

Allison, Rick

From: Allison, Rick
Sent: Monday, December 19, 2011 8:51 AM
To: 'KMiller@nobleenergyinc.com'
Cc: JKajiwara@nobleenergyinc.com
Subject: RE: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Kate,

I will place the following BMPs on the Form 2A:

“Operator proposes the following measures to prevent a release of drilling, completion, or produced fluids from impacting the stream channel immediately south of the pad:

1. Construct a hard armor/all weather pad as close to zero percent as possible.
2. Construct a ditch and berm along half of the west, and all of the south sides of the pad disturbance area.
3. Place silt fencing just beyond the ditch & berm.
4. Production facilities will be placed in the northeast corner of the location.”

Please note that silt fence will not contain spilled fluids. However, the ditch and berm appear to be reasonable measures to protect the stream channel. The silt fence can be effective as a sediment catch and to define the disturbance boundary.

Thank you,
Rick

From: KMiller@nobleenergyinc.com [mailto:KMiller@nobleenergyinc.com]
Sent: Tuesday, December 13, 2011 4:08 PM
To: Allison, Rick
Cc: JKajiwara@nobleenergyinc.com
Subject: RE: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Rick,

Please see the notes from my Landman that should cover any concerns with this location. Please feel free to contact me with any further questions with this location.

Kate,

My apologies as to the explanation of the order in which we plan to contain any fluid runoff, I got the order mixed up and left one of our lines defense out.

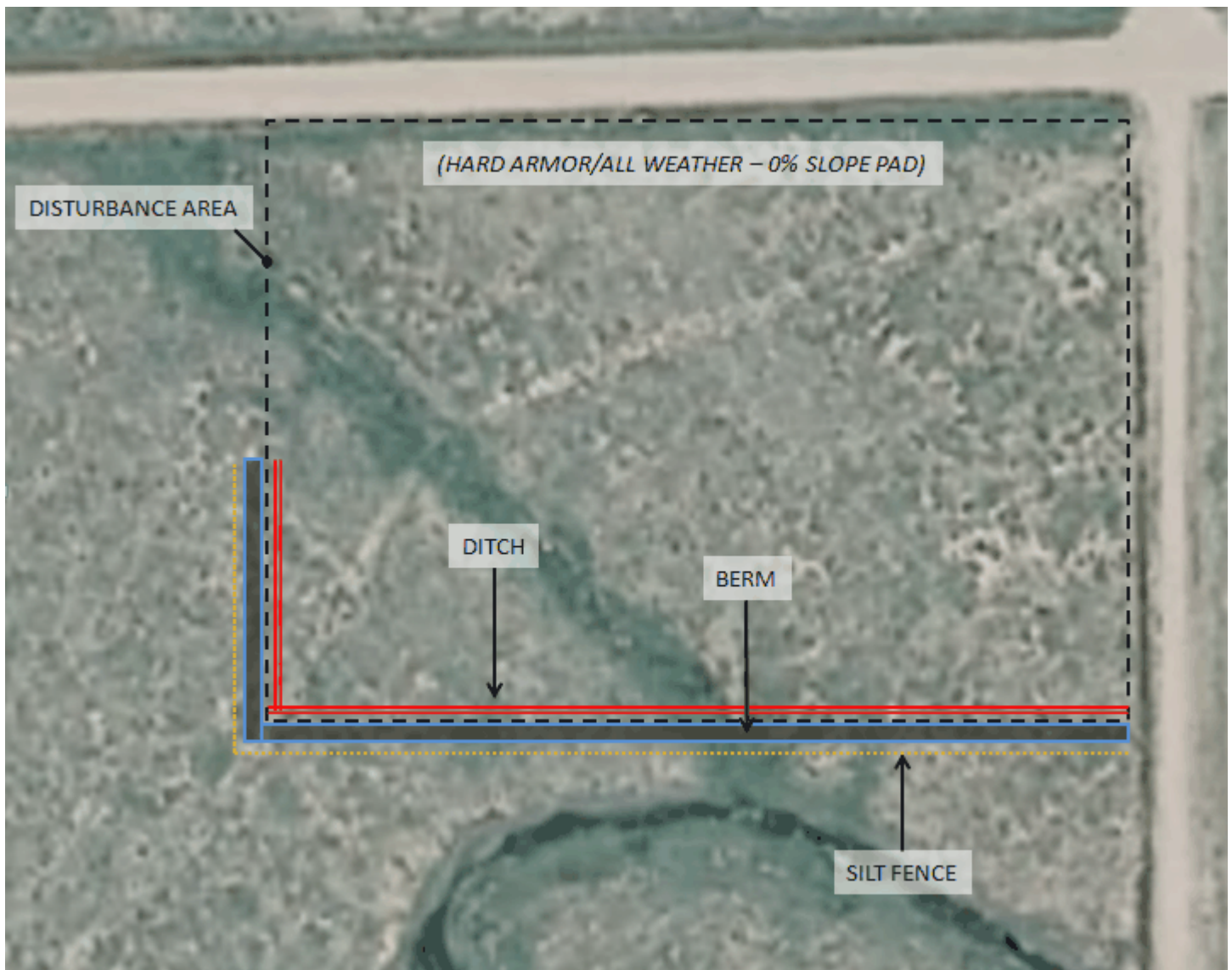
Our line of defense and operations will be as follows...

1. Construct a hard armor/all weather pad as close to zero percent as possible. (Restricting fluids from to flow in any direction)
2. Construct a ditch and berm along half of the west, and all of the south sides of the pad disturbance area. (The ditch is intended to collect and contain any possible fluids. Berm is created just beyond ditch to keep any fluids within the ditch from spill over)
3. Place silt fencing just beyond the ditch & berm. (The silt fence's purpose is to act as a filter for any fluids that may run

over the said ditch & berm, containing sediments within the fluids from impacting stream. The fencing will also be a visible boundary for workers to respect the wetlands area around the stream. Fluid overflow from the ditch & berm is highly unlikely but will be put in place to serve as the final line of defense.)

- You will find below that I have put together an aerial correctly depicting our plans of operations. With these protective measures put in place we should meet 4 BMP's (Best Management Practice), and succeed in preventing any possible fluids from reaching the stream to the south of our pad. I hope that this may help with any concerns or questions regarding our operations.

Please let me know If there may be anything else that needs answering.



Kate Miller
Noble Energy Inc.
Land Tech.
kmiller@nobleenergyinc.com
970-785-8726

From: "Allison, Rick" <Rick.Allison@state.co.us>
To: <JKajiwar@nobleenergyinc.com>, <KMiller@nobleenergyinc.com>
Date: 12/13/2011 12:31 PM
Subject: RE: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Jan/Kate,

Thank you for obtaining the additional information, particularly regarding the location of the production facilities. Placing the production facilities in the northeast corner of the location reduces the risk of a spill impacting surface water during the production phase.

I have a question regarding the silt fence. Silt fence is designed to allow water (fluids) to pass through, trapping the silt. Therefore, it would not be effective in containing a release of fluids on the location. However, the berm appears to be a reasonable measure for containing a release of fluids during drilling and completion. The silt fence could be useful to make people on location aware of the location boundary, thereby helping protect the berm from being unintentionally breached or compromised.

Is the silt fence really intended to hold fluids or will it be installed for some other purpose? Please explain how it can contain fluids if that is the case.

Thank you,
Rick

From: JKajiwar@nobleenergyinc.com [<mailto:JKajiwar@nobleenergyinc.com>]
Sent: Monday, December 12, 2011 7:25 AM
To: Allison, Rick
Subject: Fw: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Rick--

Sorry it took a while for this, I hope we have been able to address all your concerns. Please let me know.

Thanks
Jan

----- Forwarded by Jan Kajiwar/Denver/NobleEnergy/Samedan on 12/12/2011 07:19 AM -----

From: Kate Miller/Denver/NobleEnergy/Samedan
To: Jan Kajiwar/Denver/NobleEnergy/Samedan@SAMEDAN
Cc: Jacob Rice/Platteville/NobleEnergy/Samedan@SAMEDAN
Date: 12/09/2011 11:33 AM
Subject: Fw: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Jan,

Please see below for Noble's response to Rick Allison's questions.

Thanks,

Kate Miller

Noble Energy Inc.
Land Tech.
kmiller@nobleenergyinc.com
970-785-8726

----- Forwarded by Kate Miller/Denver/NobleEnergy/Samedan on 12/09/2011 11:28 AM -----

From: Jacob Rice/Platteville/NobleEnergy/Samedan
To: Kate Miller/Denver/NobleEnergy/Samedan@Samedan
Date: 12/09/2011 11:23 AM
Subject: Re: Fw: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Kate,

I have answered the questions & concerns that the State has below. Let me know if you think anything else is needed or not needed.

What site-specific plans has Noble developed to minimize the following potential impacts?

1. How will the intermittent stream located immediately adjacent to and south of the proposed location be protected from a release of drilling or completion fluids?

This issue was addressed and discussed at the siteview meeting we had on location with construction. To alleviate any possibility of runoff, construction plans to take three (3) protective measures.

- 1. Build up the drilling pad on the south/southwest side to as close as a zero percent slope as possible, decreasing the chances of any possible fluids from wanting to drain in the direction of the intermittent stream to the South of the pad.*
- 2. Put high density silt fencing around the pad site on the better part of the West, and all of the South sides of the pad to create a first line of defense against any moving fluids.*
- 3. Construct large dirt berms immediately behind the said silt fencing on the west and south sides, creating a 2nd secured line of defense for fluid runoff that may somehow get through the silt fence.*

2. The surface use agreement shows the production facilities will be located on the southeast corner of the location, near the intermittent stream. How will the facilities be constructed and operated to minimize the potential for a release of crude oil or produced water from impacting ground water or surface water?

This was also an issue that was discussed at our siteview meeting and was changed. The facilities will now be located in the Northeast corner of the location, on the corner of CR 78 & CR 63, and will also be surrounded with a dirt berm (as they usually are). The SUA was signed and filed just before the siteview meeting took place, that's why the alteration does not show on the SUA. The landowner was in attendance at the meeting and agreed to the moving of the facilities.

3. Why not place this pad in the SESE of Section 19 to avoid the wetland and use the county roads as an existing buffer between the location and the intermittent stream?

Putting this pad in the SESE was actually our first choice for these wells, however, the surface owner of that parcel of land did not want the wells on his/her property. Since we would be out of the GWA window at the said SESE of Section 19 we would need waivers to do so and would not be able to obtain them since the landowner would not consent to drilling and can not be bonded. Therefore, the SESE of Section 19 for this pad was not an option, we continued with our next available choice in the NENE of section 30 and the surface owner wanted, and agreed to the wells at this location and this location only in Section 30.

- You will find below that I have attached an aerial map depicting our general plan(s) with this location. If there are any other questions or concerns regarding the Grigsby Pad location please don't hesitate to call or email me at anytime.

IMPROVEMENTS:
(MEASURED FROM THE GRIGSBY AC19-62HN)

A	TOP OF DRAINAGE 109' SW, 134' S	F	BARROW DITCH 236' N, 267' N
B	WET AREA 570' SW	G	PUBLIC ROAD (CR 78) 240' N PRIVATE ROAD 250' E
C	POND 660' SW	H	OVERHEAD UTILITY 278' E
D	FENCE 224' N, 279' E	I	2-TRACK FIELD ROAD 98' NW
E	FIBER OPTIC MARKER 315' NE, 347' SE, 362' NE, 405' NE		

The map shows an aerial view of a wetland area labeled "GRIGSBY PAD". A blue line indicates the "ORIGINAL DRAINAGE ROUTE", and a dashed orange line indicates the "TEMP. ROUTE OF DRAINAGE". A "DISTURBED AREA" is marked with a dashed orange line and an arrow. Various features are labeled with letters A through I, corresponding to the table above. A north arrow is located in the top right corner. A yellow arrow points to a feature labeled "ACCESS".

Jacob Rice
Land Negotiator



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From: "Allison, Rick" <Rick.Allison@state.co.us>
To: <JKajiware@nobleenergyinc.com>
Cc: "Deranleau, Greg" <Greg.Deranleau@state.co.us>
Date: 11/28/2011 02:31 PM
Subject: Grigsby AC19-62HN Form 2A 400215367 - Noble Energy, Inc.

Jan,

I am reviewing the Form 2A location assessment for the Grigsby AC19-62HN well location in the NENE Sec30 T7N R63W, Weld County and have the following comments:

1. Noble has attached sensitive area data indicating the location will fill a portion of wetlands. Noble has also attached authorization from the US Army Corps of Engineers authorizing the filling of these wetlands. Therefore, the answers to the questions: "Is the location in a riparian area" and "Was an Army Corps of Engineers Section 404 permit filed" should be Yes, not No as Noble has indicated. I have changed the answers to Yes.
2. The location is proximate to surface water as indicated by the attached sensitive area data and by the data supplied on the Location Drawing and Hydrology Map. The location will not only fill wetlands, but the edge of the location will be adjacent to the meander of an intermittent stream. Therefore the location is a sensitive area due to its proximity to surface water.
3. The data included in the Savage and Savage report indicate that the ground is saturated and the water table is present at the surface. Therefore, I have changed the depth to ground water from 79 feet to 1 foot.
4. The shallow depth to ground water makes the location in a sensitive area due to potential impacts to ground water. I have changed the sensitive area designation to Yes.

What site-specific plans has Noble developed to minimize the following potential impacts?

1. How will the intermittent stream located immediately adjacent to and south of the proposed location be protected from a release of drilling or completion fluids?
2. The surface use agreement shows the production facilities will be located on the southeast corner of the location, near the intermittent stream. How will the facilities be constructed and operated to minimize the potential for a release of crude oil or produced water from impacting ground water or surface water?
3. Why not place this pad in the SESE of Section 19 to avoid the wetland and use the county roads as an existing buffer between the location and the intermittent stream?

COGCC would appreciate Noble's agreement with the above four changes and a response to the three concerns above.

Best Regards,

Rick Allison, P.G.
Oil and Gas Location Assessment Specialist

Colorado Oil and Gas Conservation Commission
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303-894-2100 ext 5102

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