My Challenge and How I Solved It

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Pushing the limits

Solutions with multiple pump systems
Solving Drilling Challenges

PROBLEM
• Peak power plant needs 1,350 gpm for fuel oil power generation plant:
  • 2700 hp motor needs cooling water during operation
  • Complete back up system needed in the event of pump failure.
  • 2nd well 29ft away from first well. Never use both together.

SOLUTION
• Drill only one 24" x 18" well to produce 1,500gpm and install two 1,350gpm pumps with 100hp motors in same water well.
• Use dual pump Wesley Tool.
• One VFD controller for each well pump and one backup VFD on auto switch gear in event of failure of backup.

Well record
Well Profile

As built drawing

MMPA-Faribault
East Deviation

MMPA-Faribault
South Deviation

MMPA-Faribault
Total Deviation
Upper 1350 gpm pump & 100hp motor

Dual pump specifications

Provides for:
- 10” NPT upper discharge male thread
- 8” NIP lower discharge male thread
- 1-1/4” opening for sub cable
- 176-3/4” overall length
- 15-3/4” max O.D. steel
- All type 304L stainless steel design
- Nipple discharge are schedule 40, 304L stainless
- Both pumps are Gould 1350gpm @ 196ft total head
- Both motors are 100hp 460/60/3
- One set of 10” dia. Steel drop pipe, 156ft setting
- Two sets of sub cables
- Two identical VFD controllers (30 days on 30 days off)
- Baker Standard MPS180W69W0010M10 pitless unit

In-Control

Alternating dual ABB VFD controllers
Digital flow meter for each pump

Ready for shipment to site.
Upper 100hp 2-pole motor

Upper pump check valve

Dual pump supply

# of pumps is unlimited

PUSHING THE LIMITS
Think out of the box!

The advantages of using the Wesley Tool for the MIMA site are as follows:

a. Provides immediate backup-stayly pump capability
b. Design and operation features require minimal maintenance costs.
c. Eliminates high cost of a second well
d. Eliminates cost of a second Baker Monfort plunger unit and drop pipe
e. Eliminates the additional cost of second set of discharge piping.
f. Eliminates the additional cost of two wells drilled less than 50 ft apart.
  a. Additional re-development of first well
  b. Removal and reinstallation of pump & motor
g. Eliminates down time the first well is in production while the second well is drilled, grotted, developed and test pumped.
h. Allows time to order & deliver replacement pump or motor
i. Allows time to bring in replacement pump & motor without stock out by pumping equipment.
j. Maintenance on pumping equipment requires only one pump pull.
k. Maintenance on well is reduced by 50% with only one well.
Questions?