Conductor Failures Put Workers’ Safety and the Environment at Risk

BSEE has observed several conductor failures in recent inspections by BSEE inspectors and incident reports submitted by industry. Failure to maintain the integrity of the conductor can lead to parting of the conductor, external and internal corrosion, well and structural damage, collapse, and other negative affects like well blowouts.

Corrosion of the inner wall may occur if water and air enter the annular space inside a conductor. This corrosion may not be observable until the conductor develops through-thickness holes or fractures, which can further corrode the structure and other well components.

The conductor is severed near the water line, affecting the structural integrity of the well.

The conductor has a fracture and is leaning to the side, causing stress on the associated equipment.

The conductor (Drive Pipe) is parted below the bell guide.
Therefore, BSEE recommends that operators consider the following:

- Prevent water and air from entering the conductor-casing annular space, and between the conductor and casing;
- Ensure any supports or clamps that are attached to a conductor do not accumulate water;
- Conductors should be properly supported and maintained for lateral loading. Do not use ropes or chains as a long-term solution to prevent movement;
- Maintain cathodic protection, verify that anodes are actively providing protection within performance requirements, and confirm voltage measurements are within acceptable range; and,
- Complete inspection testing on a recurring basis (e.g. ultrasonic/UT, laser, etc.) to determine the extent of metal loss and repair as needed.

The lack of lateral stabilization and conductor-casing annulus cover may reduce structural support of the conductor. The original support / framing collar at the top of this conductor is missing, exposing the insider. A new collar was welded to the top, but it is not connected to the Wellhead and does not fully cover the opening.

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A Safety Alert is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding a potential safety issue. It also contains recommendations that could assist avoiding potential incidents on the Outer Continental Shelf.