

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



September 16, 2015

Ms. Julie Harris
ARP Production Company, LLC
Park Place Corporate Center One
1000 Commerce Drive 4th floor
Pittsburgh, PA 15275

RE: Packer Setting Depth Exception
VPR E-99 (30-007-20378)
H-5-31N-19E-Colfax
Administrative Order SWD-850
Entrada/Glorieta Formations

Dear Sir or Madame:

Reference is made to your request on behalf of ARP Production Company, LLC (OGRID 300097, "ARP") received by the Division on September 1, 2015, for the above named well. ARP applied for exception to the requirement in permit SWD-850 to set the packer or polish bore receptacle at 6703 feet – and provided notice to the surface owner and in the newspaper.

ARP has requested to allow the polished bore receptacle on the end of the 3-1/2 inch tubing to be set into the top of the 5 inch liner at approximately 6345 feet. The existing disposal sands are located from 7095 to 7175 feet within the Entrada formation and from 7470 to 7580 feet in the Glorieta formation. The open-hole interval extends from 6824 feet to 7690 feet and has in it, a perforated, uncemented 3-1/2 inch liner.

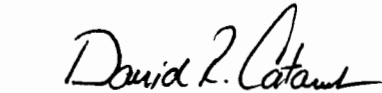
It is our understanding that ARP has maintained the current packer setting depth based on prior setting depths used by the previous operator of the injection well. This setting depth is advantageous in allowing disposal of higher volumes at lower pressures. The evidence presented shows the Dakota formation is located behind cemented casing and the footage below 6345 feet is not productive of natural gas. Further, ARP is not asking for permission to perforate the Dakota for additional disposal.

For the reasons stated in the application and because it appears that correlative rights are protected, waste will not occur and this modification will not endanger any fresh water aquifer or the environment, the exception is granted. The packer location within this well shall not be set higher

than 6345 feet and the cemented casing in this well shall not be perforated for disposal unless the operator receives written approval from the Division Director.

The Division Director may rescind this exception if it becomes apparent that the injected fluid is not being confined to the permitted interval or is endangering any fresh water aquifer.

Sincerely,



DAVID R. CATANACH
Director

DRC/wvjj

cc: Oil Conservation Division – Santa Fe District Office
SWD-850
Well File API 30-007-20378

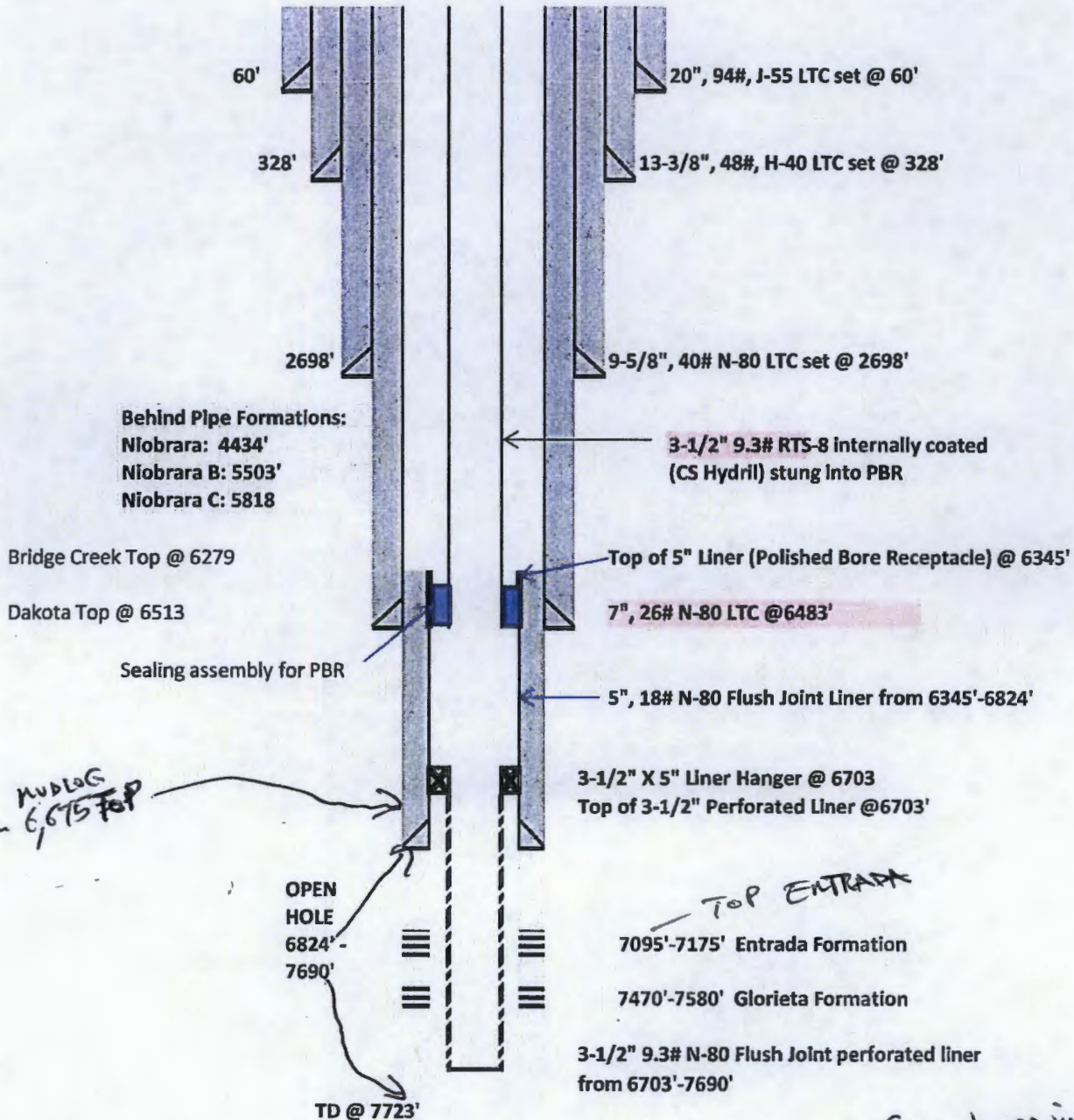
VPR E-99 WATER DISPOSAL WELL WELLBORE DIAGRAM

LEASE: Vermejo Park Ranch
LOC: 1392' FNL; 885' FEL
BHL: Vertical Well
CURRENT STATUS: WDW

WELL: VPR E-99 WDI Field: Stubblefield Canyon
SEC: 5
GL: 8593'

T/R: T31N, R19E
CTV/ST: Colfax, New Mexico

API NO: 30-007-20378
SPUD: 7/3/02
COMPL: 1/3/03
TD: 7723'
PBD: 7690'



Memorandum
6,675 TOP

(DKTA/MORRISON/ENTRADA/GLORIETA)
6,513' GROSS 7,690'
OH 6,824-7,690'
PBR @ 6345'

VPR E-099
API # 30-007-20378
Production Potential of Dakota Formation

From June 2, 2015 to June 9, 2015, Atlas Resource Partners conducted squeeze operations on VPR E-099 because it had failed to pass a MIT. The squeeze was successful and the well passed the MIT on June 9. During these operations, it was discovered that the tubing depth was less than originally reported by the previous operator. The tubing was reported to be below the Dakota Formation but was actually above. In order to continue with the current wellbore configuration, Atlas desires to include the Dakota as part of its water disposal interval.

The Dakota formation spans from 6513' to 6713' in the E-099 and exists as a series of sand and shale sequences. Relatively clean sands can be identified at 6513 – 6527, 6565 – 6572, 6578 – 6601, 6612 – 6632, 6639 – 6667, and 6671 – 6679. This wellbore section was logged prior to running intermediate casing, and the hole depth at this time was 6824'. Due to hole conditions, the resistivity and density neutron log were only run from 6660 to the top of intermediate casing at 6483'. Reviewing the log data that is available, there is slight separation between the density and neutron in this interval, but it is not believed that it is significant enough to indicate the commercial presence of gas. The porosity is also low - 5% to 6% through the interval. Reviewing the mud log, there was one notable connection gas kick at the top of the Dakota, but it quickly dissipated and the reported fluids were subsequently water.

Looking at the Dakota Formation on a broader scale, Atlas Energy owns the mineral interest in over 570,000 acres that constitutes our Vermejo Park project. This acreage is primarily located in Colfax County, New Mexico. Thus far, no commercial Dakota production has been established. In an offset to the E-099, the E-034, the Dakota was swab tested and found to be incapable of sustained gas production due to high water production.

In summary it is believed that the Dakota Formation does not have commercial hydrocarbon production potential because:

- Low porosity – 5 to 6%
- Lack of significant cross over on density neutron logs
- No sustained gas indication on mud log
- Tested wet in offset well