

HIGH PRESSURE SEAL BACK-UP

Abstract

A seal mechanism for use with a downhole component comprises a first tubular member and a second tubular member, wherein the first tubular member is disposed within the second tubular member and separated therefrom by an extrusion gap; a circumferential groove disposed on the first tubular member; a seal disposed within the circumferential groove, wherein the seal is selectively positionable into engagement with the second tubular member; and a high pressure seal back-up disposed within the circumferential groove, wherein the distance between an inside diameter of the high pressure seal back-up and an outside diameter of the high pressure seal back-up is configured to remain substantially constant when pressure increases on the high pressure seal back-up, and wherein the high pressure seal back-up is configured to have an increase in its outer diameter in response to a pressure increase.

[FIGURE 1]