

Bratcher, Mike, EMNRD

From: Randall Hicks <r@rthicksconsult.com>
Sent: Friday, March 08, 2013 10:09 AM
To: Bratcher, Mike, EMNRD
Cc: mstewart@helmsoil.com; Hollie Lamb; cstoker@helmsoil.com; kristin@rthicksconsult.com
Subject: Alamo - State BK 9
Attachments: BK9WatercourseData.pdf; WaterDiversionDRAFT.pdf

Mike

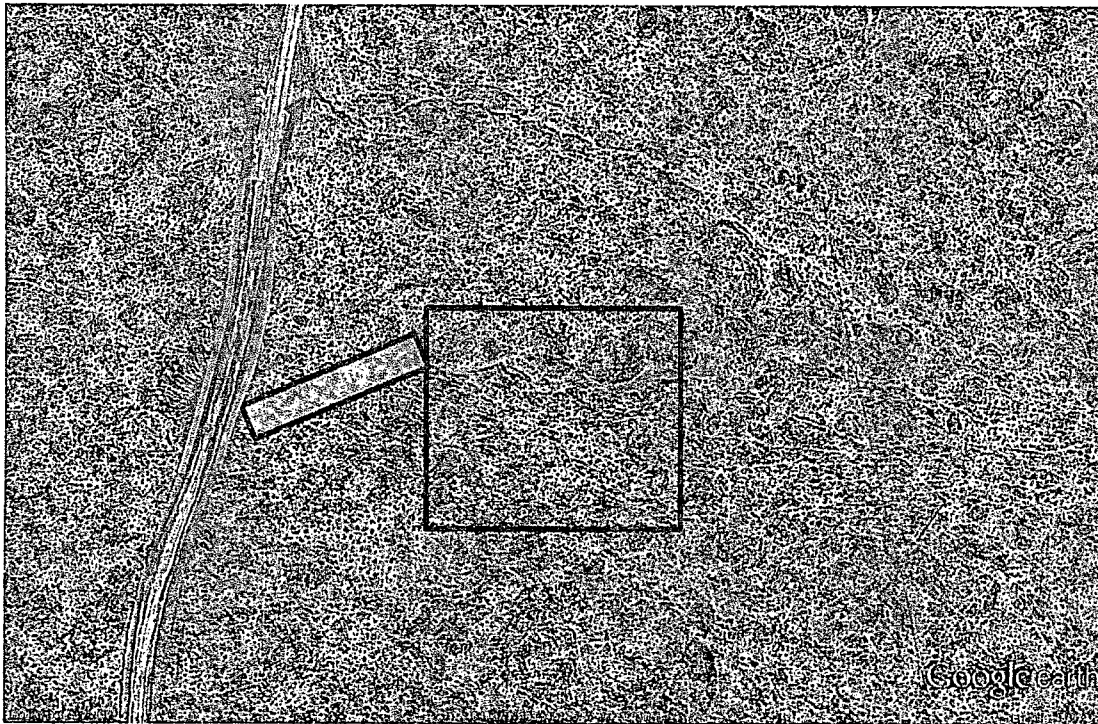
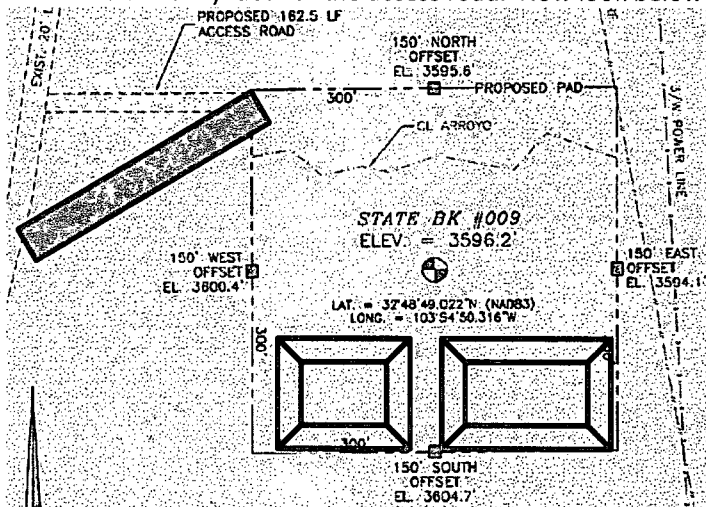
I attach additional research and opinion regarding the erosion feature/gully that exists on the north side of the State BK 9 location. I think the pre-1971 air photograph from the Soil Survey should help understand what has happened to the natural drainage in this area. Also attached is my preliminary idea about diverting the lease road runoff away from the location and into the larger arroyo to the north. We need to walk the site with Sweatt prior to construction and be sure we are all comfortable about how to make this happen in a manner that makes the most sense.

Please push this note to side and focus on getting the Wilson 3 reviewed/approved. We need to give Sweatt to notice to proceed for building that location.

Expect a paper copy of this in your Monday mail.

Randall Hicks
RT Hicks Consultants
Office: 505-266-5004
Cell: 505-238-9515

Here is the survey of the site with the pit show. Note the Arroyo shown on the survey – this must be filled to build the location. The Google map below the survey shows the same area. The 150 south survey benchmark is 8 feet higher than the well marker – the pit is built into the side of a dune. Also shown below is my idea for the access road. Now look below at the Google Image.



PRELIMIARY DESIGN - Sweatt creates one or two small bar ditches on each side of the road that direct drainage to the larger arroyo to the north. This water diversion will be necessary with pits or closed loop. In the absence of water diversion, one frog strangler rain will take out the northern portion of the location – probably in July, after construction of the tank battery. In essence, this diversion restores some of the drainage pattern observed in the 1971 Soil Survey map.

R. T. HICKS CONSULTANTS, LTD.

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March 8, 2013

Mr. Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, New Mexico 88210

RE: Alamo Permian – State BK #9

Dear Mike:

Our application and subsequent communications identified a dune-blowout/erosional feature that transmits water. The site walk with you and other data show:

1. This feature is about 180 feet from the northern edge of the proposed temporary pit
2. Uphill from this feature there is no "watercourse"
3. The current road, which is not present on the 1971 Soil Survey of Eddy County (see below), causes stormwater to into the gully/erosional feature
4. The proposed drilling pad and access road will eliminate this feature
5. The area of the location is a dune field, not a drainage.
6. a "watercourse" exists about 200 feet north of this feature. However, this feature begins at a culvert under the Lovington Highway. This watercourse is faintly visible on the aerial photographs of the 1971 Soil Survey of Eddy County (see below) and more obvious in more recent Google Earth images

From these data we conclude that the erosional feature/gully that lies about 180 feet north of the proposed pit is not natural and is not a watercourse - it is a by-product of man's activity. However, this feature requires attention with respect to construction of the location and temporary pit. The larger watercourse located about 350 feet north of the well marker may also be a by-product of man's activity, as it is not marked as a drainage on the Soil Survey map (see below).

When building the access road and location, the operator will divert drainage from the road to the larger watercourse to the north. Please consider this commitment to divert road drainage to the larger watercourse north of the location an amendment to the application.

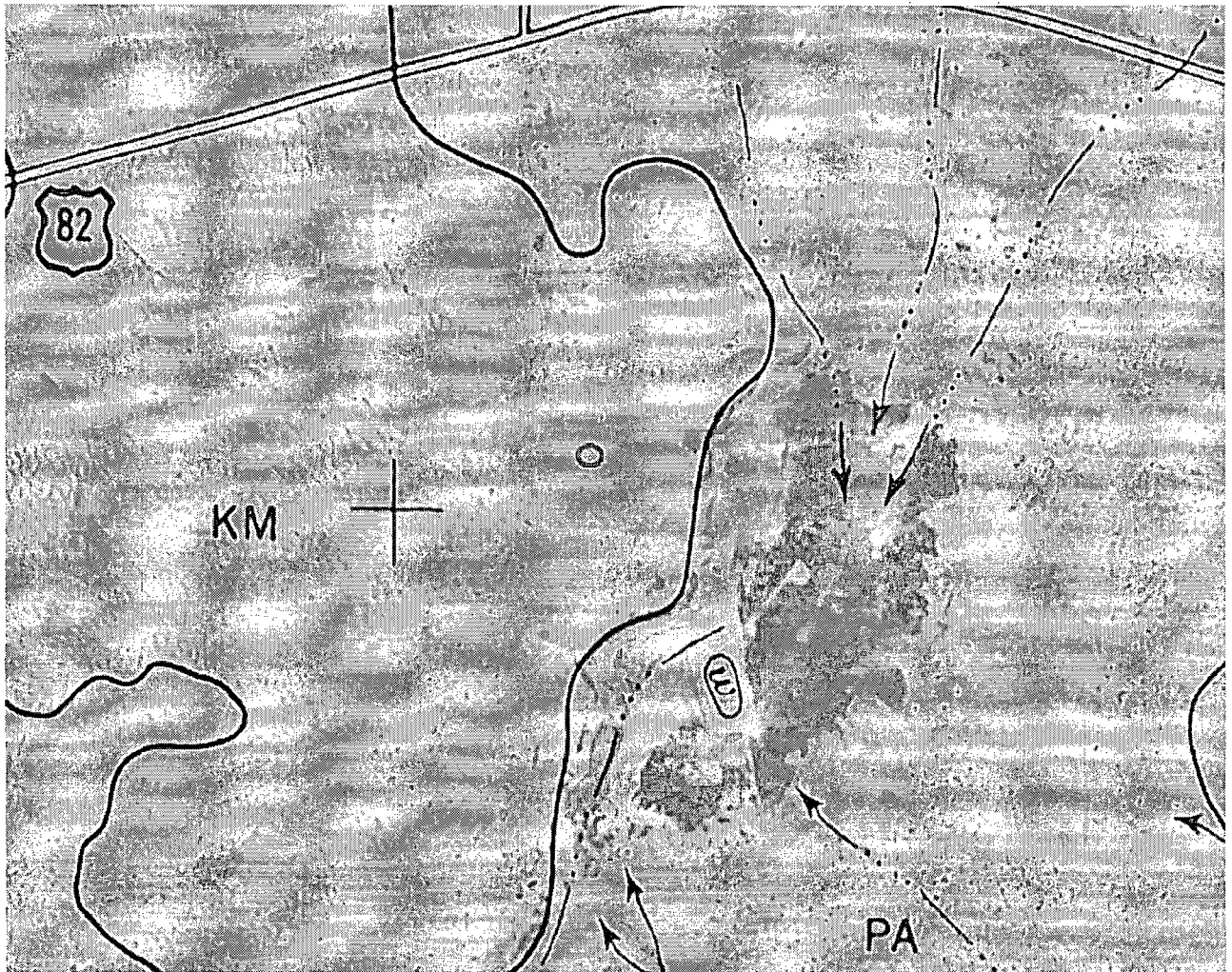
Sincerely,
R.T. Hicks Consultants



Randall Hicks
Principal

Copy: Alamo Permian Resources

The aerial photograph below is reproduced from the 1971 Eddy County Soil Survey. The location of the State BK #9 proposed temporary pit lies within the red circle with the larger drainage just north of the circle. No drainage is evident in the area of the State BK 9 location. This map identifies drainages entering the ancient lake bed and a channel draining the ancient lakebed (north and west of the W in the center of the map). The scientists who created this map did not identify a drainage near State BK 9.



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The photograph below was used to "georeference" the location of the temporary pit. One can compare common features to see that the circle on the photograph above is consistent with the location of the State BK 9 temporary pit. Note that numerous roads, pipelines and well locations have materially disturbed the natural drainage in the area.

