

## NORTH AMERICAN ROYALTIES, INC.

LONG WELL NO. 1

LEA COUNTY, NEW MEXICO

## DST NO. 1

(11,282' to 11,350')

4/24/78

Finished running in hole with DST #1 (11,282' to 11,350'). Opened tool for 10 min. preflow, very weak blow. Closed tool for 60 min. initial shut-in. Reopened tool for 30 min. final flow, very weak blow-died in 28 min. Closed tool for 90 min. shut-in. POOH. Recovered 60' of drilling mud with 1000 ppm chlorides. Pressures were as follows:

IHP 5306 psi  
IFP 57 psi  
ISIP 70 psi  
FFP 57 psi  
FSIP 80 psi  
FHP 5306 psi  
BHT 158° F

Sample Chamber Recovery-880 cc of mud, 0 psi with a 1000 ppm chloride content.

## DST NO. 2 (MIS-RUN)

## DST NO. 3

(11,365' to 11,392')

4/27/78

Finished going in hole with DST #3 (11,365' to 11,392'). Opened tool for 15 min. preflow with strong blow. Shut in tool for 1-1/4 hrs. Had gas to surface in 35 min. after closing tool. Opened tool for 1-1/3 hrs. @ end of flow period, surface pressure was 69 psi on 3/8" choke, making gas @ rate of 217 MCFPD. Shut in tool for 2 hrs. Pulled test tools free and reversed out 5 bbls. free oil and 10 bbls. gas and oil-cut drilling mud. POOH with DST #3. Pressures were as follows:

IHP 5347 psi  
IFP 125 psi to 188 psi  
ISIP 2818 psi  
FFP 150 psi to 426 psi  
FSIP 1996 psi  
FHP 5347 psi

Sample Chamber Recovery: 125 psi, 2.37 cubic ft. gas, 520 cc oil, 140 cc water and 140 cc drilling mud.

## DST NO. 4

(11,558' to 11,624')

4/30/78

Results of DST #4 (11,558' to 11,624') are as follows: Opened tool for 5 min. preflow with strong blow. Shut in tool for 1 hr.-had gas to surface in 4 min. after closing tool. Opened tool for 1 hr.-had gas and oil-cut mud to surface 22 min. after opening tool. Flowed to pit and cleaned up. Flowed 15 bbls. oil on 1/2" choke @ 350 psi in approximately 15 min. Shut in tool for 1-1/2 hrs. Opened tool for 1 hr.-flowed 40 bbls. oil on 1/2" choke @ 250 psi. Shut in tool for 2 hrs. Released test tools and reversed out 60 bbls. oil and 90 bbls. oil and gas-cut mud. POOH with test tools. Recovered total 115 bbls. oil during test. Pressures were as follows:

IHP 5473 psi  
IFP 833 psi to 947 psi  
ISIP 4095 psi  
2nd FP 947 psi to 2363 psi  
2nd SIP 2729 psi  
FFP 1086 psi to 2148 psi  
FSIP 2540 psi  
FHP 5473 psi

Sample Chamber Recovery: 500 psi, 2.47 cubic feet gas, 80 cc oil, 1180 cc oil and gas-cut mud, and 160 cc water. Oil Gravity: 42.2°.

## DST NO. 5

(11,630' to 11,684')

5/2/78

Completed running DST #5 (11,630' to 11,684'). Opened tool for 5 min. preflow with fair blow. Closed tool for 1 hr. Opened tool for 1 hr.; at end of flow period had 18 psi on 3/8" choke, no gas to surface. Closed tool for 2 hrs. Released test tools and POOH. Recovered 3534' of gas in drill pipe, 221' of light oil and gas-cut mud and 120' of gas-cut salt water. Pressures were as follows:

IHP 5532 psi  
IFP 69 psi to 94 psi  
ISIP 4248 psi  
FFP 94 psi to 157 psi  
FSIP 3912 psi  
FHP 5494 psi

Sample Chamber Recovery: 135 psi, .32 cubic feet of gas, 380 cc salt water and 720 cc mud.