

集输工程

苏里格气田上、下古生界气藏合采气井的集输工艺

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摘要:

随着苏里格气田下古生界气藏的不断开发, 现有的集输工艺及场站建设已不能满足生产需要。为此, 在综合分析该气田现有上古生界气藏气井的集输工艺和靖边气田下古生界气藏气井的集输工艺的基础上, 根据苏里格气田目前完钻井的情况, 选择了“小站脱水、天然气净化厂集中脱硫”的上、下古生界气藏合采气井集输工艺, 确定了其主要工艺路线为: 井下节流、中压串接、集中注醇、常温分离、集中处理。在对集输场站的流程、平面布置、设备选型进行分析后, 确定了新的集气站流程: 排污和放空共用一套系统, 其余均分开设置, 充分利用公用系统, 减少下游处理装置负担; 统筹考虑上古生界气藏气井的集输系统与上、下古生界气藏合采气井的集输系统, 按照同类系统靠近布置的原则, 重新进行集气站的平面部署; 还对站内设备重新进行了选型, 确定了中压系统下的抗硫生产设备。最后讨论了新集输工艺存在的问题及下一步研究方向。新的上、下古生界气藏合采气井的集输工艺和场站建设满足了气藏合采气井的开发要求, 经济合理地解决了下古生界气藏含硫气的处理难题, 为规模开发上、下古生界气藏奠定了基础。

关键词: [鄂尔多斯盆地](#) [苏里格气田](#) [晚古生代](#) [早古生代](#) [气藏合采](#) [集输工艺](#) [集输场站](#) [平面布置](#) [设备选型](#)

Gas gathering and transportation process for the commingled production wells at upper and lower Paleozoic gas reservoirs of the Sulige Gas Field

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Abstract:

With the development of the lower Palaeozoic gas reservoirs at the Sulige Gas Field, the existing gas gathering and transportation process and the stations can no longer meet the production requirement. Based on the analysis of gas gathering and transportation process at the upper and the lower Palaeozoic gas reservoirs of the Sulige and Jingbian gas fields and the realistic well condition of the Sulige Gas Field, the process of "dewatering at a small scale station & centralized desulphurization at a gas purification plant" is selected for the commingled production wells at upper and lower Paleozoic gas reservoirs. The main process route is determined, namely, downhole throttling, medium pressure connection, centralized alcohol injection, separation at atmospheric temperature, and centralized treatment. The new flow process of the station is figured out based on the study of its original flow process, plane layout, and equipment type selection. The blowdown and venting share one system, and other functions are designed separately. The public system is fully used so as to reduce the load of the downstream facilities. The station is re-arranged to make the similar systems closer. The equipment is re-selected and the sulfur-resistant facilities for the medium pressure system are determined. This paper also discusses the problems of the new process and the follow-up research direction. The gas gathering and transportation process for the commingled production gas wells can meet the development requirement, and economically resolve the sour gas problem of the lower Palaeozoic gas reservoir, which will lay the foundation for the development of upper and lower Palaeozoic gas reservoirs at the Sulige Gas Field.

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