# ROUTT COUNTY BOARD OF COUNTY COMMISSIONERS

# AGENDA COMMUNICATION FORM

ITEM DATE: December 4, 2012	ITEM TIME: 5:00 p.m.
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FROM:	Routt County Planning, Chris Brookshire	
TODAY'S DATE:	November 28, 2012	
AGENDA TITLE:	Quicksilver Resources Inc. PP2011-056 Well Name: Pirtlaw 32-09 SUP for Oil and Gas Exploration and Production Attachments:  • Draft Planning Commission minutes dated 10.18.12 • COGCC approved Form 2A • Comments from the COGCC on LGD comments • Letter from Pirtlaw Partners LTD dated 3.1.12 • Email from QRI dated 11.19.12 • Email from Brent Romick dated 11.16.12	
CHECK ONE THAT YOUR ITEM:	APPLIES TO	
X ACTION ITEM		
☐ DIRECTION		
☐ INFORMATION		
I. DESCRIBE THE	REQUEST OR ISSUE:	
Special Use Permit for Oil and Gas Exploration and Production, located approximately 7 miles NE of Hayden, Colorado, on the east side of CR 70		
II. RECOMMENDED ACTION:		
Approve, Deny or Table		
III. DESCRIBE FISCAL IMPACTS (VARIATION TO BUDGET):		
IV. IMPACTS OF A REGIONAL NATURE OR ON OTHER JURISDICTIONS (IDENTIFY ANY COMMUNICATIONS ON THIS ITEM):		
See background information (V)		
V. BACKGROUND INFORMATION:		

On October 18, 2012, the Planning Commission recommended approval of the SUP with conditions.

The COGCC approved the applications for Form 2 and Form 2A on October 12, 2012. Form 2A is included so that the Board can review the conditions which incorporated some of Routt County's comments as proposed during the LGD process. Also attached is a response from the COGCC commenting on Routt County's LGD comments. This is the first time that the COGCC has responded to comments submitted by the LGD.

During the Planning Commission meeting Mr. Romick, manager of the Pirtlaw Properties referred to a letter previously submitted for another well site, Pirtlaw 24-33, dated March 1, 2012. Routt County staff had asked for another letter from Pirtlaw Properties with regard to placing a dedicated groundwater monitoring well on the property for the Pirtlaw 32-09 application. During the Pirtlaw 24-33 review, Mr. Romick was opposed to a monitoring well. Mr. Romick feels that the March 1, 2012 letter also addresses the Pirtlaw 32-09 application. (see attached letter)

After the October 18<sup>th</sup> meeting, Routt County was approached by another oil and gas operator requesting a process to allow construction of access/well pads prior to the final approval of the Board of Commissioners. The County Manager, Tom Sullivan, worked on this request and along with the County Attorney developed an agreement to allow construction of the access road prior to final SUP approval. Outside of such an agreement, early construction connected to a pending SUP is prohibited. Because staff anticipated that construction of the access road prior to final SUP approval would be desirable to QRI for the Pirtlaw 32-09 site, staff forwarded an agreement on November 8, 2012 to make QRI aware of this process and give them the opportunity to take advantage of this agreement. They responded that they were not in a position to utilize the agreement for the Pirtlaw 32-09 site, but would consider this agreement in the future.

Mr. Romick applied for a G&E permit on 10.22.12 to start construction for the access to the Pirtlaw 32-09 site. Construction of the access and well pad is directly connected to this SUP application, so the G&E permit was denied as per Section 3.2.8 A of the Routt County Zoning Regulations.

Planning staff received an email on 11.16.12 from Mr. Romick with an update to a wildlife condition. As part of the 'string' of the email it was noticed by staff that there was a statement that the completion of the access road and oil operation area should be completed prior to the 12.1 commencement date. (The 12.1 commencement date was a condition with regard to Bald Eagle Roost restriction). The Pirtlaw 32-09 hearing was not until 12.4.12, so there should be no construction on site for the oil and gas operations. This email was also copied to QRI employee Heather McLaughlin-Sloop.

A site visit was conducted on November 23, 2012, and construction was in progress for the access road and well pad.

It was determined that QRI should be contacted to update them that non-permitted construction was in progress at their site and that staff wanted to meet with them. Ms. Clifford, Senior Regulatory Analyst for QRI, returned Planning Staff's call and explained that it was QRI management's position that the

non-permitted construction was between the landowner and Routt County.

A Stop Work Order was issued by the Routt County Road and Bridge Department on 11/21/12 for the access road and well pad. It does appear that the majority of the work has been completed and it is unknown if the work has ceased.

Due to the construction of the road and well pad without any permits from Routt County, the application, if approved, will not conform with accepted practices (COA #5 requires compliance with existing permitting processes). Even though construction was conducted by the property owner, the SUP is based on the application submitted by QRI which included the access and well pad location and will fully benefit QRI in any future operations at this site. It is not known if the construction is located as proposed by QRI and if it meets the standards that QRI has stated that they maintain. Routt County does not know who is the construction operator. According to McLaughlin-Sloop, the well pad was not overseen by QRI.

All required permits should be in place before issuance of the SUP and any fees associated with permits should be submitted. Routt County should confirm that the road and pad construction meets engineering standards and BMP requirement before any drilling commences. It is not clear why the property owner is constructing the access and well pad when this should be at the expense of the operator and conducted after the issuance of the SUP.

#### VI. LEGAL ISSUES:

#### VII. CONFLICTS OR ENVIRONMENTAL ISSUES: N/A

#### VIII. SUMMARY AND OTHER OPTIONS:

The Board needs to determine if this permit should be approved, approved conditionally, tabled or denied based on the existing non-compliance created by the property owner and any other issue relevant to the application.

The application includes the access road and well pad and is associated with the operator. If the application is approved, the permittee would not be in compliance with COA #5, which is a standard and uniformly adopted condition requiring compliance with all state, federal, and local permits.

Applications may be approved and not issued until all appropriate conditions for issuance are met as directed by the Board of County Commissioners.

# **Board of Commissioners Options:**

**A)** If the application is **approved**, an additional suggested condition could be considered and added to the conditions as presented in the Planning Commission minutes of 10.18.12:

A G&E permit from the Routt County Road and Bridge Department shall be obtained by the applicant prior to issuance of the SUP and any associated fees paid. No further construction shall proceed until the Special Use Permit is issued.

The Board also can consider tabling or denying this application. The application is currently not in compliance with the requirements of the Routt County Zoning Resolution Sections 1.4, 3.1, 3.2.8 A, and 5.1.2 and the Routt County Road and Bridge requirements.

**B)** If the application is considered to be **tabled**, the follow suggested language could be considered:

#### The Board finds that:

- 1. Construction of the well pad and access road has commenced without appropriate permits or agreements as presented in the application from Quicksilver Resources, Inc.
- 2. The illegally constructed pad and access road are for the sole use and benefit of the applicant, Quicksilver Resources, Inc.
- 3. The proposal does not meet the Routt County Zoning Regulations Sections 1.4, 3.1, 3.2.8 A, and 5.1.2.
- 4. The proposal does not meet permitting requirements of the Routt County Road and Bridge Department for a G&E Permit.
- 5. It is in the best interest of the permittee and Routt County to comply with the Routt County Zoning Regulations.
- 6. The Routt County Zoning Regulations are necessary, designed and enacted for the purpose of promoting the health, safety, and general welfare of the present and future inhabitants of Routt County.
- 7. Approval of the SUP without compliance with the Routt County Zoning Regulations would set a negative precedence for future applications in Routt County.
- 8. Circumvention of local permitting processes should be discouraged.

The Board of County Commissioners hopes that the applicant will come into compliance with well-
established and lawful local regulations before the next hearing on this application on
(date).

**C**) If the application is considered to be **denied**, the following suggested language could be considered:

#### The Board finds that:

- 1. Construction of the well pad and access road has commenced without receiving appropriate permits or agreements.
- 2. The illegally constructed access pad and road are for the sole use and benefit of the applicant,

Quicksilver Resources, Inc.

- 3. The proposal does not meet the Routt County Zoning Regulations Sections 1.4, 3.1, 3.2.8 A; and 5.1.2
- 4. The proposal does not meet permitting requirements of the Routt County Road and Bridge Department for a G&E Permit.
- 5. It is in the best interest of the applicant and Routt County that applicant be required to comply with the Routt County Zoning Regulations.
- 6. The Routt County Zoning Regulations are necessary, designed, and enacted for the purpose of promoting the health, safety, and general welfare of the present and future inhabitants of Routt County.
- 7. Approval of the SUP without compliance with the Routt County Zoning Regulations would set a negative precedence for future applications in Routt County.
- 8. Circumvention of local permitting processes should be discouraged.

The Board of County Commissioners hereby denies the proposed application.

## **ROUTT COUNTY PLANNING COMMISSION**

#### **DRAFT MINUTES**

#### **OCTOBER 18, 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 Brita Horn, Donna Hellyer, Dick Klumker, Sandi Gibson, Andrew Benjamin, John Merrill, Steve Warnke and alternate Brian Arel. Commissioners Bob Woodmansee and John Ayer were not present. Planning Director Chad Phillips and staff planner Chris Brookshire also attended. Alan Goldich recorded the meeting and prepared the minutes.

# **Public Comment**

There was no comment from the public.

ACTIVITY: PP2011-056

PETITIONER: Quicksilver Resources WELL NAME: Pirtlaw Partners #32-09

PETITION: Special Use Permit for an Oil and Gas Well

LOCATION: Located approximately 7 miles Northeast of Hayden on the East side of CR

70

LEGAL: NW4NE4 Section 9 T6N R87W

Commissioner Gallagher stated that this petition will go in front of the Board of County Commissioners on December 4.

Judith Clifford of Quicksilver Resources (QRI) presented the application. She noted how many wells they currently have in Routt and Moffat Counties and what phase of development they are in. She highlighted the new agreement with Shell Oil to operate in Routt and Moffat Counties. It will combine both companies leased acreage in the two counties and defines who will be operating each of the wells. Next, she went over the anticipated timeline for this well.

QRI's water management activities concerning fresh water includes trucking in water for the drilling phase and pumping water to the site via a temporary above ground pipe for the fracking phase. She stated that no pits will be used in this operation. Everything will be contained in a closed-loop system.

She explained the traffic management plan, which requires trucks traveling from the west to turn left onto CR 52, make the loop along CR 52 to access US Highway 40 and then turn right onto CR 70. Traffic volumes were presented for the different phases of drilling.

Ms. Clifford provided an overview of the proposed well pad layout and indicated the location of the equipment to be used in the drilling operation. She presented a diagram of how the pad would be reduced in size during interim reclamation. She reviewed the stormwater management measures, including the diversions that would prevent water from flowing off of the site.

Ms. Clifford presented a schematic of the proposed well and reviewed the series of casings to be installed at different levels of the well.

She highlighted the water quality considerations that they plan to use including the Colorado Oil & Gas Association (COGA) program, Colorado Oil & Gas Conservation Commission's (COGCC) requirements and the Surface Use Agreement (SUA). Ms. Clifford reviewed a map showing the locations of all the water wells within a one-mile radius of the proposed site, as well as the already permitted oil wells, and the water sources that are being tested in association with those wells. She then touched on Colorado's Frack Disclosure Regulations which include Rule 205A and the requirement of the operator to disclose fracking fluids to the COGCC and fracfocus.org.

Chris Brookshire stated that when the packet was prepared the State permit had not been issued but it had now received approval and she had a copy of the approved state permit. She noted the comments she had received from the COGCC concerning the Local Government Designee's (LGD) comments. It was the first time she had received comments from the state regarding concerns the LGD had submitted. She stated that usually there are 60 conditions of approval (COA) but the permit being reviewed tonight had 62. That was because the traffic conditions had been re-ordered. She stated there was a typo on COA #60 that she wanted to bring attention to. The original wording of condition #60 was not clear, therefore it had been re-worded and that is when the typo occurred.

Ms. Brookshire then noted that she had received an e-mail from Greg Brown, the county Weed Supervisor. In his e-mail he commended the petitioner on how concise and thorough the Weed Management plan was. Mr. Brown had a question about Knapweed and asked that the petitioner meet with him to make sure this issue gets addressed. Ms. Brookshire then stated that it is one of conditions of approval to consult with the county weed supervisor.

She stated that she had previously received a letter from Bob Waltrip of Pirtlaw Partners dated March 1, 2012. On page 2 of the letter Mr. Waltrip commented about groundwater monitoring. He said that there is already a groundwater monitoring program in place for the other oil wells that are located on the property and he feels this is adequate to protect the water bearing regions.

Ms. Brookshire then sought to clear up a comment made by the COGCC about Great Blue Herons. She said that, according to CPW, there should not be any concern about the herons due to the timing of the drilling activity. She also noted that Great Blue Herons are not part of the COGCC review process.

Chad Phillips noted the problems that some of the commissioners had expressed with regards to the new website. He stated that there are two links on the website. One contains the entire application packet and staff report which consists of about 400 pages. The other link contains only the staff report.

Chairman Gallagher opened the meeting to questions from the Commissioners.

John Merrill began with trying to clear up a discrepancy between the presentation and the staff report. The staff report stated that the fracking technique was not yet determined but that in the

presentation it was stated that it would be water based frack job. Ms. Clifford confirmed that the fracking technique would be water based.

Commissioner Merrill was concerned about the timing of drilling of the previous well on the Pirtlaw property. The petitioner requested to drill during the time period when "no drill conditions" were in effect. This was based on the timing of the public meetings and because of the tight schedule that the operator was presented with in the lease agreement. Commissioner Merrill's personal view was that it technically was within the letter of the law but not conforming to the spirit of the law.

Commissioner Merrill also stated that he was disappointed in the fact that the details of the SUA had not been made available to the public or the Planning Commission.

Commissioner Merrill then sought to clear up a discrepancy that states that production information is not available for the Pirtlaw wells. He thought the information that was provided suggests that there must be production information for Pirtlaw 14-03 since it was drilled over a year ago. Ms. Clifford confirmed that Pirtlaw 14-03 does have some production occurring and that it is all public information that can be accessed on the COGCC site. She also stated that there is currently no production information for Pirltaw 32-09 because it has not been drilled yet. Ms. Brookshire confirmed that all of the production information is available on the COGCC website.

Commissioner Steve Warnke then had a question about drilling depth. The staff report stated that the well would be drilled to the Carlile formation but that the application said that it would be drilled the Niobrara. Ms. Clifford stated that the total depth the well would be drilled to is the Carlisle formation, but that the production formation is the Niobrara.

Commissioner Sandi Gibson asked the petitioner to elaborate on the groundwater monitoring plan. The application stated that the surface owner does not want a groundwater monitoring well. Brent Romick addressed the question by stating that after Pirtlaw 14-03 was drilled, they were asked to author an opinion about groundwater monitoring because it was not such a big issue when the Pirtlaw 14-03 was drilled. Mr. Romick stated that monitoring has been in place in the SUA since Pirtlaw 14-03 was drilled and it has not deviated for any of the wells. They are still using that monitoring program. There is a deep well that is 1835 feet north and a little east from the proposed Pirtlaw 32-09 that has been monitored since the Pirtlaw 14-03 well. At the time Pirtlaw 14-03 was drilled, this monitoring program was above and beyond what was required, because of the Conservation Easement that is in place. There is another spring that is up gradient from the proposed well that has been monitored for the past 2 years. During the Pirtlaw 32-09 hearing it was stated that they agreed to have the cattle head spring monitored but it was already happening because of the SUA.

Chairman Gallagher then asked to know what wells are currently being monitored under Pirtlaw 14-03 and Pirtlaw 24-33 and which ones will be monitored under the proposed Pirtlaw 32-09. Todd Hutson, QRI's Environmental Manager, explained that under Pirtlaw 14-03, there are 8 wells along CR 52 and a spring that is being monitored. Under Pirtlaw 24-33, there is a well at the Ranch Headquarters. Chairman Gallagher asked about the artesian spring and they confirmed that it was being sampled as well. Chairman Gallagher then stated that it looked like the artesian well is down gradient of the proposed Pirtlaw 32-09 by about 1,800 feet. Mr. Hutson stated that there is one well to the south of Pirtlaw 32-09 that is already being tested. The state's website says there are 2

other water wells permits but they are non-existing. All of these water wells are north and east of the road and the river. Chairman Gallagher then asked if they would consider the river as a hydrological barrier and Mr. Hutson answered yes.

Mr. Romick presented a letter written when Pirtlaw 24-33 was being considered stating their opposition to groundwater monitoring wells and their opinion has not changed since. They thought the issue was settled and that they would not have to go over this again. QRI has been overcompliant with the monitoring that is stated in the SUA. They have 8 potential operators on the land and they need to treat each one equally and fairly. They take groundwater monitoring very seriously because they are the ones getting held to the terms of the Conservation Easement.

Commissioner Gibson asked if there was any progress being made on reducing the size of the flare so that it is not the same size as the one when 14-03 was being drilled. She feels that the size of the flare present during the drilling of 14-03 was unacceptable. Mr. Hutson said that since this well will be water fracked and not propane fracked that the size of the flare will be reduced. Carl Bowers, QRI's Completion Manager, explained that the reason the flare on 14-03 was so big was because of the amount of propane coming back out of the well that needed to be flared. It was not the result of any produced material coming out of the ground. On the water frack the only thing that will be flared will be any gas coming out of the ground and that it should be minimal. After fracking was done on 14-03 the flare was moved up and you are not able to see the flare. The flare remaining on 14-03 is the result of produced gas. Mr. Bowers assured Commissioner Gibson that you will not be able to see the flare.

Commissioner Arel noted that they will have 10-20 employees on site during the drilling phase and was wondering how many will remain once the well is completed. Mr. Bowers stated that during the drilling phase employees will stay on site. The propane frack takes a little more time and is more complex so it took more people. A water frack takes a lot less time, only about 2 days. Almost all employees stay in Craig because of availability and pricing of hotel rooms. Once the well goes to production the only person that will be around is Heather McLaughlin, except on occasion when someone else will be there to help.

Commissioner Horn then asked the petitioner if they were aware of the comments that came back from the COGCC. The petitioner said that they were aware. They had received form 2 and 2a last week and had been going over the comments very carefully and intend to follow all of the recommendations.

Commissioner Arel then asked if the results from the water monitoring will go just to the COGCC or if the county will get a copy of that also. Ms. Brookshire stated that the county does get the results of the water tests.

Commissioner Klumker asked Mr. Romick to explain the Conservation Easement.

Mr. Romick explained that the waiver request to work during the "off limits" time was because the permitting process was taking too long. He said that they are in the same boat this time. He expected this stuff to already be hashed out because the SUA has not changed at all. The window to drill gets tight with all of the different timing restrictions. The waiver that was granted ended up not being used. The operator was able to get in, drill the well, and get out in 2 weeks. Mr. Romick

expressed his concern over work being done 24 hours a day in the dead of winter and the safety of the workers. The conservation value of the land does not allow for repeated waiver requests.

Commissioner Merrill then asked if the drilling on Pirtlaw 14-03 was completed before March 15, 2011. Commissioner Merrill noted that a waiver was requested and granted and he was wondering if the waiver was actually used. Cindy Keister, QRI's Regulatory Manager, stated that all trucks, tanks, and other equipment were off the site by midnight of March 15th.

Mr. Romick then stated that there is a time waiver included in the packet but they hope to not use it.

The COGCC was accessed for review by Planning Commission and Ms. Brookshire stated that all of the production numbers are available on the COGCC website. The website also states when production starts, when the well changes operators, and other information associated with each well. She then showed the production numbers for Pirtlaw 14-03, the first well drilled on Pirtlaw Partners land. It started production in November of 2011. The website also shows how much product is produced, how much they have sold, and whether it is oil or gas. There is also a new site that shows water monitoring information.

Mr. Phillips then directed a question towards Planning Commission. He stated that Ms. Brookshire asked Mr. Waltrip for a current letter specifically stating his opposition to drilling another groundwater monitoring well. Mr. Phillips stated he reviewed the letter that Mr. Waltrip had submitted on March 1, 2012. On page 2 of the letter Mr. Waltrip stated that he has reason to believe that COA #15 is not appropriate. Then, 2 paragraphs later, the letter states that groundwater monitoring is not needed. That was the strongest language in the letter opposing groundwater monitoring. Mr. Phillips asked Planning Commission to determine if that is good enough.

## **Public Comment**

There was no public comment.

## Roundtable

Commissioner Merrill expressed his opinion that the two new pieces of information and the lack of time to review them, detracted from the petition. He also feels that the secret SUA the petitioner keeps referring to significantly disrespects the process and that it will certainly influence his vote.

Commissioner Warnke then asked Commissioner Merrill what he expected to see in the SUA. Commissioner Merrill responded that he does not know but that the petitioner keeps referring to it. Commissioner Warnke stated he disagreed with Commissioner Merrill. The SUA contains proprietary information and this issue will not affect his decision on this petition. Commissioner Warnke stated that he thinks this petition is fine.

Commissioner Benjamin stated he was the one that wanted a groundwater monitoring program put in place for the QRI well near Milner. He was okay with monitoring existing wells and seeps and thinks drilling a new monitoring well is going a little too far. He mentioned how Shell wanted to drill

two monitoring wells and he would support it. He stated that he is comfortable with what is being proposed. On the previous Pirtlaw wells he asked about the SUA and Conservation Easement. Mr. Romick responded that this kind of development falls in line with the Conservation Easement and they are aggressively monitoring compliance with the Conservation Easement. He stated that he was in support of this petition but that he would pull COA #15 from the permit. He thinks that if they are already monitoring wells above and beyond what the County is asking for he is supportive of the proposal. Chairman Gallagher asked Commissioner Benjamin to clear up what he had said. Commissioner Benjamin stated he is in support of pulling COA #15.2.

Commissioner Horn stated that she was interested in the fact that the COGCC is just now making comments on the LGD's comments but was pleased that they are finally doing so. Commissioner Horn asked Ms. Brookshire if she was the one who had highlighted the hand out or if it was highlighted by the COGCC. Ms. Brookshire stated that it was the COGCC that highlighted the comments. Commissioner Horn also thanked staff for explaining the re-numbering of the COAs. Commissioner Horn stated that she thought the Petitioner did due diligence in putting together their application and that she supports the petition with the omission of COA #15.2.

Commissioner Gibson stated that she does not support the omission of COA #15.2 because the County is asking every other petitioner for groundwater monitoring. Groundwater is a resource that is not owned by the surface, it is owned by everyone and it is an important resource. She feels that groundwater monitoring is important and it is something that the community has fought long and hard for and to back off right now would not respect them. No matter how many groundwater wells are being monitored for the other oil wells in the area, this is a new oil well. She stated that the application does not mention that this will be a water frack and until the application is amended to say what technique will be used, she cannot vote for the permit. Ms. Clifford stated that 5 fracking options are presented because at the time of permitting the operator does not know what kind of technique will work the best. Because the technique has to be stated in the application they provided the 5 techniques to allow the operator to pick the best one once on site. Commissioner Gibson would like to know now before she approves a permit.

Commissioner Warnke then asked if previous permits had been approved without knowing what the fracking technique will be. Commissioner Gibson stated that the Planning Commission had approved petitions that left the fracking technique in question but she had not voted for them. Commissioner Merrill noted that the COGCC had no knowledge of what kind of technique would be used when earlier permits were approved. He stated that when QRI decided to make Pirtlaw 14-03 the first well in the state to be fracked with butane, the head of Atmospheric Monitoring for the CDPHE stated that he was not aware of fracking with butane. By that time the flare on Pirtlaw 14-03 was reaching 30 feet high.

Commissioner Hellyer wondered that if the owner did not want groundwater monitoring to occur why it was not stated in the letter.

Commissioner Klumker thanked everyone for putting together such a nice application and commended staff on a job well done for arranging all of the information. He stated the Planning Commission's role is to help out the Board of County Commissioners. He questioned the need for the 60 COAs and thinks that a lot of them are extemporaneous. He stated that there is no need for the Planning Commission to see the SUA. He then read COA #15 to emphasize the complexity of

the condition and asked anyone if they can explain what it was saying. He then reviewed the process that takes place for casing the oil well and that it will eliminate any issue with groundwater contamination. He wondered why the Commission is concerning itself with all of this extra stuff and wasting the petitioner's time. He asked the petitioner, when they are drilling and they lose pressure, do they stop the operation to find out what is going wrong. The petitioner answered yes. He asked everyone to use their heads to get this stuff done because there is a lot of extra stuff in there. He then asked Commissioner Gibson if he was wrong.

Commissioner Gibson stated that the County has worked long and hard to get groundwater monitoring into the process and she will not back off on it. The Yampa River is a really important resource for Northwest Colorado and if we ruin it, it will be ruined for everyone. Commissioner Klumker then asked how it would be ruined. Commissioner Gibson replied that no one knows how good the casing is and refused to get into an argument about it. She then said that since it is adjacent to the Yampa River groundwater monitoring is even more important.

Commissioner Klumker then stated that he was all for the wildlife. He stated that the Governor asked the CPW to protect wildlife and they are doing that by throwing everything at it including the kitchen sink. He thinks that it does not apply to a lot of what is going on. He mentioned bear proof trash cans and raptor perches and wondered why we require measures addressing them. Commissioner Klumker then stated his support for the petition.

Ms. Clifford then got up to clear up two points. She said QRI shares some of the same concerns as the Commissioners when it came to the delayed response from the state about Forms 2 and 2a. She said QRI had contacted the COGCC to check on the status of the comments relating to these forms. Ms. Clifford asked Mr. Steve Lindsey to further explain some of the fracking techniques. He addressed Commissioner Merrill's concern with the butane frack. He noted that the COGCC was aware of the butane frack and it was he and Carl Bowers that had informed them of it. He recalled the site visit to the well site that was being butane fracked, that was open to the Planning Commissioners, County Staff, and the COGCC. It was his opinion that the state official that Commissioner Merrill is referring to misspoke because the state had been notified prior to that meeting. Mr. Lindsey stated that the size of the butane flare was something that QRI has been discussing. He recalled that during the Planning Commission meeting that the size of the flare was discussed and reminded Commissioners that it was a trade off. By fracking the well with butane there would be less water used and therefore less trucks transporting water. The trade-off was the large flare. Since the well site was in such close proximity to the power plant, which is lit up 24 hours a day, Mr. Lindsey stated that they felt it was an appropriate option to see the effectiveness of the technique.

Chairman Gallagher cleared up a statement from Commissioner Merrill about the COGCC official Commissioner Merrill was referring to. The official was actually from CDPHE.

Commissioner Horn addressed the work that has been done to get groundwater monitoring as a COA. She thinks that the conditions should be flexible because some situations are different than others. She recalled the work had been accomplished through a working group. Then the COAs were given to Planning Commission from the Board of County Commissioners. She does not remember the Planning Commission fighting for the groundwater monitoring condition.

Commissioner Gibson stated that it was the citizens of Routt County that had fought for these conditions.

Chairman Gallagher noted that the citizens of Routt County did fight hard for these conditions, but Planning Commission can use their discretion when it comes to the inclusion of 15-(1) and 15-(2). Those conditions were included in the template but they are not required. He noted that some of the Commissioners feel comfortable with the testing that is already being conducted in association with Pirtlaw 14-03 and 24-33, and that those should be sufficient for this oil well. He stated that he would be in support of this petition with the exclusion of COA #15-(2) because the testing is already being conducted. He explained the complex wording of COA #15-(2) is necessary because a specific method for testing the groundwater monitoring wells is needed. Chairman Gallagher stated that he is comfortable with the level of monitoring that is currently taking place and he thinks it is sufficient. He stated the reason he was in support of COA #15-(2) in the previous petition near Milner was because of the proximity of the oil well to all of the domestic water wells in the town of Milner. The County did not want to use those domestic wells as a monitoring well.

Commissioner Benjamin reiterated that he was the only one concerned about groundwater monitoring on the well near Milner and that the BCC just added COA #15-(2) to the COA. He disagrees with the BCC's decision to require another groundwater monitoring well when there was already a well available to monitor. He stated his concern on the previous petition was the frequency with which the well would be monitored. He is in support of this petition without condition #15-(2). He stated that condition #15-(2) should be taken out of the template but that if there is no existing water well that could be monitored, condition #15-(2) should be included. Another issue he brought up was about having a level playing field for everyone to use, but if this condition is taken out, what kind of message does it send.

Chairman Gallagher stated the template allows Planning Commission some degree of discretion. He feels the groundwater monitoring plan that is already established in the area is sufficient. He would like to see condition #15-(1) and #15-(2) stay in the template because there will be other cases that will utilize it. Planning Commission's primary concern is the health, safety, and welfare of the citizens. He stated there is redundancy in the County's conditions and the ones from the COGCC because those COAs are important to the citizens of the County. Should the state fall down on their responsibility of enforcement, the County has these conditions they can hold the operator to.

Commissioner Klumker stated that some of these conditions are not good for the safety, health, and welfare of the County. He stated we are a Federalist Republic and decisions need to get made. The advice of every single person that offers their view is not needed. His opinion is that everything required by the conditions is not good. The simpler things are, the more efficient the operation will be.

Chairman Gallagher stated that his business of providing water to the city is a very regulated business and the people of Steamboat Springs are thankful for that. Chairman Gallagher then asked for a motion.

# **MOTION**

Commissioner Klumker moved to approve the petition for an SUP for Oil & Gas Exploration and Production at the Pirtlaw 32-09 site. This approval is based on the following findings of fact:

- 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 immediately 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 3.44 acres
- o Access road: 2.27 acres; approximately 0.5 miles.
- Vertical drill to approximately 7408 feet, the surface, intermediate and production casing will meet or exceed COGCC minimum requirements
- Stimulation/fracking operations are proposed.
- On-site gas flare

- Closed loop drilling system
- Artificial Lift system
- No reserve pits other than the cuttings pit.
- Personal vehicles to and from the site; no on-site man camps will be utilized
- There will be approximately10-20 employees at the site throughout the construction, drilling and completion phases that will live in self contained trailer as shown on the Typical Rig Layout submitted in the application.
- Parking will be at the well pad. There will be no parking on C.R. 70

# Operation plan

Operation plan consists of Drilling, Completion and Production. Fracking operations are proposed

- 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.
- 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

# Wells, Seeps, or Springs:

- 15(1). All permitted and registered groundwater wells and ground water seeps or springs (Water Sources) within one-half (1/2) mile of the wellhead shall be subject to sampling and testing as provided herein excepting those Water Sources already subject to testing under a separate Routt County permit. Water Sources shall be sampled and tested only with owner's permission and according to the Colorado Oil and Gas Association Voluntary Baseline Groundwater Quality Sampling Program dated November 15, 2011 (COGA Program), except as described in e. below. Additionally, the following standards and procedures shall be followed:
  - a. Baseline water sampling of the Water Sources shall be completed prior to drilling of the oil or gas well and shall continue monthly until conclusion of completion activities. Drilling of the oil or gas well may commence after confirmation has been received from (i) the party responsible for collection of the samples that the water samples were collected properly; and (ii) the testing facility that the water samples were preserved and transported appropriately, that chain of custody has been secured, and that the samples have not exceeded analytical hold times.

- b. Water Sources shall be sampled quarterly for one (1) year after the baseline water sampling described above ceases. If a previously undetected constituent is detected or if the fluctuation of inorganics varies from the baseline sample (or baseline fluctuation if more than one baseline sample is obtained) by more than twenty-five percent (25%), Permittee and Routt County shall confer within thirty (30) days and collaborate, with each party's hydrologic expert if necessary, to determine an appropriate sampling frequency and term going forward. If the parties cannot reach an agreement as to such frequency and term, Routt County's determination shall prevail and Permittee shall abide by said determination. If no such "trigger points" arise after one (1) year, the sampling frequency may, at the option of Permittee, be reduced to an annual basis. Water sampling may, at the option of Permittee, terminate after plugging and abandonment of the oil or gas well or twenty (20) years after well development, whichever is longer.
- c. Water samples shall be collected by an independent third party (a party other than the Permittee) using standard operating procedures 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 positing system, chain of custody, shall be provided to the LGD and COGCC within thirty (30) days from collection.
- d. Water sample analysis 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 laboratory analysis shall be provided by the testing facility directly to the LGD and surface owner, if different than the Permittee. A written explanation and interpretation of the test results, including the identification of any trends, shall also be provided by the testing facility or a qualified third party within thirty (30) days of the availability of the laboratory analysis.
- e. Water samples shall be tested for the constituents listed in Table 1 of the COGA Program with the addition of the following constituents: effervescence, TPH-GRO, TPH-DRO, Lower Explosive Limit, arsenic, barium, cadmium, chromium (total) copper, lead, mercury, silver, carbonate/bicarbonate, cation-anion balance, fluorine/fluoride, hardness, methylene blue active substances, and silica.
- 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 and as listed in Condition #15 (1) e. 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, and 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 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. The operator will work with the CPW to establish drilling operations that mitigate disturbance to hunting operations, wildlife management and Hunting for Wildlife Operations.
- 26. The following recommendations of the Colorado Division of Parks and Wildlife (CPW) shall be followed:

- 1. Where oil and gas activities must occur near active bald eagle winter roost sites, conduct these activities outside the time period from November 15 through February 28.
- Restrict post-development well site visitations to between the hours of 10:00 a.m. and 2:00 p.m. from November 15 to March 15 for active bald eagle winter roost sites.
- 3. Where oil and gas activities must occur within 1.25 miles of Columbian sharp-tailed grouse leks or within other mapped Columbian sharp-tailed grouse breeding or summer habitat, conduct these activities outside the period between March 15 and July 30. Pirtlaw Partners 32-09 is approximately 0.6 miles from the Wolf Mountain Ranch Lek.
- For work-over activity attempt to avoid March 15 to July 30 time period. If it is necessary to work within that time period consult/notify local CPW contact and restrict daily visits to period from 9am to 4pm.
- 5. Restrict well site visitations to portions of the day between 9:00 a.m. and 4:00 p.m. during the Columbian sharp-tailed grouse lekking season, from March 15 to June 1.
- 6. When compressor stations must be sited within 1.25 miles of Columbian sharp-tailed grouse active and inactive (within last 10 years) lek sites, locate compressor stations no closer than 2,500 feet from the lek.
- 7. Install raptor perch deterrents on equipment, fences, cross arms and pole tops in Columbian sharp-tailed grouse habitat.
- Reclaim/restore Columbian sharp-tailed grouse habitats with native grasses and forbs
  conducive to optimal Columbian sharp-tailed grouse habitat and other wildlife appropriate
  to the ecological site. Reclamation of breeding habitat should include a substantially higher
  percentage of forbs than other areas.
- 9. Muffle sound from compressors, pump jacks or other motors necessary to run operations at the site. If mufflers are used, point upward to dissipate sound and vibration.
- Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location following COGCC Rule 1204 a-1.

# Visual Impacts

- 27. 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.
- 28. 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.
- 29. Equipment used for Production 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**

30. Overweight and over length permits for vehicles shall be obtained from the Routt County Road and Bridge Director prior to the use of such vehicles.

- 31. All haul roads that are public roads must have adequate signage at intersections and at any other locations that may require signage or additional signage as required by the Routt County Road and Bridge Department.
- 32. Access permits shall be obtained to all access roads to be built or improved which intersect Routt County roads.
- 33. Routt County has the authority to close any county road at its sole discretion if damage to the road may occur by its use. To the extent that a road closure may affect Permittee's operations, Routt County will cooperate with Permittee to allow operations to be continued in a safe and practicable stopping point.
- 34. Routt County roads shall not be completely blocked at any time. If traffic regulation is deemed necessary, the Permittee shall notify the Routt County Road and Bridge Director, or designee thereof, in advance (if possible), who may then require:
  - a. The Permittee or Permittee's contractor/sub-contractor to place traffic control signage along haul routes and at intersections as specified by the Routt County Road and Bridge Director and at Permittee's expense; and
  - Flaggers to be placed at the intersections of affected county roads as specified by the Routt County Road and Bridge Director and at Permittee's expense; and
  - c. The Permittee or Permittee's contractor/sub-contractor to supplement regular dust control efforts by application of dust palliative, as approved by the Routt County Road and Bridge Director and RCDEH and at Permittee's expense.
- 35. 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.
- 36. Permittee shall comply with the following recommendations concerning road improvements and maintenance:
  - a) Permittee shall limit Routt County road traffic to County Roads (CR) 70 and 52. In the case of CR 70, traffic shall be limited to that portion of the road between Highway 40 and the private, drill pad access road. In the case of CR 52, traffic shall be limited to that portion of the road between the Southeast entrance at Mount Harris and the Northwest exit near mile marker 114 and traffic shall only travel in that direction.
  - b) Per the Operation plan described in the APP, access from Highway 40 to CR 70 and CR 52 shall be limited to restrictions as determined by the Colorado Department of Transportation (CDOT). Any cost of improvements or traffic direction required by CDOT shall be at Permittee's sole expense.

- c) Permittee shall complete all improvements to Highway 40 as required by CDOT prior to commencing the Operation plan.
- d) Permittee shall complete all improvements to Highway 40 access points as recommended by the Routt County road consultant and accepted by the Routt County Road and Bridge Director prior to commencing the Operation plan.
- e) The portion of CR 52 affected by this SUP required the following improvements prior to commencement of the Operation plan:
  - Placement of one inch of class 6 aggregate base course materials was contracted and completed in July 2012 in conjunction with the Pirtlaw 24-33 SUP upgrade requirements.
  - Dust Control will be sprayed at Permittee's expense on entire haul route: CR 70 and CR 52 each spring as part of the Routt County Dust Mitigation Program.
  - iii. Additional placement of the same materials as needed to ensure that an adequate crown is maintained in the road. Routt County will engage a third-party contractor, via its bid process, to make the above improvements. Permittee shall be required to enter into a reimbursement agreement with Routt County for payment of the contractor. Upon signing the reimbursement agreement, permittee shall deposit an amount equal to the estimated costs of the improvements with the Routt County Treasurer.
  - iv. The offset off of County road right of way before encountering a fence, gate or cattleguard shall at a minimum, the distance of 1.5 times of the length of the longest vehicle.
- f) Routt County roads affected by this SUP will be inspected by the Routt County Road and Bridge Department at intervals determined by same. Any road damage shall be repaired by a third-party contractor as selected by the Routt County Road and Bridge Department and on a schedule determined by same. Permittee shall solely bear the costs of repairs.
- g) Permittee shall maintain county roads affected by this SUP during the life of the Operations. Maintenance shall be determined by the Routt County Road and Bridge Department in its sole discretion and at Permittee's expense. Maintenance may include grading and graveling roadways, sweeping or cleaning access points, and application of a dust palliative as approved by the Routt County Road and Bridge Director and RCDEH.
- 37. Permittee shall provide and post advance warning signs of truck traffic turning from and entering upon Highway 40 during the importation and exportation of drilling equipment to the Site. Types and placement of signs shall be in conformance with the Model Traffic Code and shall be coordinated with CDOT.
- 38. The Permittee shall be assessed Road and Bridge staff costs directly associated with the project. Payment of the assessment shall be due and owing upon receipt.

# **Reclamation and Weeds**

- 39. Permittee shall strictly adhere to all federal and state regulatory standards for reclamation.
- 40. 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.
- 41. Drill pits shall be reclaimed in conformance with COGCC Rule 905 and Rule 1003.
- 42. 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.
- 43. 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.
- 44. The interim reclamation completion notice (COGCC Form 4 and attachments) required by COGCC Rule 1003 shall be submitted to the LGD upon completion.
- 45. 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.
- 46. For the purposes of the revegetation requirements set forth herein, Permittee shall work with the local Natural Resources Conservation Service, the County Weed Supervisor, and the landowner to determine the appropriate types and quantities of application materials.

### Miscellaneous On-Site Issues

- 47. 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.
- 48. 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.

- 49. 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.
- 50. No pets or firearms shall be allowed on the Property at any time.
- 51. The Permittee shall protect and maintain flows of all affected irrigation ditches.
- 52. Permittee shall conform to the noise abatement procedures and standards as set forth in COGCC Rule 802.
- 53. All equipment and housing units used during drilling and completion operations must be removed from the site immediately after such operations are complete.
- 54. 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.
- 55. 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**

- 56. 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.
- 57. No junk, trash, or inoperative vehicles shall be disposed of or stored on the Site.
- 58. On-Site toilets shall meet minimum CDPHE requirements for sanitary/sanitation facilities.
- 59. 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.
- 60. Solid waste, excess drilling fluids, and other waste materials shall be transported to a disposal facility that is operated in compliance with the regulations of the Colorado Department of Public Health and Environment. If waste materials are considered hazardous according to state or federal definitions, the wastes must be disposed of in an approved hazardous waste disposal site. Records of such disposal shall be available for review on-site. The Routt County Emergency Manager shall be notified in advance of the proposed transportation of hazardous materials. The notice shall include the type of material being transported, the intended route.

the date that transportation of hazardous materials will commence, and notice when transportation of hazardous materials ceases.

# Reporting

- 61. 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.
- 62. 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.

Commissioner Warnke seconded the motion.

# **Discussion and Friendly Amendments**

There was no discussion.

# The motion carried 5 – 4, with the Chair voting yes.

Commissioner Merrill stated his opposition to approving this permit based on the new information he received that night and the lack of time to review it, the fact Planning Commission was not able to see the SUA, and because of the unique aspect of the Conservation Easement.

Commissioner Gibson voted no because of the environmental impacts, 5.3.F of the Routt County Master Plan. She does not believe the water is being taken care of because of a lack of monitoring and since the fracing technique is still in question.

Commissioner Benjamin stated that although he feels the petitioner will go above and beyond and be a good operator, the location of the well, with its close proximity to the Yampa River, makes him feel uncomfortable.

Commissioner Arel could not support the petition because of the proximity of the well to the Yampa River and 5.3.F of the Routt County Master Plan. He stated that if it were 4,000 feet from the river and all of the water monitoring conditions were left in place, he could support it.

# Administrator's Report

Mr. Phillips stated he researched the Planning Commission by-laws and could not find anything that said Commissioner Horn could not stay on Planning Commission after receiving her new job as the Routt County Treasurer.

Mr. Phillips discussed some housekeeping items which staff hopes to complete this winter. He asked for feedback on the format of the staff reports. The "Complies Yes/No" section will be taken out. He asked Commissioners if they have any suggestions on improving the format of the staff reports to contact staff.

Mr. Phillips apologized for springing the public comment section onto the agenda. Members of the public had been sending the office information but it was not making it to the Planning Commission because Mr. Phillips had been acting as "Gatekeeper" to filter out the information that did not pertain to an application. There is a new section of the website where this kind of information will now be posted. Chairman Gallagher said that he will put a time limit on how long people can talk, and cut people off if need be, due to some of the Commissioners having long drives after the meetings. Mr. Phillips stated that the BCC has been doing this for a year or two and 90% of the time no one speaks. There was general agreement to keep the public comment section.

Mr. Phillips then reminded the Commissioners about the Socioeconomic of Oil & Gas presentation on October 23. Upcoming Planning Commission meetings include a Shell Oil permit on November 1 and discussion of draft Zoning Amendments on November 15.

**FORM** 2A

# **State of Colorado** Oil and Gas Conservation Commission



**Document Number:** 

400262066

04/01 1120 Lincoln Street, Suite 601, Deniver, Colorado 60/203 Priorie: (303) 894-2100 Fax: (303)	894-2109 OIL&	
Oil and Gas Location Assessment	Date Received:	
▼ New Location	03/22/2012	
Submit original plus one copy. This form is to be submitted to the COGCC prior to any ground disturbance activity associated with oil and gas development operations. This Assessment may be approved as a standalone application or submitted as an informational report accompanying an Application for Permit-To-Drill, Form 2. Approval of this Assessment will allow for the construction of the below specified location; however, it does not supersede any land use rules applied by the local land use authority. This form may serve as notice to land owners and other interested parties, please see the COGCC web site at http://colorado.gov/cogcc/ for all accompanying information pertinent to this Oil and Gas Location Assessment.		
This location assessment is included as part of a permit application.		
1. CONSULTATION  This location is included in a Comprehensive Drilling Plan. CDP #  This location is in a sensitive wildlife habitat area.  This location is in a wildlife restricted surface occupancy area.  This location includes a Rule 306.d.(1)A.ii. variance request.		
2. Operator	3. Contact Information	
Operator Number: 10255	Name: Pamela Osburn	
Name: QUICKSILVER RESOURCES INC	Phone: (817) 665-4918	
Address: 801 CHERRY ST - #3700 UNIT 19	Fax: (817) 665-5009	
City: FT WORTH State: TX Zip: 76102	email: posburn@qrinc.com	
4. Location Identification:	· •	
Name: PIRTLAW PARTNERS, LTD Num	mber: 32-09	
County: ROUTT		
QuarterQuarter: SWNE Section: 9 Township: 6N Range:	87W Meridian: 6 Ground Elevation: 6616	
Define a single point as a location reference for the facility location. This point should be used as the point of measurement in the drawings to be submitted with this application. When the location is to be used as a well site then the point shall be a well location.  Footage at surface: 1336 feet FNL, from North or South section line, and 2385 feet FEL, from East or West section line.		
Latitude: 40.496215 Longitude: -107.152379 PDOP Reading: Instrument Operator's Name: DOWLING LAND SURVEYORS	1.8 Date of Measurement:11/14/2011	
5. Facilities (Indicate the number of each type of oil and gas facili	ty planned on location):	
Special Purpose Pits: Drilling Pits: Wells:	1 Production Pits: Dehydrator Units:	
Condensate Tanks: 1 Separators: 2	2 Electric Motors: Multi-Well Pits:	
Gas or Diesel Motors: 1 Cavity Pumps: LACT Unit:	Pump Jacks: Pigging Station:	
Electric Generators: Gas Pipeline: Oil Pipeline	Water Pipeline: Flare:	
Gas Compressors: VOC Combustor:	Oil Tanks: 2 Fuel Tanks:	
Other: 1 HEATER TREATER		
6 Construction:		

Estimated date that interim reclamation will begin: 04/15/2013 Size of location after interim reclamation in acres: 1.00 Estimated post-construction ground elevation: 6620 Will a closed loop system be used for drilling fluids: Yes 💢
Estimated post-construction ground elevation: 6620 Will a closed loop system be used for drilling fluids: Yes
Will salt sections be encountered during drilling: Yes No 💢 Is H2S anticipated? Yes No 💢
Will salt (>15,000 ppm TDS CI) or oil based muds be used: Yes ☒ No ☒
Mud disposal: Offsite 💢 Onsite 🧮 Method: Land Farming 📜 Land Spreading Disposal Facility 💢
Other:
7. Surface Owner:
Name: Phone:
Address: Fax:
Address: Email:
City: State: Zip: Date of Rule 306 surface owner consultation: 02/03/2011
Surface Owner: 💢 Fee State Federal Indian
Mineral Owner: 💢 Fee State Federal Indian
The surface owner is: the mineral owner committed to an oil and gas lease
is the executer of the oil and gas lease the applicant
The right to construct the location is granted by: 🔝 oil and gas lease 💢 Surface Use Agreement 🔯 Right of Way
applicant is owner
Surface damage assurance if no agreement is in place: \$2000 \$5000 Blanket Surety ID
8. Reclamation Financial Assurance:
Well Surety ID: 20080107 Gas Facility Surety ID: Waste Mgnt. Surety ID:
9. Cultural:
or contain
to the town of the
l de la companya de
Is the location in a high density area (Rule 603.b.): Yes No IX
Is the location in a high density area (Rule 603.b.):  Ves No X  Distance, in feet, to nearest building: 4670, public road: 1500, above ground utilit: 3100
Is the location in a high density area (Rule 603.b.): Yes No  X    Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336
Is the location in a high density area (Rule 603.b.): Yes No
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe):
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: X Rangeland Timber Recreational Other (describe):  Subdivided: Industrial Commercial Residential
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100  , railroad: 3095 , property line: 1336   10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe):  Subdivided: Industrial Commercial Residential  11. Future Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP
Is the location in a high density area (Rule 603.b.): Yes No   No   X   Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100   , railroad: 3095 , property line: 1336    10. Current Land Use (Check all that apply): Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP   Non-Crop Land:   Rangeland Timber Recreational Other (describe):   Subdivided: Industrial Commercial Residential    11. Future Land Use (Check all that apply): Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: X Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  11. Future Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Residential Meadow CRP  Non-Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Residential Recreational Other (describe): Subdivided: Industrial Commercial Recreational Other (describe): Subdivided: Industrial Commercial Residential
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  11. Future Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential
Is the location in a high density area (Rule 603.b.): Yes No.  X   Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land:  X  Rangeland   Timber   Recreational Other (describe): Subdivided: Industrial Commercial   Residential  11. Future Land Use (Check all that apply):  Crop Land:   Irrigated Dry land   Improved Pasture Hay Meadow   CRP  Non-Crop Land:   Irrigated Dry land   Improved Pasture Hay Meadow   CRP  Non-Crop Land:     Rangeland   Timber   Recreational   Other (describe): Subdivided:   Industrial   Commercial   Residential  12. Soils:  List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  11. Future Land Use (Check all that apply):  Crop Land: Rangeland Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  12. Soils:  List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS)
Is the location in a high density area (Rule 603.b.): Yes No X Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100 , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply): Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  11. Future Land Use (Check all that apply): Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  12. Soils: List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.
Is the location in a high density area (Rule 603.b.): Yes No X  Distance, in feet, to nearest building: 4670 , public road: 1500 , above ground utilit: 3100  , railroad: 3095 , property line: 1336  10. Current Land Use (Check all that apply):  Crop Land: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  11. Future Land Use (Check all that apply):  Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Irrigated Dry land Improved Pasture Hay Meadow CRP  Non-Crop Land: Rangeland Timber Recreational Other (describe): Subdivided: Industrial Commercial Residential  12. Soils:  List all soil map units that occur within the proposed location. Attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

NRCS Map Unit Name:		
NRCS Map Unit Name:		
13. Plant Community:  Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.		
Are noxious weeds present: Yes X No		
Plant species from: NRCS or,		
List individual species: RABBITBRUSH, INTERMEDIATE WHEATGRASS, SNOWBERRY		
List individual species. NADBITBROSH, INTERMEDIATE WHEATGRASS, SNOWBERRY		
Check all plant communities that exist in the disturbed area.		
Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)		
Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)		
Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)		
Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)		
Mountain Riparian (Cottonwood, Willow, Blue Spruce)		
Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)  Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)		
Alpine (above timberline)		
Other (describe):		
14. Water Resources:         Rule 901.e. may require a sensitive area determination be performed. If this determination is performed the data is to be submitted with the Form 2A.         Is this a sensitive area: ▼ No ▼ Yes Was a Rule 901.e. Sensitive Areas Determination performed: ▼ No ▼ Yes Distance (in feet) to nearest surface water: 1000 , water well: 3100 , depth to ground water: 50         Is the location in a riparian area: ▼ No ▼ Yes Was an Army Corps of Engineers Section 404 permit filed ▼ No ▼ Yes         Is the location within a Rule 317B Surface Water Suppl Area buffer zone:         ▼ No ▼ 0-300 ft. zone       301-500 ft. zone		
If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles		
been notified: X No Yes		
15. Comments: THE SUA CAN BE FOUND WITH THE FORM 2 APD, DOC ID# 400247021		
I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.  Signed: Date: 03/22/2012 Email: posburn@qrinc.com		
Print Name: Pamela S. Osburn  Title: Sr. Regulatory Analyst		
Title. Of Negulatory Allalyst		
Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.		
COGCC Approved: Director of COGCC Date: 10/12/2012		
CONDITIONS OF		

All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.

#### SITE SPECIFIC COAs:

The drilling pit, if constructed, must be lined, or a closed loop system (which operator has indicated on the Form 2A) must be implemented during drilling. All cuttings generated during drilling with oil based muds (OBM)/high chloride mud must be kept in the lined drilling pit, or placed either in containers or on a lined/bermed portion of the well pad; prior to analysis and/or offsite disposal.

The moisture content of any drill cuttings in a cuttings pit, trench, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts.

Operator must implement best management practices to contain any unintentional release of fluids, including any fluids conveyed via temporary surface or buried pipelines.

Operator must ensure secondary containment for any volume of fluids contained at well site during drilling and completion operations; including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days), and maintained in good condition.

If the well is to hydraulically stimulated, flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or pit located on the well pad or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area with additional downgradient perimeter berming. The area where flowback fluids will be stored/reused must be constructed to be sufficiently impervious to contain any spilled or released material.

The access road will be constructed to prevent sediment migration from the access road to nearby surface water or any drainages leading to other nearby surface waters.

Water Testing: Prior to drilling, operator shall sample two (2) to three (3) closest domestic water wells, other water wells, and/or springs; and two (2) to three (3) nearby surface water features (two nearby surface water ponds and the intermittent stream to the north [if water is present]). If possible, the water wells or springs selected should be on opposite sides of the oil and gas location not exceeding a one (1) mile radius. The sample location shall be surveyed in accordance with Rule 215.

Initial baseline testing shall include laboratory analysis of pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO3), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime and coliform), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be included. COGCC recommends that the latest version of EPA SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

If free gas or a dissolved methane concentration greater than 1.0 milligram per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen – 12C, 13C, 1H and 2H) shall be performed to determine gas type. If test results indicated thermogenic or a mixture of thermogenic and biogenic gas. If the methane concentration increases by more than 5.0 mg/l between sampling periods, or increases to more than 10. mg/l, the operator shall notify the Director and the owner of the water well immediately.

After 90 days, but less than 180 days of completion of the first proposed well a "post-completion" test shall be performed for the same analytical parameters listed above and repeated one (1), three (3) and six (6) years thereafter. If the well is a non-producing well, then the one (1), three (3) and six (6) year samples will not be required. If no significant changes from the baseline have been identified after the third test (i.e. the six-year test), no further testing shall be required. Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners. Copies of all test results described above shall be provided to the Commission and the water well owner within three (3) months of collecting the samples. The data shall be sent via email to the COGCC Environmental Data Analyst (Arthur Koepsell; email arthur.koepsell@state.co.us), with a copy provided to the COGCC OGLA Specialist for Western Colorado (Dave Kubeczko; email dave.kubeczko@state.co.us). Documented refusal to grant access by well owner shall not constitute a violation of this COA.

Attachment Check List		
Att Doc Num	Name	
1293011	CORRESPONDENCE	
1293012	CORRESPONDENCE	
1293013	CONST. LAYOUT DRAWINGS	
2034418	PROPOSED BMPs	
2538005	CORRESPONDENCE	
400262066	FORM 2A SUBMITTED	
400262070	PROPOSED BMPs	
400262071	CONST. LAYOUT DRAWINGS	
400262072	HYDROLOGY MAP	
400262073	LEGAL/LEASE DESCRIPTION	
400262074	LOCATION DRAWING	
400262075	WELL LOCATION PLAT	
400262076	NRCS MAP UNIT DESC	
400262077	REFERENCE AREA MAP	
400262078	SENSITIVE AREA DATA	
400262079	LOCATION PICTURES	
400262080	REFERENCE AREA PICTURES	
400264186	ACCESS ROAD MAP	

Total Attach: 18 Files

# **General Comments**

<u>User Group</u>	Comment	<b>Comment Date</b>
Permit	LGD comments addressed by attached correspondence. No public comments. Final Reviewpassed.	10/12/2012 12:52:59 PM
Agency	To address air quality issues related to individual sources, operators will need to comply with new Federal "New Source Performance Standards" to reduce air emissions. CDPHE encourages and supports best management practices for air emissions and fugitive dust controls.	7/10/2012 12:46:47 PM

Date Run: 10/12/2012 Doc [#400262066] Loc Name: PIRTLAW PARTNERS, LTD 32-09

DOW The operator has agreed to the following BMPs: 5/2/2012 4:58:07 PM

- 1. Where oil and gas activities must occur near active bald eagle winter roost sites, conduct these activities outside the time period from November 15 through February 28.
- 2.Restrict post-development well site visitations to between the hours of 10:00 a.m. and 2:00 p.m. from November 15 to March 15 for active bald eagle winter roost sites.
- 3. Where oil and gas activities must occur within 1.25 miles of Columbian sharptailed grouse leks or within other mapped Columbian sharp-tailed grouse breeding or summer habitat, conduct these activities outside the period between March 15 and July 30. Pirtlaw Partners 32-09 is approximately 0.6 miles from the Wolf Mountain Ranch Lek.
- 4.For work-over activity attempt to avoid March 15 to July 30 time period. If it is necessary to work within that time period consult/notify local CPW contact and restrict daily visits to period from 9am to 4pm.
- 5.Restrict well site visitations to portions of the day between 9:00 a.m. and 4:00 p.m. during the Columbian sharp-tailed grouse lekking season, from March 15 to June 1.
- 6. When compressor stations must be sited within 1.25 miles of Columbian sharp-tailed grouse active and inactive (within last 10 years) lek sites, locate compressor stations no closer than 2,500 feet from the lek.
- 7.Install raptor perch deterrents on equipment, fences, cross arms and pole tops in Columbian sharp-tailed grouse habitat.
- 8.Reclaim/restore Columbian sharp-tailed grouse habitats with native grasses and forbs conducive to optimal Columbian sharp-tailed grouse habitat and other wildlife appropriate to the ecological site. Reclamation of breeding habitat should include a substantially higher percentage of forbs than other areas.
- 9.Muffle sound from compressors, pump jacks or other motors necessary to run operations at the site.If mufflers are used, point upward to dissipate sound and vibration.
- 10.Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location following COGCC Rule 1204 a-1.

Jacob Davidson, 5/2/2012, 16:58

LGD	This well is the third oil well proposed in this area. The Pirtlaw 24-33 API05-107-06248-00 and Pirtlaw 14-03 API 05-107-06241-00 are located north of the proposed Pirtlaw 32-09. All of the sites are located east of the Yampa River and will have cumulative impacts on the wildlife in the area, noise impacts, and potential air and water quality impacts. The surface is in a conservation easement intended to protect the visual, wildlife, agriculture and DPW Hunting for Wildlife programs.  A Special Use Permit is required for Oil and Gas Operations in Routt County. The petitioner is aware of this process.  There are wildlife concerns in this area. The well site is approximately 1,200' from Bald Eagle Winter Concentration area, within Columbian Sharp-tailed Grouse Production area, within Greater Sage Grouse Production area, within Elk Severe Winter Range, within Great Blue Heron foraging area, and abutting Mule Deer Severe Winter range. All conditions placed by the CPW must be complied with. The	
	Columbian Sharpe-tailed Grouse should be closely monitored to determine if any wildlife are being impacted by oil/gas operations. Since this is the third well site in this area and all sites are located within a mile of each other, additional reduction/restriction in hours for site visits/maintenance and hauling to reduce noise and/or human disturbance should be considered for all sites.	
	The site is located approximately 1,600' (1/3 mi.) east of the Yampa River and 600' from a stock pond and intermittent stream. Routt County is concerned with the possible contamination of water. Because of the location of the proposed well, annual surface water monitoring shall be performed at the stock pond and intermittent stream. Baseline samples shall be taken prior to operation.	
	Annual ground water monitoring should be performed at a location down-gradient between the drilling well site and the Yampa River at either a water well, seep or spring. Baseline samples shall be taken prior to operations.	
	Water testing protocol and reporting to Routt County should be in accordance with the COGA program requirements.	
	Routt County requests information from the COGCC after drilling operations are complete for the location of aquifers and showing that casing was completed at minimum requirements to protect all aquifers.	
	Continued best management practices should be used to test or monitor air quality. The COGCC should work with CDPHE to develop monitoring system requirements and schedules for all operators. New technology should be used to prohibit emissions from tanks, equipment and flares at the onset of production.	
OGLA	Initiated/Completed OGLA Form 2A review on 04-22-12 by Dave Kubeczko; requested acknowledgement of fluid containment, spill/release BMPs, lined pits/closed loop, cuttings containment, baseline water sampling, moisture content cuttings, access road sediment control, and flowback to tanks COAs from operator on 04-22-12 and 10-10-12; received acknowledgement of COAs from operator on 04-27-12 and 10-12-12; passed by CPW on 05-02-12 with operator agreed to BMPs acceptable; addressed LGD comments from 01-27-12 on 10-12-12 (email correspondence is attached); passed OGLA Form 2A review on 10-12-12 by Dave Kubeczko; fluid containment, spill/release BMPs, lined pits/closed loop, cuttings containment, baseline water sampling, moisture content cuttings, access road sediment control, and flowback to tanks COAs.	4/22/2012 2:35:51 PM
Permit	at oper.'s request, APD for horiz. lateral associated w/ this well (doc #400261961) was withdrawn.	4/11/2012 7:31:35 AM
Permit	per LGD's request, extended comment period for this 2A and its related APD's, doc #400247021, doc #400261961 for ten days past the expiration of the comment period (4/16) for doc #400261961	4/3/2012 2:26:13 PM
OGLA	Operator checked RSO, location maps as SWA.	3/26/2012 8:14:39 AM
Permit	Operator input comment about SUA and attached Access road map. This form has passed completeness.	3/23/2012 6:50:01 AM

Permit Returned to draft. Missing SUA and Access road map. 3/22/2012 3:00:34 PM

Total: 10 comment(s)

# **BMP**

<u>Type</u>	Comment
Wildlife	1. Where oil and gas activities must occur near active bald eagle winter roost sites, conduct these activities outside the time period from November 15 through February 28.  2. Restrict post-development well site visitations to between the hours of 10:00 a.m. and 2:00 p.m. from November 15 to March 15 for active bald eagle winter roost sites. 3. Where oil and gas activities must occur within 1.25 miles of Columbian sharp-tailed grouse leks or within other mapped Columbian sharp-tailed grouse breeding or summer habitat, conduct these activities outside the period between March 15 and July 30. Pirtlaw Partners 32-09 is approximately 0.6 miles from the Wolf Mountain Ranch Lek. 4. For work-over activity attempt to avoid March 15 to July 30 time period. If it is necessary to work within that time period consult/notify local CPW contact and restrict daily visits to period from 9am to 4pm.  5. Restrict well site visitations to portions of the day between 9:00 a.m. and 4:00 p.m. during the Columbian sharp-tailed grouse lekking season, from March 15 to June 1.  6. When compressor stations must be sited within 1.25 miles of Columbian sharp-tailed grouse active and inactive (within last 10 years) lek sites, locate compressor stations no closer than 2,500 feet from the lek.  7. Install raptor perch deterrents on equipment, fences, cross arms and pole tops in Columbian sharp-tailed grouse habitat.  8. Reclaim/restore Columbian sharp-tailed grouse habitats with native grasses and forbs conducive to optimal Columbian sharp-tailed grouse habitat and other wildlife appropriate to the ecological site. Reclamation of breeding habitat should include a substantially higher percentage of forbs than other areas.  9. Muffle sound from compressors, pump jacks or other motors necessary to run operations at the site. If mufflers are used, point upward to dissipate sound and vibration.  10. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location following COGCC Rule 1204 a-1.
Site Specific	Quicksilver Resources Inc. is an original participating operator in the COGA Baseline Groundwater Quality Sampling Program and will follow the COGA program on this well.

Total: 2 comment(s)

Routt County LDG Comments
Regulatory Form 2A#400262066
Quicksilver Resources, Pirtlaw Partners Ltd 32-09; NWNE sec 9 T6N R87W, Routt County

Comments submitted on January 27, 2012: COGCC Response to Comments sent on October 12, 2012:

#### Comment No. 1 - WILDLIFE CONCERNS.

This well is the third oil well proposed in this area. The Pirtlaw 24-33 API05-107-06248-00 and Pirtlaw 14-03 API 05-107-06241-00 are located north of the proposed Pirtlaw 32-09. All of the sites are located east of the Yampa River and will have cumulative impacts on the wildlife in the area, noise impacts, and potential air and water quality impacts. The surface is in a conservation easement intended to protect the visual, wildlife, agriculture and DPW Hunting for Wildlife programs.

#### COGCC Response to Comment No. 1 - WILDLIFE CONERNS.

Colorado Parks and Wildlife has had consultation with Quicksilver Resources concerning wildlife issues at this location, as well as the other two locations. Quicksilver has agreed to the following wildlife BMPs:

- 1. Where oil and gas activities must occur near active bald eagle winter roost sites, conduct these activities outside the time period from November 15 through February 28.
- 2. Restrict post-development well site visitations to between the hours of 10:00 a.m. and 2:00 p.m. from November 15 to March 15 for active bald eagle winter roost sites.
- 3. Where oil and gas activities must occur within 1.25 miles of Columbian sharp-tailed grouse leks or within other mapped Columbian sharp-tailed grouse breeding or summer habitat, conduct these activities outside the period between March 15 and July 30. Pirtlaw Partners 32-09 is approximately 0.6 miles from the Wolf Mountain Ranch Lek.
- For work-over activity attempt to avoid March 15 to July 30 time period. If it is necessary to
  work within that time period consult/notify local CPW contact and restrict daily visits to period
  from 9am to 4pm.
- Restrict well site visitations to portions of the day between 9:00 a.m. and 4:00 p.m. during the Columbian sharp-tailed grouse lekking season, from March 15 to June 1.
- When compressor stations must be sited within 1.25 miles of Columbian sharp-tailed grouse
  active and inactive (within last 10 years) lek sites, locate compressor stations no closer than
  2,500 feet from the lek.
- Install raptor perch deterrents on equipment, fences, cross arms and pole tops in Columbian sharp-tailed grouse habitat.
- 8. Reclaim/restore Columbian sharp-tailed grouse habitats with native grasses and forbs conducive to optimal Columbian sharp-tailed grouse habitat and other wildlife appropriate to the ecological site. Reclamation of breeding habitat should include a substantially higher percentage of forbs than other areas.
- 9. Muffle sound from compressors, pump jacks or other motors necessary to run operations at the site. If mufflers are used, point upward to dissipate sound and vibration.
- 10. Install and utilize bear-proof dumpsters and trash receptacles for all food-related trash on location following COGCC Rule 1204 a-1.

Since CPW has regulatory authority for wildlife in Colorado, COGCC believes that CPW has adequately assessed wildlife issues at this location, and therefore, no additional wildlife BMPs are necessary.

Additionally, COGCC has met with the landowner, to discuss the locations. The landowner is involved in significant wildlife conservation measures on the property and has reviewed and approved these proposed locations and is successfully working with the operator on measures to reduce cumulative impacts on wildlife.

#### Comment No. 2 - ROUTT COUNTY SPECIAL USE PERMIT.

A Special Use Permit is required for Oil and Gas Operations in Routt County. The petitioner is aware of this process.

#### COGCC Response to Comment No. 2 - ROUTT COUNTY SPECIAL USE PERMIT.

No COGCC response necessary.

#### Comment No. 3 - ADDITIONAL WILDLIFE CONCERNS.

There are wildlife concerns in this area. The well site is approximately 1,200' from Bald Eagle Winter Concentration area, within Columbian Sharp-tailed Grouse Production area, within Greater Sage Grouse Production area, within Elk Severe Winter Range, within Great Blue Heron foraging area, and abutting Mule Deer Severe Winter range. All conditions placed by the CPW must be complied with. The Columbian Sharpe-tailed Grouse should be closely monitored to determine if any wildlife are being impacted by oil/gas operations. Since this is the third well site in this area and all sites are located within a mile of each other, additional reduction/restriction in hours for site visits/maintenance and hauling to reduce noise and/or human disturbance should be considered for all sites.

## COGCC Response to Comment No. 3 - ADDITIONAL WILDLIFE CONERNS.

Colorado Parks and Wildlife has had consultation with Quicksilver Resources concerning wildlife issues at this location, as well as the other two locations. As stated above in COGCC's response to Comment No. 1 - WILDLIFE CONCERNS, Quicksilver has agreed to the appropriate wildlife BMPs for this location.

All wildlife BMPs that are attached to the Form 2A permit are enforceable by COGCC through our inspection process. Anyone who observes activities that are in violation of these permit BMPs can call the COGCC and a follow up inspection will take place. Any violations will be addressed immediately.

CPW has prepared sensitive wildlife habitat (SWH) and restricted surface occupancy (RSO) maps for all of Colorado. CPW has determined which species required monitoring and protection from potential oil and gas activities. The Blue Heron is not covered under the COGCC's 1200-series rules or House Bill 07-1298. Since CPW has regulatory authority for wildlife in Colorado, they are already conducting wildlife monitoring for any potentially affected species on a yearly basis.

CPW has adequately assessed wildlife issues at this location, and therefore, additional wildlife BMPs (including more restrictions on site visits and timing limitations) are not necessary at this or the other two locations.

#### Comment No. 4 - NEARBY SURFACE WATER CONCERNS.

The site is located approximately 1,600' (1/3 mi.) east of the Yampa River and 600' from a stock pond and intermittent stream. Routt County is concerned with the possible contamination of water. Because of the location of the proposed well, annual surface water monitoring shall be performed at the stock pond and intermittent stream. Baseline samples shall be taken prior to operation.

COGCC Response to Comment No. 4 - NEARBY SURFACE WATER CONCERNS.

COGCC conducted two additional onsite inspections at the proposed well pad location and found two nearby stock ponds located downgradient of the pad. Quicksilver has agreed to sample these two ponds and the intermittent stream to the north if sufficient water is present prior to drilling and completion. COGCC has placed the following COA on the Form 2A:

COA 9 - Water Testing: Prior to drilling, operator shall sample two (2) to three (3) closest domestic water wells, other water wells, and/or springs; and two (2) to three (3) nearby surface water features (two nearby surface water ponds and the intermittent stream to the north [if water is present]). If possible, the water wells or springs selected should be on opposite sides of the oil and gas location not exceeding a one (1) mile radius. The sample location shall be surveyed in accordance with Rule 215.

Initial baseline testing shall include laboratory analysis of pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO3), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime and coliform), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be included. COGCC recommends that the latest version of EPA SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

If free gas or a dissolved methane concentration greater than 1.0 milligram per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen - 12C, 13C, 1H and 2H) shall be performed to determine gas type. If test results indicated thermogenic or a mixture of thermogenic and biogenic gas. If the methane concentration increases by more than 5.0 mg/l between sampling periods, or increases to more than 10. mg/l, the operator shall notify the Director and the owner of the water well immediately.

After 90 days, but less than 180 days of completion of the first proposed well a "post-completion" test shall be performed for the same analytical parameters listed above and repeated one (1), three (3) and six (6) years thereafter. If the well is a non-producing well, then the one (1), three (3) and six (6) year samples will not be required. If no significant changes from the baseline have been identified after the third test (i.e. the six-year test), no further testing shall be required. Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners.

Copies of all test results described above shall be provided to the Commission and the water well owner within three (3) months of collecting the samples. The data shall be sent via email to the COGCC Environmental Data Analyst (Arthur Koepsell; email <a href="mailto:arthur.koepsell@state.co.us">arthur.koepsell@state.co.us</a>), with a copy provided to the COGCC OGLA Specialist for Western Colorado (Dave Kubeczko; email <a href="mailto:dave.kubeczko@state.co.us">dave.kubeczko@state.co.us</a>). Documented refusal to grant access by well owner shall not constitute a violation of this COA.

## Comment No. 5 - ANNUAL GROUNDWATER MONITORING CONCERNS.

Annual ground water monitoring should be performed at a location down-gradient between the drilling well site and the Yampa River at either a water well, seep or spring. Baseline samples shall be taken prior to operations.

#### COGCC Response to Comment No. 5 - ANNUAL GROUNDWATER MONITORING CONCERNS.

Quicksilver has agreed to sample two to three domestic water wells, other water wells, or springs prior to drilling and completion of this well. COGCC has placed the following COA on the Form 2A:

COA 9 - Water Testing: Prior to drilling, operator shall sample two (2) to three (3) closest domestic water wells, other water wells, and/or springs; and two (2) to three (3) nearby surface water features (two nearby surface water ponds and the intermittent stream to the north [if water is present]). If possible, the water wells or springs selected should be on opposite sides of the oil and gas location not exceeding a one (1) mile radius. The sample location shall be surveyed in accordance with Rule 215.

Initial baseline testing shall include laboratory analysis of pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO3), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magneslum, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime and coliform), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be included. COGCC recommends that the latest version of EPA SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

If free gas or a dissolved methane concentration greater than 1.0 milligram per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen - 12C, 13C, 1H and 2H) shall be performed to determine gas type. If test results indicated thermogenic or a mixture of thermogenic and biogenic gas. If the methane concentration increases by more than 5.0 mg/l between sampling periods, or increases to more than 10. mg/l, the operator shall notify the Director and the owner of the water well immediately.

After 90 days, but less than 180 days of completion of the first proposed well a "post-completion" test shall be performed for the same analytical parameters listed above and repeated one (1), three (3) and six (6) years thereafter. If the well is a non-producing well, then the one (1), three (3) and six (6) year samples will not be required. If no significant changes from the baseline have been identified after the third test (i.e. the six-year test), no further testing shall be required. Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners.

Copies of all test results described above shall be provided to the Commission and the water well owner within three (3) months of collecting the samples. The data shall be sent via email to the COGCC Environmental Data Analyst (Arthur Koepsell; email <a href="mailto:arthur.koepsell@state.co.us">arthur.koepsell@state.co.us</a>), with a copy provided to the COGCC OGLA Specialist for Western Colorado (Dave Kubeczko; email <a href="mailto:dave.kubeczko@state.co.us">dave.kubeczko@state.co.us</a>). Documented refusal to grant access by well owner shall not constitute a violation of this COA.

#### Comment No. 6 - WATER TESTING PROTOCOL CONCERNS.

Water testing protocol and reporting to Routt County should be in accordance with the COGA program requirements.

COGCC Response to Comment No. 6 - WATER TESTING PROTOCOL CONCERNS.

Quicksilver has placed the following BMP on the Form 2A permit:

"Quicksilver Resources Inc. is an original participating operator in the COGA Baseline Groundwater Quality Sampling Program and will follow the COGA program on this well."

In addition, COGCC has placed the following COA on the Form 2A:

COA 9 - Water Testing: Prior to drilling, operator shall sample two (2) to three (3) closest domestic water wells, other water wells, and/or springs; and two (2) to three (3) nearby surface water features (two nearby surface water ponds and the intermittent stream to the north [if water is present]). If possible, the water wells or springs selected should be on opposite sides of the oil and gas location not exceeding a one (1) mile radius. The sample location shall be surveyed in accordance with Rule 215.

Initial baseline testing shall include laboratory analysis of pH, specific conductance, total dissolved solids (TDS), dissolved gases (methane, ethane, propane), alkalinity (total bicarbonate and carbonate as CaCO3), major anions (bromide, chloride, fluoride, sulfate, nitrate and nitrite as N, phosphorus), major cations (calcium, iron, magnesium, manganese, potassium, sodium), other elements (barium, boron, selenium and strontium), presence of bacteria (iron related, sulfate reducing, slime and coliform), total petroleum hydrocarbons (TPH) and BTEX compounds (benzene, toluene, ethylbenzene and xylenes). Field observations such as odor, water color, sediment, bubbles, and effervescence shall also be included. COGCC recommends that the latest version of EPA SW 846 analytical methods be used where possible and that analyses of samples be performed by laboratories that maintain state or national accreditation programs.

If free gas or a dissolved methane concentration greater than 1.0 milligram per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and hydrogen – 12C, 13C, 1H and 2H) shall be performed to determine gas type. If test results indicated thermogenic or a mixture of thermogenic and biogenic gas. If the methane concentration increases by more than 5.0 mg/l between sampling periods, or increases to more than 10. mg/l, the operator shall notify the Director and the owner of the water well immediately.

After 90 days, but less than 180 days of completion of the first proposed well a "post-completion" test shall be performed for the same analytical parameters listed above and repeated one (1), three (3) and six (6) years thereafter. If the well is a non-producing well, then the one (1), three (3) and six (6) year samples will not be required. If no significant changes from the baseline have been identified after the third test (i.e. the six-year test), no further testing shall be required. Additional "post-completion" test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners.

Copies of all test results described above shall be provided to the Commission and the water well owner within three (3) months of collecting the samples. The data shall be sent via email to the COGCC Environmental Data Analyst (Arthur Koepsell; email <a href="mailto:arthur.koepsell@state.co.us">arthur.koepsell@state.co.us</a>), with a copy provided to the COGCC OGLA Specialist for Western Colorado (Dave Kubeczko; email <a href="mailto:dave.kubeczko@state.co.us">dave.kubeczko@state.co.us</a>). Documented refusal to grant access by well owner shall not constitute a violation of this COA.

Quicksilver will provide the data to the COGCC within 3 months of sampling. COGCC will then upload this data to the COGCC database, which will become available through the COGCC online GIS mapping system. No further notification will be required of the operator.

#### Comment No. 7 - SURFACE CASING PLACEMENT CONCERNS.

Routt County requests information from the COGCC after drilling operations are complete for the location of aquifers and showing that casing was completed at minimum requirements to protect all aquifers.

#### COGCC Response to Comment No. 7 - SURFACE CASING PLACEMENT CONCERNS.

COGCC requires the submittal of Drilling and Completion Reports, Form 5's and Completed Interval Reports, Form 5As, within 30 days of drilling and completion of a well to describe "downhole" conditions. The Forms are reviewed by COGCC engineering staff to verify compliance with the drilling and cementing rules, and checked to ensure that aquifers have been adequately protected. Unless the operator has requested the information be held confidential, the approved Forms are available to the public to review in the well-file on the COGCC website.

COGCC Rule 317.i. applies if unanticipated aquifers are encountered while drilling the production hole:

317. GENERAL DRILLING RULES; i. Production casing cementing. The operator shall ensure that all cement required under this rule placed behind production casing shall be of adequate quality to achieve a minimum compressive strength of at least three hundred (300) psi after twenty-four (24) hours and eight hundred (800) psi after seventy-two (72) hours measured at ninety-five degrees Fahrenheit (95 °F) and at eight hundred (800) psi. After thorough circulation of a wellbore, cement shall be pumped behind the production casing (200) feet above the top of the shallowest known producing horizon. All fresh water aquifers which are exposed below the surface casing shall be cemented behind the production casing. All such cementing around an aquifer shall consist of a continuous cement column extending from at least fifty (50) feet below the bottom of the fresh water aquifer which is being protected to at least fifty (50) feet above the top of said fresh water aquifer. Cement placed behind the production casing shall be allowed to set seventy-two (72) hours, or until eight hundred (800) psi calculated compressive strength is developed, whichever occurs first, prior to the undertaking of any completion operation.

#### Comment No. 8 - AIR QUALITY MONITORING CONCERNS.

Continued best management practices should be used to test or monitor air quality. The COGCC should work with CDPHE to develop monitoring system requirements and schedules for all operators. New technology should be used to prohibit emissions from tanks, equipment and flares at the onset of production.

#### COGCC Response to Comment No. 8 - AIR QUALITY MONITORING CONCERNS.

COGCC cannot "prohibit" emissions or flares. Operators are required to comply with Colorado Department of Public Health and Environment (CDPHE) rules incorporated by reference in COGCC Rule 805.b.(1) regarding odor emissions. Operators are required to comply with statewide green completion requirements identified in Rule 805.b.(3). Operators are required to seek approval for long-term production venting or flaring on a Sundry Notice, per Rule 912.b. COGCC may approve production flaring (production venting is not encouraged) if costs for pipeline construction are prohibitive based on an economic analysis submitted with the Sundry Notice. Flaring is required if hydrogen sulfide is present in the gas. Flared or vented gas must be reported monthly on Form 7, per Rule 912.c. Flared gas subject to Rule 912.b. approval must be directed to a controlled device operated efficiently to provide maximum reduction of air contaminants where practicable and without endangering the safety of the well site personnel and the public, per Rule 912.d. Operators shall notify the local emergency dispatch

or the local governmental designee of any natural gas flaring with reasonable notice timeframes specified in Rule 912.e.

When production flaring is approved per Rule 912.b., COGCC requires annual updates (requests to flare) on Sundry Notices, which discuss whether or not any new gathering systems or increased development of the field have changed pipeline economics such that installation of a new pipeline would be an economically viable option in lieu of continued flaring. COGCC encourages operators to use a portion of the gas flow for lease operations, if possible. COGCC also encourages other innovative approaches, in lieu of flaring (e.g., on-site gas turbine electric generation or re-injection into offset wells for pressure maintenance [UIC approval would be required for gas injection]).

Garfield County, in conjunction with Colorado State University and has initiated a long-term air quality monitoring program that will be conducted from Fall 2012 through Fall 2015. The initial criteria presented by Garfield County at the Northwest Colorado Oil and Gas Forum meeting of September 6, 2012 will allow for the evaluation of the need for air monitoring requirements at future well pad locations. Currently, air monitoring is regulated by the CDPHE.

# Pirtlaw Partners, Ltd. 1929 Allen Parkway Houston, TX 77019

March 1, 2012

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

Routt County Planning Commission PO Box 773598 Steamboat Springs, CO 80477

RE: Pirtlaw Partner's (Surface Owner) Opinion for Activity PP2011-054 Quicksilver Resources SUP

Dear Ms. Brookshire and Planning Commissioners,

The intent of this letter is to express support for a positive approval recommendation for the 24-33 Special Use Permit application submitted by Quicksilver Resources. Pirtlaw Partners believes that this application will allow reasonable development while also ensuring the protection of the conservation values and private property rights on Wolf Mountain Ranch. It was just over one year ago that SunTerra Oil and Gas was issued a SUP for oil exploration on the ranch. Very recently, Quicksilver Resources purchased that Lease with the existing Pirtlaw 14-03 well. The Pirtlaw 14-03 well and this new proposed Pirtlaw 24-33 well are both located on lands protected by conservation easements, which caused Pirtlaw and Quicksilver to put in place aggressive protection methods to ensure that the conservation values are not disrupted or destroyed.

Trying to be pro-active verses passive about protecting the conservation easements and the associated values, we put together a Development and Mitigation Team that has devoted extensive amounts of time and effort towards proper and responsible methods of energy recovery and to provide this and other operators reasonable access to recovery of their mineral estate interest which is protected by law and represents the dominant estate in Colorado. This activity is eminent in portions of Routt County and successful oil recovery has been taking place on Wolf Mountain Ranch along with properties adjacent to the ranch since the early mid-1900's. To date Quicksilver Resources has accommodated nearly all of our specific requests and mitigation efforts while supporting our goals of conservation and Pirtlaw wants to continue working with this specific operator.

We would like to stress the importance of recommending approval to the BOCC. The specific lease that Quicksilver Resources is working under has strict requirements and contains a 'continuous drilling clause' thereby requiring them to drill new wells within specified periods of time,

Ranch. We feel very confident in our team's ability to ensure this protection can be accomplished in conjunction with working with a responsible operator such as Quicksilver Resources.

Best Regards,

PIRTLAW PARTNERS, LTD, a Texas Limited Partnership

By: Pirtlaw Management LLC, General Partner

R. L. Waltrip, President

#### **Chris Brookshire**

From:

Judith Clifford [jclifford@grinc.com]

Sent:

Monday, November 19, 2012 2:01 PM

To:

Chris Brookshire

Cc:

slindsey@grinc.com; ckeister@grinc.com; Stan Page; hmsloop@grinc.com; Todd Hutson;

Judith Clifford

Subject:

FW: Dates Associated with Pirtlaw 32-09

#### Chris.

The land owner, Mr. Waltrip, does not want and will not allow another monitoring water well to be drilled on his property. Mr. Waltrip, the Wolf Mountain Conservation Conservancy and the COGCC believe that the current water monitoring protocols address any concerns related to water quality.

Thank you.

Judith R. Clifford | Sr. Regulatory Analyst | T 817 665 5438 | F 817 665 5009

From: Judith Clifford

Sent: Wednesday, November 07, 2012 2:09 PM

To: 'Chris Brookshire'

Cc: Cindy Keister; Stephen Lindsey; Heather McLaughlin-Sloop; Judith Clifford

Subject: RE: Dates Associated with Pirtlaw 32-09

Chris,

We anticipate having a response the week of Thanksgiving, thank you.

Judith R. Clifford | Sr. Regulatory Analyst | T 817 665 5438 | F 817 665 5009

From: Judith Clifford

Sent: Friday, November 02, 2012 9:12 AM

To: 'Chris Brookshire'

Cc: Cindy Keister; Judith Clifford

Subject: RE: Dates Associated with Pirtlaw 32-09

Chris,

We have several team members out of the office but will be reviewing internally. Thank you,

Judith R. Clifford | Sr. Regulatory Analyst | T 817 665 5438 | F 817 665 5009

From: Chris Brookshire [mailto:CBrookshire@co.routt.co.us]

Sent: Wednesday, October 31, 2012 11:44 AM

To: Judith Clifford

Subject: FW: Dates Associated with Pirtlaw 32-09

Judith

We spoke about a week ago about concerns that Brent Romick may have on the Pirtlaw property.

We have received this email from Brent and would like you to review this and submit any comments you may have.

If you have any questions, please contact me.

Chris



Please consider the environment before printing this e-mail.

From: Brent Romick [mailto:brent@romick.com]
Sent: Wednesday, October 31, 2012 7:40 AM

To: Tom Sullivan Cc: 'Joan M. Ryan'

Subject: Dates Associated with Pirtlaw 32-09

#### Tom,

To assist you with the facts associated with the previous communication delivered to you yesterday and current duplication of facts associated with the proposed Pirtlaw 32-09 SUP application and the previous SUP processes pertaining to Pirtlaw 14-03 & 24-33 is the current facts and proposed time tables.

Similar to the two previous well SUP processes, Pirtlaw 32-09 is subject to the Continuous Drilling Clause in the Victor America Lease. We provided you a copy of this information in February pertaining to Pirtlaw 24-33 and again yesterday. This Lease is topped lease and the same exact circumstances exist with the proposed 32-09 well as the previous two wells. The necessary Spud date for Pirtlaw 32-09 is March 4<sup>th</sup>, 2012. Wolf Mt. Ranch Phase 1B Conservation Easement is the host location for this proposed well and is the same as the existing Pirtlaw 14-03. This Easement has specific Conservation Values which must be maintained in accordance with the Easement. Included in the Easement is Specific Wildlife Restrictions and dates. In addition the existing Surface Use Agreement has more extensive restrictions which Pirtlaw requires of the Operator. The current Pirtlaw 32-09 SUP process is again disregarding the exact facts we just learned from on the 24-33 well process. Pirtlaw cannot allow this to be another duplication of the early process this year and with the current approval recommendation from the Planning Commission which in itself violates the necessary dates which all parties to the Conservation Agreement and Surface Use Agreement have entered into.

The County SUP Process has again created a circumstance where in order to proceed a Wildlife Waiver would be required. A Wildlife Waiver is NOT acceptable to Pirtlaw because wildlife restrictions must be maintained to protect the Phases Conservation Values which are paramount to Pirtlaw Partners. The current approved restrictions include a December 1 to February 28<sup>th</sup> Bald Eagle Roost restrictions in the area of the proposed 32-09 well and support road site. Grouse restrictions for Lek protection starts March 15<sup>th</sup> and concludes July 31<sup>st</sup>. It is impossible to construct the support road, Oil Location Pad, and drill in a period from March 1<sup>st</sup> to March 14<sup>th</sup>.

What does the County propose to the Landowner who's obligation and intention is to enforce the conditions of the Conservation Easement and the Surface Use Agreement? It is Pirtlaw's intention to proceed with whatever measures are necessary to ensure this activity occurs and previously agreed. Thank you. BR

#### **Chris Brookshire**

Subject:

FW: Bald Eagle Restrriction Agreed Upon Time Frame

From: Brent Romick [mailto:brent@romick.com]
Sent: Friday, November 16, 2012 9:29 AM

To: Chris Brookshire

Cc: 'Joan Shenfield'; hmsloop@grinc.com

Subject: FW: Bald Eagle Restriction Agreed Upon Time Frame

FYI

From: Haskins, James [mailto:jim.haskins@state.co.us]

Sent: Thursday, November 15, 2012 8:25 AM

To: Brent Romick

Cc: Michael G. Figgs; Joan Shenfield; Cindy Keister

Subject: Re: Bald Eagle Restriction Agreed Upon Time Frame

# Brent/Mike,

The information below comes from the BMP list that was adopted through the 1298 process. The third bullet point reflects a date of December 1st after which no surface occupancy or construction should occur. This does seem to conflict somewhat with bullet point 4 however the important verbiage in both of these is "active" winter roost site which is not the case at this location right now. All discussion and correspondence that I'm familiar with on this site used the December 1st date and that is what I'm comfortable with.

#### Jim

# **Bald Eagle**

- No surface occupancy (beyond that which historically occurred in the area) within 0.25 mile of any active or historic bald eagle nest site.
- No human disturbance or construction activity within 0.5 mile of any active bald eagle nest from November 15 to July 31. Activity within 0.5 mile of bald eagle nest sites would be best conducted between August 15 and October 15.
- No surface occupancy or construction within 0.25 mile of any active bald eagle winter night roost site, where there is no direct line of sight to the roost, between December 1 and February 28 and within 0.5 mile of any active bald eagle winter night roost site, where there is a direct line of sight to the roost, between December 1 and February 28.
- No human disturbance within 0.5 mile of any active bald eagle winter roost site from November 15 to March 15 except for periodic visits such as oil maintenance and monitoring Maintenance and monitoring work within the buffer zone after development should be restricted to the period between 10:00 a.m. and 2:00 p.m.
- No human disturbance within any mapped winter concentration areas between November 15 and March
   15.

On Thu, Nov 15, 2012 at 3:38 AM, Brent Romick <a href="mailto:brent@romick.com">brent@romick.com</a> wrote:

# Jim & Mike,

Pursuant to our recent discussions pertaining to the commencement of the Bald Eagle Roost restriction, it was mutually agreed in the March 2012 discussions and mitigation principals a 12.1 commencement and 2.28 termination. The referral document from the Division needs to be modified to reflect the same provided we are all still in agreement. This fact is very important to Quicksilver Resources as well and they would be included in our correspondence. I will be available all day t the office or on my cell. The completion of the access road and oil operation area should be completed prior to the 12.1 commencement date. Subgrade has been completed on the access road and the improvements for livestock and wildlife water ponds above the subject area is moving along nicely as part of the agreed upon total mitigation principles.

Thank you and give me a call or send me an email and I will respond asap. BR