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WC-132

A NOVEL GEOTECHNICAL/GEOSTATISTICAL APPROACH FOR
EXPLORATION AND PRODUCTION OF NATURAL GAS FROM
MULTIPLE GEOLOGIC STRATA

TECHNICAL PROGRESS REPORT: JANUARY - MARCH 1995

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BY:
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I. PROGRESS AND ACHIEVEMENTS

A. SUMMARY OF TASK ACTIVITIES

10.0 ALASKAN ENERGY DEVELOPMENT

Administrative activities only were conducted during the quarter on this task in an effort to develop a workable field plan and to obtain the appropriate level of funding. Contract Modification 26, which will address this task, is still being negotiated at this time.

12.0 DEWATERING/PRODUCTION EXTENSION TEST PERIOD

Gas production from the Project's three wells continued at approximately the same rates during this quarter as in the previous. A quick monthly summary follows.

JANUARY

There were 9 shut in days due to compressors being down. These downtimes were caused by Belden & Blake's and Columbia's compressors as well as our own. Most of the problems were due to adverse weather conditions. Gas production averages for January were as follows:

- The Orifice Master Meter averaged 61 mcf/d with an average discharge line pressure of about 41 pounds
- The Rotary Master Meter averaged 65.1 mcf/d
- TW1 Big Lime/Ravencliff averaged 37.1 mcf/d
Coal: 13.4 mcf/d
- TW2 Big Lime/Ravencliff dropped somewhat to 8.8 mcf/d
- TW3 Coal: 9.6 mcf/d

FEBRUARY

Production dropped slightly due to a combination of hardware and weather problems. There were at least four full days of system shut in time due to down compressors.

CWV requested that Dearing Compression Co. send a technician to the site to perform a full system checkup. This was done on 2/23/95 and the technician pulled & cleaned all suction & discharge valves, rewired starting circuit to alleviate battery drain, adjusted clutch, tightened V-belt drive, and tested oil level controls and automatic shutdowns.

- The Orifice Master Meter averaged 59.7 mcf/d with an average line pres. of 40
- The Rotary Meter averaged 59.8 mcf/d
- TW1 Big Lime/Ravencliff averaged 35.7 mcf/d
The Coal zone did 8.9 mcf/d with a great number of hardware problems and interruptions. Several wires shorted, the starter malfunctioned, and the pump jack motor burned up. Cold weather also forced shut down at times to keep the water lines and wellhead from freezing.
- TW2 Deep zones averaged 9.8 mcf/d
- TW3 Coal zone averaged 11 mcf/d

MARCH

Production showed a slight improvement as hardware problems were solved. Electrical matters on the pumps on TW1 and TW3 were addressed resulting in more efficient pumping systems on each well. The 5 hp motor on TW1 allows for a much quicker stroke than the action on TW3. This will allow us to compare the response of each well to these different scenarios.

Pump time on TW1 is set at 2 hours on, 4 times per day. TW3 is set to 3.5 hours on, 4 times per day. The quick stroke on TW1 is bringing a great deal more water to the surface. TW1 produces about 15 bbls per day; TW3 about 3 bbls.

- The Orifice Master Meter averaged about 59 mcf/d
- The Rotary Master Meter averaged 62 mcf/d

- TW1 Big Lime/Ravencliff averaged 35 mcf/d
The Coal zone did about 14 mcf/d
- TW2 Deep zones are holding at 8 mcf/d
- TW3 Coal zone averages 13 mcf/d

OFFSET WELL TW4

A variety of planning sessions, meetings and work was performed during this quarter in an effort to quickly position ourselves for an early spring spud date for this well. A number of key issues were addressed and acted upon including:

- price quotes for casing, tubing, pit liners, etc
- design of cementing program
- solicitation of bids for excavation work, etc
- bid solicitation for drilling
- logging plan and bid solicitation
- stimulation design for coalbed zone
- sizing of pumping unit
- determination of rig availability
- securing tap and meter for electrical service
- bid acquisition for electrical and other equipment

In addition to these items directly related to the field work, paperwork related to the permitting process was also completed. CWV prepared the plat, reclamation plan, WW2-A, waiver signatures, WW2-A-1, WW-60 and WW2-B. The proposed drill site was staked, a field meeting was held with oil & gas inspector, and all forms were filed with the State.

A meeting was held at Halliburton offices in Elkview, WV, with two members of their staff. The purpose was to discuss logging, perforating and stimulation of coalbed zones so that CWV might gain insight from Halliburton's experience in these activities in other parts of the country. The meeting was held 3/21/95.

Other miscellaneous activities included the completion of normal monthly DOE reports, quarterly reports, tax/royalty statements, well revenue assessments, State gas production form WR-39, Contractors' Review Report, well chart integration, monthly nominations on TCO & Mountaineer systems, consulting agreement modifications, and monthly nomination reconciliation with Belden and Blake.

13.0 DEMONSTRATE NEWLY DEVELOPED TECHNOLOGIES FOR MULTI STRATA GAS AND WATER PRODUCTION TO ENHANCE COMMERCIAL APPLICATION

Phase II of the Poland Project was approved (Mod 25) with approximately \$195,000 additional funding for continued full scale system operation at the Morcinek site in Poland. The task is proceeding according to schedule and the Evaporator and other components are performing as anticipated.

B. MEETINGS AND TRIPS

February 5 -- Project Update Meeting in Metairie, LA with DOE

March 21 -- Coalbed stimulation meeting in Elkview, WV

II. PLANNED ACTIVITIES

- > Negotiate work plan and costs for Alaskan Task 10 effort
- > Continue preparing Task 12 Final Report
- > Drill offset coalbed well TW4