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2.8 LIQUID PRODUCTION CEASES2.9 SUMMARY; 3. CRITICAL VELOCITY; 3.1 INTRODUCTION; 3.2 CRITICAL FLOW CONCEPTS; 3.3 CRITICAL VELOCITY AT DEPTH; 3.3 CRITICAL VELOCITY IN HORIZONTAL WELL FLOW; 4. SYSTEMS NODAL ANALYSIS*; 4.1 INTRODUCTION; 4.2 TUBING PERFORMANCE CURVE; 4.3 RESERVOIR INFLOW PERFORMANCE RELATIONSHIP k IPRp; 4.4 INTERSECTIONS OF THE TUBING CURVE AND THE DELIVERABILITY CURVE; 4.5 TUBING STABILITYAND FLOWPOINT; 4.6 TIGHT GAS RESERVOIRS; 4.7 NODAL EXAMPLE TUBING SIZE; 4.8 NODAL EXAMPLE SURFACE PRESSURE EFFECTS: USE COMPRESSION TO LOWER SURFACE PRESSURE
4.9 SUMMARY NODAL EXAMPLE OF DEVELOPING IPR FROM TEST DATA WITH TUBING PERFORMANCE4.10 SUMMARY; 5. SIZING TUBING; 5.1 INTRODUCTION; 5.2 ADVANTAGES AND DISADVANTAGES OF SMALLER TUBING; 5.3 CONCEPTS REQUIRED TO SIZE SMALLER TUBING; 5.4 SIZING TUBING WITHOUT IPR INFORMATION; 5.5 FIELD EXAMPLE NO. 1RESULTS OF TUBING CHANGE OUT; 5.6 FIELD EXAMPLE NO.1 RESULTS OF TUBING CHANGE OUT; 5.6 PRE- AND POST- EVALUATION; 5.7 WHERE TO SET THE TUBING; 5.8 HANGING OFF SMALLER TUBING FROM THE CURRENT TUBING; 5.9 SUMMARY; 6. COMPRESSION; 6.1 INTRODUCTION; 6.2 NODAL EXAMPLE; 6.3 COMPRESSION WITH A TIGHT GAS RESERVOIR
6.4 COMPRESSION WITH PLUNGER LIFT SYSTEMS6.5 COMPRESSION WITH BEAM PUMPING SYSTEMS; 6.6 COMPRESSION WITH ELECTRIC SUBMERSIBLE SYSTEMS; 6.7 TYPES OF COMPRESSORS; 6.8 GAS JET COMPRESSORS OR EDUCATORS; 6.9 SUMMARY; 7. PLUNGER LIFT; 7.1 INTRODUCTION; 7.2 PLUNGERS; 7.3 PLUNGER CYCLE; 7.4 PLUNGER LIFT FEASIBILITY; 7.5 PLUNGER SYSTEM LINE-OUT PROCEDURE; 7.6 PROBLEM ANALYSIS; 7.7 NEW PLUNGER CONCEPT; 7.8 OPERATION WITH WEAK WELLS; 7.9 PLUNGER SUMMARY; 8. USE OF FOAM TO DELIQUEFY GAS WELLS; 8.1 INTRODUCTION; 8.2 LIQUID REMOVAL PROCESS; 8.3 FOAM SELECTION; 8.4 FOAM BASICS; 8.5 OPERATING CONSIDERATIONS
8.6 SUMMARY9. HYDRAULIC PUMPS; 9.1 INTRODUCTION; 9.2 ADVANTAGES AND DISADVANTAGES; 9.3 THE 1/4 - INCH JET PUMP; 9.4 SYSTEM COMPARATIVE COSTS; 9.5 HYDRAULIC PUMP CASE HISTORIES; 9.6 SUMMARY; 10. USE OF BEAM PUMPS TO DELIQUEFY GAS WELLS; 10.1 INTRODUCTION; 10.2 BASICS OF BEAM PUMP OPERATION; 10.3 PUMP-OFF CONTROL; 10.4 GAS SEPARATION TO KEEP GAS OUT OF THE PUMP; 10.5 HANDLING GAS THROUGH THE PUMP; 10.6 INJECT LIQUIDS BELOWA PACKER; 10.7 OTHER PROBLEMS INDICATED BY THE SHAPE OF THE PUMP CARD; 10.8 SUMMARY; 11. GAS LIFT; 11.1 INTRODUCTION; 11.2 CONTINUOUS GAS LIFT; 11.3 INTERMITTENT GAS LIFT
11.4 GAS LIFT SYSTEM COMPONENTS

Sommario/riassunto

No other book on the market offers such a turnkey solution to the problem of liquid interference in gas wells. Gas Well Deliquification contains not only descriptions of the various methods of de-watering gas wells, but also compares the various methods with a view toward explaining the suitability of each under particular circumstances. The material is presented as practical information that can be immediately applied, rather than a theoretical treatment. And, includes useful historical methods, but focuses on the latest techniques for de-watering gas wells.* Only book on ma