

elements in the reclamation of land.

“Prior to the 1980s there were no regulations in regards to saving top soil. When the Oil and Gas Division was formed in the 1980s one of the first rules implemented was saving top soil,” Ritter said. “Today, top soil is stockpiled so after development, the land is reshaped and returned as close as possible to the original contour. The area can be reseeded with appropriate native fauna or crop. It is not a process that happens overnight, and it can sometimes take years to get a site returned to its original condition.”

Cody Vanderbush, reclamation specialist, North Dakota Oil and Gas Division, agrees that top soil

regulations are extremely critical in proper reclamation, and added new technologies and methods have been instrumental in restoration.

“Over the past decade or so we gained a better knowledge on everything from better seeding to erosion control to hydroseeding,” Vanderbush said.

Another factor in today’s reclamation world is pad drilling. The advent of pad drilling has created new opportunities in extracting oil and has allowed increased opportunities to decrease oil and gas’s footprint.

“Previous to multi-wells the footprint was about 10 percent,” Ritter said. “Then in 2006-2007 we got down to

4 or 5 percent. Now, we are less than one half of one percent.

According to Ritter, the typical well pad is approximately 4-5 acres and averages about four wells per pad. However, the well numbers do vary, the largest drilling 14 wells.

“Whether four or 14, the steps for reclamation are the same,” Vanderbush said. “Ultimately everyone’s goal is to get the land back to its original state.”

Tom Petrie, chairman of Petrie Partners, sees additional environmental assistance from the practice of pad drilling.

“The benefit you have is one the

surface disturbance is much reduced,” Petrie said. “And two, by bringing all those wells into one pad your gathering challenges are much improved. And then finally you’ve eliminated a lot of rig mobilization.”

Petrie continued saying historically the rigs would take upwards of a week or more to move. Today, the rigs hydraulically walk to the next well decreasing the overall amount of activity on the land. Petrie said it costs more to extract oil this way, but technology has made it “very practical” to perform.

Reclamation involving pipelines have evolved over the years as well. Tony Straquadine, manager of government

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LAUREN DONOVAN/Tribune

An example of North Dakota’s reclamation laws in practice, this wetlands area is one of the several that will have been reclaimed after BNI Coal completes reclamation work in this section of the coal mine. The emerging cattail and other vegetation got a start from seed stored when the soil was originally stripped and stockpiled before the area was opened for coal.