applicant could designate a "plan B" route, with written authorization from the County to utilize "plan B."

The applicant shall also obtain such approvals or franchises as are necessary under state or county law before constructing Project utility lines within the county right of way. Applicant shall obtain approach permits from Public Works Department for road approach access to county roads.

***AIR***

31. The applicant shall obtain all required air permits, and comply with all applicable conditions. Provide copies of all air quality reports, permit applications, and permits, including amendments thereto, to the County Planning Department within three business days of issuance/submittal.

***SURFACE/GROUND WATER PROTECTION***

32. The applicant shall obtain all state permits required for drilling, including a drilling permit from Department of Natural Resources. The applicant shall comply with all conditions of that permit, with the descriptions of the drilling operation made in

	application materials, and all applicable state regulatory requirements.
33.	<p><b>Mud Waste Pits:</b></p> <ul style="list-style-type: none"> <li>• Mud waste pit lining material, thickness, and design, shall be determined by DNR, in consultation with Ecology, and the County. In no event shall lining thickness be less than 24 mil.</li> <li>• All open pits shall be designed following guidelines in the Eastern Washington Stormwater Manual and have sufficient capacity to handle a two-year 24 hour storm event. This shall be a minimum of two feet extra capacity. On-site pumping equipment shall be available to address emergency situations, whereby excess water will have to be pumped into a tank.</li> <li>• If the mud pit must be kept in operation longer than 18 months, additional mitigation may be required.</li> <li>• Upon completion of drilling activities the reserve pits shall be flagged or netted.</li> </ul>
34.	<p><b>Chemicals:</b></p> <ul style="list-style-type: none"> <li>• The project will use water and water based muds for drilling.</li> <li>• The applicant shall maintain a comprehensive list of all chemicals which are being used for drilling with the County Planning Department and DNR. The current list is at Attachment A. This list shall be kept current, and the County shall be provided with written notification of the new compound, and MSDS information sheets, at least three working days before a new chemical is used.</li> <li>• The County Planning Department retains the right to prohibit the use of a particular chemical, but only as determined through consultation and collaboration with the Department of Ecology and Department of Natural Resources.</li> <li>• The current list of prohibited chemicals is as follows: <ul style="list-style-type: none"> <li>• Diesel fuel shall not be used in hydraulic fracturing operations.<sup>3</sup></li> <li>• 2-BE shall not be used.</li> <li>• Biocides may be used as necessary to prohibit bacterial growth.</li> </ul> </li> </ul> <p>Delta is responsible for all necessary remediation costs should any of its drilling chemicals be released into County potable water supplies.</p>
<b><i>WATER QUALITY/QUANTITY</i></b>	
35.	<p><b>Baseline Water Quality and Quantity:</b> Baseline water quality and quantity of groundwater in the vicinity of the proposed well shall be established before drilling occurs. Delta has estimated water requirements for well drilling, mud and cementing requirements at three million gallons (approximately nine acre feet)</p>

<sup>3</sup> BJ Services has voluntarily agreed to not use diesel fuel in hydraulic fracturing operations.



over the course of the project for this well. The water is expected to be supplied from a water well to be drilled and completed on the drill site pad location, with the balance from other adjacent farms or municipal supplies. While water wells on the drill site lease and adjacent lands have been identified, no analysis regarding water quality issues has been provided. Given the importance of both water supply and quality, a baseline water study is required before drilling commences, which will be followed up with periodic monitoring of water quality. The baseline water quality study, to be submitted to the County prior to project startup, shall have the following components:

- (a) A map showing the location and designation of all wells within at least three miles of the proposed project (if available);
- (b) A set of drilling logs for all wells within at least three miles of the proposed project;
- (c) A stratigraphic analysis delineating the expected depth and thickness of the principal basalt aquifer zones to be penetrated by the exploration well;
- (d) A compilation of construction and completion data, water level data, and production information (specific capacity, well testing information, production flow rates, etc) for all wells within at least three miles of the proposed project; and
- (e) A tabulation of available water quality data for all wells within at least three miles of the proposed project.

The above requested information only relates to that which is publicly available (and available from publicly published sources).

36. To ensure that groundwater resources are adequately protected during completion of the project, the County Planning Department must approve a written Water Quality Monitoring Plan before construction begins, and before building permits are issued. Details and required components of the Monitoring Plan will be worked out between the applicant and the County, but will include, at minimum, the following components:

1. Identification of selected wells and springs proposed for baseline sampling. The proposed baseline sampling locations must include, at a minimum, the following:
  - (a) A minimum of three wells in the immediate area (< 3 miles). Delta will attempt to collect samples from wells completed in each of the major aquifers in the area (Wanupum, Umatilla, and the Grande Ronde). If Delta cannot obtain access to three such wells, an alternate sampling plan shall be worked out between the County and Delta.
    - i. One of the wells will be the water supply well to be drilled on the McBride Site and located south of the exploration well. It is assumed the well will be completed in the Wanupum formation. The approximate depth of the well

	<p>will be outlined, and will be designed and drilled to a depth to ensure County potable water supplies are adequately monitored.</p> <p>ii. The other 2 wells will be identified from the wells listed with Ecology either on the WRIA database or its list of registered water wells. The wells selected for sampling will be submitted to the County for review prior to baseline sampling.</p> <ul style="list-style-type: none"> <li>• (b) Sample the mapped spring located approximately 1-1/2 miles southeast of the proposed exploration well in the Alder Creek drainage.</li> <li>• (c) The wells will be sampled while they are in use by the owner to avoid having to waste purge volumes or install a pump.</li> </ul> <ol style="list-style-type: none"> <li>2. Identification of selected wells for sampling during drilling and after well completion, which shall include, at minimum, the on-site water supply well.</li> <li>3. Detailed procedures and protocols for sample collection and management.</li> <li>4. A comprehensive list of analytes/compounds to be tested for and the proposed analytical methods for the planned sampling.</li> <li>5. A schedule for the proposed baseline sampling events; subsequent sampling during drilling (which shall be of the on-site production well); and after project completion. Additional testing may be required if changes in water quality are identified, in response to complaints from water well owners, or other events occur suggesting ground water quality may be impaired, or in danger of impairment.</li> <li>6. A summary monitoring report will be submitted to the County and DNR following each sampling event, along with the attached testing data. Each report shall detail the completed sampling activities, tabulate the collected and historic data, and make comparisons to baseline water quality.</li> <li>7. The water quality monitoring plan shall address other information to be provided to the County during drilling to assist in identifying potential impacts to potable water supplies (which is believed to extend through the Grande Ronde formation).</li> <li>8. Test results will be submitted directly to the County and/or its representative; Delta; Washington Department of Natural Resources. Delta and the County Planning Department shall work out cost reimbursement, chain of custody, and other relevant testing procedures to ensure reliable test reporting.</li> </ol>
37.	<p><b>Impacts to Water Quality:</b> In the event that impacts to baseline water quality are noted over the course of the required monitoring period, the County will require that Delta continue or expand sampling activities, as deemed appropriate based on</p>



	<p>the nature of the impact. Any impacts to water quality that result in an exceedance of State Drinking Water Quality or Model Toxics Cleanup Act levels will necessitate additional monitoring and corrective actions. The water quality monitoring plan shall include a specific section addressing how potential water quality impacts will be addressed, and shall require County Planning Department approval. The County Planning Department has authority to order a halt to well operation and drilling, if drilling is contaminating water supplies. Drill operation shall not commence until the Water Quality Monitoring Plan is approved by the County Planning Department.</p>
38.	<p><b><u>Financial Security:</u></b></p> <ul style="list-style-type: none"> <li>• \$50,000 in bonding shall be provided to cover surface restoration and plugging. The bonding shall remain in place until restoration is complete, and the County has approved such restoration as consistent with the Restoration Plan. Bonding with DNR for this amount shall meet this requirement. The applicant shall provide a copy of the bond to confirm compliance.</li> <li>• In the event the applicant has additional insurance, the County shall be name as additional insured.</li> </ul>
39.	<p><b><u>Insurance Coverage</u></b></p> <p>The applicant shall maintain insurance coverage acceptable to the County for liability, loss, expense, and/or damage arising from the project, including liability insurance that (a) covers contamination and/or pollution arising from or relating to the project, (b) has a policy period of at least 24 months from the issuance of the exploratory drilling's conditional use permit, and (c) has occurrence, personal injury, completed operations, and aggregate limits of at least \$20 million applicable only to this project. This insurance must make the County an additional insured, and shall not have any insured-verses-insured exclusion. The applicant shall maintain insurance coverage consistent with state law requirements.</p> <p>All insurance policies shall be issued by insurance companies qualified to do business in the State of Washington, and having a rating of not less than A in the most current available A.M. Best Co., Inc.'s, Best Insurance Report. The County retains the right to reject insurance written by an insurer it deems unacceptable because of financial condition or because the insurer is not operating legally in the State of Washington.</p> <p>The applicant shall comply with all of the terms of its insurance policies, and shall not act in any manner that impairs any coverage under those policies. Without limitation, applicant agrees to promptly notify any insurer of any claim or potential claim that applicant may become aware of in connection with such policy consistent with the terms of the policy. Applicant agrees that it shall be liable for the amount of any damages, costs or expenses, including reasonable attorney's fees, that the County incurs as a result of applicant's failure to comply or perform as required by the terms of any insurance policy, and the same shall not be reimbursable to applicant. Applicant shall at all times maintain a current and</p>

	complete copy of its policies with the County Planning Department.
<b><i>LAWS/STANDARDS</i></b>	
40.	The Project will comply with all applicable federal, state, and local regulations, including health industry health and safety codes, regulations, and standards, and including permit conditions required by the State Department of Natural Resources. If there is a conflict in requirements, the applicant shall comply with the strictest conditions. The applicant shall provide copies of all permit applications, approvals, and SEPA determinations to the County Planning Department within three business days of issuance/submittal.
41.	Except as provided herein, the Project shall be developed consistent with the SEPA Checklist and all application materials. If there is an inconsistency between the DNR or County permit conditions and/or application materials, the stricter permit conditions shall govern.
42.	The Applicant is responsible for achieving compliance with all permit terms and conditions. As provided for in the County Code, the County may take enforcement action to achieve compliance with any permit condition.
<b><i>ENFORCEMENT</i></b>	
43.	The County and the applicant will work with DNR to ensure DNR has adequate resources and personnel to conduct inspections at critical intervals in the drilling program and provide adequate regulatory oversight. Whether regulatory oversight is conducted by DNR, or the County, at minimum there shall be field inspections of operations at critical intervals of the drilling program, (e.g. such as during setting and cementing casing, approval of hydraulic fracturing design, plugging); necessary monitoring of the facility; and other inspections as needed to confirm regulatory compliance. Field inspections shall be conducted by either DNR or an engineer hired by the County with adequate technical expertise. If it becomes necessary for the County to conduct such oversight, the applicant shall reimburse the County for its reasonable expenses. The County will coordinate with DNR on these issues.
44.	These conditions must all be complied with during the life of the project. It is the applicant's responsibility to ensure all conditions are met. The Planning Department has the authority to require compliance with any condition, at any time, should it become aware that a condition has not been met, or is not being complied with. The Planning Department may issue a stop work order, and/or terminate drilling operations, if necessary to achieve compliance. The Board of Adjustment may rescind the County Conditional Use Permit (CUP) for failure to comply with any condition herein.
45.	The CUP may be transferred to another company only if the Planning Department approves the transfer in writing, and: (1) the new permit holder assumes all permit obligations, and executes all agreements with the County, including those for cost reimbursement; (2) the new permit holder has the financial ability to comply with all permit conditions, has adequate experience with operating this type of project, and does not have a history of significant regulatory violations; (3) the project is in

	compliance with all permit conditions; and (4) otherwise complies with all other applicable regulatory requirements.
46.	The CUP shall expire twelve months from the date of the expiration of the appeal period for the permit unless construction <sup>4</sup> of Project facilities has commenced within that period. The filing of any appeals shall defer the running of such period until the final resolution of such appeals and the expiration of any appeal period following such resolution. The Planning Director may extend the permit validity upon a showing of need by the applicant for not more than two six-month periods. The permit applicant shall continue to make substantial progress toward Project completion after construction commences.
47.	The CUP authorizes the drilling, testing, and completion of an exploratory test well. Should the well be completed for production, the CUP must be amended to ensure adequate mitigation and additional environmental review shall be required.
48.	The CUP is valid for an 18 month period following the commencement of construction, as defined in condition 46. Should the applicant need to continue the exploratory drilling past this 18 month period, the applicant shall request the Planning Department for an extension. The extension may be granted if the applicant is in compliance with all permit conditions. The Planning Department may impose additional conditions as needed to address the extension or other issues which have arisen during project operation.
49.	The applicant shall provide copies to the County of all SEPA determinations and DNR permits, permit applications or amended permit applications which relate to this proposal. Such copies shall be provided by mail or email (PDF) to the Klickitat County Planning Department within five working days of applicant's actual receipt of SEPA determinations and DNR permits, or the filing date of permits applications and amended permit applications.

<sup>4</sup> Construction is defined as a physical activity that would lead to the construction of project facilities on the project site, including but not limited to land clearing or road construction.

# **ATTACHMENT 1**

Chemical	Use	Depth (feet)	Fracturing Fluids
Corr Foam	foam drilling	1,500' - 5,260'	
Klean-break	foam drilling	1,500' - 5,260'	
Klean-foam	foam drilling	1,500' - 5,260'	
WFT FM A 100	foam drilling	1,500' - 5,260'	
Aldacide G	drill mud	5,260' - 15,260'	
Aluminum Stearate	drill mud	5,260' - 15,260'	
Aquagel Gold Seal	drill mud	5,260' - 15,260'	
Baracarb 150	drill mud	5,260' - 15,260'	
Baracarb 25	drill mud	5,260' - 15,260'	
Baracarb 5	drill mud	5,260' - 15,260'	
Baracarb 50	drill mud	5,260' - 15,260'	
Baracarb 600	drill mud	5,260' - 15,260'	
Baracor 100	drill mud	5,260' - 15,260'	
Baracor 700	drill mud	5,260' - 15,260'	
Baracor 95	drill mud	5,260' - 15,260'	
Bara-defoam 1	drill mud	5,260' - 15,260'	
Barafilm	drill mud	5,260' - 15,260'	
Barathin-plus	drill mud	5,260' - 15,260'	
Barazan D	drill mud	5,260' - 15,260'	
Barofibre	drill mud	5,260' - 15,260'	
Barofibre Coarse	drill mud	5,260' - 15,260'	
Baroid	drill mud	5,260' - 15,260'	
Baroid Oil Absorbent	drill mud	5,260' - 15,260'	
Barolift	drill mud	5,260' - 15,260'	
Baro-seal Classic	drill mud	5,260' - 15,260'	
Baro-seal Fine	drill mud	5,260' - 15,260'	
Crystal-dril	drill mud	5,260' - 15,260'	
Dril-n-slide	drill mud	5,260' - 15,260'	
Enviro-thin	drill mud	5,260' - 15,260'	
Enviro-torq	drill mud	5,260' - 15,260'	
EZ spot	drill mud	5,260' - 15,260'	
EZ-mud	drill mud	5,260' - 15,260'	
Filter-chek	drill mud	5,260' - 15,260'	
Hydro-plug	drill mud	5,260' - 15,260'	
Lime	drill mud	5,260' - 15,260'	
Liqui-vis EP	drill mud	5,260' - 15,260'	
LVT200	drill mud	5,260' - 15,260'	
Micatex Coarse	drill mud	5,260' - 15,260'	
Micatex Fine	drill mud	5,260' - 15,260'	
Multi Seal	drill mud	5,260' - 15,260'	
No-sulf	drill mud	5,260' - 15,260'	
N-seal	drill mud	5,260' - 15,260'	
Pac-L	drill mud	5,260' - 15,260'	
Pac-R	drill mud	5,260' - 15,260'	
Polyac Plus	drill mud	5,260' - 15,260'	
Potassium Chloride	drill mud	5,260' - 15,260'	
Potassium Hydroxide	drill mud	5,260' - 15,260'	
RM-63	drill mud	5,260' - 15,260'	
Sapp	drill mud	5,260' - 15,260'	
XC207	drill mud	5,260' - 15,260'	
Zeogel	drill mud	5,260' - 15,260'	
Zinc	drill mud	5,260' - 15,260'	

Chemical Usage  
Delta Petroleum  
01 March 2007

(76 Chemicals)

Chemical	Use	Depth (feet)	Fracturing Fluids
Zinc Chloride Solution	drill mud	5,260' - 15,260'	
Clay Grabber	drill mud, clay inhibitor	5,260' - 15,260'	
Bore-plus	drill mud, fluid loss	5,260' - 15,260'	
Baro-trol Plus	drill mud, shale stabilizer	5,260' - 15,260'	
Bore-hib	drill mud, shale stabilizer	5,260' - 15,260'	
Bore-vis	drill mud, viscosifier	5,260' - 15,260'	
Hydrochloric Acid	acid - HCL	7,260' - 15,260'	x
GBW-21	breaker - water	7,260' - 15,260'	x
High Perm CRB	breaker - water	7,260' - 15,260'	x
GBW-5	breaker-water	7,260' - 15,260'	x
BF-9L	buffer	7,260' - 15,260'	x
Clay Treat-3C	clay control - KCl sub	7,260' - 15,260'	x
XLW-14	cross linker	7,260' - 15,260'	x
FRW-14	friction reducer	7,260' - 15,260'	x
GS-1A	gel stabilizer	7,260' - 15,260'	x
GW-45LE	gellant -water	7,260' - 15,260'	x
Hy Temp O	inhibitor - intensifier	7,260' - 15,260'	x
CI-25	inhibitor, acid	7,260' - 15,260'	x
Ferrotrol 300L	iron control	7,260' - 15,260'	x
Magnacide 575 Microbiocide	microbiocide	7,260' - 15,260'	x
NE-940	non-emulsifier	7,260' - 15,260'	x
S-8C, Sand, 100 mesh	sand	7,260' - 15,260'	x
Inflo-150	surface tension	7,260' - 15,260'	x
Interprop (all mesh sizes)	fracture proppant	7,260' - 15,260'	x