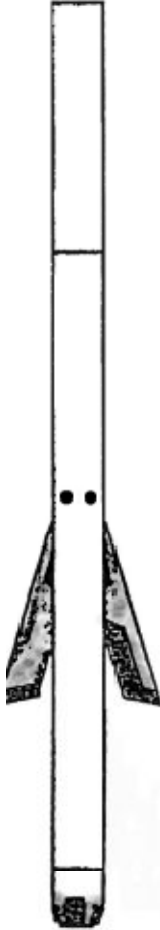


TUBING UNDERREAMER

THE TUBING UNDERREAMER - CLEAN OUT TOOL AND CUTTER IS HYDRAULICALLY OPERATED WITH A MINIMUM OF 75 PSI PRESSURE. ALL TOOLS ARE DESIGNED WITH POSITIVE STOPS WHICH ALLOW THE CUTTER ARMS TO EXPAND ONLY TO A PREDETERMINED DIAMETER. THE CUTTER ARMS ARE DRESSED WITH VARIOUS SIZE AND CHIPS OF TUNGSTEN CARBIDE FOR MAXIMUM PENETRATION AND MATERIAL REMOVAL. A BLADE TYPE BIT OR BULLNOSE IS ALSO DRESSED WITH TUNGSTEN CARBIDE.

THE TUBING UNDERREAMER - CLEAN OUT TOOL AND CUTTER IS A UNIQUELY DESIGNED TOOL WHICH WILL OPERATE UNDERNEATH PRODUCTION PACKERS WITHOUT REMOVING OR PULLING THE PACKER. SCALE, CEMENT, CORROSION, OR FORMATION DEBRIS THAT MAY HAVE FORMED BENEATH THE PACKER CAN EASILY BE REMOVED. BY DISLODGING THIS UNWANTED FOREIGN MATERIAL FROM THE WELL BORE BENEATH THE PRODUCTION PACKER, PRODUCTION OF THE WELL WILL INCREASE WITHOUT REMOVING THE PACKER FROM THE WELL BORE. THE TOOL CAN ALSO BE DRESSED WITH TUNGSTEN CARBIDE TO CUT TUBING.

THE TUBING UNDERREAMER - CLEAN OUT TOOL AND CUTTER ARE AVAILABLE IN SIZES THAT CAN BE OPERATED 1.900" THROUGH 3-1/2" TUBING. THE MAXIMUM OPERATING RANGE OF EACH TOOL IS LISTED BELOW. THE TUBING UNDERREAMER - CLEAN OUT TOOL AND CUTTER CAN ALSO BE FURNISHED FOR H₂S SERVICE.



SPECIFICATIONS

TUBING SIZE	TOOL O.D.	(MAXIMUM)
1.900"	1.600"	TUBING CUTTER
2-3/8"	1-7/8"	4-1/2" CSG. I.D.
2-7/8"	2-3/8"	5-1/2" CSG. I.D.
3-1/2"	3"	7" CSG. I.D.