



## MEMORANDUM

TO: Routt County Planning Commission

FROM: Chris Brookshire, Staff Planner

RE: Quicksilver Resources Inc  
Special Use Permit – Oil and Gas Exploration and Production and Waterbody  
Crossing  
PP2011-035 – Camilletti 21-10

DATE: March 28, 2012 for meeting of April 5, 2012

The Planning Commission previously heard this application on January 19, 2012. A motion was approved to table the petition to allow time for finalization of the conditions of approval which were being developed during that time (see attached minutes). The petition was originally tabled to March 1<sup>st</sup>, but was rescheduled at the request of the petitioner. Planning Commission meeting is scheduled for April 5<sup>th</sup> with Board of Commissioner's hearing on April 24<sup>th</sup> at 5:30 p.m.

The conditions of approval are attached for your review. They have been revised to reflect and include conditions specific to the Camilletti 21-10 application. As an example, there are no county roads being used for this application so these conditions have been revised.

Attached is a water well location map for your review. There are five wells located within one mile of the proposed well. The well located northeast of the proposed oil well site is located approximately 0.28 miles from the oil well site.

Also attached are items submitted prior to the Planning Commission meeting of 1.19.12 which were not included in the staff report. These items were submitted at the planning commission meeting and include:

Letter from Vicki V Ferguson dated 1.18.12  
Letter from Division of Water Resources received 1.13.12  
Email letter from Rodger Steen dated 1.17.12  
Email from Sam Marti dated 1.19.12

A second letter was submitted from the Division of Water Resources dated 1.24.12 after the Planning Commission meeting and has been included.

There have been no changes to the staff report and at the time of this memo no additional information has been received.

## **ROUTT COUNTY PLANNING COMMISSION**

### **DRAFT MINUTES**

**JANUARY 19, 2012**

The regular meeting of the Routt County Planning Commission was called to order at 6:00 p.m. with the following members present: Chairman Jay Gallagher and Commissioners John Ayer, Brita Horn, Donna Hellyer, Wayne Adamo, Dick Klumker, Sandi Gibson, Andrew Benjamin and alternates Brian Arel and Alan Goldich. Commissioner Jeff Fry was absent. Planning Director Chad Phillips and staff planners Rebecca Bessey and Chris Brookshire also attended. Sarah Katherman recorded the meeting and prepared the minutes.

**ACTIVITY: PP2011-035**  
**PETITIONER: Quicksilver Resources**  
**PETITION: 1. Special Use Permit for Oil and Gas Exploration and Production**  
**2. Waterbody Setback Approval for access road crossings of Cheney and Little Cheney Creek and an un-named waterbody drainage**  
**LOCATION: NW1/4 Section 10, T6N R86W; located approximately 1 mile north of Milner, CO**

Commissioner Gallagher recognized the efforts of the Oil & Gas Working Group (working group) and staff to update the conditions of approval for oil & gas permits. He stated that these efforts were on-going and that the conditions of approval would be vetted by legal staff prior to the Board of County Commissioners' hearing scheduled for February 21, 2012.

Mr. Phillips reviewed the work that had been done by staff over the past year on oil and gas permitting. He reviewed that the Board of County Commissioners had formed the working group on Dec. 12, 2011 and that since then it had met twice to review and update the conditions of approval. Mr. Phillips stated that the current version of the conditions is included in the hand-out, but that they had not yet been reviewed by the County Attorney's Office. Mr. Phillips offered that the intent of Routt County is not to infringe upon the regulations of the State, but rather to ensure that anything that is not covered by the State is addressed by the County. He said that the final template of conditions should be complete by Feb. 21, 2012 when the Board of County Commissioners is scheduled to hear the Quicksilver petition being reviewed this evening.

Mr. Phillips recommended that Planning Commission stick to the conditions of approval included in the staff report, knowing that the Board is likely to change them. He also encouraged Planning Commission to make its comments clear regarding suggestions for further conditions and that it should focus on site-specific issues and public comment.

Mr. Steve Lindsey, Senior Director of Government Affairs and Community Relations for Quicksilver, introduced the operational team representing the petitioner. He reviewed the company's operations and noted that Quicksilver is a family controlled public company traded on the NYSE.

Regarding the suggested conditions of approval and updates to the regulatory system in Routt County, Mr. Lindsey recognized that they are a work in progress. He stated Quicksilver's support for the COGA water well testing program, the use of closed-loop systems, efforts to reduce visual impacts of well pads and flares, environmental, academic and wildlife research, notification of reportable incidents, and maintaining

an open and concerned regulatory process. He stressed the importance to Quicksilver of establishing a collaborative relationship with Routt County. Mr. Lindsey stated, however, that because the conditions of approval are in flux, the petitioner would reserve its right to comply with the revised conditions if it is determined that they are less stringent than those currently being suggested. Mr. Lindsey stated that he would address each of the suggestions made in the letter submitted by the Community Alliance of the Yampa Valley (CAYV), and that in any case Quicksilver would comply with all local, state and federal regulations, as well as industry Best Management Practices (BMPs).

Mr. Lindsey reviewed Quicksilver's areas of focus and presented slides of well sites. He reviewed a list of issues received from public input and feedback and outlined the 17 items that are required by the County to begin the process of applying for a permit. He also reviewed the State of Colorado regulatory framework for oil and gas permitting and operations. Mr. Lindsey noted that the surface owner, the County, and the regulatory bodies all have a say in where a drill site is located, but added that the most important factor remains the geology. He reviewed the list of requirements set out by the Colorado Oil and Gas Conservation Commission (COGCC) and the areas that Routt County can address in their regulations. Mr. Lindsey also reviewed the site-specific County-related conditions of approval that are attached to the COGCC permit. He added that there are also stipulations on the operation by the Colorado Parks and Wildlife (CPW). He stated that the preferred well site had been moved due to infringement upon a grouse lek site. Other restrictions on operations and hauling have been set to protect the grouse during lekking and brooding activities, and hospital-grade mufflers must be used on the compressors and pump jacks. Mr. Lindsey added that the County must be notified of all work-over activities and emergency situations. Fencing and off-site trucking must also be addressed.

Mr. Lindsey presented a map of the area and indicated the location of the proposed well pad and access road. He indicated the location of the proposed waterbody crossing, which already has a culvert. He stated that when the well site was moved away from the lek site, it was located closer to the stream. Mr. Lindsey reiterated the importance of the surface owner's wishes and the geology in determining the location of the well site.

Mr. Lindsey provided an overview of the proposed well pad layout and indicated the location of the equipment to be used in the drilling operation. He presented a diagram of how the pad would be reduced in size during interim reclamation. He reviewed the stormwater management measures, including berms and diversions that would prevent water from flowing out of the site. Mr. Lindsey stated that any water collected at the site would be sucked up and transported to a disposal site. He then reviewed the elements of the drilling, completion and production processes.

Mr. Lindsey presented a schematic of the proposed well and reviewed the series of casings to be installed at different levels of the well. He stated that the three levels of steel and cement casings would be pressure tested and inspected by the COGCC to ensure that they are properly installed. He noted that Chris Nidell (sp?), the COGCC inspector for this region is very proactive and is generally on site during drilling operations. Mr. Lindsey noted the location of the aquifer on a cross-section diagram and stated that the casings would extend 1000 ft. below that level, well beyond the COGCC requirement. Mr. Lindsey stated that the proposed well would be 5060 ft. deep. He said that Quicksilver would be focusing on a vertical well at this time, but if this proves to be a viable play, the petitioner would explore the use of horizontal wells to reduce the surface disturbance.

Mr. Lindsey reviewed the COGA program for water well baseline testing, and stated that Quicksilver supports this program. He added that the operator also must comply with regulations related to the

protection of water-bearing formations, stormwater management, pollution, spill prevention and surface containment. He stated that water usage and permitting requirements ensure that any water used on the site is from a permitted source. Mr. Lindsey reviewed a map showing the locations of all the water wells within a one-mile radius of the site. He stated that all of these are being tested and that the information from these wells would be included in the state-wide database.

Regarding fracking, Mr. Lindsey stated that the operator did not know at this time how the well would be fracked, and would not know until about a week prior. He said that the most appropriate way to frack the well would be determined from data obtained through drilling. He said it could be fracked with gas, a water-based compound or with another fracking technology. Mr. Lindsey reviewed the COGCC regulations regarding fracking and the newly implemented disclosure regulations. He noted that the Local Government Designee (LGD) or any public health official could access the complete profile of the fracking fluids used in any particular well.

Mr. Lindsey reviewed the fracking process and how it employs a fluid or gas and sand mixture to release hydrocarbons from the rock. He said that they are looking at ways to recapture gas that flows back out the well from the fracking process, rather than flaring it off. Any recaptured butane could then be used to frack another well. If a water-based frack is used, the fluid is collected and stored on site. The sand injected into the formation remains in the fissures to allow the hydrocarbons to flow out. Mr. Lindsey reviewed how micro-seismic technology provides the operator with information that ensures the fracking is staying within the desired formation.

Mr. Lindsey presented a photo of a Quicksilver well in Moffatt County as an example of a typical well pad. He indicated the location of the closed-loop mud system, on-site water tanks, the generation pack and the drilling rig itself. Mr. Lindsey presented a list of references and invited any interested County staff or officials to attend the drilling operation.

Ms. Chris Brookshire noted the correspondence that had been received since the fact packets were assembled, including letters from the Division of Water Resources (DWR), Vicki Ferguson, Rodger Steen of the CAYV and an email from Sam Marti. She reported that a call had been received from Tim Cole who stated his opposition to the petition, citing concerns regarding the water table and water quality and the impact of fracking.

Chairman Gallagher asked if any representatives from the Colorado Department of Health and the Environment (CDPHE), the COGCC or the CPW were present. None were.

Commissioner Arel asked if horizontal wells would be drilled from the proposed exploration pad if the site proves viable for production. Mr. Lindsey stated that this was possible, but that it would depend on the geology. He stated that although horizontal wells are more expensive to drill initially, they reduce the impact of well pads and are less expensive in the long run.

Commissioner Hellyer asked about the source of the water to be used in the drilling operation. Mr. Todd Hutson, the Environmental Manager for Quicksilver, stated that the petitioner would contract with a licensed service company to supply the water taken and haul it to the site. He said that no water would be drawn from Cheney Creek. In response to a question from Commissioner Ayer regarding water rights, Mr. Hutson clarified that the water would be leased and that Quicksilver would ensure that the source was decreed for industrial purposes. Mr. Lindsey stated that outside counsel had contacted the DWR and answered its question regarding the water.

Commissioner Horn asked about the ditches on the property designated for irrigation only. Ms. Brookshire stated that she had spoken with Ms. Light from the DWR regarding this issue. Ms. Brookshire clarified that there are no irrigation ditches in the vicinity; there are only Cheney Creek, Little Cheney Creek and an unnamed drainage.

In response to a question from Commissioner Horn regarding fencing, Mr. Lindsey stated that the fencing would be determined by the surface use agreement, unless it is in conflict with the recommendations of the CPW. He stated that Quicksilver would work with the CPW to ensure proper fencing.

Commissioner Gibson asked why Quicksilver does not know what type of fracking will be used at the site. Mr. Lindsey stated that this is an exploratory well and that the company is still learning about the geology of the area. He said that the three fracking options were native hydrocarbons, gas or a water-based fluid. He explained that different types of fracking are used for different reasons to release the hydrocarbons from the rock. Mr. Carl Bowers, the completions specialist for Quicksilver, stated that they are currently leaning towards using butane, because of recent success with this method. He said that once the hole is open and the drilling logs are reviewed a determination will be made based on the geology.

Commissioner Klumker asked about the recovery of the drilling fluids: how much is recovered and how much stays in the well. Mr. Bowers explained that if oil is used, they keep track of the amount recovered and everything beyond that amount is considered production. If butane is used, the gas is analyzed when it is flared to determine the amount of the return gas that is butane. If water is used, the water it is measured and analyzed to determine if there is produced water or fracking water coming back up the hole.

Commissioner Klumker suggested that the installation of the bore casings is the most important phase of the drilling process. He asked how Quicksilver ensures that this is done properly. A representative of Quicksilver stated that the COGCC is notified 24 hours prior to the casing run or cement job, and usually the COGCC inspector attends the procedure. He stated that standard procedure is to pour two times the volume for the surface casing, which is the most important, and confirm the volume of return. He reviewed the procedure for checking the integrity of the casings, noting that the well is pressure-tested throughout the drilling and fracking process.

Commissioner Ayer asked how the drilling schedule would be adjusted to accommodate the wildlife restrictions. Mr. Lindsey stated that they will adjust the timeline as needed to comply with the black-out days and surface owners concerns.

Chairman Gallagher asked if electric power could be used at the site. Mr. Lindsey said that in order to use electric power, lines would have to be extended all the way to the site. He said that they plan to use gas driven diesel generators equipped with hospital-grade mufflers.

Commissioner Hellyer asked whether the existing culvert would be sufficient to accommodate the truck traffic. Mr. Lindsey stated that if it is not, it will be re-engineered and re-built.

Commissioner Goldich asked for a clarification of what all is collected in the cuttings pit and spoils stockpile. Mr. Lindsey stated that the first 1000 ft. of the well would be drilled with straight water. The cuttings from this portion of the well will not be contaminated, and will be dried and placed in a reserve pit, which will then be tested to ensure there are no hydrocarbons. Following the first 1000 ft. all the material

coming out of the well will go through the closed loop system and will never be stored in a pit. This material will then be hauled to a certified disposal facility.

Mr. Goldich asked if there are any cracks or fissures in the formations below the level of the casing that ends 1000 ft. below the water-bearing formations that might allow fracking fluids to migrate up to the aquifer. Mr. Lindsey stated that 2-D and 3-D micro-seismic data is collected to determine the make-up of the intervening layers. He stated that they do not want there to be fissures. He said that they want to ensure there are capping layers on either side of the target fracking zone. Mr. Bowers stated that the fracking is generally 700 – 900 ft. on each side of the well bore.

Mr. Phillips asked about the decibel output from a hospital-grade muffler. Mr. Lindsey stated that there is a marked reduction in noise, but that he does not know the standards at this time. He said he could provide them if needed. He stated that the noise levels must comply with the COGCC regulations. Mr. Phillips asked Mr. Lindsey to submit the information on the mufflers.

Mr. Phillips called attention to suggested General Condition #2 on page 18 of the staff report. He stated that the approved project plan has traditionally been considered the permit itself, the meeting minutes and the applicant's presentation. He stated that a concise summary of the project with pertinent details will now be included as part of the permit. This will apply to all permits. Mr. Phillips clarified that if an activity is not listed in the project plan, then the applicant will have to come back through the process to get approval for that activity. He stated that this would apply to all activities, even the construction of accessory structures on oil and gas well pads. He stated that although an example is not included with this staff report, all future petitions will include a project plan.

Mr. Lindsey reviewed and responded to the items listed in the letter submitted by the CAYV, as follows:

1. Mr. Lindsey stated that he was uncertain what County-only requirements are, and stated that all requirements are monitored for compliance.
2. Mr. Lindsey stated that some degree of VOC capture is already being done, but that it was difficult to agree to such a blanket statement. He noted that the operator would comply with all COGCC and CDPHE regulations. Ms. Cindy Reister, representing the petitioner, stated that while in the testing phase no air quality permits are required by the COGCC for butane fracks. She stated that a flare permit application is submitted when the majority of the butane has been recovered. Mr. Lindsey stated that a CDPHE air quality permit must be applied for within 90 days of initial production.
3. Mr. Lindsey stated that Quicksilver prefers to use a closed-loop system.
4. He stated there would be no pits containing hydro-carbons, unless there is an operational accident.
5. Mr. Lindsey stated that a flare is a safety apparatus, and that Quicksilver cannot commit to flares not being visible. He stated that they would comply with all COGCC regulations regarding flares. He stated, however, that flares can be shrouded to mitigate their visibility. He stated he understands the intent of the request.
6. Mr. Lindsey stated that the diesel is sourced from a supplier. He said that they would consider the use of ultra-low-sulfur diesel. Mr. Hutson stated that the diesel they use is highway-grade, but that they could look into the ultra-low-sulfur grade. Mr. Lindsey stated that they want to be treated fairly, and be subject to the same rules that apply to other industries and uses such as agriculture and trucking. In response to a question from Commissioner Ayer, Mr. Hutson stated that all the trucks are sub-contracted. He reviewed the vetting process that all suppliers and contractors must go through, adding that Quicksilver performs audits on its suppliers from time to time to ensure

compliance with the master service agreement. Mr. Lindsey stated that Quicksilver does not distance itself from its subcontractors.

In response to Mr. Lindsey's comment regarding being treated the same as other industries, Mr. Phillips offered that the list submitted by the CAYV goes beyond regulations or standard BMPs and asks oil and gas operators to voluntarily hold themselves to a higher standard. Mr. Lindsey stated that Quicksilver could not commit at this exploratory stage to comply with all items on the list, but that when the project moves to the next level the company may be able to consider a higher standard. He noted that the proposed well is a single exploratory site.

Commissioner Ayer noted that Quicksilver, being the first applicant to come through the process since the formation of the working group, was in a leadership role. He suggested that when certain BMPs are agreed to voluntarily, pre-emption does not apply.

7. Mr. Lindsey stated that lighting on a well pad is a safety issue and that the operator must comply with Occupational Safety and Health Administration (OSHA) regulations, but that he understands the intent of the request. He said that the pad would be well-lit during drilling, but that once in production there would be no lighting on the site if possible.
8. Mr. Lindsey stated that they would follow the regulations and that once in production they could look at additional mitigation measures.
9. Mr. Lindsey stated that Quicksilver has agreed to participate in the COGA water well database program.
10. Mr. Lindsey stated that if the production gets to the point of considering additional wells, which will require a new application, the best technology available will be used. He noted that although they prefer to use a single drilling site, this will be determined by the geology. He said that Quicksilver focusses on minimizing surface disturbance.
11. Quicksilver will drill the first 1000 ft. water-based drilling mud.
12. Quicksilver will contract with permitted water suppliers. Mr. Lindsey reviewed efforts being made in Texas to reduce the water footprint of drilling operations.

Commissioner Goldich asked if non-saleable gas could be used on site rather than flared-off. A representative of Quicksilver stated that they would use what they can on site, for instance to power the pump jack. Ms. Reister explained that part of the permitting process entails demonstrating that any produced gas cannot be sold because it is economically unfeasible to get that gas to market. Commissioner Goldich stated that he would like to see the gas used rather than flared. Ms. Reister stated that they must also review the area for potential local usage of the gas by utilities, agricultural or other operations. She stated that these ways of using the gas would be investigated if the project goes into larger production.

Commissioner Horn asked about the emergency response plan. Ms. Brookshire stated that Quicksilver has submitted a plan and Director of Emergency Management Bob Struble is reviewing it.

Commissioner Horn asked Mr. Lindsey to review how the response to an accident might go. Mr. Lindsey stated that the response is based on being properly prepared with personnel and equipment on site. He said that Quicksilver contracts with Boots and Coots (sp?), a specialized oil service emergency company. He reviewed an incident in which the drilling process went out of control at a site in Texas. Mr. Lindsey stated that once production is developed a remote control monitoring system can automatically shut down a well if an anomaly occurs. He stressed that the specialized and well-trained oil well emergency service

contractor are a crucial part of the drilling operation. Local fire departments are not sufficiently trained to respond to an oil well fire. Mr. Hutson stated that a sleeve type (?) plan is used that includes site specific information and constant monitoring. Mr. Bowers added that during a gas fracking operation multiple LEL monitors which measure the atmosphere are carried on site. When a monitor goes off, the operation is shut down. He stated that it is standard practice to maintain a supply of fire suppression foam on site. In response to a question from Commissioner Horn, he confirmed that in the event of an emergency an Incident Command System (ICS) is put in place immediately.

Commissioner Hellyer asked about the Army Corps of Engineers (ACOE) 404 permit. Ms. Brookshire stated that they have a copy of the application. Mr. Hutson said that the petitioner has a copy of the ACOE approval, but noted that the permit would be amended.

Regarding the emergency response plan, Mr. Phillips stated that the Board of County Commissioners wants to develop a template for a plan to assist local officials in their review of the submitted plans. Mr. Lindsey stated that Quicksilver seeks to establish a collaborative relationship with local and emergency response services.

Chairman Gallagher noted that the satellite image on page 68 of the application (Figure 2, included near the back of the fact packet) shows multiple wells sites. Mr. Lindsey explained that these sites were originally identified as potential alternatives based on geology and could represent potential additional sites.

### **Public Comment**

Mr. Steve Lewis stated that he had attended all of the working group and Board of County Commissioners' meetings and noted that there were no opportunities for public comment. He noted that the requested permit would vest the approval for the scope of the operation. He asked what remedy Quicksilver would have if or when the Environmental Protection Agency determines that the operation is hurting the citizens. Mr. Lewis stated that is of particular concern given that it may take decades for noxious materials to migrate into the aquifer. He expressed concern that the applicant has not identified the type of fracking that will be used, and suggested that it would appropriate to have an additional stage of review once this has been determined. Mr. Lewis stated that the operator should go beyond the COGCC requirements.

Mr. Rodger Steen, representing the CAYV, stated that when the citizens' group examined the pre-emption ability of the COGCC, it decided to approach the oil and gas industry directly. He stated that because two-way agreements are easier to accomplish, the group started with one operator: Shell. He stated that the purpose of the proposed agreement for Routt County-only requirements is to go beyond the state and federal rules. Regarding item #2 on the list of County-specific conditions requested by the CAYV, Mr. Steen stated that vapor recovery should have been included. Regarding flaring, Mr. Steen stated that they are looking for a rule that can be enforced rather than something to be done when it is convenient for the operator. He offered that unforeseen upsets occur, and this is understood. Regarding transport trucks Mr. Steen stated that he is sure Quicksilver will comply with ultra-low-sulfur fuel use, because it is required as of June 2010. He suggested, however, that this issue points to another problem regarding rules. He stated that all the rules from all sources that apply to this project should be defined to ensure that the operator knows what they are. He said that this should be an element of an upgraded SUP process.

Mr. Steen stated that this project will generate a lot of truck traffic and suggested that there should be something in the permit to discourage truck use in favor of rail or pipeline shipping. He stated that CAVY wants Quicksilver to engage the group and be a leader in setting an industry standard in Routt County. He noted that Shell was willing to accept the proposed conditions and comply with them.



Ms. Kathleen Campbell (sp? – didn't sign in) stated that her property is sandwiched between this proposed site and the Wolf Mountain site. She said that the flare at the Wolf Mountain site is visible from her home every night. Noting the potential of additional wells in the area, she expressed concern with the cumulative impacts long term and the effect of the oil and gas development on property values. She stated that under such conditions no one would be willing to purchase her home. Ms. Campbell stated that she understands that the petitioner is exploring and learning about the geology and that ultimately it is about making money, but asked who would be liable when something goes wrong. She also asked how Routt County benefits from the development. Chairman Gallagher suggested that Ms. Campbell contact Mr. Phillips, who can contact the County Attorney regarding the liability and the financial benefits to Routt County.

Mr. Ben Beall recommended that Planning Commission table the petition. He cited that absence of final conditions of approval and asked how the Commission could approve or deny a petition without knowing the conditions of approval. Mr. Beall noted that no conditions had been proposed to address the cumulative impacts on community resources such as schools, emergency services, social services, etc. He suggested that conditions should be developed to address these issues.

Mr. Beall noted that although little drilling has occurred so far in Routt County, three out of four exploratory wells have gone into production just across the Moffatt County line. He noted that under current regulations which allow one well per 40 acres, there is a potential for 4750 well pads within a 15 x 20 mile area. He stressed that conditions of approval must address cumulative impacts and that Routt County needs to consider the Big Picture of the impacts of the built-out development, not simply each well, as if it were self-contained. He stated that even if only 2000 wells are drilled over time, Routt County must ensure that local taxpayers are not paying for these impacts. Mr. Beall suggested that something like a PUD should be created to deal with the cumulative impacts.

Mr. Stuart Orzach reiterated that there has been little opportunity for public input during the many work sessions and meetings regarding oil and gas development. Regarding the topic of pre-emption, Mr. Orzach stated that pre-emption should not be assumed and stated that the idea that local regulations cannot be more stringent or redundant is incorrect. He reviewed the pivotal cases in pre-emption law and explained that what can be pre-empted is an operational conflict in which both the regulations of the state and those of the county cannot be simultaneously met. Mr. Orzach noted that the Board of County Commissioners chose not to impose a moratorium, but that many of the Board's questions regarding the regulations of the COGCC and the CDPHE have remained unanswered. He stated that many concerns and questions remain regarding enforcement and differences in how things are done in different counties. He also cited the misunderstanding of the law and insufficient time to finalize the conditions of approval as additional reasons that Planning Commission should table the petition. Mr. Orzach stated that Planning Commission would be abdicating its responsibility to approve a petition without knowing the conditions of approval and pointed out that the consequences of an improperly conditioned permit could be devastating. He offered that the COGA well monitoring program should be mandatory. Mr. Orzach emphasized that conditions of approval, regardless of how they are initially written, can be changed on the spot by the Board of County Commissioners. He stated that the necessary information has not been obtained and suggested that the County Commissioners could use qualified, informed input from Planning Commission to help them determine what those conditions should be. He stated his support for tabling the petition.

Mr. Bill Atkinson encouraged the County to consider the issue of access to the site for various agencies, including the Environmental Health Department, CPW and the Sheriff's Office, in the event of an accident or other emergency.

Ms. Miriam Marney (sp? – didn't sign in) stated that she had read the entire application online. She noted that on the bottom of page 49 the application states that water produced on site will be evaporated. She asked how much water this would be, and when the testing would be done and whether there might be toxic elements in the water to be evaporated. Ms. Marney also noted that the applicant plans to use magnesium chloride on the roads for dust suppression. She expressed concern regarding the use of this compound so close to streams and waterbodies. Ms. Marney also asked what would happen if in the drilling process a lower aquifer is encountered, and whether the casings would be extended.

Ms. Linda Lewis noted that we live in a geologically active region. She stated that there is evidence that fracking has caused earthquakes in Ohio. She added that fracking has been associated with many health problems. Ms. Lewis asked how we know the process will go as planned and cited the Deep Water Horizon incident.

Ms. Beth Ann Russell (sp? – didn't sign in), a member of the working group, stated that an adequate emergency response plan is not in place. She said that the existing plan is not site-specific and that the details of the plan for this site need to be included for the plan to be acceptable. She added that additional training and equipment for local firefighters and emergency medical services crews may be needed. Ms. Russell stated that the working group is not finished. She stated that the group needs to consider social issues and suggested that impacts fees may be a way of off-setting the cost to the community of oil and gas development. She suggested that a framework similar to that of Santa Fe, NM would be appropriate.

Ms. Rachel Elston stated her support for tabling the petition indefinitely. She noted that the applicant is unwilling to meet a higher standard and has reserved the right to do only the minimum required. Ms. Elston offered that the economic interests of the company would always come first.

Mr. Tim Zander stated that more specific information is needed regarding the quality of diesel fuel to be used on the site. He added that County officials and the community need to know what type of fracking will be done. He suggested that another hearing should be held after this information is available.

Mr. Justin Hirsch stated his support for tabling the petition, citing the lack of agreement on the conditions of approval. He stated his agreement with the previous comments by Ben Beall, Stuart Orzach, Steve Lewis and others. He expressed concern regarding how the drilling process would be monitored and suggested that an independent third party expert should be present to ensure the work is done properly. He encouraged Planning Commission to table the petition.

Ms. Catherine Carson thanked all those that have worked hard on this issue. She agreed that the health and social issues needed further study, and suggested that current and future oil and gas developers should share the costs incurred by the community. She expressed concern regarding the effect to oil and gas development on the tourism industry that drives the local economy, citing the visual impacts and the traffic through town. Ms. Carson asked Planning Commission to table the petition for further consideration of the health, social and community impacts.

Ms. Megan Walker stated that she strongly agrees with the previous comments by Mr. Orzach, Mr. Beall, Mr. Steen and others. She stated that she is particularly concerned with the impacts that may occur in the future, and how accountability will be determined down the road. She also expressed concern regarding the amount of water to be used in the drilling, not just on this well, but cumulatively as more and more wells are drilled. She suggested that how this water use will affect our water supply should be considered. Ms.

Walker asked whether baseline data had been collected regarding air quality, water quality and health, and if so, how the information can be accessed by the public. She urged Planning Commission to table the petition. She said that the process is incomplete.

Seeing no further public comment, Chairman Gallagher closed public comment.

Environmental Health Department Director Mike Zopf announced that on Jan. 31, 2012 the Board of County Commissioners will host a public meeting with the oil and gas liaison for the CDPHE. He said the CDPHE official would discuss CDPHE regulations regarding oil and gas development. He added that there would be a forum for public input.

Mr. Zopf stated that it is very important that the operator stay engaged with Routt County and the region. He noted that drilling in neighboring counties can also have impact on Routt County. Mr. Zopf commended Quicksilver for agreeing to participate in the voluntary COGA water well monitoring program, but asked what happens to the data once it has been submitted. He asked who would perform the analysis and how is the data reported back to the County and the landowner. He also asked how it would be determined if contamination has occurred and what would occur if it was determined that a well was contaminated.

Mr. Lindsey stated that the water well data is available on the COGA website. He stated that COGA website also provides the details of the program including how the samples are taken, the chain of custody, the independent analysis and how the data is displayed in the database. He read from the program summary, noting that landowners are provided with the laboratory results within three months of sampling. He stated that the data is also sent to the COGCC. He also reviewed the process for handling complaints. Regarding remediation, Mr. Lindsey stated that if the operator is found to be at fault that operator is responsible for remediating back to the baseline level. He said that officials would determine fault and that various state agencies would determine the proper remediation. Mr. Lindsey stated that the goal is not to get to that point. He cited the need for proper well casings, engineering and controls throughout the drilling process.

Regarding the possibility of migrating frack fluids, Mr. Lindsey stated that Quicksilver uses micro-seismic technologies to ensure there are no faults in the area of operation. He added that most issues with migrating frack fluids come from problems with the design, implementation and failures of well casings.

Regarding the efforts of Douglas and Arapahoe Counties to develop their own regulatory schema, Mr. Lindsey noted that there are areas that the counties can regulate, but that there is a line and a balance between local and state regulation. He stated that both Douglas and Arapahoe Counties have received letters from the attorney general's office and the COGCC regarding pre-emption of some of their regulations.

Mr. Lindsey noted that a flare is a safety device that allows the clean combustion of gas released from the well. He said that this process is necessary for a short time after completion, but that Quicksilver understands that the community wants to keep these flares out of sight.

Mr. Lindsey stated that the SUP requires that the operator comply with all applicable rules from all local, state and federal agencies. He stated that the operator must know these rules in order to comply with them, and that Quicksilver has staff dedicated to the process. Regarding truck traffic, Mr. Lindsey stated that Quicksilver is trying to reduce its use of trucks whenever possible.

Regarding the property values in the area, Mr. Lindsey stated that the owner has the right to develop, and that development does have an effect of the neighbors, regardless of the type of development. He offered that balancing the rights of land and mineral owners with the surrounding property owners is something that municipal governments must deal with.

Regarding the choice of fracking method, Mr. Lindsey said that they are still learning about the underlying geology, and that a premature choice of technique would be environmentally and economically wasteful.

Mr. Lindsey stated that Routt County as well as the state and the school districts receive taxes on the production. He noted that one of the surface owners from which Quicksilver has leased property is one of the colleges. He stated that oil and gas production creates a steady stream of revenue for many entities. Regarding the cumulative impacts and social services, Mr. Lindsey offered that these are issues that plague all growing cities. He said that Quicksilver does not want to burden the local communities in which it operates and cited examples of assistance the company has provided to local fire and EMS agencies. He added, however, that for oil well emergencies it is important to employ experts in the field that can provide the proper response.

Regarding well spacing, Mr. Lindsey stated that this would be a matter of the conditions of approval. He stated that the suggested conditions contain many great ideas, but also a few questionable items. He said that state statute gives the COGCC the authority to regulate oil and gas. He stated that he supports master planning, but noted this is the first exploratory well and they do not know whether the play is a viable one.

Mr. Lindsey responded to the question regarding evaporating water with an acknowledgment that this statement in the application was incorrect. All fluids will be contained in a closed-loop system. Only the cuttings from the first 1000 ft. will be dried in a pit. He reviewed the system and stated that all materials would be recycled or hauled to a licensed disposal site. Regarding the relationship between fracking and earthquakes and health issues, Mr. Lindsey stated that he is not an expert, but offered that the U.S. relies on petroleum-based energy. He stated that all sources of energy have impacts. He added that he hopes that one day the country will run on 100% alternative energy, but that will not happen tomorrow. He acknowledged that tragedies are just that: tragedies, but offered that they are extraordinarily rare. Mr. Lindsey agreed that collaborating with local agencies on emergency planning is a priority.

Mr. Lindsey stated that Quicksilver will comply with the use of ultra-low sulfur in its over-the-road operations, but that he cannot guarantee what is used in the on-site generators over the two-week drilling period. He said that they would explore opportunities to use landscaping to reduce the visual impacts of the well site. Regarding accountability, Mr. Lindsey noted that Quicksilver is a publicly traded company and that it is a priority of the company to be accountable for its actions. He said that aside from bonding and financial assurances, Quicksilver employees are professionals and want to do a good job.

Mr. Lindsey urged Planning Commission to consider the merits and facts of the permit application. He noted that the conditions of approval, which are currently in flux, can always be changed by the Board of County Commissioners.

Mr. Phillips acknowledged that Planning Commission always faces the possibility that the conditions it approves will be changed, but noted that this is an extreme example because the template of conditions is in flux. He stated that of the 60 comments provided by the working group, it is not known which item will be removed for legal reasons and what might be added to the list. Mr. Phillips stated that staff is compiling a list of questions for COGCC Director David Neslin, and offered that the need for this additional information

is in part because the state has done an inadequate job of addressing the concerns and fears of the community. He said that many of the questions relate to enforcement. Mr. Phillips stated that the use of magnesium chloride is not a concern if it is properly applied, and added that a dust suppression plan is required and reviewed by the Road & Bridge Department. He stated that the emergency response plan is being reviewed by the Routt County Emergency Manager. Ms. Brookshire added that the Steamboat Springs Rural Fire Protection District will inspect the site to ensure that emergency access is adequate. Regarding well casings, she stated that while the state requires they extend 50 ft. beyond the level of the aquifer, Quicksilver will extend the well casings 1200 ft. Mr. Phillips stated that the date for David Neslin's visit has not yet been set. The representative from the CDPHE will be here on January 31, 2012.

Commissioner Ayer thanked the working group and all those that had participated in the collaborative process. He acknowledged the level of expertise in the community and offered that the local quality of life depends on the trust of the community in the public process. Commissioner Ayer stated that all proposed activities have consequences, and that it is the role of the County to impose adequate mitigations. He stated that he has little confidence that the current proposed mitigations can instill faith in the public process. He added that they do not satisfy him. He stated that he is not comfortable with approving a petition without knowing the range of potential conditions of approval, and stated that the Commission had never done so before. Commissioner Ayer stated that balancing process between the COGCC and the County cannot be accomplished without this. He acknowledged that Quicksilver is up to the task of following the rules, but that the County is not yet ready to establish its conditions of approval. He offered that clarifications are coming very soon. He suggested that the working group should be allowed to complete its work. Commissioner Ayer stated his support for tabling the petition until a specific date when clarification is available through the state, the legal department, etc.

Commissioner Arel agreed with tabling the petition. He stated that there are too many questions that remain unanswered.

Commissioner Goldich also stated his support for tabling the petition, citing specifically the uncertainty regarding the fracking technique. He offered that even if the County does not know which of the three options will be used, it should know more regarding what is involved with each of the three. He also stated that the application should be amended to remove the language regarding evaporation pits.

Commissioner Adamo stated that he could not vote on something that is changing. He also expressed concern regarding cumulative impacts, but noted that additional conditions affect the price of the commodity. Commissioner Adamo stated that he could not approve the petition until the conditions had been reviewed and approved by the legal department.

Commissioner Klumker thanked Quicksilver, staff and the working group for their efforts. He said that although he is reluctant to table the petition, many questions remain unanswered. He asked Environmental Health Director Mike Zopf what would be coming from the Environmental Protection Agency (EPA) regarding enforcement of the Clean Water Act. Mr. Zopf stated that the EPA is constantly reviewing regulations and making recommendations. He said it is always a question regarding what gets published in the register. Commissioner Klumker stated that the issue is the enforcement of regulations already in place. He said that he would agree to a short tabling to clarify the conditions of approval. He added that everything has a risk and offered that Quicksilver has assured us they will do the best thing. He said that the landowners' and mineral owners' rights must be considered.

Commissioner Hellyer thanked the working group and the applicant. She stated that she would also support a tabling to allow the working group to finish its work. She stated that Planning Commission must know for sure what it is approving.

Commissioner Benjamin offered that there is an argument for denying the petition on the basis of negative impacts to the health, safety and welfare of the County's citizens. He also cited impacts to the roads and the schools. He added that any boom has impacts and stated that he wishes the real estate/construction industry had gone through the same scrutiny. Commissioner Benjamin stated his support for a short tabling, but suggested that the operator is being regulated to death. He stated that conditions of approval are always subject to change. He suggested that the question is what the County will have to answer for in ten years, and said that the interests of future generations should be considered and balanced against current owners' rights.

Commissioner Horn thanked all those who had participated. She stated that the emergency response plan would soon be back from Emergency Manager Bob Struble. She said that it was important to her to understand the details of the plan, and to know that the ICS and full access have been stipulated before voting on the petition. She said these items must be in writing. Commissioner Horn also said that more information was needed regarding the water leasing arrangements and sources. She agreed to a short tabling.

Commissioner Gibson stated her support for tabling the petition.

Chairman Gallagher thanked Quicksilver for its patience and stated that his concerns are more about where the County is in the process of revising its conditions that with the petitioner's ability to comply with the regulations.

#### **MOTION**

Commissioner Arel moved to table the petition for an SUP for Oil & Gas Exploration and Production and the petition for a Waterbody Access Approval to the March 1, 2012 Planning Commission hearing to allow time for the proposed conditions of approval to be vetted and defined.

Commissioner Gibson seconded the motion.

#### **Discussion and Friendly Amendments**

Mr. Phillip stated that the Board of County Commissioners anticipates that the working group will be finished and the conditions of approval will have been reviewed and approved by Feb. 21, 2012. Planning Commission agreed on the date of March 1, 2012

Chairman Gallagher added that the tabling will allow the COGCC and the CDPHE to answer outstanding questions and all the County Attorney's Office to review the conditions for Board of County Commissioner approval.

**The motion to table carried 9 – 0, with the Chair voting yes.**

## **Revised suggested conditions for Planning Commission meeting of 4.5.12**

### **Findings of Fact** that may be appropriate if the Special Use Permit is approved:

1. The proposal with the following conditions meets the guidelines of the Routt County Master Plan and is in compliance with Sections 4,5,6,8 and 9 of the Routt County Zoning Regulations.
2. The Special Use Permit approval with the following conditions will not adversely affect the public health, safety and welfare.
3. The proposal with the following conditions is compatible with the immediate adjacent and neighborhood properties.

### **Conditions of Approval:**

1. This Special Use Permit (SUP) shall expire within the timeframes set forth as follows:
  - a. One (1) year after date of approval if Permittee does not commence drilling and was granted a Permit-to-Drill by the Colorado Oil and Gas Conservation Commission (COGCC) using only COGCC Form 2.
  - b. Two (2) years after date of approval if Permittee does not commence drilling and was granted a Permit-to-Drill by COGCC using COGCC Form 2 and 2A.
  - c. Three (3) years after date of approval if Permittee does not commence construction operations on a COGCC approved oil and gas location using COGCC Form 2A.
  - d. Upon expiration of Permittee's COGCC permit.
2. This SUP is contingent upon compliance with the applicable provisions of the Routt County Zoning Regulations (RCZR) including but not limited to Sections 5, 6, 8 and 9. By signing this SUP, Permittee acknowledges that he or she fully read and understands the standards and mitigation techniques described in the RCZR and this SUP and shall abide by same.
3. The conditions herein shall apply to the Permittee and any employee, subcontractor, or representative that acts on behalf of Permittee or under the auspices of this SUP.
4. This SUP is limited to uses, facilities, and operations for the Permitted Operation (Operation or Operations) as presented in the Approved Project Plan (APP) as follows, including adherence to those specific Best Management Practices and technology as referenced in the approved project plan:

#### Overview

- Well pad approximately 3 acres
- Access road approximately 4.71 acres
- Vertical drill to approximately 5,060 feet with surface, intermediate and production casing that meets or exceeds COGCC minimum requirements

- Stimulation/fracing operations proposed. Stimulation methods are described in the narrative.
- On-site gas flare
- Closed loop drilling system
- No reserve pits
- A cuttings pit will be located on the northwest side of the well pad
- Employees will travel to and from the site; no man camps will be utilized
- There will be approximately 6-12 employees at the site throughout the construction, drilling and completion phases that will live in self contained trailers as shown on the Typical Rig Layout submitted in the application.
- Parking. There will be no parking on US Highway 40.

#### Operation Plan

- Operation plan consists of Drilling, completion and production
5. This SUP is contingent upon Permittee obtaining and complying with any required federal, state and other local permits and the Permittee shall comply with all federal, state, and local laws. Permittee shall notify the Local Governmental Designee (LGD) should the Permittee have any required permit denied, revoked, or suspended. Denial, revocation, or suspension of any required permit shall be grounds for possible revocation of this SUP.
  6. Prior to the issuance of this SUP, the Permittee shall provide evidence of liability insurance in the amount of no less than \$1,000,000 per occurrence with either unlimited aggregate or a policy endorsement requiring notice to Routt County of all claims made. Routt County shall be named as an additional insured on the policy. The Certificate of Liability Insurance shall include all permit numbers associated with the Operation.
  7. Permittee shall furnish a bond to Routt County in the amount of \$25,000 to guarantee Permittee's performance of the requirements and conditions of this SUP not regulated by COGCC.
  8. The Permittee shall be assessed an annual review fee pursuant to the Routt County Planning Department's Fee Schedule for the life of this SUP. Additional fees may be assessed based on hourly staff time which exceeds the time allotted for the annual review.
  9. This SUP shall not be issued until all fees have been paid in full. Failure to pay fees may result in revocation of this SUP.
  10. Transfer of this SUP may occur only after a statement has been filed with the Planning Director by the transferee guaranteeing that they will comply with the terms and conditions of this SUP. Bonds, insurance certificates, or other security required by this SUP shall also be filed with the Planning Director by the transferee prior to transfer to assure Operations will be conducted as specified. Any proposal to change the terms and conditions of this SUP upon transfer or transfer request shall require a new permit.
  11. Routt County may investigate any credible allegation of non-compliance with this SUP. Upon finding that an alleged violation has occurred, and where said violation also amounts to a violation of COGCC rules, Routt County shall provide notice of the alleged violation to the COGCC pursuant to the procedures in COGCC Rule 522. To the extent that an alleged violation violates a condition of



approval of this SUP, violates any of the applicable requirements of the RCZR or creates significant negative impacts inconsistent with the representations made by the Permittee during the original approval process, the Amendment of Revocation of Approval process may be undertaken following the procedures listed in Section 3.2.11 and 3.2.12 of the RCZR.

12. In the event that Routt County commences an action to enforce or interpret this SUP, the substantially prevailing party shall be entitled to recover its costs in such action including, without limitation, attorney fees.
13. Permittee shall comply with the terms of the Emergency Response Plan developed by Permittee in consultation with the Routt County Department of Environmental Health (RCDEH), the Routt County Emergency Manager, the Routt County Sheriff, the Routt County Communications Center, the local fire district, and the Colorado State Forest Service (Emergency Consultants). Permittee shall amend the Emergency Response Plan if needed and as required by COGCC rules or the Routt County Emergency Manager. At a minimum, the Emergency Response Plan shall address spill or release response, emergency signage, site access maps, on-site fire suppression equipment, wildfire hazard recommendations, storage of hazardous materials, transportation of hazardous materials, and notification requirements concerning spills or releases, transportation of hazardous materials and wastes, and on-site chemicals/materials.
14. Costs associated with any emergency response on the part of Routt County to an adverse condition or event that results from Operations or Permittee's conduct (or that of an employee or subcontractor) shall be reimbursed to Routt County by Permittee within thirty (30) days of receiving notice of services provided and the costs associated therewith from Routt County.

### **Water Quality**

15. A permitted and registered groundwater well downgradient of the wellhead shall be located. Where practical and with the consent of the owner, the well shall be sampled and tested according to the Colorado Oil and Gas Association Voluntary Baseline Groundwater Quality Sampling Program dated November 15, 2011 (COGA Program) and the following standards and procedures:
  - a. Baseline water sampling shall be completed prior to drilling of the oil or gas well. Drilling may commence after confirmation has been received from the testing facility that the water samples were collected properly, have not exceeded hold times, and no contamination of the sample has been detected.
  - b. Monitoring of water well shall occur at least annually and shall continue through the life of the SUP.
  - c. Water samples shall be collected by an independent third party using high quality methods and standards as described in the COGA Program. A copy of all records produced during water sampling, including but not limited to unedited field notes, calibration logs, photographs/videos, global positioning system, chain of custody, shall be provided to the LGD and COGCC.
  - d. Water sample testing shall be performed by a testing facility accredited by the National Environmental Laboratory Accreditation Program. Qualification records and certifications shall be provided to the LGD. Results of testing and an analysis/interpretation of findings shall be

- provided by the testing facility directly to the LGD and surface owner, if different than the Permittee.
- e. Water samples shall be tested for the constituents listed in Table 1 of the COGA Program.
16. If post base-line water sample testing indicates any abnormalities or contamination in the Tested for Constituents listed in Table 1 of the COGA program that may be attributed to oil/gas operations, the Permittee shall immediately notify COGCC and LGD and take immediate corrective action to contain any contaminant(s) that are not naturally occurring and mitigate the damage to any affected waters to contaminant levels found in the initial baseline testing.
17. If water is to be discharged, it shall be discharged in accordance with the Water Quality Control Act and COGCC rules. Permittee shall notify the LGD at least four (4) weeks in advance of such discharge and provide the Colorado discharge permit number as well as a topographic map showing the location of the discharge outfall as well as the haul route.
18. Permittee shall obtain a permit from RCDEH for sewage and greywater systems prior to installation in accordance with existing and applicable Colorado Department of Public Health and Environment (CDPHE) regulations.

### **Air Quality**

19. Permittee shall be in compliance with CDPHE, Air Quality Control Commission, Regulation No. 2 (Odor Emission), 5 C.C.R. 1001-4 Section A and COGCC Rule 805.
20. Open burning of slash is prohibited unless absolutely necessary and only with the approval of RCDEH, the local Fire District, and CDPHE, if required.
21. Any gas escaping from the well during any phase of operation shall be captured to the extent reasonably practicable and otherwise consistent with COGCC Rules 317, 805, and 912, or conducted to a safe distance from the well site and flared or otherwise combusted. The Permittee shall notify the local emergency dispatch as provided by the LGD of any such flaring. Such notice shall be given prior to the flaring if the flaring can be reasonably anticipated, and in all other cases as soon as possible but in no event more than two (2) hours after the flaring occurs.
22. Dust control shall be applied as needed to the private access road during construction and use of the access road. If dust complaints are received along CR 52 or CR 70, the Permittee will work with the Routt County Road and Bridge Department to address dust mitigation at Permittee's expense.

### **Wildlife**

23. Tanks, overhead wire, fences, pole tops and other facilities or structures shall be designed so they do not provide perches or nests for raptors, crows, and ravens. Raptor perch deterrents shall also be installed.
24. If the well goes to production, the Permittee shall take reasonable measures to reduce the noise to surrounding wildlife. This may include, but not be limited to, hospital grade mufflers for compressors,

- pump jacks or other motors necessary to run operations at the site and upward-pointing mufflers to dissipate potential vibration.
25. Reclamation operations shall be completed during times to avoid wildlife concerns and disturbance and should not occur March 15 – July 31.
  26. This site is within critical wildlife habitat. Any wildlife encountered during operations, testing, production and maintenance shall be avoided and shall be allowed to move away from the area before the operations continue.
  27. In the event there are any open pits containing fluids, in addition to being fenced to exclude livestock and wildlife they should also be netted to exclude birds. If other methods to scare birds away are proposed the operator will work with the CPW for approval of these methods.
  28. The following recommendations of the Colorado Division of Parks and Wildlife (CDPW) shall be followed:
    - a. The lekking and brooding period for sharp-tailed grouse occurs between March 15 and July 30. All activities should be kept to a minimal and try to minimize auditory impacts during this time. Drilling operations, construction of roads and workover operations should not operate during this time.
    - b. Daily operations after drilling has occurred should be scheduled and carried out between 9:00 a.m. and 4:00 p.m. between the period of March 1 and July 30 (lekking and brood rearing).
    - c. Operator should use hospital grade mufflers for compressors, pump jacks or other motors necessary to run operations at the site.
    - d. The permittee will notify CPW of workover activities - they should be scheduled as much as practicable outside of the lekking season.
    - e. The permittee will notify CPW of emergency situations - they will be handled as appropriate by the permittee regardless of time of year.
    - f. The permittee will use exclusionary - wildlife livestock- fencing to protect reclaimed areas until vegetation is established.
    - g. Cuttings will be placed in lined pits if oil based mud is used. Pits will be fenced. All COGCC rules will be followed regarding oil based mud and cuttings.
    - h. Oil and gas and water will be trucked off the site between 9:00 a.m. and 4:00 p.m. between the period of March 1 and July 30.

### **Visual Impacts**

29. To the extent practicable, technically feasible, and consistent with safe operations, all exterior lighting shall be downcast and opaquely shielded with the exception of the drilling rig.
30. To the extent practicable and technically feasible, a flare shroud, or other device serving the purpose of concealing a flare, shall be used to reduce the visibility of flaring to neighboring properties, residences, and public roadways.
31. Equipment used for Operations will not be visible from adjacent or surrounding residences, or will be mitigated to the extent economically practicable and technically feasible to reduce visual impacts.

### **Access and Traffic**

32. Directional signs, no less than three (3) and no more than six (6) square feet in size, shall be provided during any drilling or recompletion operation, by the Permittee. Such signs shall be at locations sufficient to advise emergency crews where drilling or recompletion is taking place. At a minimum, such locations shall include: (1) the first point of intersection of a public road and the rig access road and (2) thereafter at each intersection of the rig access route. The Permittee shall also notify the Routt County Sheriff's Office of the Site and its access point.
33. A copy of the approved CDOT permit shall be submitted to the Routt County Planning Department prior to operations.

### **Reclamation and Weeds**

34. Permittee shall strictly adhere to all federal and state regulatory standards for reclamation.
35. All disturbed surfaces affected by drilling or subsequent operations, except areas reasonably needed for production operations or for subsequent drilling operations to be commenced within twelve (12) months, shall be reclaimed as early and as nearly as practicable to their original condition or their final land use as designated by the surface owner and shall be maintained to control dust and minimize erosion to the extent practicable.
36. Drill pits shall be reclaimed in conformance with COGCC Rule 905 and Rule 1003.
37. When the well is completed for production, all disturbed areas no longer needed will be restored and revegetated as soon as practicable and in conformance with COGCC Rule 1003.
38. During drilling, production, and reclamation operations, all disturbed areas and surrounding agricultural and residential lands shall be kept as free of all undesirable plant species designated to be noxious weeds as practicable. Weed control measures shall be conducted in compliance with the Colorado Noxious Weed Act and COGCC Rule 1003.
39. The interim reclamation completion notice (COGCC Form 4 and attachments) required by COGCC Rule 1003 shall be submitted to the LGD upon completion.
40. Upon plugging and abandonment of the well, all debris and surface equipment shall be removed within three (3) months. All disturbed surfaces shall be reclaimed as early and as nearly as practicable to their original condition or their final land use as designated by the surface owner and pursuant to COGCC Rule 1004.
41. For the purposes of the revegetation requirements set forth herein, Permittee shall work with the local Natural Resources Conservation Service, the County Extension Service, and the landowner to determine the appropriate types and quantities of application materials

### **Miscellaneous On-Site Issues**

42. Any land survey monuments shall be recorded in the Colorado Land Survey Monument Records prior to commencement of operations, and if removed, shall be replaced following reclamation.
43. Permittee shall follow the COGCC requirements for initial and ongoing site security and safety measures. Such requirements shall adequately address security fencing, the control of fire hazards, equipment specifications, structural stabilization and anchoring, and other relevant safety precautions.
44. Fences of the type and at the locations recommended by the CDPW and agreed to by the surface owner, if different than Permittee, and listed as a condition in the COGCC Form 2A, shall be installed immediately after drilling to protect domestic animals and wildlife. Permittee shall also adhere to the requirements of COGCC Rule 1002.
45. No pets or firearms shall be allowed on the Property at any time.
46. The Permittee shall protect and maintain flows of all affected irrigation ditches.
47. Permittee shall conform to the noise abatement procedures and standards as set forth in COGCC Rule 802.
48. All equipment and housing units used during drilling and completion operations must be removed from the site immediately after such operations are complete.
49. The Permittee shall prevent erosion on any private access roads used by Permittee as well as the pad site in accordance with all requirements of its CDPHE storm water permit.
50. The Permittee shall have complied with construction or alteration notification requirements of the Federal Aviation Administration and provided further notice to the Routt County Planning Department of same. The Permittee shall comply with any further filings or requirements set forth by the Federal Aviation Administration and/or the Yampa Valley Regional Airport prior to the issuance of this SUP.

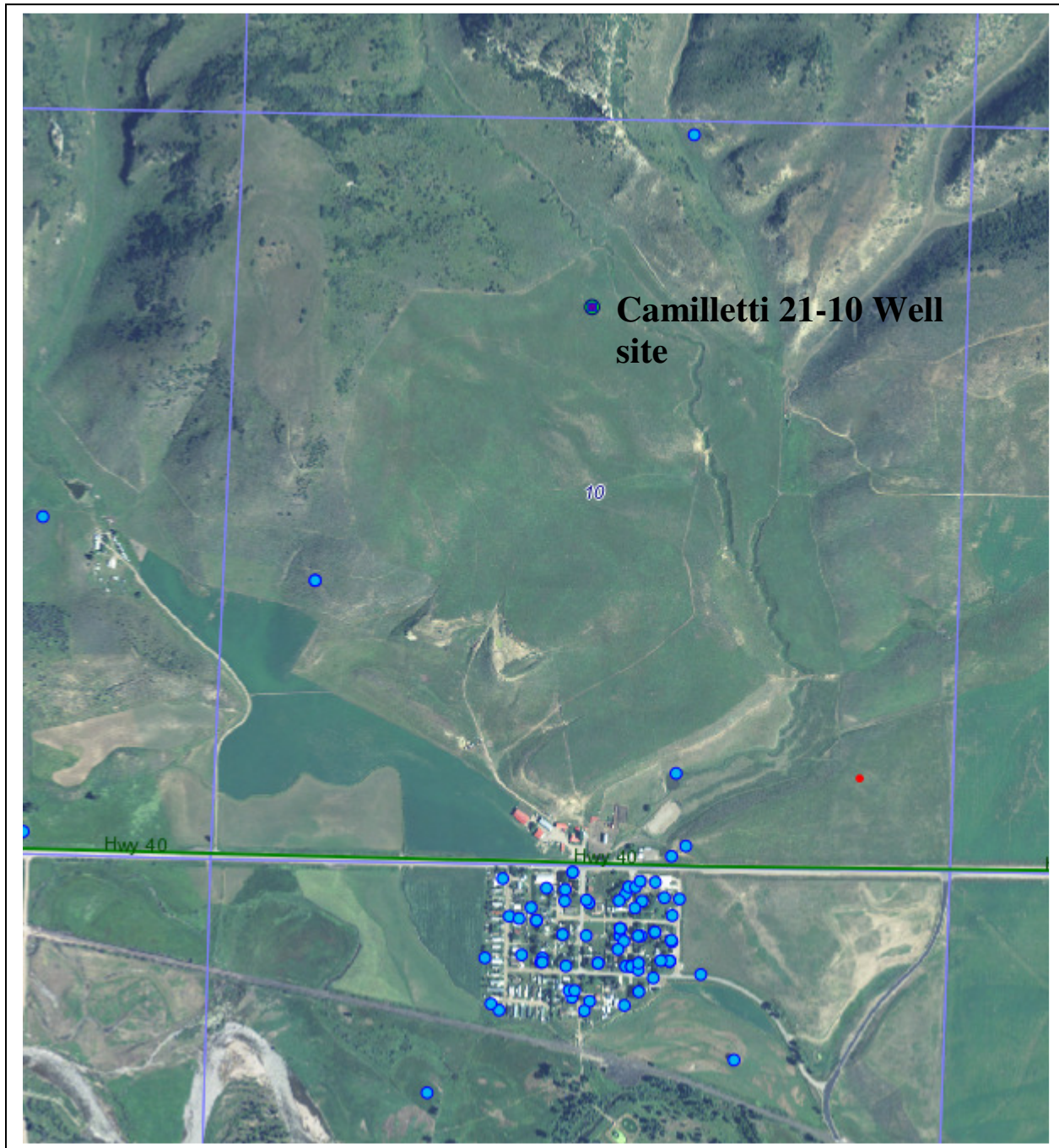
### **Hazardous and Waste Materials**

51. All tanks or hazardous materials containment areas shall comply with COGCC Rules 604, 902, and 904. Tanks and containment areas shall be inspected at least every thirty (30) days and the results of such inspections shall be reported to the LGD by Permittee within five (5) days.
52. No junk, trash, or inoperative vehicles shall be disposed of or stored on the Site as defined by the APP.
53. On-Site toilets shall meet minimum CDPHE requirements for sanitary/sanitation facilities.
54. Fuel, flammable materials, or hazardous materials shall be kept in a safe area and shall be stored in accordance with state requirements as well as the Emergency Response Plan. An inventory of such materials shall be supplied to the Routt County Emergency Manager prior to issuance of this SUP consistent with regulations of the COGCC and CDPHE.

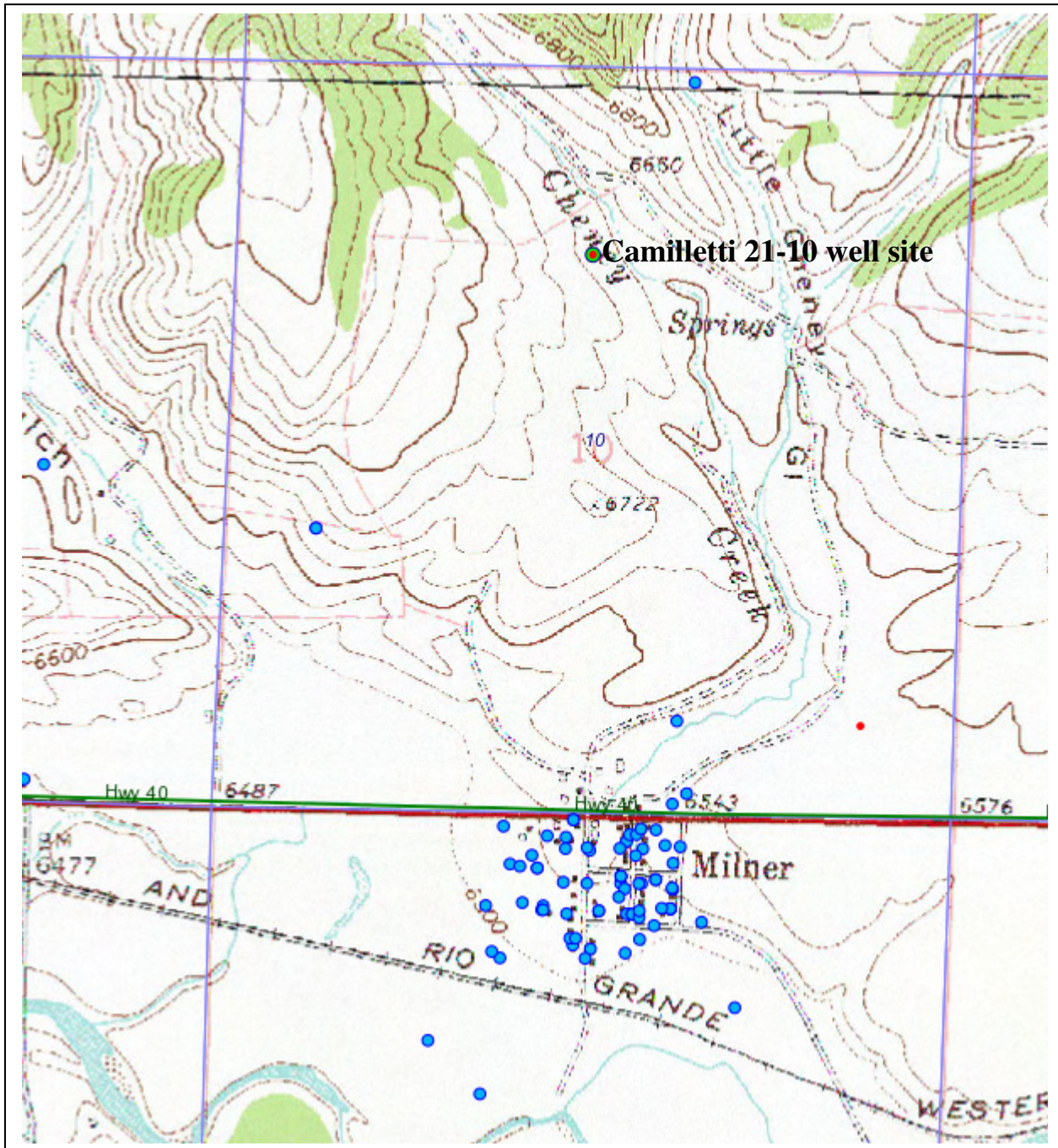
55. Solid waste, excess drilling fluids and water from on-site pits shall be transported to an approved disposal site. The Routt County Emergency Manager and local fire district shall be notified at least 48 hours in advance of such transport. The notice shall include the type of material being transported, the intended route, dates, and times. If waste materials are hazardous according to state or federal definitions, the wastes must be disposed of in an approved hazardous waste disposal site and records of such disposal shall be provided to the LGD within thirty (30) days of disposal.

### **Reporting**

56. In addition to COGCC Rule 305, Permittee shall notify the LGD in advance of all drilling and completion dates, drilling rig arrival and removal, name of the drilling company, and the drilling rig number. Notification shall occur at least 48 hours in advance of drilling or completion.
57. Permittee shall notify the LGD of any written or verbal notice of violations or citations issued to Permittee by COGCC, CDPHE, or any other regulatory agency, and the next action to be taken by such agency within 24 hours of notice of same.



Water wells (show as blue dots) registered in the area around the Camilletti 21-10 oil and gas side



Water wells (shown as blue dots) registered around the Camilletti 21-10 proposed site



P.O. Box 773749  
JAN-18-2012

: Board of Commissioners :  
- Oil & Gas Exploration & Development  
in Routt County

Attn: Diane Mitak-Busch

Thank you for your true concern and due diligence in your efforts to ensure the residents of Routt County stay safe and are of highest regard when it comes to the possible chemical poisoning of our wells and watersheds. This possible devastation of lives, health and welfare needs to remain top priority.

Please insist on the extreme measures of inspection every step of the way to help ensure our water, rivers, wells stay protected. Understanding Quick Silver & other companies already have an obligation to current state regulations if we could plead to them to go over, above and beyond current regulations and have our counties interest in safety + water/well issues as high or higher a priority than theirs. Keeping these operations at a far distance from residents or waterways could first be beneficial to these efforts.

Thank You,

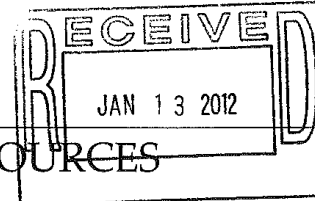
Vicki V. Ferguson  
Milner Resident  
37505 SADDLE Mtn. Dr.  
AS - Co 80487

cc: Planning Commission



DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES



John W. Hickenlooper  
Governor

Mike King  
Executive Director

Dick Wolfe, P.E.  
Director/State Engineer

Erin C.H. Light, P.E.  
Division Engineer

December 30, 2011

Chris Brookshire  
Routt County Planning Department  
PO Box 773749  
Steamboat Springs, CO 80477

Re: Activity No. PP2011-035 – Quicksilver Resources Inc. – Comments Pertaining to Special Use Permit

Ms. Brookshire;

I was sent a Referral Agency Notice of Application for Activity No. PP2011-035 and have reviewed the enclosure provided as well as the documents included the County's FTP site and offer the following comments:

- The exploratory well drilling site will be located in the Cheney Creek basin, tributary to the Yampa River. Neither Cheney Creek nor the Yampa River in this vicinity is subject to administration and neither is considered over-appropriated. Cheney Creek can however at times go completely dry.
- Downstream of the proposed well drilling site are two ditches with decreed water rights – Milner Cheney Gulch Ditch, which has not been used in several years, and Cheney Ditch. All of the water in Cheney Creek at the location of the Cheney Ditch is diverted by said ditch and conveyed to the R E Clark Ditch, which diverts water from the Yampa River. The water rights decreed to Milner Cheney Gulch Ditch and Cheney Ditch are decreed for irrigation purposes only.
- In the event water is diverted from Cheney Creek by Quicksilver Resources Inc. (Quicksilver) for their industrial purposes (i.e. well drilling/fracking, dust suppression, ...) to the extent that such diversion reduces the amount of water in Cheney Creek below the amounts decreed to Milner Cheney Gulch Ditch and Cheney Ditch, a call may be placed by the owner of the water rights decreed to these ditches.
- For the above reasons, Cheney Creek may not be a reliable source of water. However, it is very unlikely that the Yampa River in this vicinity would go under administration in the near future and thus is a more reliable source of water.
- On page 3 of the Drilling Plan under the section titled Water Source, Quicksilver indicates that freshwater is required for the drilling operations (estimated at 500 barrels) and that this water will be trucked in from a local water source. Quicksilver did not mention what this water source is. Quicksilver also states that they have obtained water rights in order to have legal access to nearby resources. This office has no record of Quicksilver owning any water rights. If on the other hand they are leasing water rights, they need to assure that these water rights are decreed for industrial purposes.

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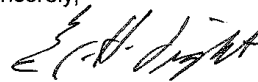
Page 2 of 2

- The estimated amount of water to be used (500 barrels) is equivalent to 21,000 gallons or 2,807 cubic feet or 0.064 acre-feet – in actuality a very small quantity of water.

Regardless of the quantity of water to be diverted, it is important for this office to know from what water source water will be diverted for beneficial use as well as the water right under which such water will be diverted. As such, we request that this information be provided.

Please feel free to contact me if you have any questions.

Sincerely,



Erin C. H. Light, P.E.  
Division Engineer

Cc: Brian Romig, Water Commissioner Water Districts 57 and 58

**Chris Brookshire**

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**From:** Rodger G Steen [rgsteen@airsci.com]  
**Sent:** Tuesday, January 17, 2012 2:34 PM  
**To:** Chris Brookshire; Chad Phillips  
**Cc:** Matt Holman  
**Subject:** Joint Shell & CAYV supplemental SUP conditions  
Chris and Chad,

CAYV will; be requesting that these supplemental "Routt County Only" conditions be added to the Quicksilver SUP. Shell agrees to add them to Shell's permits. Presumably you will need to hear this from Shell - which they will do on Thursday - verbally.

Rodger

**Rodger Steen**  
**970-870-6570 - home**  
**303-807-8024 - cell**

**Community Alliance of the Yampa Valley & Shell  
Jointly Agreed 2012 Special Use Permit (SUP) Conditions**

**January 17, 2012**

For presentation to Planning Commission January 19: Community Alliance of the Yampa Valley (CAYV) and Shell have gotten together to discuss meaningful improvements to the existing rules for consideration in all future O&G permits. We are not attempting to interpret Colorado Oil and Gas Conservation Commission (COGCC) rules here. We are establishing a set of expectations for oil and gas companies to go beyond COGCC rules in certain ways in the best interest of Routt County and its unique tourist-based character.

- 1) **Compliance Monitoring:** The operator will certify compliance with these County-only requirements at least annually.
- 2) **Capture of Volatile Organic Compound (VOC) Emissions:** The operator agrees to install, maintain and operate VOC capture equipment on major equipment including tanks, wellheads, dehydrators and heater treaters, and to route captured emissions through a combustion device (flare, incinerator, heater, internal combustion engine).
- 3) **Closed-Loop Systems:** The operator will use only "closed loop systems" during drilling with hydrocarbon-based mud systems or additives that could impair groundwater quality.
- 4) **On-Site Pits:** There will be no pits on site used to contain liquid hydrocarbons.
- 5) **Flares:** Production flares will be smokeless in design, will include a flame arrester, and the flame will not be directly visible from buildings or land beyond the site. Emergency flares are exempted from this requirement.
- 6) **Transport Truck Air Emissions:** Transport trucks shall meet all Federal DOT vehicle guidelines and the operator shall request that vendors use their newest low-emissions equipment. The operator shall require vendor use of Ultra-Low Sulfur Diesel (ULSD) while hauling for operator. On-site idling time shall be minimized by policy and will be tracked by the vendor with results made available to the County upon request to the vendor.
- 7) **Light Pollution:** Routt County Rule 6.3 (Outdoor Lighting Standards) will prevail throughout the County except during active drilling or completion operations or as temporarily required for safety or in case of emergency as follows:

- a. All fixtures shall be fully downcast and opaquely shielded. For purposes of this section, fully downcast and opaquely shielded shall mean fixtures constructed so that light rays emitted are projected below, and not above, the fixture.
  - b. Lighting shall be placed so as to prevent their light rays or illumination from being cast beyond property lines, and the light source (bulb) shall not be visible beyond property lines.
  - c. No light source shall be directly visible to any motor vehicle operated from a road or street from any residential area within a distance of 300 feet measured from the light source.
- 8) **Noise.** The noise limits provided in COGCC Rule 802(c) for Residential / Agricultural / Rural shall apply throughout the county, except for the activities of drilling and completions, which will meet the Light-industrial standards set forth in that same rule.
- 9) **Surface Water/Groundwater Sampling Plan.** The Operator will participate in the COGCC Voluntary Baseline Groundwater Quality Sampling Program available at [http://www.coga.org/pdfs\\_facts/COGA-sample\\_analysis-Plan.pdf](http://www.coga.org/pdfs_facts/COGA-sample_analysis-Plan.pdf). The Operator will include in the SUP at least one figure and descriptive text showing how drilling, completion and production operations will be isolated from potable groundwater. Radii of investigation under the COGCC Voluntary Baseline Groundwater Quality Sampling Program are expanded from ½ mile to 1 mile. A final groundwater/surface water sampling round is required one year after the Oil and Gas well(s) have been plugged and abandoned. If the sampling indicates no impact to the water from Oil and Gas activities, any dedicated monitoring wells can be plugged and abandoned.
- 10) **Surface Disturbance:** Operators are strongly encouraged to minimize surface disturbance and consolidate operations as much as reasonably practicable through the use of centralized well pads and directional or horizontal wells. Multiple-well pads using directional or horizontal wells shall be governed by a single SUP application. Additional wells not included with the original SUP application will be considered as a new SUP application.
- 11) **Groundwater Protection:** The Operator will use only air, water, or water-based drilling mud through and to at least 200 feet below identified potable groundwater aquifers.
- 12) **Water Use:** The Operator will design operations to use non-potable water as reasonably practicable to minimize the use of potable water.
- 13) **Water Source:** Operator will work with local water boards, municipalities and other agencies to identify suitable water sources.

**Chris Brookshire**

**From:** Chad Phillips  
**Sent:** Thursday, January 19, 2012 9:32 AM  
**To:** Chris Brookshire  
**Subject:** FW: Quicksilver Application for Camellitti Ranch in Milner

**From:** Chad Phillips  
**Sent:** Thursday, January 19, 2012 8:41 AM  
**To:** 'Sam Marti'; Diane Mitsch Bush  
**Subject:** RE: Quicksilver Application for Camellitti Ranch in Milner

Sam – the meeting time is 6:00pm. The meeting time was included as a legal ad in the Today, depicted on a poster displayed on-site (the drilling site, that is), included in the Adjacent Property Owner's notifications, on the Planning Commission's agenda which can be found online at the Planning Department's webpage, and posted on the bulletin board outside the Clerk & Recorder's office and outside the BCC Hearing Room.

**From:** Sam Marti [mailto:mjmarti@msn.com]  
**Sent:** Wednesday, January 18, 2012 8:42 PM  
**To:** Diane Mitsch Bush  
**Cc:** Chad Phillips  
**Subject:** RE: Quicksilver Application for Camellitti Ranch in Milner

Diane - Sorry to bother you with this question: What time is the meeting of the Planning Commission on the 19th, tomorrow? I cannot find a public notice in the newspaper nor have I received any agenda from E. Salzberer, and the last Planning Commission Agenda posted on the county website was for November 17, 2011. I'm not sure how the county can expect its residents/citizens to come to the meetings if there are no public postings of the meetings. Sam Marti

> From: DMitschBush@co.routt.co.us  
> To: mjmarti@msn.com  
> CC: nstahoviak@co.routt.co.us; dmonger@co.routt.co.gov; DMonger@co.routt.co.us;  
CPhillips@co.routt.co.us; cphillips@co.routt.co.gov  
> Date: Sat, 14 Jan 2012 06:48:10 -0700  
> Subject: Re: Quicksilver Application for Camellitti Ranch in Milner

> Hi Sam,

> Thank you for your comments. As you know, it is also important for concerned citizens like yourself to come to both RCPC on January 19 and RCBCC on February 21.

> Best,  
> Diane

> On Jan 13, 2012, at 12:48 PM, "Sam Marti" <mjmarti@msn.com> wrote:

>> Dear Routt County Commissioners:

>> Having just read over the first half of the application for Quicksilver's permit for the Camellitti Ranch near Milner, I am concerned about their dust mitigation  
>> plan. They repeatedly say they will use Mag Chloride for dust suppression and yet their permit is over three water bodies and in close proximity to wetlands. Both agricultural  
>> animals and wildlife will intake water from these sources as well as they are tributaries of the Yampa River.

>> This would indicate that the mag chloride would leach from their access road into the water systems it crosses and/or is in close proximity to. I believe that another substance should be used for dust

01/19/2012

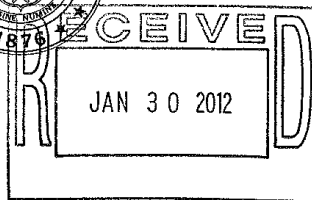
mitigation in this permit area. Thanks. Marian . . .rti





DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES



January 24, 2012

John W. Hickenlooper  
Governor  
Mike King  
Executive Director  
Dick Wolfe, P.E.  
Director/State Engineer  
Erin C.H. Light, P.E.  
Division Engineer

Chris Brookshire  
Routt County Planning Department  
PO Box 773749  
Steamboat Springs, CO 80477

Re: Activity No. PP2011-035 – Quicksilver Resources Inc. – Follow up on Letter dated  
December 30, 2011

Ms. Brookshire;

It appears there was some concern expressed by the applicant as to the basis of my letter dated December 30, 2011. As such, I wanted to follow up with you to clarify the intent of my comments in this letter. Please understand that the purpose of this letter was not to in anyway get involved in or affect the permitting process. Rather, the purpose was to respond to the County's request for input as a referral agency and, as part of that, inform the County of the water usage in the Cheney Creek drainage, the possibility of water administration in this drainage, and if water administration were to occur what effects this may have on the applicant's ability get water for their drilling purposes.

I hope I have not caused any confusion as to the intent of my letter or the roles this agency has vis a vis the County's approval process. Please feel free to contact me if you have any questions.

Sincerely;

Erin C. H. Light, P.E.  
Division Engineer

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