

# Case History

## Iron Sulfide + Scale Control



### Background:

An Antrim natural gas producer in Northern Michigan was experiencing fouling of their tubulars and water lines with multiple deposits, but primarily, iron sulfide. The current treatment program was being applied, but without complete success. The iron sulfide made the produced water black and fouled the tubulars, with a sticky black deposit, leading to reduced production and increased down time.

Over time, operations noted that the water lift pump would draw increasing amps, indicating increased fouling eventually leading to failure. As the tubulars fouled, the produced water level would increase in the well, eventually covering the perfs and limiting production.



Competitor  
Treated

### Water Analysis & Deposit analysis:

Samples of the black water and deposit were sent to One AquaSource's laboratory for analysis. The data was entered into our BlueSur™ water analysis and prediction program. The program indicated a variety of deposits would precipitate (calcium carbonate, barium sulfate, strontium sulfate, & iron sulfide). Deposit analyses confirmed the presence of these precipitated salts.

### Summary:

To prevent multiple salts from precipitating, One AquaSource recommended treatment with HP-9293W. HP-9293W is formulated with unique crystal modification deposit control agents for calcium, barium, and strontium salts, combined with an iron sulfide cleaner.



HP-9293W  
Treated

### Results:

The water quality improvement of the well was immediate and dramatic. Over the first 4 weeks of treatment the water clarity transformed from black to crystal clear. Operations noted the pump was drawing lower amps and the water level in the well dropped to a normal level (i.e below the perfs).

By removing the sticky, black, iron sulfide deposits and controlling its precipitation, the customer noted less maintenance issues, less issues with the pump, reduced down time for work-over, and increased production.

**T O M O R R O W ' S   C H E M I S T R Y ,   T O D A Y**

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