UIC-I - 8

PERMITS, RENEWALS, & MODS

REENTRY #2
VOL II

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REENTRY AND COMPLETION REPORT
WASTE DISPOSAL WELL NO. 2

VOLUME II

NAVAJO REFINING COMPANY
ARTESIA, NEW MEXICO

NM OIL CONSERVATION DEPT

WELL LOG # Re-entry #2

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Application For Permits, Renewals + Mods
Re-entry #2
Vol II

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EXHIBIT 3.1-1

PROTECTION CASING INSPECTION LOG

EXHIBIT 3.3.2-1

PROTECTION CASING CEMENT BOND/VARIABLE DENSITY LOG

EXHIBIT 2.5-2

CIRCUMFERENTIAL ACOUSTIC SCANNING LOG (FRACTURE FINDER LOG) AND LETTER OF INTERPRETATION

EXHIBIT 2.5-2

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July 6, 1999

Mr. Brian M. Rogers
Envirocorp Services & Technology, Inc
7020 Portwest Drive, Suite 100
Houston, Texas 77024

Subject: Subsurface Construction Corp.
Navajo WDW No. 2
Eddy County, New Mexico

Halliburton Energy Services logged the Navajo WDW No. 2 located in Eddy County, New Mexico on May 17, 1999. The purpose of the survey was to evaluate the existance of vuggy and/or fractured intervals determine the isolation of the injection interval from intervals above.

Executive Summary

The perforated injection interval from 7,570 to 8,399 feet appears to be sufficiently isolated from upper intervals by sufficiently consistant shale & competent rock. The CAST-V logs indicates that the injection interval will remain isolated from the upper intervals in the event that hydraulic fracture stimulation is utilized.

Overview

To simplify the presentation of the data the date is presented as conventional logging curves, as well as in image formats.

- CAST-V is an ultrasonic log, which uses a single rotating transducer. The Ultrasonic energy emitted from the transducer travels through the borehole fluid, strikes the wall of the formation, and is reflected back to the transducer. On the Amplitude image, the amount of reflected energy is related to the acoustic impedance, which is the product density and velocity, of the formation. The log data is presented such that the low reflected amplitude values of the shales are displayed as black whereas the higher reflected amplitude of harder rock is displayed as light colors. In addition, the time-of-flight, or travel time, is presented as an image. This is a measurement of the time required for the transmitted ultrasonic signal to travel from the transducer to the formation and back to the transducer. Vugs or Fractures appear as dark images due to the loss of amplitude, or increased travel time, of reflected signal. Shale intervals are indicated by dark images that stretch across the images and by an increase in the Gamma Ray intensity as observed on the Gamma Ray curve of the CAST-V log. The CAST-V amplitude and travel time data was sampled to provide a resolution of 5mm.

CAST-V Image Evaluation

The CAST-V was used to survey the well from 8,900 feet to 3,991 feet. The perforated interval from 7,570 to 8,399 feet appears to contain formation with primary porosity & secondary porosity in the form of vugs. The vugs are indicated as the dark spots observed on both the amplitude and travel time images. An indication of natural fracturing can be observed at the interval from 7,823 to 7,833 feet. Although significant fracturing of the formation is indicated in the Abo formation this should not pose a problem since the unfractured formation & shales below would prevent the movement of an induced fracture into this interval. Shale intervals observed above 7,360 feet should serve as plastic fracture barriers in the event that the perforated interval should require hydraulic fracture stimulation.

Please do not hesitate to call if I, or any one else at Halliburton Energy Services, can be of any further assistance.

Sincerely,

Randy Grossman
Technical Specialist
Halliburton Energy Services

ENVIROCORP®

REENTRY AND COMPLETION REPORT
WASTE DISPOSAL WELL NO. 2

VOLUME II

NAVAJO REFINING COMPANY
ARTESIA, NEW MEXICO

Subsurface Project No. 70A4955

July 1999

Prepared By:

SUBSURFACE TECHNOLOGY, INC.
Houston, Texas

ENVIROCORP SERVICES & TECHNOLOGY, INC.

7020 PORTWEST DRIVE, #100 HOUSTON, TEXAS 77024 713/880-4640 FAX 713/880-3248

EXHIBIT 3.3.2-2

LETTER OF INTERPRETATION OF THE PROTECTION CASING CEMENT BOND/VARIABLE DENSITY LOG

HALLIBURTON®

July 6, 1999

Mr. Brian M. Rogers
Envirocorp Services & Technology, Inc
7020 Portwest Drive, Suite 100
Houston, Texas 77024

Subject: Subsurface Construction Corp.
Navajo WDW No. 2
Eddy County, New Mexico

Halliburton Energy Services logged the Navajo WDW No. 2 located in Eddy County, New Mexico on June 2, 1999 to evaluate the cement sheath and casing condition of the 5-1/2 in. protection casing. Both a conventional cement bond and the ultrasonic CAST-V data were used for the cement isolation evaluation. The casing inspection was performed using the internal diameter and thickness of the casing obtained from the ultrasonic two-way travel time and the frequency of the reflected energy.

Executive Summary

The Cement in the annulus of the 5-1/2 inch casing appears adequate to provide hydraulic isolation in the casing-formation annulus between 89 to 8,766 feet. This provides zonal isolation to the Lower Wolfcamp and Cisco from other formations to the surface. The combination of the CBL & CAST-V logs indicates that good zonal isolation was achieved.

Overview

Cement sheath evaluation is acquired on a single logging pass with the CAST-V and CBL tool. To simplify the presentation of the data, the date is presented as conventional logging curves, as well as in an image format.

- Conventional acoustic cement bond log (CBL) utilizes an omni-directional transmitter and two receivers. The first receiver is located three feet from the transmitter and measures the amplitude (energy of the acoustic signal, which travels from the transmitter though the borehole, propagating along the casing and back through the borehole fluid to the receiver. A second receiver is located five feet from the transmitter, and is used to record waveform data (VDL, MSG, or X-Y presentation). This type of measurement is referred to as a transmitted (acoustic) energy. To evaluate the Cement in the casing-formation annulus, both the amplitude curve and the waveform data are utilized.

- CAST-V is an ultrasonic log, which uses a single rotating transducer. The Ultrasonic energy emitted from the transducer travels through the borehole fluid, strikes the wall of the casing, and is reflected back to the transducer. The amount of reflected energy is related to the acoustic impedance, which is the product density and velocity, of the material on the outer surface of the casing. The log data is presented such that the low acoustic impedance values of the liquids (spacer fluids) are displayed as blue. The acoustic impedance of the cementeous material is displayed as black for the highest values of acoustic impedance and darker brown to lighter brown for lesser values of acoustic impedance. The individual impedance curves are also displayed to assist in the evaluation of the low density cement across the upper interval. It should be noted that fluid contact with the casing will result in an inactive impedance curve. Whereas, any cement contacting the casing will result in an active, or statistical, impedance curve. The Data was sampled at 100 samples per 3-in. interval, which results in a bond measurement every 3.6 degrees of the casing circumference.

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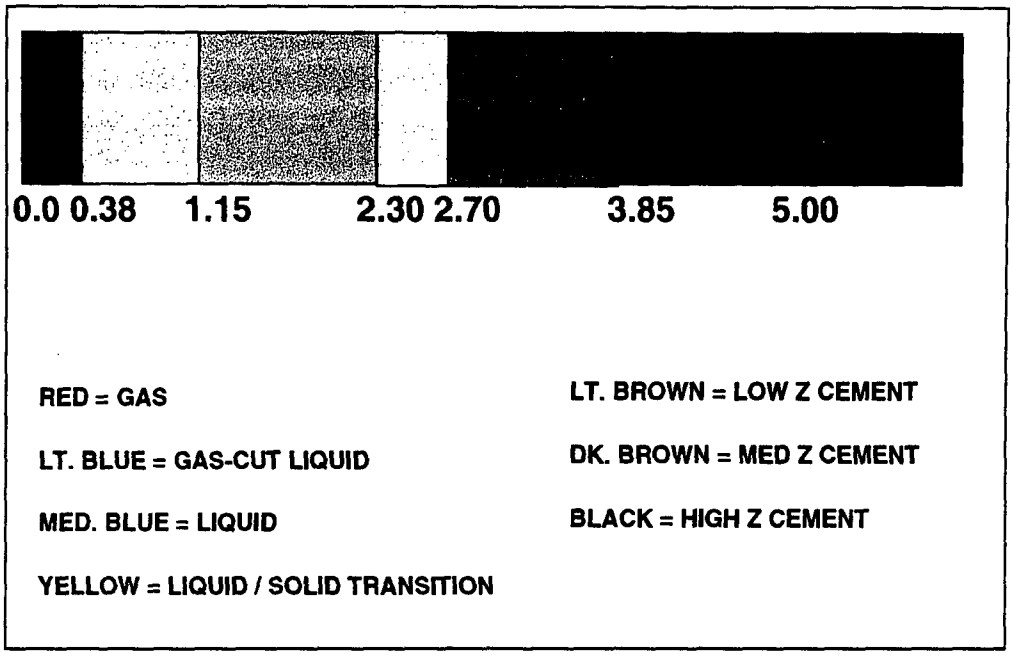
Interpretation Palette



Cement Evaluation

Cisco Formation/Lower Wolfcamp	**Depth**	**7,267 to 8,766 ft**	**Good Zonal Isolation**
Wolfcamp/Surface	**Depth**	**89 to 7,267 ft.**	**Good Zonal Isolation**

The CAST-V started from 8766 feet and shows excellent bond between the casing and cement indicating good isolation. Impedance values from 8,766 feet through 2,578 feet are in the range of 4 indicating good cement compressive strength. The cement map indicates that the entire circumference is bonded and the dark brown color again indicates good compressive strength. The variable density log (VDL) confirms this by the appearance of strong formation arrivals that can be observed in the display.

Excellent cement bonding is indicated from 2,578 feet to the top of the logged interval at 89 feet. Impedance curves remain active indicating cement in contact with the casing. Formation arrivals are observed on the VDL indicating cement coupling between the casing and formation. The CBL and CAST-V combination indicate that hydraulic isolation should exist throughout the logged intervals.

If I, or any one else at Halliburton Energy Services can be of any further assistance, please do not hesitate to call.

Sincerely,

Randy Grossman
Technical Specialist
Halliburton Energy Services

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REENTRY AND COMPLETION REPORT
WASTE DISPOSAL WELL NO. 1

NAVAJO REFINING COMPANY
ARTESIA, NEW MEXICO