**SDSMT/SGU Project Team meeting notes**

**8.1.2012**

To use the posted documents that came from Dan, use Dan’s expertise to come up and discuss limitations of the federal effort, come up with a research plan that makes sense for this 3 year period to answer as many questions as are relevant to everyone.

I think we need to start at a basic level to do some resource assessments to figure out what’s there and even if it’s not. We know some of the geology, but not really in South Dakota. The questions are, why, what are the differences and the issues. There are basic assessments that need to be done. Comparisons between Marcellus and Barnett aren’t a straightforward process. We want to address that. Your students will learn a lot about how to do this as we go through the exercise. My vision is to start with some of the basic stuff, and hopefully the SDSMT can pull up some documentation of studies that have been done to use as a basis for moving forward.

On my end, at the beginning of the summer in June and July I’ve been compiling data on studies. I have a “previous works” in the making, and compiling the references. As far as the background geology of the area. I’ve been doing a lot of that. And once I reached an endpoint, people have been giving me papers they find. I kind of pushed myself to gather some samples for hydrocarbon analysis. I went out and collected some samples last weekend. I’m in the process of adding them to my geodata base. Having lots of problems with my geodatabase. It was deleted form the computer, I’m redoing it, and getting back to the point where I can input the sample area into my map.

Any existing data would be helpful. Andy documents you have could be posted on Sharepoint so we have everything in one place. Do you know of any access to any wells anywhere? We get stuck doing outcrop, since it’s always from the periphery of the basin. It would be important to get the resource potential of the source rock we want something more from the center part of the basin. There’s nothing for core that I’ve found yet in S Dakota. Still look at Nebraska Geo Survey. There have been a few wells that were drilled that have cuttings. But hydrocarbon analysis not useful from cuttings. It depends on what the cuttings were cut with. If they’re cleaned properly you can sue them for analysis. Weather and outcroppings also problematic. I don’t’ like working with cuttings, but they’re better than nothing.

I’ve been all over the place with my research. It’s not exactly the periphery of the basin, it’s not at the center. It’s in a good place for hydrocarbon storage.

I have CD of. Drilled water wells have cuttings with water drills. I have those cuttings. Those are the only ones I knew of. They were drilled with water-based mud. We have two core preservative labs. We will try to visit them and find out what they have. If there is something interesting, we’ll find out if there are any core available. The USGS core library in Denver might have something. They have a repository. I guess we’ll have to work with what we have, and maximize what we can find. That’s pretty typical for these things. You’re usually stuck working with this sort of stuff.

I was looking at my notes about the wells I’ve looked as so far. And copying information about the wells, like the county where they’re located, and geophysical logs that give depth of the top of the Niobrara and thickness. I have 13 that I’ve compiled, that will help me make these other maps on ArcGIS. But it’s been a slow process so far.

We’ve had some issues working with our GIS to get contours. We have a geologic model called Earth Vision that gives a 3D model of the Marcellus formation. If we have enough vertical control and flat wall control, we might be able to build a model that we can hang the data point on. We have the thing and I’d like to use it. Earth Vision, the supplier is Dynamic Graphics, it’s more for mining, but it’s got a good metadata capability, so you can stick a lot of data points with a lot of attributers.

Control software – the Petrel software. I’m trying to make the structure contour maps, as we were talking, both foster and I don’t know what to expect from this software. It might be easier to use

You should be able to import ArcGIS files to Petrel. A lot of schools have that, but if we try to buy it, it’s really pricey. They want everyone at the schools to use it so graduates are familiar with it.

I’m putting a lot of my time and energy in ArcGIS, and am happy to know it’s easy to import.

We don’t have much of a database on the Niobrara shale, so we’ll have to see what we can find and pull it together. There’s production in Colorado and Wyoming. We’re very Marcellus focused, since there’s a lot of data and a lot going on. We use Marcellus as a case study for every ting else.

We need to look at what we need to assess the data. Figure out what’s available and identify the data gaps. What needs to be filled. From preliminary steps, look what’s out there and what we need. I will make a CD and send it out. It’s pretty big, I will check with my.

I have a pretty extensive, and looking at previous work. There’s still a lot of it. Faster wants me to start working on my references.

Assignments for next meeting:

Keep moving on the CRADA

Subodh will upload files to the portal