L.S. SIMS & ASSOCIATES
Environmental Consulting

FINAL CASING POINT REPORT
EXPLORATORY WELL EW-1
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

FDEP File/Permit No.: 040842-017-UC

October 2008

Prepared by:

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OLI-IW1

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October 14, 2008

Mr. Joseph R. May, P.G.
Florida Department of Environmental Protection
400 North Congress Avenue, Suite 200
West Palm Beach, Florida 33401

Re: **Final Casing Point Proposal - Okeechobee Landfill, Inc.**
File/Permit Number: 040842-017-UC

Dear Mr. May:

Pursuant to Chapter 62-528, FAC and our Exploratory Well Permit No. 040842-017-UC, the attached document supports our request for approval of a casing point for the 16-inch diameter final casing at the referenced site. The report documents the geology and hydrogeology at the site, and justifies the proposed depth for the final casing.

Please don't hesitate to contact me at (321) 504-4046 if you have any questions or need additional information.

Sincerely,

10/14/08

James E. McGrath, P.G,
Senior Geologist

Cc: David McConnell, WM
Tony Bishop, WM
Gardner Strasser, P.G., FDEP
Roger Mayfield, P.E.
Ms. Nancy Marsh, US EPA Region 4
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1.0 INTRODUCTION

On behalf of Okeechobee Landfill, Inc., L.S. Sims & Associates have prepared this report to propose the seating depth of the final casing for the OLI injection well being constructed for OLI by All Webbs Enterprises, Inc. (contractor). This report is submitted pursuant to a permit requirement.

1.1 Construction Activities

Information on injection well construction and testing activities at OLI are summarized below. Pursuant to permit requirements, progress reports have been submitted to the Florida Department of Environmental Protection (FDEP) on a weekly basis. For additional information, if required, regarding the details of daily site construction and testing activities, please refer to the submitted Weekly Construction Reports.

Construction of the injection well began during the week of 03 March 2008. All Webbs Enterprises, Inc. initially installed 250 feet of 42-inch diameter conductor casing. A nominal 42-inch hole was then drilled to 674 feet below land surface (BPL). After obtaining geophysical and lithologic data from the open hole, a 34-inch diameter surface casing was installed to 674 feet BPL. A 12¼-inch diameter pilot-hole was then drilled to a depth of 2,003 feet BPL and the required testing (straddle packer, geophysical logging, and lithologic samples) was performed in accordance with permit requirements. After obtaining the required approval from FDEP, the pilot-hole was reamed to a nominal 34-inch diameter and a 26-inch diameter intermediate casing installed to 1,994 feet BPL. A mechanical integrity test (MIT) was then successfully performed on the 26-inch diameter intermediate casing. Please refer to the May, 2008 submittal to FDEP regarding the seating depth of the intermediate casing string and summarizing the activities prior to this construction and testing phase for the injection string.

Upon completion of the installation and testing of the 26-inch diameter intermediate casing a 12¼-inch diameter pilot-hole was drilled to a total depth of 3,506 feet BPL pursuant to discussions with FDEP. Ten (10) rock cores were collected below the base of the Underground Source of Drinking Water (USDW) during the pilot-hole drilling. The borehole is currently being reamed in preparation for final injection casing (16-inch) installation.

1.2 Pilot–Hole Geology

Cutting samples were collected at approximate 10-foot intervals during the drilling of the 12 ¼-inch diameter pilot-hole. The cuttings were described in a longhand log that is included in Appendix A of this report. Senior geologist (McGrath) interpretation of the recovered cuttings is included in Appendix A and summarized as follows:

Depth (ft/BPL)	Stratigraphic Units
0 to 140	Undifferentiated Marine Terrace Deposits
140 to 670	Hawthorn Group
670 to 800	Ocala Limestone
800 to 2,290	Avon Park Formation
2,290 to 3,150	Oldsmar Formation
3,150 to 3,506	Cedar Keys Formation

The only stratigraphic units of key importance to this casing setting request report are the lower portion of the Avon Park Formation and Oldsmar Formation. The other identified units have been cased off by the intermediate casing which was set at 1,994 feet BPL or occur below the injection zone (Cedar Keys Fm.). These units (Undifferentiated Marine Terrace Deposits, Hawthorn Group, and Ocala Limestone) will be discussed in more detail in the final report which will be submitted at a later date pursuant to permit requirements.

The term "Avon Park Limestone" was originally used by Applin and Applin (1944) to describe rocks of late Middle Eocene age in northern and peninsular Florida. Miller (1986) defined the Avon Park Formation as "the sequence of predominantly brown limestones and dolomites of various textures that lies between the gray, largely micritic limestones and dolomites of the Oldsmar Formation and the white foraminiferal coquina of the Ocala Limestone." Duncan, et al. (1994) describes the Avon Park Formation in Okeechobee County area as "white to yellowish-gray limestones ranging from packstone to mudstone interbedded with very light orange to grayish-brown dolostones that commonly contain organics. Cherty dolostones are typical of the lowermost Avon Park Formation." In the OLI injection well borehole, the top of the Avon Park was found at about 800 feet BPL in a very light orange limestone (calcarenite) with numerous species of the benthonic foraminifera Dictyoconus cookei. The formation primarily contained interbedded limestone, dolomite and dolomitic limestone to a depth of 1,540 feet BPL. A low permeability limestone was present from 1540 to 2,030 feet BPL. Highly recrystallized dolomite with laminar organic bedding occurred near the top of the Oldsmar Formation at 2,290 feet BPL. Nodular chert was present in the dolomite from 2,030 feet to 2,280 feet BPL and the limestone and dolomite sequences of the upper portions of the Oldsmar to 2350 BPL.

Miller (1986) defined the Oldsmar Formation as "the sequence of white to gray limestone and interbedded tan to light-brown dolomite that lies between the pelletal, predominantly brown limestone and brown dolomite of the Middle Eocene and the gray, coarsely crystalline dolomite of the Cedar Keys Formation." Duncan, et al. (1994) recognized a stratigraphic marker bed (glauconite marker bed) at the top of the Oldsmar Formation. They describe this formation in the Okeechobee County area to consist "of an upper section of interbedded white to light gray, chalky packstone, wackestone, mudstone, and grayish brown dolostone and a lower section of predominantly well-indurated, crystalline yellowish-brown dolostone." In the OLI injection well borehole, the top of the Oldsmar Formation was found to occur at 2,290 feet BPL. It was a chalky (micritic) limestone containing bluish green interstitial clay (glauconite). These beds were found to be immediately overlain by the cherty dolomite of the lower Avon Park Formation. The upper section (2,290 to 2,710) of the Oldsmar Formation was primarily white to light gray poorly to moderately indurated limestone containing the benthonic foraminifera Heliocostegina gyralis. From 2,710 to 3,150 feet BPL the formation was found to be primarily composed of highly recrystallized and sometime coarse grained (sucrosic) dolomite. In the OLI injection well borehole, the top of the Cedar Keys Formation was found to occur at 3,150 feet BPL. From 3,150 to 3,506 feet BPL (TD) the formation was found to be primarily composed of finely crystallized dolomite with an abundance of gypsum filling the vugs.

1.3 Hydrogeology

The Southeastern Geological Society (SEGS) Committee on Florida Hydrostratigraphic Nomenclature (1986) established four major hydrogeologic units in peninsular Florida. These are the Surficial Aquifer System, Intermediate Aquifer System (or confining unit), Floridan Aquifer System, and the sub-Floridan Confining Unit. The Floridan Aquifer System consists of the upper Floridan Aquifer System, Middle Confining Unit and lower Floridan Aquifer System. In St. Lucie, and Okeechobee counties, the Floridan Aquifer System generally consists of two major permeable zones separated by a middle confining unit of lower permeability (Miller, 1986). The hydrogeologic units discussed herein are the lower Floridan Aquifer System and the "boulder zone". The boulder zone is in the lower portion of the lower Floridan Aquifer System. The other hydrogeologic units have been cased off and are not relevant to FDEP approval for the enclosed final injection casing setting depth request. The hydrogeologic units will be discussed in detail later in the above-referenced, to-be-submitted final report.

The top of the lower Floridan Aquifer System was found to be present at approximately 1,775 feet BPL, where the total dissolved solids (TDS) concentration of the formation water was found to exceed 10,000 milligrams per liter (mg/L). The lower Avon Park Confining Zone (Duncan, et al., 1994) was found to be present from about 2,030 feet to 2,290 feet BPL. This unit was primarily composed of low permeability dolomite and chert beds. A cavity was present from 2,212 feet to 2,220 feet BPL. Some smaller cavities and vugs were present that would give certain zones in the lower Avon Park confining zone relatively higher horizontal hydraulic conductivities. Packer tests in the confining zone show horizontal hydraulic conductivity to range from 10^{-3} to 10^{-9} centimeters per second (cm/s). Three cores were taken from this interval for laboratory analysis. A physical description of the cores is present in Appendix A. Overall, the lower Avon Park Confining Zone tends to exhibit low permeability. The upper portion of the Oldsmar Formation was present from about 2,290 feet to 2,710 feet BPL and was primarily micritic and sometimes glauconitic limestones that exhibited low-permeability characteristics. Although these beds have an apparent higher horizontal hydraulic conductivity (estimated to be 10^{-4} to 10^{-5} centimeters per second [cm/s]), the beds should act cumulatively as the major confining sequence overlying the boulder zone. The top of the dolomites containing the boulder zone in the Oldsmar Formation was found to be present at about 2,710 ft BPL. Fractures and solution cavities were found to be present at 2755, 2766, 2771- 2775, 2777, 2792, 2800-2804 2814, 2828, 2831, 2840-2852, 2875, 2912, 2929, 2943-2950, 2957, 2974-2983, 2992, 2997-3150, significant cavities at 2856-2862, 2892-2894 2907-2909, 2937-2939, with the largest cavity starting at 3033.

2.0 TESTING PROGRAM

The testing program for the lower Floridan Aquifer System was undertaken to obtain hydrogeologic data in support of the construction of the final injection well and to meet FDEP permit requirements. Ten (10) rock cores and five (5) straddle packer tests were obtained in the interval between 1,994 and 2,704 feet BPL. Descriptions of the cores are available in Appendix A and core interval summary presented in Table 1. Core samples have been submitted by the drilling contractor to a laboratory (Ardaman) for hydraulic conductivity and other permit-required testing. Ardaman & Assoc. provided us with a partial laboratory report which shows hydraulic conductivities from most of the samples sent to the lab. These results are tabulated below.

Depth (ft) BPL	K vertical (cm/sec)	K horizontal (cm/sec)
2054	4.7e-10	3.3e-9
2112	in progress	in progress
2167	9.3e-6	1.3e-5
2211	5.5e-5	5.2e-5
2262	2.1e-8	1.9e-5
2326	5.4e-8	7.1e-8
2390	1.3e-4	2.0e-4
2424	6.9e-10	in progress
2502	9.1e-5	1.4e-4
2585	3.5e-6	4.0e-6
2592	1.7e-5	4.8e-7

These are the only results available at this time. Results of the packer tests are available in Appendix B. The results are summarized on Table 2. Geophysical logs for the interval between 1,994 feet and 3,506 feet BPL are presented in Appendix C. A television survey (on DVD) for the interval between 1,994 feet and 3,506 feet BPL including a written interpretation is included in Appendix D.

Information taken during drilling included inclination surveys at 90 foot intervals, and drilling penetration rate (Geolograph) data. This data is shown on Table 3 and Table 4 respectively.

2.1 Core Sampling

Table 1 summarizes the depth and interval of the cores. Core No. 1 was collected in the interval between 2046 to 2056 feet BPL. The contractor cored ten feet with 75% recovery. The lithology of the core was primarily low permeability dolomite. Visual porosities were below 10% with dolomite being the major cement types. The interval was nonfossiliferous, either from the recrystallization of the limestone or depositional environment. A sample was taken for laboratory analysis from 2,054 feet BPL.

The contractor had 100% recovery on Core No. 2, with 6 feet of the core recovered from interval between 2,161 to 2,167 feet BPL. The lithology of Core No. 2 was primarily highly recrystallized dolomite with intercrystalline and vugular porosity. The dolomites were estimated to have had an overall low permeability. A sample was taken from 2,167 feet BPL or laboratory analysis.

The contractor had good core recovery on Core No. 3, with 93% of the core recovered from the interval between 2,200 to 2,214 feet BPL. The lithology was primarily highly recrystallized dolomite and dolomitic limestone. Visible porosities were between 10% and 20% porosity. A sample was taken from 2,212 feet for laboratory analysis.

The contractor had than 77% recovery on Core No. 4, which was recovered from a depth of 2,250 to 2,265 feet BPL. The lithology was primarily dolomitic limestone with less than 5% visible porosity. A sample was taken from the core for laboratory analysis from 2262 feet BPL.

The contractor had 25% recovery on Core No. 5, which was recovered from the interval between 2,300 feet to 2,304 feet BPL. The lithology of the core was primarily limestone with visible porosities less than 10%. No sample was taken from the core from this interval because none of the recovered pieces were large enough to meet the lab's requirements.

The contractor had a recovery of 95% on Core No. 6, which was retrieved from the interval between 2,321 feet to 2,326 feet BPL. The lithology of the core was predominantly a well indurated dolomitic limestone with 0% visible porosity. A sample was taken from the core for laboratory analyses at 2,326 feet.

The contractor had a recovery of 42% on Core No. 7, which was retrieved from the interval between 2,383 to 2,390 feet BPL. The lithology of the core was primarily very pale orange fossiliferous and micritic limestone characteristic of the Oldsmar Formation. Visible porosities were 10%. A sample taken to the laboratory for analysis was labeled 2,374 but actually was collected from 2,384 BPL.

The contractor had a recovery of 100% on Core No. 8, which was retrieved from the interval between 2,421 to 2,430 feet BPL. The lithology of the core was primarily white fossiliferous and micritic limestone characteristic of the Oldsmar Formation. Visible porosities were <5%. A sample was taken at 2,424 feet BPL for laboratory analysis.

Core (No. 9) was retrieved from a depth of 2,490 to 2,504 feet BPL and the contractor had a recovery of 100%. The lithology was primarily very pale orange limestone with visible porosities at approximately 10%. A sample of the core was taken from the 2,502 feet BPL depth interval for laboratory analysis.

Core (No. 10) was retrieved from a depth of 2,585 to 2,599 feet BPL and the contractor had a recovery of 100%. The lithology was primarily very yellowish brown dolomite with visible porosities at approximately 5-25%. Two samples of the core were taken for laboratory analysis from 2,585 and 2592 feet BPL depths.

2.2 Straddle Packer Testing

Table 2 summarizes the depth and interval of straddle packer tests completed in the pilot-hole from 1,994 feet to 3,500 feet BPL. Each of the tests isolated a 17 or 18-foot long vertical section of the pilot-hole. Horizontal hydraulic conductivity and transmissivity estimates by L.S. Sims & Associates for the tests conducted between 2,206 feet BPL and 2,724 feet BPL are also included on Table 2.

Straddle packer test No. C1 isolated the section of pilot-hole from 2,324 feet to 2,342 feet BPL. Flow could not be maintained during this test. 157 feet of drawdown was created with the straddle packer test set-up using a submersible pump. 0.2 foot of head recovered after two hours during this test. Hydraulic conductivities of the zone were calculated at 3.8×10^{-10} cm/sec (recovery data). Straddle packer test No. C2 isolated the section of pilot-hole from 2,608 to 2,626 BPL. A pumping rate of 1 gpm was established with a total drawdown of 157 feet. Horizontal hydraulic conductivities of the zone were calculated at 3.6×10^{-6} cm/s (recovery data). Straddle packer test No. C3 isolated a section of the pilot-hole from 2,706 feet to 2,724 feet BPL. A flow rate of 15 gpm was established with a total drawdown of 122 ft. Horizontal hydraulic conductivities of the zone were calculated at 1.1×10^{-4} cm/s (recovery data). Straddle packer No. C4 isolated a section of the pilot-hole from 2,480 feet to 2,497 feet BPL. A flow rate of 4.3 gpm was established with a drawdown of 159 ft. Horizontal hydraulic conductivities were calculated at 6.2×10^{-5} cm/s (recovery data). Packer test No. C5 isolated a section of pilot-hole from 2,206feet to 2,223 feet BPL. A flow rate of 32 gpm was established with a vertical drawdown of 141 feet. Horizontal hydraulic conductivities were calculated at 2.1×10^{-4} cm/s (recovery data).

Overall, the packer testing showed most of the tested intervals in the pilot-hole had a low permeability and, therefore, the low-permeability lower Avon Park and upper Oldsmar Formations should act as a good confining unit.

2.3 Geophysical Logs

The geophysical logs conducted on the pilot-hole include; natural gamma ray, caliper, fluid conductivity, temperature (static and ΔT), flowmeter (dynamic and static), dual induction, SP, and acoustic. Inclination surveys are depicted on Table 3. The logs were correlated with the lithologic data derived from the cutting and core samples. The natural gamma ray shows slightly higher radioactivity in the highly recrystallized dolomites, chert beds, and glauconitic limestones. The lower portion of the pilot-hole from 2,740 feet to 3,150 feet BPL generally shows higher gamma activity due to the dense dolomites associated with the boulder zone. The caliper log generally shows a larger diameter pilot hole in the Oldsmar Formation limestones from 2,290 feet to 3,150 feet BPL. A large cavity was detected from 3,045 feet to 3,048 feet, and somewhat smaller cavies from 3,022 feet to 3,024 feet BPL, 3,015 feet to 3,019 feet BPL, 2,984 feet to 2,988 feet BPL, 2,860 feet to 2,866 feet BPL, 2,766 feet to 2,792 feet BPL. The fluid conductivity log indicates that water in the borehole from 1,994 ft to 3,506 feet BPL had a conductivity in excess of 50,000 μs/cm (greater than 20,000 mg/L TDS). The temperature survey shows a general warming trend to the total depth of the well at 3,506 feet BPL. The dynamic flowmeter log indicates that most of the water is entering the borehole from above 2,870. The dual induction log helps verify the presence of dense dolomite from 2,740 feet to 3,150 feet BPL, poorly to moderately indurated limestones 2,300 to 2,500 feet BPL, and dense dolomites and cavernous zones below 2,741 feet BPL. The acoustic log also verifies the presence of dense dolomites, poorly indurated limestones, and cavities in the well. The log shows shorter travel times in the dense dolomites from 2,000 feet to 2,290 feet BPL, longest (attenuated) travel times in a cavity at about 3,020 feet BPL, generally longer travel times in the limestones from 2,290 feet to 2,741 feet BPL, and shorter travel times in the dolomites below 2,741 feet BPL. Table 5 shows the weight on bit, penetration rate and formation lithology while drilling. The penetration rates were much slower in the proposed injection zone (below 2,741 feet BPL).

2.4 Video Survey

The TV survey (Appendix D) also confirms the lithologies present in the well. A large diameter section of borehole indicative of less indurated limestone was present from 2,220 feet to 2,550 feet BPL. Dolomite and chert beds were present from 2,030 feet to 2,280 feet BPL. The video survey was generally clear in spite of the fact that as and exploratory well, the contractor could not pump fresh water into the well o improve visibility. The video generally becomes cloudy below 3020 and too cloudy to view any details below 3,030 feet due to the inability to induce sufficient flows to clear water with the higher suspended solids from the most permeable sections of the borehole. The video survey verified the presence of injection zones from 2,741 to 3,150 feet BPL.

3.0 DEMONSTRATION OF CONFINEMENT

Chapter 62-528, Florida Administrative Code (FAC) requires the applicant to demonstrate that at least one confining zone is present above the injection zone. Based upon the cuttings and core samples, geophysical logs, video survey, and straddle packer tests there are 5 distinct zones in the lower Floridan Aquifer System that were penetrated in the OLI injection well. The confining sequence generally begins at 2,100 feet BPL in the dense dolomites of the Lower Avon Park formation which extend to a depth of 2,290 feet BPL. The top of the Oldsmar Formation extends from this depth and the dense limestones in this section provide the most significant confining beds in the well extending to a depth of

2,500 feet BPL. Dense dolomites occurring from 2,500 feet BPL to 2,741 feet BPL dominate the next zone and while generally more permeable than the overlying limestone, still act as confinement to the injection zone below. The more permeable dolomites through the injection zone run from 2,741 feet BPL to 3,150 feet BPL. The last zone penetrated by the OLI well is the Cedar Keys formation which extends from 3,150 feet BPL to the total depth of the well at 3,506 feet BPL. These zones all contained beds of varying permeability and some zones are herein regarded as more "confining" than others. They will be discussed separately below.

The zone from 2,100 feet to 2,290 feet BPL contained dolomite of the Avon Park Formation. Four cores were recovered from this zone and they were composed primarily of dolomite. The beds varied in porosity and permeability but overall, the section contains some dense dolomites that are confining in nature. Analysis of the cores collected in this interval range in vertical hydraulic conductivity from 10^{-6} to 10^{-10} cm/sec. The one packer test conducted in this interval was not impressive (2.1×10^{-4} cm/sec), but can in part be attributed to the fact that the rocks with low hydraulic conductivities occur in relatively thin beds interbedded with rocks of higher hydraulic conductivities. It was not possible to use a straddle packer test assembly small enough to evaluate thinner sequences.

Geophysical logs and lithologic samples showed the presence of the lower Avon Park confining zone (as defined by Duncan, et al. 1994) from about 2,290 feet BPL to 2,500 feet BPL. The zone from 2,290 feet to 2,500 feet BPL contained primarily very tight limestone of the Avon Park and lower Oldsmar Formations. Microscopic analysis of the highly altered dolomites or dolomitic limestones and cherts from the lower Avon Park Formation showed many zones to have no visible porosity. Five cores were recovered from this zone and they were composed primarily of micritic limestone in the lower Avon Park and poorly indurated dense limestone in the Oldsmar Formation. The cuttings from this interval were primarily limestone with visual estimated porosity and permeability estimates ranging from low (<5% porosity) to high (10 % porosity). A vertical permeability of 6.9×10^{-10} was reported from a core sample taken in this interval. The sonic porosity log indicates comparatively low porosities throughout this interval. Longer travel times as seen on the sonic log for this interval usually indicate a less indurated material. One packer test were performed on this interval; hole diameters were too large to collect more. The packer test analysis showed that horizontal hydraulic conductivity is extremely low with 3.8×10^{-10} cm/sec. This zone has a very low permeability and is considered the best confining zone in the sequence above the Boulder Zone.

The injection zone is contained wholly within the Oldsmar Formation and was observed to be from 2,741 ft to 3,150 ft BPL. It was almost entirely composed of highly recrystallized dolomites. Large cavities (boulder zone) occurred intermittently from 2,741 feet to 3,150 feet BPL.

The lowest zone encountered in the OLI well was the Cedar Keys formation. It was determined after reaching the original prospective total depth of 3,100 feet BPL that the hole should be deepened to ensure that all available injection zone was penetrated by the well. The contractor's cost to deepen the well were the same for 50 feet as they were for an additional 500 feet. The borehole was advanced to 3506 BPL and then logged again on September 15, 2008.

4.0 CASING SEAT REQUEST

Based on the presented information, it is recommended that the 16-inch injection casing be seated at 2,740 feet BPL. This is interpreted to be in the top of the lower dolomite sequence of the Oldsmar Formation and overlying the highly transmissive boulder zone. In addition, the dolomite directly overlying the seat recommendation depth in the Oldsmar Formation is low permeability and could easily be cemented by the contractor with neat cement to over 100 vertical feet.

5.0 FINAL CASING INSTALLATION

Based upon the interpretations of the data presented herein, a final casing seat depth of 2,740 feet BPL is proposed. The casing is to be installed by the drilling contractor in accordance with the FDEP-approved technical specifications. The mill certificates for the 16-inch diameter, 0.50-inch wall thickness seamless carbon steel casing are included in Appendix E. The driller's cementing plan based upon a theoretical reamed hole volume (26 inch to 2,740 feet BPL) is included in Appendix F.

L.S. Sims & Associates respectfully request FDEP's review and response to this report on an expedited basis so that the construction work can continue on schedule.

6.0 REFERENCES

Applin, P.L. and Applin, E.R., 1944, "Regional Subsurface Stratigraphy and Structure of Florida and Southern Georgia", American Association of Petroleum Geologists Bulletin, Voil. 28, No. 12.

Duncan, J.G., Evans, W.L., Aylor, J.G., and Li Li, 1994, "Geologic Framework of the Floridan Aquifer System, St. Lucie, Martin, and Palm Beach Counties, Florida", DEP Contract No. WM514, Florida Geological Survey.

Miller, J.A., 1986, "Hydrogeologic Framework of the Floridan Aquifer System in Florida and in Parts of Georgia, Alabama, and South Carolina", U.S. Geological Survey Professional Paper 1403.

Southeastern Geological Society Ad Hoc Committee on Florida Hydrostratigraphic Nomenclature, 1986, Hydrogeological Units of Florida: Florida Geological Survey Special Publication No. 28.

Table 1
OLI Injection Well Program   FDEP Permit No. 040842-017-UC

Core No.	Date	Depth Interval Tested	Footage Cored	Footage Recovered	% Recovered	Rock Type
1	6/20/08	2046 - 2056	10	7.5	75	Dolomite
2	7/30/08	2161 - 2167	10	6	60	Dolomite
3	8/2/08	2200 - 2214	14	14	93	Dolomite
4	8/3/08	2250-2265	15	11.5	77	Limestone
5	8/3/08	2300-2304	4	1	25	Limestone
6	8/7/08	2321-2326	5	3.2	62	Limestone
7	8/10/08	2383-2390	7	3	42	Limestone
8	8/12/08	2421-2430	9	9	100	Limestone
9	8/14/08	2490-2504	14	14	100	Limestone
10	8/16/08	2585-2599	14	14	100	Limestone

Table 2

OLI Injection Well Program FDEP Permit No. 040842-017-UC and 040842-019-UC

OLI EW-1 Packer Test Program

Packer Test No.	Date	Depth Interval Tested	Q gpm	Pumping K (cm/sec)	Pumping T (cm^2/sec)	Recovery K (cm/sec)	Recovery T (cm^2/sec)
1	4/22/08	1898-1922	21	1.1×10^{-4}	7.8×10^{-2}		
2	4/23/08	1858-1882	35	4.1×10^{-3}	3.0		
3	4/24/08	1818-1842	71	1.2×10^{-3}	0.85		
4	4/25/08	1774-1798	40	2.1×10^{-4}	0.15		
5	4/26/08	1746-1770	22	2.0×10^{-6}		1.7×10^{-4}	0.12
C1	9/02/08	2324-2342	0			3.8×10^{-10}	2.0×10^{-7}
C2	9/03/08	2608-2626	1			3.6×10^{-6}	2.0×10^{-3}
C3	9/06/08	2706-2724	15			1.1×10^{-4}	4×10^{-11}
C4	9/07/08	2480-2497.	4.3			6.2×10^{-5}	3.2×10^{-2}
C5	9/07/08	2206-2223	32			2.1×10^{-4}	0.11

Table 3

Inclination Surveys / Pilot Hole and reamed holes

Okeechobee Landfill, Inc. Exploratory Well EW-1, Okeechobee, FL

FDEP Permit No. 040842-017-UC

Inclination Survey Depth	Pilot Hole (12.5"in) Deviation	Survey Depth	Reamed Hole Deviation	Reamed Hole Diameter (in.)
90	0.5	90	0.50	48
180	0.5	180	0.50	48
270	0.5	270	0.50	42
360	0.25	360	0.25	42
450	0.25	480	0.25	42
540	0.25	540	0.25	34
630	0.75	630	0.50	34
705	0.25	705	0.50	34
790	0.25	790	0.25	34
880	0.25	880	0.25	34
952	0.25	970	0.25	34
1060	0.25	1060	0.25	34
1150	0.25	1150	0.25	34
1240	0.25	1240	0.25	34
1330	0.25	1330	0.25	34
1420	0.50	1420	0.25	34
1510	0.25	1510	0.25	34
1600	0.50	1600	0.25	34
1690	0.25	1690	0.25	34
1780	0.25	1800	0.25	34
1870	0.50	1870	0.25	34
1900	0.25	1900	0.25	34
1940	0.50	1940	0.25	34
1990	0.25	1990	0.00	34
2080	0.25	2090	0.50	26
2170	0.25	2180	0.25	26
2260	0.25	2270	0.25	26
2350	0.25	2360	0.50	26
2440	0.25	2450	0.25	26
2530	0.25	2540	0.50	26
2620	0.25	2630	0.25	26
2710	0.25	2720	0.25	26
2800	0.25	2810	0.25	16
2890	0.25	2890	0.25	16
2980	0.25	2990	0.50	16
3070	0.25	3080	0.50	16
3160	0.25	3150	0.25	16
3250	0.25	3250		
3340	0.25	3340		
3430	0.25	3430		
3500	0.25	3500		

OKEECHOBEE LANDFILL, INC.
LITHOLOGIC DESCRIPTIONS

EXPLORATORY / INJECTION WELL – EW-1

Undifferentiated Marine Terrace Deposits

0-140	SAND; yellowish gray (5Y 8/1) high permeability; grain type: biogenetic, skeletal; phosphatic sand (10%)

Hawthorn Group – Peace River Formation

140 – 150	CLAY; pale olive (10 Y 6/2) to grayish olive (10 Y 4/2); 10% porosity, intergranular, porosity, low permeability; poor induration; clay and dolomite cement; 45% silt sized dolomite, 20% quartz sand, 2% phosphate; mollusks, fossil fragments
150-160	Sand; fine grain clean white sand, productive zone in local wells
150 – 210	DOLO-SILT; pale olive (10 Y 6/2) to grayish olive (10 Y 4/2); 10% porosity, intergranular porosity, low permeability; poor induration with clay and dolomite cement; 5% quartz sand, 2% phosphate, 2% clay; mollusks
210 – 220	SHELL BED; yellowish gray (5 Y 7/2), 15% porosity, intergranular porosity; poor induration with clay. dolomite, and micrite cements; 45% silt sized dolomite, 2% clay, 2% phosphate; mollusks
220 – 440	DOLO-SILT; light olive gray (5 Y 5/2); 10% porosity, intergranular porosity, low permeability; poor induration with clay and dolomite cements; 2% clay, 2% quartz sand, 2% phosphate
440 – 570	DOLO-SILT; pale olive (10 Y 6/2); 10% porosity, intergranular porosity, low permeability; poor induration with clay and dolomite cements; 2% clay, 10% phosphate, 10% quartz sand
570 – 660	DOLO-SILT; pale olive (10 Y 6/2); 10% porosity, intergranular porosity, low permeability; poor induration with clay and dolomite cement; 1% clay, 5% phosphate, 10% quartz sand, limestone fragments
660 – 670	Reworked zone – Ocala Limestone fragments in dolosilt/clay sand matrix

Ocala Limestone

670 – 680	LIMESTONE, very pale orange (10 YR 8/2), 20% porosity, intergranular and moldic porosity, medium permeability, grain types are skeletal, micrite and sparry calcite, poor induration with micrite and sparry calcite cements, benthonic foraminifera, mollusks, bryozoans, and corals

680 – 730	LIMESTONE, very pale orange (10 YR 8/2); 15% porosity, intergranular, moldic and vugular porosity, medium permeability; grain types are biogenic, micrite and skeletal, moderate induration with micrite and sparry calcite cements, mollusks, benthonic foraminifera (*Lepidocyclina* and *Operculinoides sp.*)
730- 800	LIMESTONE; very pale orange (10 YR 8/2); 15% porosity, intergranular, moldic and vugular porosity, medium permeability; grain types are biogenic, skeletal, and micrite, moderate induration with micrite and sparry calcite cements, benthonic foraminifera

Avon Park Formation

800 -820	LIMESTONE (calcarenite); white (N 9); 15 porosity, intergranular porosity; grain types are biogenic, skeletal, and crystal; medium grained, moderate induration with micrite sparry calcite, and dolomite cements; dolomitic; cones – *Dictyoconus cookie*
820 – 830	LIMESTONE (calcilutite), yellowish gray (5 Y 8/1); 5% porosity, intergranular porosity; grain type: skeletal, micrite, very fine grained, moderate induration with micrite cement, trace phosphatic sand; cones, benthic foraminifera
830 -850	LIMESTONE, (calcilutite), yellowish gray (5 Y 8/1); 5% porosity, intergranular porosity, possibly low permeability; grain type: skeletal, calcilutite; calcilutite matrix; cones, benthic foraminifera
850 – 870	LIMESTONE, yellowish gray (5 Y 8/1); 15% porosity, intergranular porosity, grain type is skeletal, micrite, and crystal, moderate induration with micrite and sparry calcite cements, dolomitic; benthonic foraminifera
860 – 880	LIMESTONE, (calcarenite), dark yellowish brown (10 YR 4/2); 15% porosity, intergranular porosity; grain types are skeletal, micrite, and crystal, good induration with sparry calcite, micrite and dolomite cements, 10% dolomite; benthic foraminifera; dolomitic limestone
880 – 890	LIMESTONE (calcilutite), yellowish gray (5 Y 7/2); 15% porosity, intergranular porosity, pinpoint vugs; grain type: skeletal, calcilutite; calcilutite matrix, cones, benthic foraminifera; Dictyconus Americanus; dolomitic limestone
890 – 900	LIMESTONE, yellowish gray (5 YR 8/1); 15% porosity, intergranular porosity, grain types are skeletal, biogenic, and crystal calcilutite; moderate induration with sparry calcite and micrite cements, milliolids, benthic foraminifera; *Dictyconus americanus*

900 – 920	LIMESTONE (calcilutite),pinkish gray (5 YR 8/1), 5% porosity, intergranular porosity, possibly low permeability; grain types are: skeletal and micrite; moderate induration with micrite cement; dolomitic; cones, benthic foraminifera; *Dictyconus americanus*; dolomitic
920- 930	LIMESTONE (calcilutite), light gray (N7), 5% porosity, intergranular and vugular porosities, possibly low permeability, grain types are skeletal and micrite, very fine grained, moderate induration with micrite and sparry calcite cements, dolomitic; cones, benthonic foraminifera
930 -960	LIMESTONE (calcilutite), yellowish gray (5 YR 8/1); 5% porosity, intergranular and vugular porosity, possibly low permeability, grain types are skeletal and micrite, very fine grained, moderate induration with micrite cement, 5% chert; dolomitic; cones, benthonic foraminifera
960 – 980	LIMESTONE, yellowish gray (5 YR 8/1); 5% porosity, intergranular porosity, possibly low permeability, grain types are skeletal and micrite, moderate induration with micrite cement; cones, benthonic foraminifera
980 – 1000	LIMESTONE, yellowish gray (5 YR 8/1); 15% porosity, intergranular porosity, pinpoint vugs; grain types are skeletal, crystal, and micrite, moderate induration with sparry calcite cements and micrite cements, benthonic foraminifera;
1000 – 1040	DOLOMITE, dark yellowish brown (10 YR 4/2); 15% porosity, intercrystalline and vugular porosity, pinpoint vugs; high alteration, very fine grained euhedral crystals, good induration with dolomite and micrite cements; benthic foraminifera
1040 – 1060	LIMESTONE, yellowish gray (5 Y 8/1); 15% porosity, intergranular and moldic porosities; grain types are skeletal and micrite, moderate induration with micrite cement, benthonic foraminifera
1060 – 1070	LIMESTONE (calcilutite),yellowish gray (5 Y 8/1); 5% porosity, intergranular and vugular porosities, possibly low permeability, grain types are micrite and crystal, very fine grained, moderated induration with sparry calcite and micrite cements
1070 -1090	LIMESTONE, yellowish gray (5 Y 8/1); low permeability, intergranular; grain type: skeletal, calcilutite; 0 -10% dolomite alteration; calcilutite matrix; cones, benthic foraminifera; dolomitic limestone
1070 – 1080	LIMESTONE; Light yellowish brown (5 YR 6/1); 15% porosity, intergranular, pinpoint vugs; grain type: sand, clay; 0 -10% dolomite alteration; sparry calcite, calcilutite matrix; dolomitic; cones, benthic foraminifera; dolomitic limestone

1080 – 1100	DOLOMITE, yellowish gray (5 YR 8/1); 10% porosity, intercrystalline and vugular porosity, high alteration, very fine grained euhedral crystals, good induration with dolomite and micrite cements, 10% micrite
1100 – 1120	LIMESTONE; moderate yellowish brown (10 YR 5/4); 15% porosity, intergranular and moldic porosity, pinpoint vugs; grain types are skeletal, crystal, and micrite, good induration with sparry calcite and micrite cements, 10% dolomite
1120 – 1200	DOLOMITE, pale yellowish brown (10 YR 6/2); 15% porosity intercrystalline, vugular and moldic porosities, possibly high permeability, high alteration, very fine grained euhedral crystals, moderate induration with dolomite and micrite cements, sucrosic
1200 -1220	DOLOMITE; moderate yellowish brown (10 YR 5/4); 10% porosity, intercrystalline and vugular porosity, pinpoint vugs; high alteration, very fine grained subhedral to euhedral crystals; good induration with sparry calcite and dolomite cements; sucrosic
1220 – 1230	DOLOMITE: dark yellowish brown (10 YR 4/2); 10% porosity, intercrystalline and moldic porosity, pinpoint vugs; high alteration; good induration with dolomite cement; sucrosic, fossil molds
1230 -1240	DOLOMITE, brownish gray (10 YR 4/1); 2% porosity, intercrystalline and intracrystalline porosity, pinpoint vugs; high alteration, microcrystalline to very fine grained euhedral crystals, good induration with dolomite cement, unfossilliferous
1240 – 1260	DOLOMITE, moderate yellowish brown (10 YR 5/4) 15% porosity, intercrystalline, pinpoint vugs, possibly high permeability; high alteration, very fine grained euhedral crystals, good induration, with dolomite cement; sucrosic
1260 – 1270	LIMESTONE: yellowish gray (5 Y 8/1); 5% porosity, intergranular porosity, possibly low permeability; grain type is micrite and crystal,: moderate induration with micrite, sparry calcite, dolomite cement; 10% dolomite
1270 – 1280	DOLOMITE, brownish gray (10 YR 4/1); 10% porosity, intercrystalline and vugular porosity, pinpoint vugs, high alteration, euhedral crystals; good induration with dolomite and micrite cements
1280 – 1300	DOLOMITE, moderate yellowish brown (10 YR 5/4); 15% porosity, intercrystalline porosity, pinpoint vugs; possibly high permeability, high alteration; very fine grained euhedral crystals, good induration; dolomite cement

1300 – 1310	DOLOMITE, moderate yellowish brown (10 YR 5/4); 15% porosity, intercrystalline, pinpoint vugs, possibly high permeability; high alteration; microcrystalline to very fine grained euhedral crystals, good induration with dolomite cement; trace glauconite
1310 – 1320	DOLOMITE, moderate yellowish brown (10 YR 5/4); 10% porosity, intercrystalline and vugular porosity, pinpoint vugs, high alteration; good induration; with dolomite cement
1320 – 1340	LIMESTONE, yellowish gray (5 Y 8/1); 5% porosity, intergranular porosity, possibly low permeability, grain type are skeletal and micrite, moderated induration with sparry calcite and micrite cements; 10% dolomite
1340 – 1370	LIMESTONE, yellowish gray (5 Y 8/1); 15% porosity, intergranular, moldic and vugular porosity, possibly high permeability; grain types are crystal, skeletal, and biogenic, good induration with sparry calcite and micrite cement;, benthonic foraminifera, mollusks, bryozoans
1370 – 1380	LIMESTONE, yellowish gray (5 Y 8/1), 15% porosity, intergranular; grain types is micrite and skeletal, moderate induration with sparry calcite and micrite cements, cones, benthonic foraminifera
1380 – 1390	LIMESTONE: moderate yellowish brown (10 YR 5/4); 5% porosity, intergranular porosity, possibly low permeability; grain types are biogenic, skeletal and crystal, poor induration with micrite and sparry calcite cements, 10% dolomite, forams
1390 - 1400	LIMESTONE: pale yellowish brown (10 YR 6/2); 5% porosity, intergranular porosity, possibly low permeability, grain types are biogenic, skeletal and crystal, moderate induration with sparry calcite and micrite cement; benthonic foraminifera; *Dictyoconus americanus*
1400 – 1420	LIMESTONE, dark yellowish brown (10 YR 4/2); 5% porosity, intergranular porosity, possibly low permeability, grain types are micrite and skeletal, poor induration with micrite cement; 10% dolomite; cones, benthonic foraminifera
1420 – 1430	LIMESTONE: moderate yellowish brown (10 YR 5/4); 5% porosity, intergranular porosity, possibly low permeability, pinpoint vugs; grain types are skeletal micrite, poor induration with micrite cement, 10% dolomite; cones, benthic foraminifera
1430 – 1440	LIMESTONE, pale yellowish brown (10 YR 6/2); 5% porosity, intergranular porosity, possibly low permeability, grain types are biogenic, skeletal, and crystal; poor induration with micrite cement, cones, benthonic foraminifera

1440 – 1450	DOLOMITE,: pale yellowish brown (10 YR 6/2); 10% porosity, intercrystalline and vugular porosity, high alteration, very fine grained euhedral crystals, moderate induration with dolomite and micrite cements; cones, benthonic foraminifera
1450 – 1460	LIMESTONE: pale yellowish brown (10 YR 6/2); 5% porosity, intergranular and vugular porosity, possibly low permeability, grain type are skeletal and micrite, moderate induration with micrite cement; cones, benthic foraminifera; dolomitic limestone
1460 – 1470	DOLOMITE, dark yellowish brown (10 YR 4/2); 5% porosity, intercrystalline and vugular porosity, possibly low permeability, high alteration, microcrystalline to very fine euhedral crystals, good induration with dolomite cement; cones, benthonic foraminifera
1470 – 1490	DOLOMITE, moderate yellowish brown (10 YR 5/4); 15% porosity, intercrystalline porosity, pinpoint vugs; high alteration; good induration with dolomite cement; trace hematite
1490 - 1510	DOLOMITE, pale yellowish brown (10 YR 6/2); 5% porosity, intercrystalline porosity, pinpoint vugs; high alteration very fine grained euhedral crystals, good induration with dolomite cement; 5% glauconite
1510 - 1530	DOLOMITE, dark yellowish brown (10 YR 4/2); 5% porosity, intercrystalline porosity, possibly low permeability, pinpoint vugs; high alteration; very fine grained euhedral crystals, good induration with dolomite cement; 5% glauconite; benthonic foraminifera
1530 – 1540	DOLOMITE, moderate yellowish brown (10 YR 5/4); 20% porosity, intercrystalline, pinpoint vugs, possibly high permeability; high alteration, very fine grained euhedral crystals, good induration with dolomite cement; sucrosic;
1540 – 1560	DOLOMITE, dark yellowish brown (10 YR 4/2); 5% porosity, intercrystalline porosity, pinpoint vugs; high alteration; very fine grained euhedral crystals, moderate induration with dolomite cement; 5% glâuconite;; cones, benthonic foraminifera
1560 – 1580	DOLOMITE, moderate yellowish brown (10 YR 5/4); 15% porosity, intercrystalline porosity, pinpoint vugs, possibly high permeability; high alteration; euhedral crystals good induration with dolomite cement
1580 – 1590	DOLOMITE, dark yellowish brown (10 YR 4/2); 15% porosity, intercrystalline porosity; pinpoint vugs, high alteration; good induration with dolomite cement
1590 – 1600	DOLOMITE, moderate yellowish brown (5 YR 5/4); 20% porosity intercrystalline and vugular porosity, possibly high permeability; high alteration; very fine grained euhedral crystals, moderate induration with dolomite cement, benthonic foraminifera

1600 – 1610	DOLOMITE, light brownish gray (10 YR 6/1); 15% porosity, intercrystalline porosity, pinpoint vugs, high alteration, very fine grained euhedral crystals, good induration with dolomite cement
1610 – 1620	DOLOMITE, moderate yellowish brown (10 YR 5/4); 25% porosity, intercrystalline and vugular porosity, possibly high permeability; high alteration; good induration with dolomite cement
1630 – 1650	DOLOMITE, moderate yellowish brown (10 YR 5/4); 25% porosity, intercrystalline and vugular porosity, possibly high permeability; high alteration; good induration with dolomite cement
1650 – 1680	DOLOMITE, moderate yellowish brown (5 Y 8/1); 15% porosity, intercrystalline and moldic porosity, pinpoint vugs, high alteration, very fine grained euhedral crystals, good induration with dolomite cement, fossil molds
1680 – 1700	LIMESTONE, very pale orange (10 YR 8/2); 10% porosity, intergranular and moldic porosity; grain types are biogenic, skeletal, and micrite, moderate induration with micrite cement, benthonic foraminifera, milliolids
1700 – 1730	LIMESTONE, very pale orange (10 YR 8/2); 10% porosity, intergranular porosity, grain types are skeletal, micrite and crystal, moderate induration with sparry calcite and micrite cement, benthonic foraminifera
1730 – 1760	DOLOMITE, pale yellowish brown (10 YR 6/2); 5% porosity, intercrystalline and vugular porosity, possibly, low permeability, pinpoint vugs; high alteration, very fine grained euhedral crystal, good induration with dolomite and micrite cements, benthonic foraminifera
1760 – 1790	LIMESTONE, very pale orange (10 YR 8/2); 5% porosity, intergranular porosity, grain types are biogenic micrite and skeletal, poor induration with micrite cement, benthonic foraminifera
1790 – 1810	LIMESTONE, very pale orange (10 YR 8/2); 10% porosity, intergranular and moldic porosity; grain type is biogenic, skeletal and micrite, moderate induration with micrite cement, mollusks. benthonic foraminifera
1810 – 1840	LIMESTONE, very pale orange (10 YR 8/2); 15% porosity, intergranular and moldic porosity, grain types are micrite, biogenic and skeletal, 40% > .625 mm, very fine to medium grained, moderate induration with micrite cement, benthonic foraminifera, cones

1840 – 1920 LIMESTONE, very pale orange (10 YR 8/2); 5% porosity, intergranular and vugular porosity, possibly low permeability, grain types micrite, crystal, and biogenic, 20% > .65mm, microcrystalline to fine grained, poor induration with sparry calcite and micrite cements, benthonic foraminifera, cones

1920 – 2000 LIMESTONE, very pale orange (10 YR 8/2); 10% porosity, intercrystalline, intergranular, and vugular porosity; grain types is crystal, micrite, and biogenic, 20% > .65mm, moderate induration with sparry calcite and micrite cements, benthonic foraminifera

2000 – 2010 80/20 light brownish gray Dolomite and very pale orange Limestone moderate yellowish brown (5 Y 8/1); 15% porosity, intercrystalline and moldic porosity, pinpoint vugs, high alteration, very fine grained euhedral crystals, good induration with dolomite cement, fossil molds

2010 – 2040 DOLOMITE, pale yellowish brown (10 YR 6/2); 5% porosity, intercrystalline and vugular porosity, possibly, low permeability, pinpoint vugs; high alteration, very fine grained euhedral crystal, good induration with dolomite and micrite cements, benthonic foraminifera

2040– 2100 DOLOMITE, grayish orange (10 YR 7/4); 10% porosity, intercrystalline and vugular porosity, high alteration, microcrystalline to very fine grained euhedral crystals, good induration with dolomite cement, unfossilliferous

2020 – 2030 DOLOMITE, pale yellowish brown (10 YR 6/2); 5% porosity, intercrystalline porosity, possibly low permeability, high alteration, very fine grained euhedral crystals, good induration with dolomite cement

Confining Sequence

2100 – 2140 DOLOMITE, dark yellowish brown (10 YR 4/2); 10% porosity, intercrystalline porosity, high alteration, subhedral; good induration; with dolomite cement

2140 – 2190 DOLOMITE, moderate yellowish brown (10 YR 5/4), 15% porosity, intercrystalline, vugular, and moldic porosity, possibly high permeability, high alteration, very fine grained euhedral crystals, sucrosic, good induration with dolomite cement

2190 – 2220 DOLOMITE, dark yellowish brown (10 Y 4/2); 5% porosity, intercrystalline and vugular porosity, possibly low permeability, high alteration, very fine to microcrystalline grained euhedral crystals, good induration with dolomite cement

2220 – 2230 DOLOMITE, dark yellowish orange (10 YR 6/6), 15% porosity, intercrystalline and intergranular possibly possibly high permeability, high alteration, very fine grained euhedral crystals, moderate induration with dolomite cement

2230 – 2290	DOLOMITE, moderate yellow brown (10 YR 5/4); 15% porosity, intracrystalline and intergranular porosity, possibly high permeability, high alteration, very fine grained euhedral crystals, moderate induration with dolomite cement

OLDSMAR FORMATION

2290 – 2310	LIMESTONE (calcilutite), yellowish gray (5 Y 8/1); 5% porosity, intergranular porosity, grain types are micrite and biogenic, 10% >,062mm, poor induration with micrite cement, unfossilliferous
2310 – 2390	LIMESTONE, very pale orange (10 YR 8/2), 10% porosity, intergranular porosity, grain type is skeletal, micrite, and biogenic, 40% > .65mm, very fine to medium grained euhedral , moderate induration with micrite cement, trace glauconite, pellets, benthonic foraminifera
2390 – 2400	LIMESTONE: very pale orange (10 YR 8/2); 10% porosity, intercrystalline, intergranular, and moldic porosity; grain type: biogenic, crystals, and micrite, 30% > .65mm good induration; sparry calcite cement and micrite cements, benthonic formaminifera
2400 – 2460	LIMESTONE (calcarenite): very pale orange (10 YR 8/2); 15% porosity, intergranular, moldic; grain type: biogenic, skeletal, micrite, 75% > 0.062mm, mode: microcrystalline, range: medium; moderate induration; sparry calcite cement and calcilutite matrix; 1% clay; benthic formaminifera (*Heliocostegina gyralis*), mollusks, pellets
2460 – 2500	LIMESTONE: very pale orange (10 YR 8/2); 15% porosity, intergranular, moldic; grain type: biogenic, skeletal, calcilutite, 50% > 0.062mm, mode: microcrystalline, range: medium; moderate induration; sparry calcite cement and calcilutite matrix; 1% clay, glauconite; benthic formaminifera, *Heliocostegina gyralis,* mollusks w/ glauconite
2500 – 2510	DOLOMITE, dark yellowish brown (10 Y 4/2); 5% porosity, intercrystalline, possibly low permeability, high alteration, very fine to microcrystalline grained euhedral crystals, good induration
2510 – 2540	LIMESTONE: very pale orange (10 YR 8/2); 5% porosity, intergranular, moldic; grain type: biogenic, crystal, skeletal, calcilutite, 65% > 0.062mm, mode: microcrystalline, range: medium; moderate induration; sparry calcite cement and calcilutite matrix; benthic formaminifera, mollusks
2540 – 2600	DOLOMITE, dark yellowish brown (10 Y 4/2); 5% porosity, intercrystalline, possibly low permeability, high alteration, very fine to microcrystalline grained euhedral crystals, good induration

2600 – 2610	LIMESTONE, pale yellowish brown (10 YR 6/2); 10% porosity, intergranular, moldic, vugular; grain type: biogenic, skeletal, calcilutite, 25% > 0.062mm, mode: microcrystalline, range: medium; moderate induration; sparry calcite cement and calcilutite matrix; benthic formaminifera, pellets
2610 – 2640	LIMESTONE (calcarenite): very pale orange (10 YR 8/2);15% porosity, intergranular, moldic; grain type: biogenic, calcilutite, sparry calcite; 75% > 0.062mm, mode: medium, range: medium to microcrystalline; moderate induration; sparry calcite cement and calcilutite matrix; benthic formaminifera
2640 – 2660	DOLOMITE, dark yellowish brown (10 Y 4/2); 5% porosity, intercrystalline, possibly low permeability, high alteration, very fine to microcrystalline grained euhedral crystals, good induration
2660 – 2670	LIMESTONE (calcarenite): very pale orange (10 YR 8/2);15% porosity, intergranular, moldic; grain type: biogenic, calcilutite, sparry calcite, range: medium to microcrystalline; moderate induration; sparry calcite cement and calcilutite matrix
2670 – 2690	DOLOMITE, dark yellowish brown (10 Y 4/2); 5% porosity, intercrystalline, possibly low permeability, high alteration, very fine to microcrystalline grained euhedral crystals, good induration
2690 – 2730	LIMESTONE (calcilutite): grayish orange (10 YR 7/4); 5% porosity, intergranular, possibly low permeability; grain type: biogenic, calcilutite, crystals; 0% > 0.062mm, mode: microcrystalline,poor induration; sparry calcite cement and calcilutite matrix
2730 – 2741	DOLOMITE, moderate yellowish brown (10 YR 5/4); 10% porosity, intergranular, intercrystalline, vugular; 50 - 90% dolomite alteration, euhedral, mode: very fine, range: very fine to microcrystalline; good induration; matrix: dolomite cement and sparry calcite cement,

TOP OF INJECTION ZONE AT 2741

2741 – 2780	DOLOMITE, pale yellowish brown (10 YR 6/2); 10% porosity, intergranular, intercrystalline, vugular; 50 - 90% dolomite alteration, euhedral, mode:very fine, range: cryptocrystalline to microcrystalline; good induration; matrix: dolomite cement and sparry calcite cement
2780 – 2880	DOLOMITE, moderate yellowish brown (10 YR 5/4); 15% porosity, intergranular, intercrystalline, vugular; 90 - 100% dolomite alteration, euhedral, mode: microcrystalline, range: cryptocrystalline to microcrystalline; good induration; matrix: dolomite cement

2880 – 2910	DOLOMITE, moderate yellowish brown (10 YR 5/4); 15% porosity, intercrystalline, vugular; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: cryptocrystalline to very fine; good induration; matrix: dolomite cement
2910– 2930	DOLOMITE, dark yellowish brown (10 YR 4/2); 10% porosity, intercrystalline, vugular, low permeability; 90 - 100% dolomite alteration, euhedral, mode: microcrystalline, range: microcrystalline to cryptocrystalline; good induration; matrix: dolomite cement
2930– 2990	DOLOMITE, pale yellowish brown (10 YR 6/2); 15% porosity, intercrystalline, vugular; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: microcrystalline to very fine; good induration; matrix: dolomite cement
2990– 3010	DOLOMITE, grayish orange (10 YR 7/4); 15% porosity, intercrystalline, vugular, 90 - 100% dolomite alteration, euhedral, mode: very fine, range: microcrystalline to very fine; good induration; matrix: dolomite cement
3010– 3100	DOLOMITE, pale yellowish brown (10 YR 6/2); 10% porosity, intercrystalline, vugular; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: microcrystalline to very fine; good induration; matrix: dolomite cement
3100– 3150	DOLOMITE, moderate yellowish brown (10 YR 5/4); 25% porosity, intercrystalline, intergranular, possible high permeability; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: fine to microcrystalline; good induration; matrix: dolomite cement, sucrosic

CEDAR KEYS FORMATION

3150– 3180	DOLOMITE, moderate yellowish brown (10 YR 5/4); 20% porosity, intercrystalline, intergranular, possible high permeability; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: fine to microcrystalline; good induration; matrix: dolomite cement with 10% Gypsum
3180– 3370	DOLOMITE, olive gray (5 Y 4/1); 10% porosity, intercrystalline, vugular, low permeability; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: fine to microcrystalline; good induration; matrix: dolomite cement with 20% Gypsum
3370– 3410	DOLOMITE, pale yellowish brown (10 YR 6/2); 10% porosity, intercrystalline, vugular; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: fine to microcrystalline; good induration; matrix: dolomite cement with 20% Gypsum

3410– 3500	DOLOMITE, olive gray (5 Y 4/1); 10% porosity, intercrystalline, vugular, low permeability; 90 - 100% dolomite alteration, euhedral, mode: very fine, range: fine to microcrystalline; good induration; matrix: dolomite cement with 20% Gypsum

APPENDIX A

LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1

OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE:	June 20, 2008	TOTAL FOOTAGE CORED (feet):	10.0
CORE #:	ONE (1)	TOTAL FOOTAGE RETRIEVED (feet):	7.5
CORE INTERVAL:	2046 to 2056 FT BLS	RECOVERY:	75%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
7.5	DOLOMITE: pale yellowish brown (10 YR 6/2); 10% porosity, intercrystalline and pin point vug porosity, high alteration with very fine grain euhedral crystals, good induration with dolomite cement; high recrystallization; sucrosic intervals.
	Sample collected for laboratory analyses at 2,054 ft BLS

APPENDIX A

LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1

OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: July 30, 2008
CORE #: TWO (2)
CORE INTERVAL: 2,161 to 2,167 FT bls

TOTAL FOOTAGE CORED (feet): 6.0
TOTAL FOOTAGE RETRIEVED (feet): 6.0
RECOVERY: 100%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
3.5	DOLOMITE: light olive brown (5 Y 5/6); 15% porosity, vugular, moldic, and intercrystalline porosity; high alteration, with very fine grain euhedral crystals, microcrystalline; good induration with dolomite cement; high recrystallization; sucrosic, fossil molds.
1.0	DOLOMITE: pale yellowish brown (10 YR 6/2); 10% porosity, intercrystalline and pin point vug porosity, high alteration with very fine grain euhedral crystals, good induration with dolomite cement; high recrystallization; sucrosic intervals.
1.5	DOLOMITE: moderate yellowish brown (10 YR 5/4); 20% porosity, intercrystalline, moldic, and pin point vug porosity, high alteration, very fine grained euhedral crystals, good induration with dolomite cement; high recrystallization; fossil molds
	Sample collected for laboratory analyses at 2,167 ft BLS

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1
OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 2. 2008
CORE #: THREE (3)
CORE INTERVAL: 2,200 to 2,214 FT BLS

TOTAL FOOTAGE CORED (feet): 14.0
TOTAL FOOTAGE RETRIEVED (feet): 13.0
RECOVERY: 93%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
1.0	DOLOMITE: moderate yellowish brown (10 YR 5/4); 20% porosity, intercrystalline, moldic, and pin point vug porosity, high alteration, very fine grained euhedral crystals, good induration with dolomite cement; high recrystallization; fossil molds
9.0	DOLOMITE: pale yellowish brown (10 YR 6/2) 5% porosity, pin point vugs, intercrystalline and moldic porosity, high alteration, very fine grained euhedral crystals, microcrystalline; good induration with dolomite cement, massive, high recrystallization, evidence of burrowing near top of core.
4.0	DOLOMITE: moderate yellowish brown (10 YR 5/4); 20% porosity, intercrystalline, moldic, and pin point vug porosity, high alteration, very fine grained euhedral crystals, good induration with dolomite cement; high recrystallization; fossil molds
	Sample collected for laboratory analyses at 2,212 ft BLS

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1

OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 3. 2008
CORE #: FOUR (4)
CORE INTERVAL: 2,2250 to 2,265 FT BLS

TOTAL FOOTAGE CORED (feet): 15.0
TOTAL FOOTAGE RETRIEVED (feet): 11.5
RECOVERY: 77%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
11.5	LIMESTONE: very pale orange (10 YR 8/2), 5% porosity, possibly low permeability, moldic, intergranular and pinpoint vug porosity; grain types are biogenic, skeletal, crystal, and skeletal cast; 25% > 0.062mm, very fine to medium grain; moderate induration with sparry calcite and micrite cement; benthic foraminifera.
	Sample collected for laboratory analyses at 2,262 feet.

APPENDIX A

LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1

OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 3. 2008

CORE #: FIVE (5)

CORE INTERVAL: 2,300 to 2,304 FT BLS

TOTAL FOOTAGE CORED (feet): 4.0

TOTAL FOOTAGE RETRIEVED (feet): 1.0

RECOVERY: 25%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
1	LIMESTONE: dark yellowish orange (10 YR 6/6); 10% porosity, intergranular porosity, grain types are skeletal, micrite, and crystal; fine grained, 25% > 0.62 mm; moderate induration with sparry calcite and micrite cement benthic foraminifera.
	No sample sent for laboratory analyses.

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1
OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 7, 2008
CORE #: SIX (6)
CORE INTERVAL: 2,321 to 2,326 FT BLS

TOTAL FOOTAGE CORED (feet): 5.0
TOTAL FOOTAGE RETRIEVED (feet): 3.2
RECOVERY: 60%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
1.2	LIMESTONE: very pale orange (10 YR 8/2), <5% porosity, possibly low permeability, moldic, intergranular porosity; grain types are biogenic; very fine to medium grain; moderate induration; benthic foraminifera.
0.3	CHERT: yellowish gray (5 Y 8/1); no visible porosity, possibly low permeability; good induration with silica cement, nodular; conchoidal fracturing.
1.7	LIMESTONE: very pale orange (10 YR 8/2), <5% porosity, possibly low permeability, moldic, intergranular porosity; grain types are biogenic; very fine to medium grain; moderate induration; benthic foraminifera.
	Sample collected for laboratory analyses at 2,326 feet.

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1
OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 10, 2008
CORE #: SEVEN (7)
CORE INTERVAL: 2,383 to 2,390 FT BLS

TOTAL FOOTAGE CORED (feet): 7.0
TOTAL FOOTAGE RETRIEVED (feet): 3.0
RECOVERY: 42 %

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
3.0	LIMESTONE: grayish orange (10 YR 7/4); 10% porosity, intergranular, moldic, and vugular porosity; grain types are biogenic, skeletal cast, and micrite; 20% > 0.062mm; microcrystalline to medium; moderate induration with sparry calcite and micrite cement; benthic foraminifera. Dolomitic limestone in the bottom foot, fossil chert nodules.
	Sample collected for laboratory analyses labeled 2,374 feet, from 2,384.

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1
OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 12, 2008
CORE #: EIGHT (8)
CORE INTERVAL: 2,421 to 2,430 FT BLS

TOTAL FOOTAGE CORED (feet): 9.0
TOTAL FOOTAGE RETRIEVED (feet): 9.0
RECOVERY: 100%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
9.0	LIMESTONE: very pale orange (10 YR 8/2); 20% porosity, moldic, intercrystalline, and pinpoint vug porosity; grain types are biogenic, skeletal, and crystal; 75% > 0.062mm, very fine to medium grain; moderate induration with sparry calcite and micrite cement, glauconite, abundance of benthic foraminifera including *Helicostigina Gyralis*., fossil molds.
	Sample collected for laboratory analyses at 2,424 feet.

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1
OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE: August 14, 2008
CORE #: NINE (9)
CORE INTERVAL: 2,490 to 2,504 FT BLS

TOTAL FOOTAGE CORED (feet): 14.0
TOTAL FOOTAGE RETRIEVED (feet): 14
RECOVERY: 100%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
13.5	LIMESTONE: (calcarenite) very pale orange (10 YR 8/2); 10% porosity, moldic, intercrystalline, and pinpoint vug porosity; grain types are biogenic, skeletal, and crystal; 75% > 0.062mm, very fine to medium grain; moderate induration with sparry calcite and micrite cement, glauconite, abundance of benthic foraminifera including *Helicostigina Gyralis*., fossil molds.
0.5	DOLOMITE: pale yellowish brown (10 YR 6/2); 5% porosity, possibly low permeability, intercrystalline and vugular porosity; high alteration with microcrystalline to very fine grain euhedral crystals, good induration with dolomite cement; sparry calcite filling vugs
	Sample collected for laboratory analyses at 2,502 feet.

APPENDIX A
LITHOLOGIC LOG OF CORES – EXPLORATORY WELL IW-1

OKEECHOBEE LANDFILL, INC. EXW-1 CORE LOG RECORD FDEP PERMIT NO. 040842-017-UC

CORE DATE:	August 16, 2008	TOTAL FOOTAGE CORED (feet):	14.0
CORE #:	Ten (10)	TOTAL FOOTAGE RETRIEVED (feet):	14
CORE INTERVAL:	2,585 to 2,599 FT BLS	RECOVERY:	100%

SECTION THICKNESS (feet)	LITHOLOGIC DESCRIPTION
1.5	DOLOMITE: Very light gray (N8); 10% porosity, intercrystalline, moldic, and vugular porosity; high alteration with very fine grain euhedral crystals, good induration with dolomite cement; sucrosic dolomite filling vugs
1.5	DOLOMITE: pale yellowish brown (10 YR 6/2); 5% porosity, possibly low permeability, intercrystalline and vugular porosity; high alteration with microcrystalline to very fine grain euhedral crystals, good induration with dolomite cement;
2.5	DOLOMITE: Very light gray (N8); 10% porosity, intercrystalline, moldic, and vugular porosity; high alteration with very fine grain euhedral crystals, good induration with dolomite cement;
0.5	DOLOMITE: pale yellowish brown (10 YR 6/2); 5% porosity, possibly low permeability, intercrystalline and vugular porosity; high alteration with microcrystalline to very fine grain euhedral crystals, good induration with dolomite cement; sparry calcite filling vugs
1.0	DOLOMITE: Very light gray (N8); 10% porosity, intercrystalline, moldic, and vugular porosity; high alteration with very fine grain euhedral crystals, good induration with dolomite cement;
0.1	DOLOMITE: Very dark gray (NJ3); 25% porosity, intercrystalline, and vugular porosity; high alteration, good induration with dolomite cement.
4.0	DOLOMITE: pale yellowish brown (10 YR 6/2); 10% porosity, possibly low permeability, intercrystalline and vugular porosity; high alteration with microcrystalline to very fine grain euhedral crystals, good induration with dolomite cement; sparry calcite filling vugs
1.5	DOLOMITE: Very light gray (N8); 10% porosity, intercrystalline, moldic, and vugular porosity; high alteration with very fine grain euhedral crystals, good induration with dolomite cement

WELL ID: OLI Exploratory Well 1

Local ID: Packer Test C-1 Recovery
Date: 9/2/08
Time: 0:00

INPUT

Construction:	
Casing dia. (d_c)	7 Inch
Annulus dia. (d_w)	12.25 Inch
Screen Length (L)	17 Feet
Depths to:	
water level (DTW)	51 Feet
Top of Aquifer	2324 Feet
Base of Aquifer	2342 Feet
Annular Fill:	
across screen --	Open Hole
above screen --	Cement
Aquifer Material --	Clay
FLOW RATE	0.000001 GPM

COMPUTED

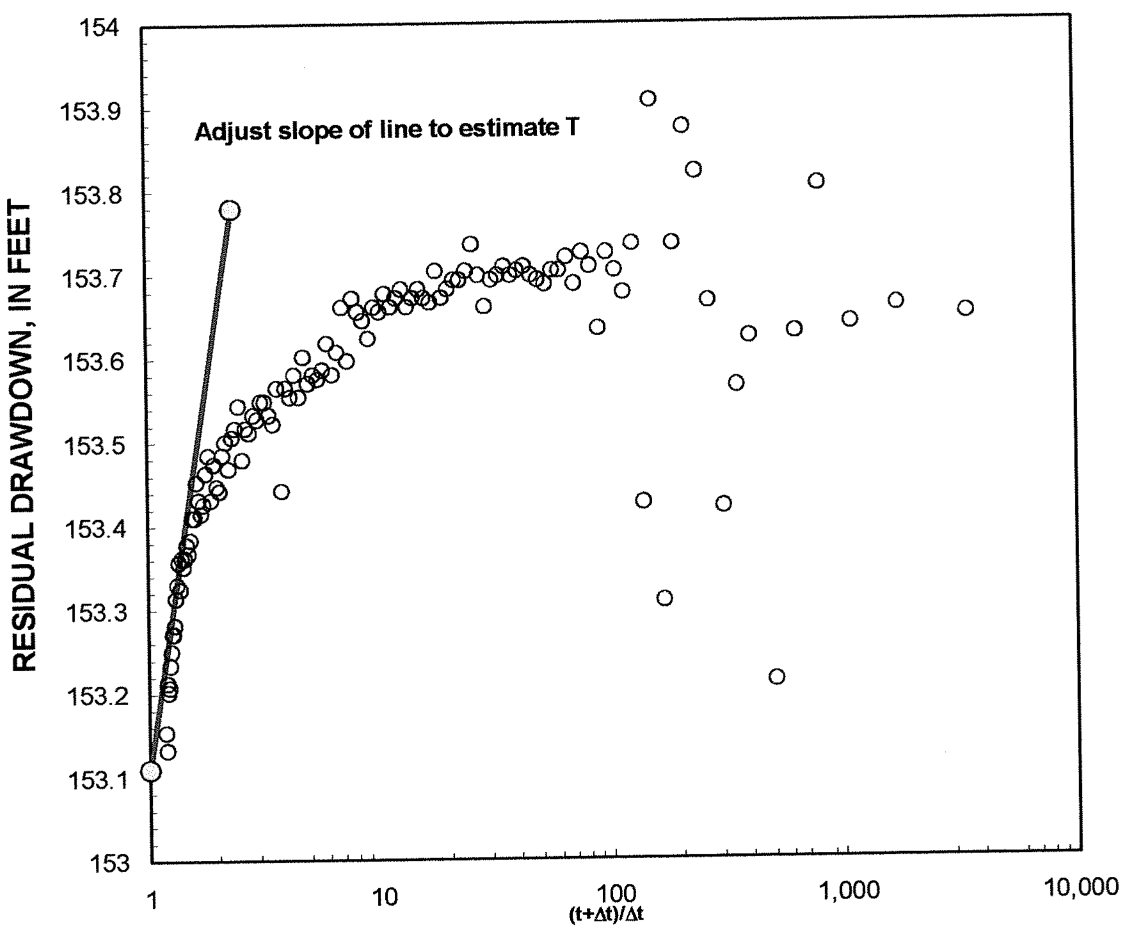
Aquifer thickness = 550 cm

Slope = 55.19351 cm/log10

Input is consistent.

K =	3.8E-10 cm/Second
T =	2.1E-07 cm²/Second

K= 0.00000000038 is less than likely minimum of 0.00000000353 for Clay



REMARKS:

Cooper-Jacob recovery analysis of single-well aquifer test

Using recovery test data instead of drawdown data eliminates casing storage impacts of straddle packer test set up.

Reduced Data

Entry	Time, Date Hr:Min:Sec	Water Level Feet	Entry	Time, Date Hr:Min:Sec	Water Level Feet
1	1/0/00 0:00:00	0.00	51	1/0/00 0:22:08	153.67
2	1/0/00 0:20:33	154.05	52	1/0/00 0:22:14	153.66
3	1/0/00 0:20:34	153.65	53	1/0/00 0:22:20	153.68
4	1/0/00 0:20:34	153.66	54	1/0/00 0:22:27	153.67
5	1/0/00 0:20:34	153.64	55	1/0/00 0:22:34	153.66
6	1/0/00 0:20:35	153.81	56	1/0/00 0:22:42	153.68
7	1/0/00 0:20:35	153.63	57	1/0/00 0:22:50	153.66
8	1/0/00 0:20:36	153.21	58	1/0/00 0:22:58	153.66
9	1/0/00 0:20:36	153.62	59	1/0/00 0:23:07	153.62
10	1/0/00 0:20:37	153.57	60	1/0/00 0:23:17	153.65
11	1/0/00 0:20:37	153.42	61	1/0/00 0:23:26	153.66
12	1/0/00 0:20:38	153.67	62	1/0/00 0:23:37	153.67
13	1/0/00 0:20:39	153.82	63	1/0/00 0:23:48	153.60
14	1/0/00 0:20:39	153.87	64	1/0/00 0:24:00	153.66
15	1/0/00 0:20:40	153.74	65	1/0/00 0:24:13	153.61
16	1/0/00 0:20:41	153.31	66	1/0/00 0:24:26	153.58
17	1/0/00 0:20:42	153.91	67	1/0/00 0:24:41	153.62
18	1/0/00 0:20:42	153.43	68	1/0/00 0:24:56	153.59
19	1/0/00 0:20:43	153.74	69	1/0/00 0:25:11	153.58
20	1/0/00 0:20:44	153.68	70	1/0/00 0:25:28	153.58
21	1/0/00 0:20:45	153.70	71	1/0/00 0:25:46	153.57
22	1/0/00 0:20:46	153.73	72	1/0/00 0:26:05	153.60
23	1/0/00 0:20:47	153.63	73	1/0/00 0:26:25	153.55
24	1/0/00 0:20:49	153.71	74	1/0/00 0:26:46	153.58
25	1/0/00 0:20:50	153.73	75	1/0/00 0:27:08	153.55
26	1/0/00 0:20:51	153.69	76	1/0/00 0:27:32	153.57
27	1/0/00 0:20:53	153.72	77	1/0/00 0:27:57	153.44
28	1/0/00 0:20:54	153.70	78	1/0/00 0:28:24	153.57
29	1/0/00 0:20:56	153.70	79	1/0/00 0:28:52	153.52
30	1/0/00 0:20:57	153.69	80	1/0/00 0:29:22	153.53
31	1/0/00 0:20:59	153.69	81	1/0/00 0:29:54	153.55
32	1/0/00 0:21:01	153.70	82	1/0/00 0:30:27	153.55
33	1/0/00 0:21:03	153.71	83	1/0/00 0:31:03	153.53
34	1/0/00 0:21:05	153.70	84	1/0/00 0:31:39	153.53
35	1/0/00 0:21:07	153.70	85	1/0/00 0:32:21	153.51
36	1/0/00 0:21:10	153.71	86	1/0/00 0:33:03	153.52
37	1/0/00 0:21:12	153.70	87	1/0/00 0:33:45	153.48
38	1/0/00 0:21:15	153.69	88	1/0/00 0:34:33	153.54
39	1/0/00 0:21:18	153.66	89	1/0/00 0:35:27	153.52
40	1/0/00 0:21:21	153.70	90	1/0/00 0:36:15	153.51
41	1/0/00 0:21:24	153.74	91	1/0/00 0:37:15	153.47
42	1/0/00 0:21:27	153.70	92	1/0/00 0:38:15	153.50
43	1/0/00 0:21:31	153.69	93	1/0/00 0:39:15	153.49
44	1/0/00 0:21:35	153.69	94	1/0/00 0:40:21	153.44
45	1/0/00 0:21:39	153.68	95	1/0/00 0:41:33	153.45
46	1/0/00 0:21:43	153.67	96	1/0/00 0:42:51	153.47
47	1/0/00 0:21:47	153.70	97	1/0/00 0:44:09	153.43
48	1/0/00 0:21:52	153.67	98	1/0/00 0:45:33	153.49
49	1/0/00 0:21:57	153.67	99	1/0/00 0:47:03	153.46
50	1/0/00 0:22:02	153.68	100	1/0/00 0:48:39	153.43

WELL ID: OLI Exploratory Well 1

Local ID: Packer Test C-2 Recovery
Date: 9/3/08
Time: 0:00

INPUT

Construction:	
Casing dia. (d_c)	7 Inch
Annulus dia. (d_w)	12.25 Inch
Screen Length (L)	17 Feet
Depths to:	
water level (DTW)	51 Feet
Top of Aquifer	2608 Feet
Base of Aquifer	2626 Feet
Annular Fill:	
across screen --	Open Hole
above screen --	Cement
Aquifer Material --	Limestone, Dolomite
FLOW RATE	1 GPM

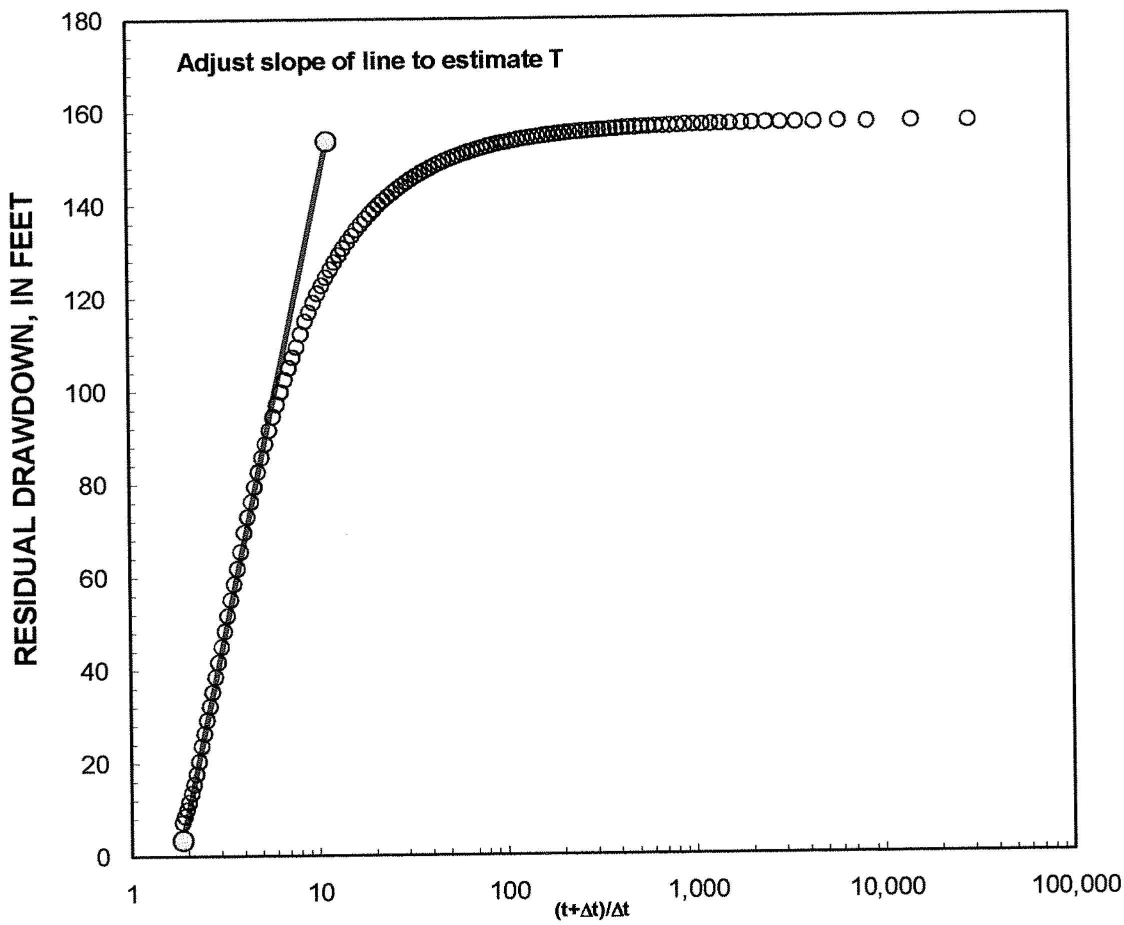
COMPUTED

Aquifer thickness = 550 cm

Slope = 5798.145 cm/log10

Input is consistent.

K =	3.6E-06 cm/Second
T =	0.002 cm^2/Second



REMARKS: Cooper-Jacob recovery analysis of single-well aquifer test

Using recovery test data instead of drawdown data eliminates casing storage impacts of straddle packer test set up.

Reduced Data

Entry	Time, Date Hr:Min:Sec	Water Level Feet	Entry	Time, Date Hr:Min:Sec	Water Level Feet
1	1/0/00 0:00:00	0.00	51	1/0/00 2:02:29	152.79
2	1/0/00 2:01:05	157.56	52	1/0/00 2:02:34	152.55
3	1/0/00 2:01:05	157.31	53	1/0/00 2:02:40	152.26
4	1/0/00 2:01:05	157.37	54	1/0/00 2:02:46	151.97
5	1/0/00 2:01:06	157.23	55	1/0/00 2:02:52	151.66
6	1/0/00 2:01:06	157.34	56	1/0/00 2:02:59	151.34
7	1/0/00 2:01:06	157.23	57	1/0/00 2:03:06	150.99
8	1/0/00 2:01:07	157.22	58	1/0/00 2:03:14	150.62
9	1/0/00 2:01:07	157.20	59	1/0/00 2:03:21	150.23
10	1/0/00 2:01:08	157.22	60	1/0/00 2:03:30	149.81
11	1/0/00 2:01:08	157.14	61	1/0/00 2:03:39	149.36
12	1/0/00 2:01:09	157.10	62	1/0/00 2:03:48	148.91
13	1/0/00 2:01:09	157.05	63	1/0/00 2:03:58	148.44
14	1/0/00 2:01:10	157.02	64	1/0/00 2:04:09	147.89
15	1/0/00 2:01:10	157.00	65	1/0/00 2:04:20	147.35
16	1/0/00 2:01:11	156.93	66	1/0/00 2:04:32	146.77
17	1/0/00 2:01:12	156.90	67	1/0/00 2:04:45	146.17
18	1/0/00 2:01:13	156.85	68	1/0/00 2:04:58	145.55
19	1/0/00 2:01:13	156.79	69	1/0/00 2:05:12	144.87
20	1/0/00 2:01:14	156.74	70	1/0/00 2:05:27	144.15
21	1/0/00 2:01:15	156.66	71	1/0/00 2:05:43	143.43
22	1/0/00 2:01:16	156.61	72	1/0/00 2:06:00	142.64
23	1/0/00 2:01:17	156.53	73	1/0/00 2:06:18	141.80
24	1/0/00 2:01:18	156.47	74	1/0/00 2:06:36	140.95
25	1/0/00 2:01:19	156.38	75	1/0/00 2:06:57	140.03
26	1/0/00 2:01:20	156.32	76	1/0/00 2:07:18	139.05
27	1/0/00 2:01:22	156.24	77	1/0/00 2:07:40	138.06
28	1/0/00 2:01:23	156.14	78	1/0/00 2:08:04	136.96
29	1/0/00 2:01:24	156.06	79	1/0/00 2:08:29	135.84
30	1/0/00 2:01:26	155.96	80	1/0/00 2:08:56	134.68
31	1/0/00 2:01:28	155.89	81	1/0/00 2:09:24	133.43
32	1/0/00 2:01:29	155.78	82	1/0/00 2:09:54	132.10
33	1/0/00 2:01:31	155.70	83	1/0/00 2:10:26	130.72
34	1/0/00 2:01:33	155.61	84	1/0/00 2:10:59	129.28
35	1/0/00 2:01:35	155.49	85	1/0/00 2:11:35	127.74
36	1/0/00 2:01:37	155.40	86	1/0/00 2:12:11	126.22
37	1/0/00 2:01:39	155.28	87	1/0/00 2:12:53	124.48
38	1/0/00 2:01:42	155.16	88	1/0/00 2:13:35	122.75
39	1/0/00 2:01:44	155.04	89	1/0/00 2:14:17	121.07
40	1/0/00 2:01:47	154.90	90	1/0/00 2:15:05	119.14
41	1/0/00 2:01:50	154.76	91	1/0/00 2:15:59	117.01
42	1/0/00 2:01:53	154.60	92	1/0/00 2:16:47	115.12
43	1/0/00 2:01:56	154.46	93	1/0/00 2:17:47	112.36
44	1/0/00 2:01:59	154.27	94	1/0/00 2:18:47	109.59
45	1/0/00 2:02:03	154.10	95	1/0/00 2:19:47	107.37
46	1/0/00 2:02:06	153.92	96	1/0/00 2:20:53	105.06
47	1/0/00 2:02:11	153.71	97	1/0/00 2:22:05	102.53
48	1/0/00 2:02:15	153.49	98	1/0/00 2:23:23	99.87
49	1/0/00 2:02:19	153.29	99	1/0/00 2:24:41	97.26
50	1/0/00 2:02:24	153.07	100	1/0/00 2:26:05	94.54

WELL ID: OLI Exploratory Well 1

Local ID: Test Confinement-3 Recovery
Date: 9/6/08
Time: 0:00

INPUT

Construction:	
Casing dia. (d_c)	7 Inch
Annulus dia. (d_w)	12.25 Inch
Screen Length (L)	17 Feet
Depths to:	
water level (DTW)	51 Feet
Top of Aquifer	2706 Feet
Base of Aquifer	2724 Feet
Annular Fill:	
across screen --	Open Hole
above screen --	Cement
Aquifer Material --	Limestone, Dolomite
FLOW RATE	15 GPM

COMPUTED

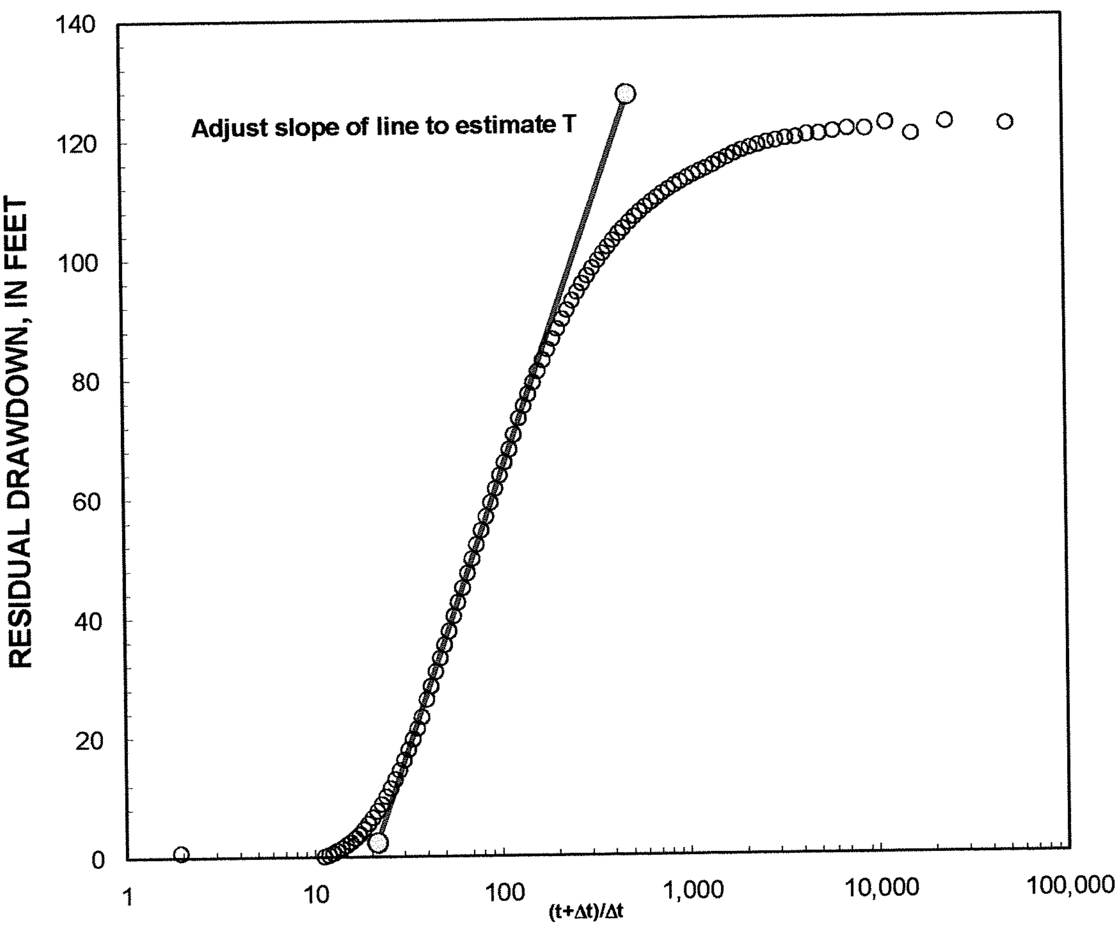
Aquifer thickness = 550 cm

Slope = 2799.229 cm/log10

Input is consistent.

K = 0.00011 cm/Second
T = 0.062 cm²/Second

K= 0.00011 is greater than likely maximum of 0.0000353 for Limestone, Dolomite



REMARKS: Cooper-Jacob recovery analysis of single-well aquifer test

Using recovery test data instead of drawdown data eliminates confusing casing storage impacts of straddle packer test set up.

Reduced Data

Entry	Time, Date Hr:Min:Sec	Water Level Feet	Entry	Time, Date Hr:Min:Sec	Water Level Feet
1	1/0/00 0:00:00	0.00	51	1/0/00 10:06:44	86.50
2	1/0/00 10:03:35	121.94	52	1/0/00 10:06:56	84.76
3	1/0/00 10:03:35	121.78	53	1/0/00 10:07:08	82.99
4	1/0/00 10:03:36	122.26	54	1/0/00 10:07:22	81.18
5	1/0/00 10:03:37	120.31	55	1/0/00 10:07:36	79.26
6	1/0/00 10:03:38	122.13	56	1/0/00 10:07:51	77.32
7	1/0/00 10:03:39	121.18	57	1/0/00 10:08:07	75.34
8	1/0/00 10:03:40	121.26	58	1/0/00 10:08:23	73.28
9	1/0/00 10:03:41	120.86	59	1/0/00 10:08:41	70.54
10	1/0/00 10:03:42	120.44	60	1/0/00 10:09:00	68.11
11	1/0/00 10:03:43	120.33	61	1/0/00 10:09:20	65.92
12	1/0/00 10:03:44	119.90	62	1/0/00 10:09:41	63.72
13	1/0/00 10:03:45	119.75	63	1/0/00 10:10:04	61.53
14	1/0/00 10:03:47	119.38	64	1/0/00 10:10:28	59.19
15	1/0/00 10:03:48	119.06	65	1/0/00 10:10:53	56.85
16	1/0/00 10:03:50	118.69	66	1/0/00 10:11:19	54.55
17	1/0/00 10:03:51	118.29	67	1/0/00 10:11:47	52.19
18	1/0/00 10:03:53	117.80	68	1/0/00 10:12:17	49.80
19	1/0/00 10:03:55	117.25	69	1/0/00 10:12:49	47.40
20	1/0/00 10:03:57	116.68	70	1/0/00 10:13:23	44.98
21	1/0/00 10:03:59	116.03	71	1/0/00 10:13:59	42.56
22	1/0/00 10:04:01	115.42	72	1/0/00 10:14:35	40.29
23	1/0/00 10:04:03	114.85	73	1/0/00 10:15:17	37.77
24	1/0/00 10:04:05	114.32	74	1/0/00 10:15:59	35.46
25	1/0/00 10:04:08	113.81	75	1/0/00 10:16:41	33.27
26	1/0/00 10:04:10	113.25	76	1/0/00 10:17:29	30.96
27	1/0/00 10:04:13	112.66	77	1/0/00 10:18:23	28.54
28	1/0/00 10:04:16	112.04	78	1/0/00 10:19:11	26.32
29	1/0/00 10:04:19	111.40	79	1/0/00 10:20:11	23.42
30	1/0/00 10:04:23	110.72	80	1/0/00 10:21:11	21.49
31	1/0/00 10:04:26	110.01	81	1/0/00 10:22:11	19.72
32	1/0/00 10:04:30	109.30	82	1/0/00 10:23:17	17.94
33	1/0/00 10:04:34	108.47	83	1/0/00 10:24:29	16.18
34	1/0/00 10:04:38	107.66	84	1/0/00 10:25:47	14.46
35	1/0/00 10:04:43	106.85	85	1/0/00 10:27:05	12.96
36	1/0/00 10:04:47	105.93	86	1/0/00 10:28:29	11.49
37	1/0/00 10:04:53	104.91	87	1/0/00 10:29:59	10.12
38	1/0/00 10:04:58	104.03	88	1/0/00 10:31:35	8.83
39	1/0/00 10:05:04	102.91	89	1/0/00 10:33:11	7.68
40	1/0/00 10:05:10	101.82	90	1/0/00 10:34:59	6.58
41	1/0/00 10:05:16	100.75	91	1/0/00 10:36:53	5.56
42	1/0/00 10:05:22	99.58	92	1/0/00 10:38:53	4.65
43	1/0/00 10:05:29	98.34	93	1/0/00 10:40:59	3.84
44	1/0/00 10:05:37	97.01	94	1/0/00 10:43:11	3.17
45	1/0/00 10:05:45	95.69	95	1/0/00 10:45:35	2.50
46	1/0/00 10:05:53	94.31	96	1/0/00 10:48:05	2.00
47	1/0/00 10:06:02	92.86	97	1/0/00 10:50:41	1.51
48	1/0/00 10:06:12	91.31	98	1/0/00 10:53:29	1.08
49	1/0/00 10:06:22	89.81	99	1/0/00 10:56:29	0.71
50	1/0/00 10:06:32	88.16	100	1/0/00 10:59:35	0.40

WELL ID: OLI Exploratory Well 1

Local ID: Packer Test C 4 Recovery
Date: 9/7/08
Time: 0:00

INPUT

Construction:	
Casing dia. (d_c)	7 Inch
Annulus dia. (d_w)	12.25 Inch
Screen Length (L)	17 Feet
Depths to:	
water level (DTW)	51 Feet
Top of Aquifer	2480 Feet
Base of Aquifer	2497 Feet
Annular Fill:	
across screen --	Open Hole
above screen --	Cement
Aquifer Material --	Limestone, Dolomite
FLOW RATE	4.3 GPM

COMPUTED

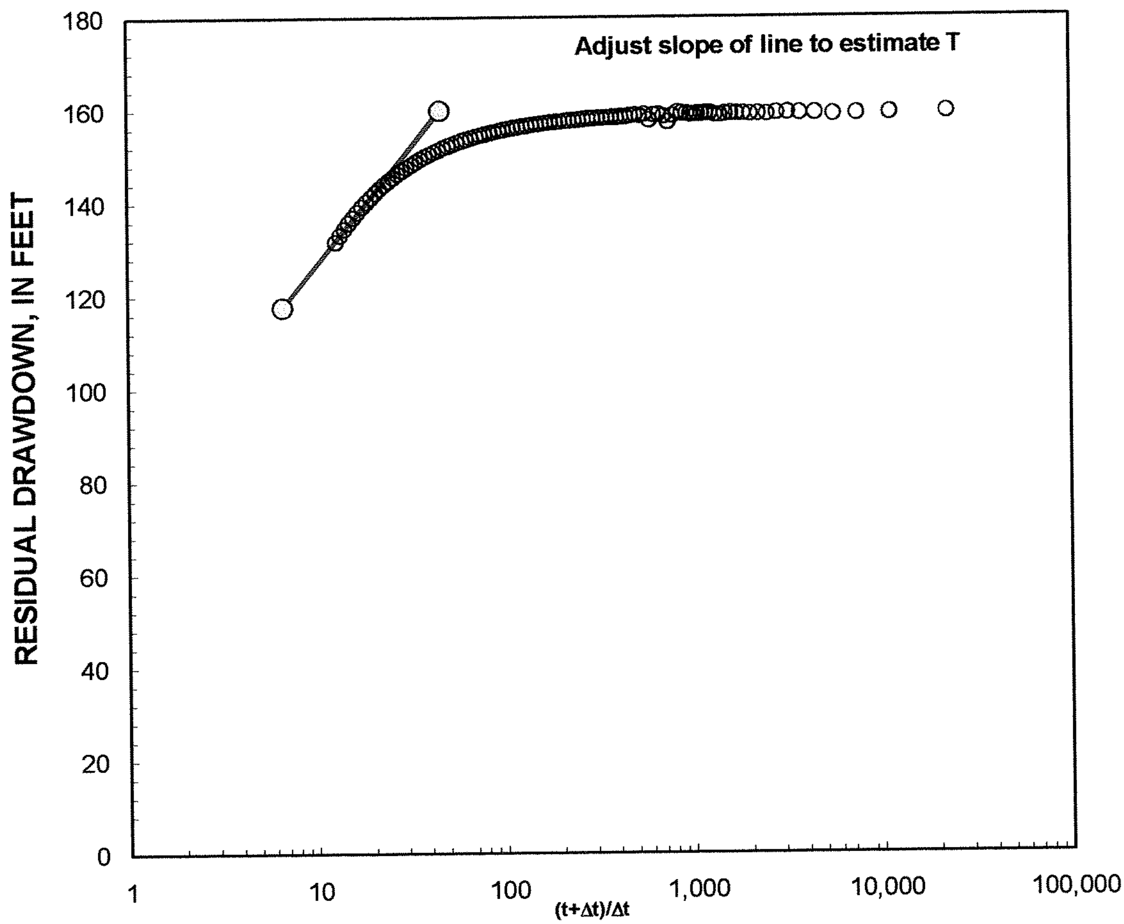
Aquifer thickness = 520 cm

Slope = 1534.886 cm/log10

Input is consistent.

K = 0.000062 cm/Second
T = 0.032 cm²/Second

K= 0.000062 is greater than likely maximum of 0.0000353 for Limestone, Dolomite



REMARKS:

Cooper-Jacob recovery analysis of single-well aquifer test

Using recovery test data instead of drawdown data eliminates casing (drill string) storage impacts of straddle packer test set up.

Reduced Data

Entry	Time, Date Hr:Min:Sec	Water Level Feet	Entry	Time, Date Hr:Min:Sec	Water Level Feet
1	1/0/00 0:00:00	0.00	51	1/0/00 1:33:17	157.82
2	1/0/00 1:32:51	159.37	52	1/0/00 1:33:18	157.71
3	1/0/00 1:32:51	159.51	53	1/0/00 1:33:20	157.63
4	1/0/00 1:32:52	159.32	54	1/0/00 1:33:21	157.52
5	1/0/00 1:32:52	159.18	55	1/0/00 1:33:23	157.40
6	1/0/00 1:32:52	159.06	56	1/0/00 1:33:25	157.28
7	1/0/00 1:32:52	159.33	57	1/0/00 1:33:27	157.16
8	1/0/00 1:32:53	159.30	58	1/0/00 1:33:29	157.02
9	1/0/00 1:32:53	159.44	59	1/0/00 1:33:31	156.90
10	1/0/00 1:32:53	159.36	60	1/0/00 1:33:34	156.74
11	1/0/00 1:32:53	159.14	61	1/0/00 1:33:36	156.59
12	1/0/00 1:32:54	159.16	62	1/0/00 1:33:39	156.42
13	1/0/00 1:32:54	159.12	63	1/0/00 1:33:42	156.24
14	1/0/00 1:32:54	159.23	64	1/0/00 1:33:45	156.05
15	1/0/00 1:32:54	159.24	65	1/0/00 1:33:48	155.85
16	1/0/00 1:32:55	159.34	66	1/0/00 1:33:51	155.65
17	1/0/00 1:32:55	159.16	67	1/0/00 1:33:55	155.43
18	1/0/00 1:32:55	158.94	68	1/0/00 1:33:58	155.20
19	1/0/00 1:32:55	158.97	69	1/0/00 1:34:03	154.93
20	1/0/00 1:32:56	159.33	70	1/0/00 1:34:07	154.69
21	1/0/00 1:32:56	159.33	71	1/0/00 1:34:11	154.42
22	1/0/00 1:32:56	159.16	72	1/0/00 1:34:16	154.13
23	1/0/00 1:32:56	159.20	73	1/0/00 1:34:21	153.80
24	1/0/00 1:32:57	159.10	74	1/0/00 1:34:26	153.51
25	1/0/00 1:32:57	159.07	75	1/0/00 1:34:32	153.15
26	1/0/00 1:32:57	159.23	76	1/0/00 1:34:38	152.77
27	1/0/00 1:32:58	159.30	77	1/0/00 1:34:44	152.41
28	1/0/00 1:32:58	159.50	78	1/0/00 1:34:51	152.02
29	1/0/00 1:32:58	158.79	79	1/0/00 1:34:58	151.55
30	1/0/00 1:32:59	157.42	80	1/0/00 1:35:06	151.08
31	1/0/00 1:32:59	158.70	81	1/0/00 1:35:13	150.62
32	1/0/00 1:33:00	159.09	82	1/0/00 1:35:22	150.10
33	1/0/00 1:33:00	158.97	83	1/0/00 1:35:31	149.57
34	1/0/00 1:33:01	157.91	84	1/0/00 1:35:40	149.00
35	1/0/00 1:33:01	159.10	85	1/0/00 1:35:50	148.42
36	1/0/00 1:33:02	158.78	86	1/0/00 1:36:01	147.79
37	1/0/00 1:33:03	158.98	87	1/0/00 1:36:12	147.14
38	1/0/00 1:33:03	158.84	88	1/0/00 1:36:24	146.43
39	1/0/00 1:33:04	158.58	89	1/0/00 1:36:37	145.70
40	1/0/00 1:33:05	158.60	90	1/0/00 1:36:50	144.93
41	1/0/00 1:33:05	158.49	91	1/0/00 1:37:04	144.10
42	1/0/00 1:33:06	158.45	92	1/0/00 1:37:19	143.25
43	1/0/00 1:33:07	158.40	93	1/0/00 1:37:35	142.35
44	1/0/00 1:33:08	158.35	94	1/0/00 1:37:52	141.40
45	1/0/00 1:33:09	158.31	95	1/0/00 1:38:10	140.39
46	1/0/00 1:33:10	158.24	96	1/0/00 1:38:28	139.36
47	1/0/00 1:33:11	158.18	97	1/0/00 1:38:49	138.21
48	1/0/00 1:33:13	158.06	98	1/0/00 1:39:10	137.07
49	1/0/00 1:33:14	157.98	99	1/0/00 1:39:32	135.85
50	1/0/00 1:33:15	157.90	100	1/0/00 1:39:56	134.56

WELL ID: OLI Exploratory Well 1

Local ID: Packer Test C-5 Recovery
Date: 9/7/08
Time: 0:00

INPUT

Construction:		
Casing dia. (d_c)	7	Inch
Annulus dia. (d_w)	12.25	Inch
Screen Length (L)	17	Feet
Depths to:		
water level (DTW)	51	Feet
Top of Aquifer	2206	Feet
Base of Aquifer	2223	Feet
Annular Fill:		
across screen -- Open Hole		
above screen -- Cement		
Aquifer Material -- Limestone, Dolomite		
FLOW RATE	32	GPM

COMPUTED

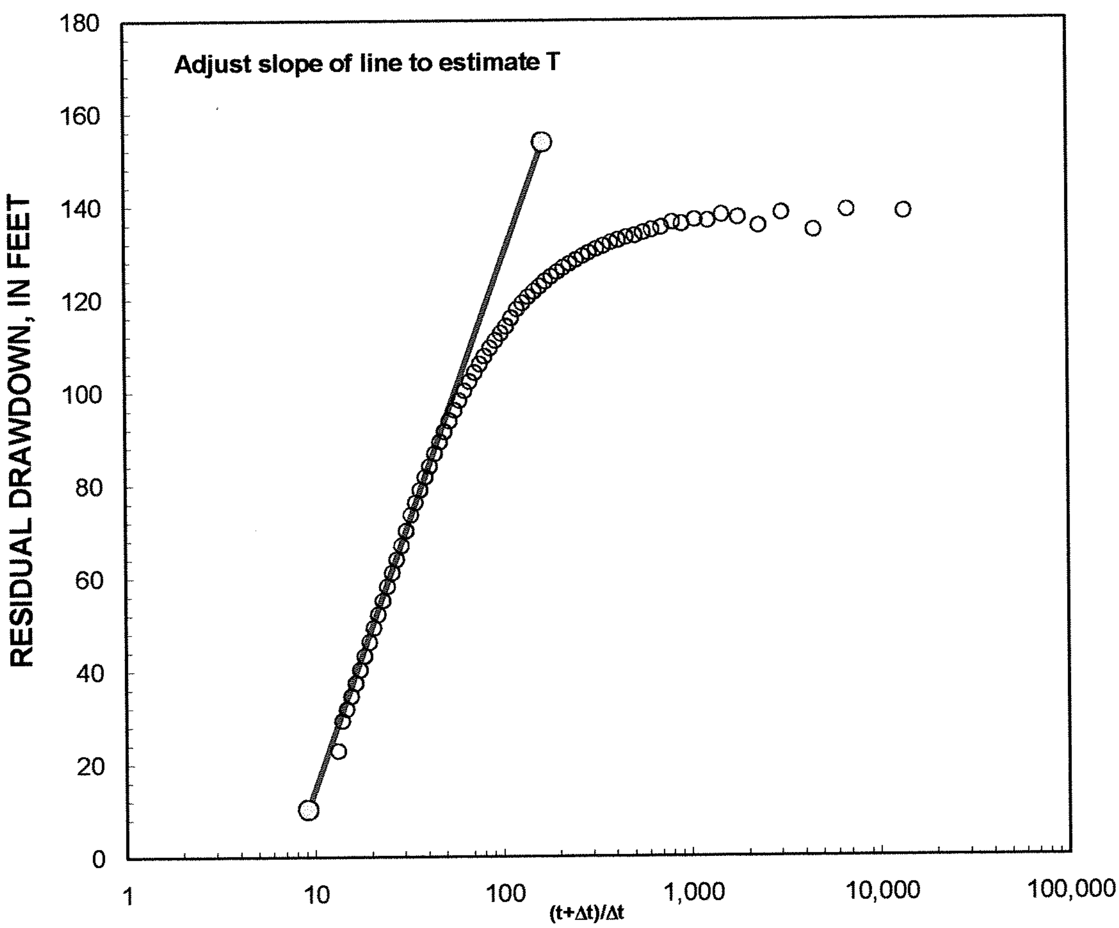
Aquifer thickness = 520 cm

Slope = 3470.85 cm/log10

Input is consistent.

K =	0.00021	cm/Second
T =	0.11	cm^2/Second

K= 0.00021 is greater than likely maximum of 0.0000353 for Limestone, Dolomite



REMARKS:

Cooper-Jacob recovery analysis of single-well aquifer test

Using recovery test data instead of drawdown data eliminates casing storage impacts of straddle packer test set up.

Reduced Data

Entry	Time, Date Hr:Min:Sec	Water Level Feet	Entry	Time, Date Hr:Min:Sec	Water Level Feet
1	1/0/00 0:00:00	0.00	51	1/0/00 0:58:09	86.88
2	1/0/00 0:56:50	141.03	52	1/0/00 0:58:15	84.15
3	1/0/00 0:56:50	138.52	53	1/0/00 0:58:20	81.83
4	1/0/00 0:56:51	138.94	54	1/0/00 0:58:26	79.02
5	1/0/00 0:56:51	134.66	55	1/0/00 0:58:32	76.30
6	1/0/00 0:56:51	138.39	56	1/0/00 0:58:38	73.66
7	1/0/00 0:56:51	135.65	57	1/0/00 0:58:44	70.21
8	1/0/00 0:56:52	137.43	58	1/0/00 0:58:51	67.02
9	1/0/00 0:56:52	138.04	59	1/0/00 0:58:59	64.06
10	1/0/00 0:56:53	136.78	60	1/0/00 0:59:07	61.19
11	1/0/00 0:56:53	137.02	61	1/0/00 0:59:15	58.25
12	1/0/00 0:56:54	136.11	62	1/0/00 0:59:24	55.22
13	1/0/00 0:56:54	136.41	63	1/0/00 0:59:34	52.21
14	1/0/00 0:56:55	135.37	64	1/0/00 0:59:44	49.37
15	1/0/00 0:56:55	134.84	65	1/0/00 0:59:54	46.33
16	1/0/00 0:56:56	134.27	66	1/0/00 1:00:06	43.33
17	1/0/00 0:56:57	133.60	67	1/0/00 1:00:18	40.36
18	1/0/00 0:56:57	133.25	68	1/0/00 1:00:30	37.49
19	1/0/00 0:56:58	132.66	69	1/0/00 1:00:44	34.70
20	1/0/00 0:56:59	132.11	70	1/0/00 1:00:58	31.93
21	1/0/00 0:57:00	131.42	71	1/0/00 1:01:13	29.36
22	1/0/00 0:57:01	130.75			
23	1/0/00 0:57:02	129.99			
24	1/0/00 0:57:03	129.29			
25	1/0/00 0:57:04	128.45			
26	1/0/00 0:57:05	127.60			
27	1/0/00 0:57:06	126.72			
28	1/0/00 0:57:07	125.82			
29	1/0/00 0:57:09	124.84			
30	1/0/00 0:57:10	123.80			
31	1/0/00 0:57:12	122.74			
32	1/0/00 0:57:13	121.63			
33	1/0/00 0:57:15	120.45			
34	1/0/00 0:57:17	119.15			
35	1/0/00 0:57:18	117.82			
36	1/0/00 0:57:21	115.94			
37	1/0/00 0:57:23	114.12			
38	1/0/00 0:57:25	112.66			
39	1/0/00 0:57:27	111.11			
40	1/0/00 0:57:30	109.48			
41	1/0/00 0:57:33	107.71			
42	1/0/00 0:57:35	106.04			
43	1/0/00 0:57:38	104.22			
44	1/0/00 0:57:41	102.30			
45	1/0/00 0:57:45	100.32			
46	1/0/00 0:57:48	98.23			
47	1/0/00 0:57:52	96.19			
48	1/0/00 0:57:56	93.88			
49	1/0/00 0:58:00	91.58			
50	1/0/00 0:58:05	89.36			

![AllWebbs Enterprises, Inc.]

X-Y CALIPER GAMMA RAY LOG

Company	OLI
Well	IW-1
Field	OKEECHOBEE LANDFILL
County	OKEECHOBEE
State	FLORIDA

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE State FLORIDA
Location: API # :
27 DEGREES, 20', 21" N;
80 DEGREES, 41', 34" W
SEC TWP RGE

Other Services: SEE COMMENTS

Permanent Datum GL Elevation
Log Measured From GL
Drilling Measured From GL

Elevation: K.B. / D.F. / G.L.

Date	30-AUG-2008
Run Number	TD
Depth Driller	3100'
Depth Logger	3100'
Bottom Logged Interval	3100'
Top Log Interval	3000'
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T.	SURFACE	1994'
Prot. String				
Production String				
Liner				

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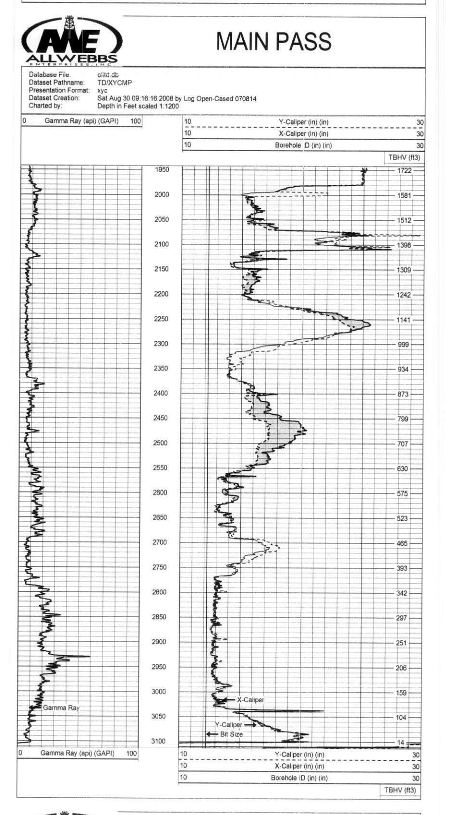
Comments

BHC/SONIC/VDL
DIL/LL3/SP
FLOWMETER
FCT
DHTVS

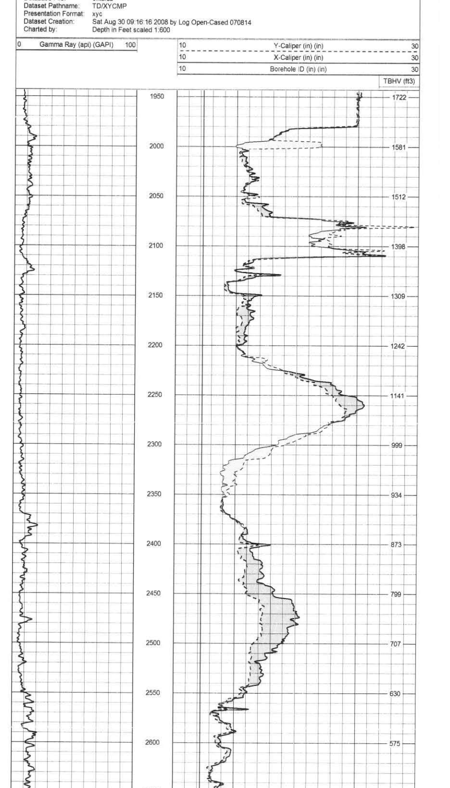
MAIN PASS

Database File: olitd.db
Dataset Pathname: TD/XYCMP
Presentation Format: xyc
Dataset Creation: Sat Aug 30 09:16:16 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:1200



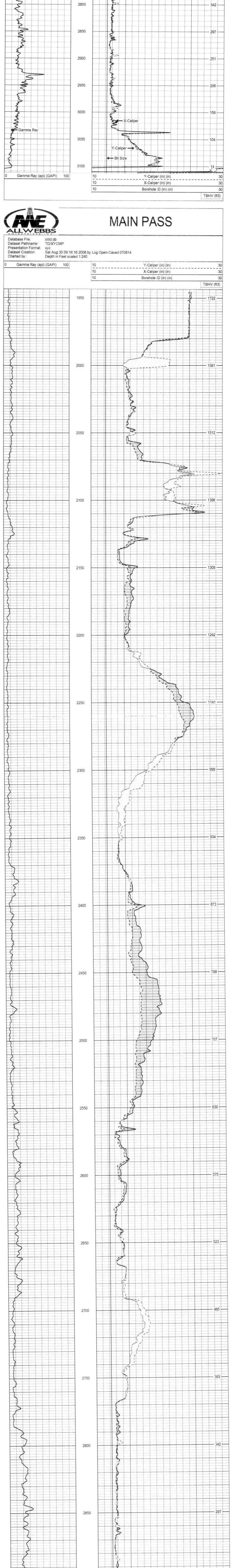
MAIN PASS

Database File: olitd.db
Dataset Pathname: TD/XYCMP
Presentation Format: xyc
Dataset Creation: Sat Aug 30 09:16:16 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:600

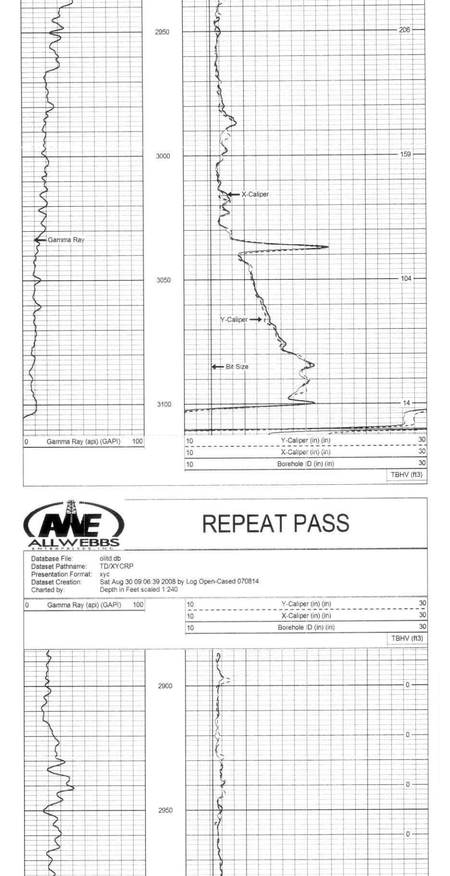


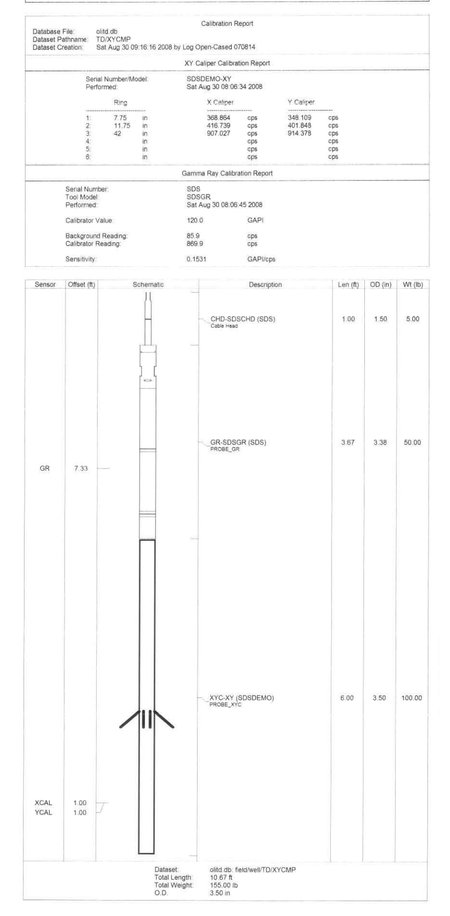
MAIN PASS

Database File: olitd.db
Dataset Pathname: TD/XYCMP
Presentation Format: xyc
Dataset Creation: Sat Aug 30 09:16:16 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:240



REPEAT PASS





DUAL INDUCTION LL3/SP LOG

ALLWEBBS ENTERPRISES, INC.

Company	OLI		
Well	IW-1		
Field	OKEECHOBEE LANDFILL		
County	OKEECHOBEE	State	FLORIDA
Location:	27 DEGREES, 20', 21" N; 80 DEGREES, 41', 34" W	API #:	Other Services: SEE COMMENTS
SEC	TWP	RGE	
Permanent Datum	GL	Elevation	Elevation: K.B. / D.F. / G.L.
Log Measured From	GL		
Drilling Measured From	GL		

Date	30-AUG-2008
Run Number	
Depth Driller	TD
Depth Logger	3100'
Bottom Logged Interval	3100'
Top Log Interval	3100'
Open Hole Size	CASING
Type Fluid	12.25"
Density / Viscosity	WATER
Max. Recorded Temp.	NA
Estimated Cement Top	93.6 DEGF.
Time Well Ready	NA
Time Logger on Bottom	ON ARRIVAL
Equipment Number	0000
Location	VA-203
Recorded By	JUIPTER
Witnessed By	LEE
	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

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Comments

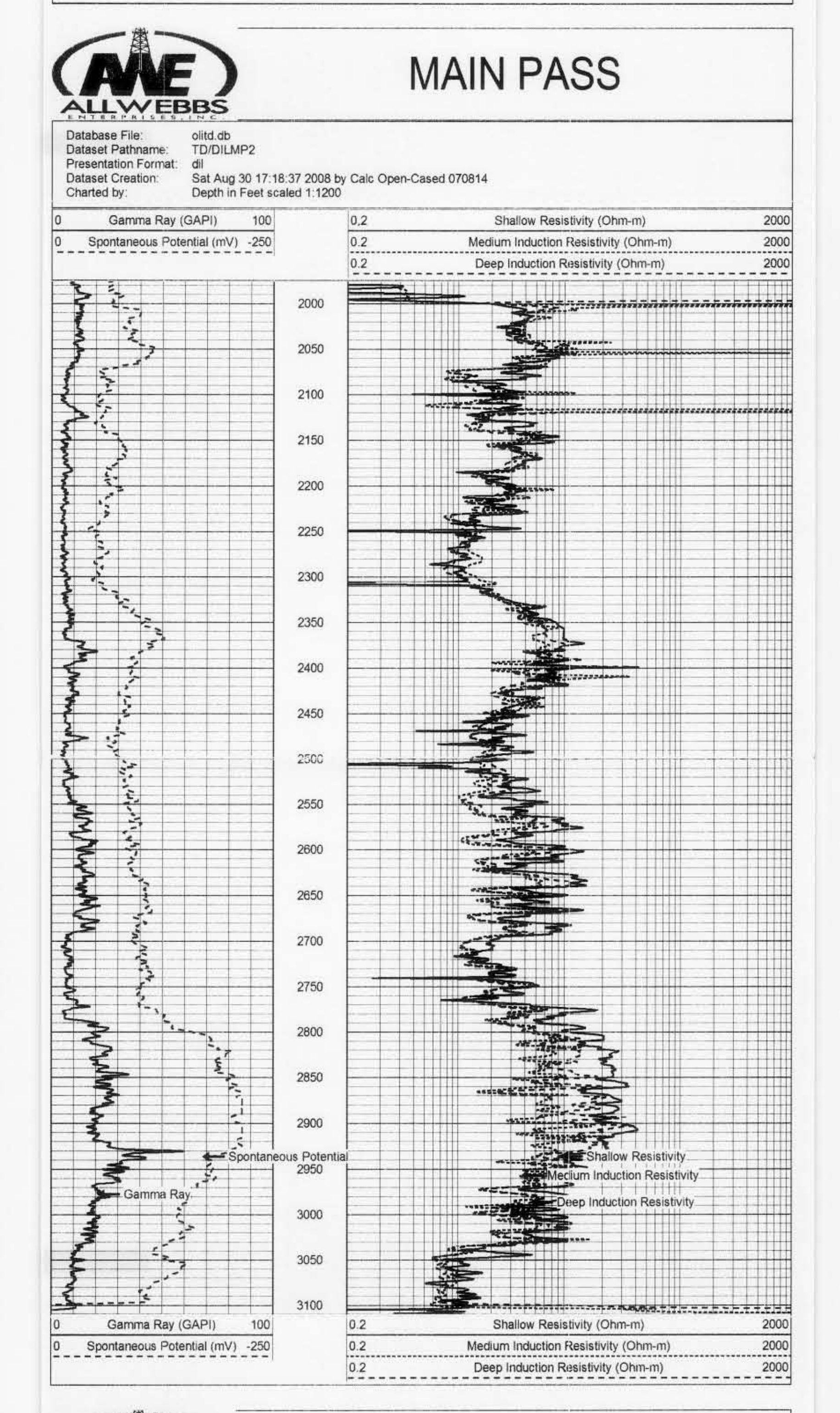
XYC/GR
BHC/SONIC/VDL
FLOWMETER
FCT
DHTVS

MAIN PASS

ALLWEBBS ENTERPRISES, INC.

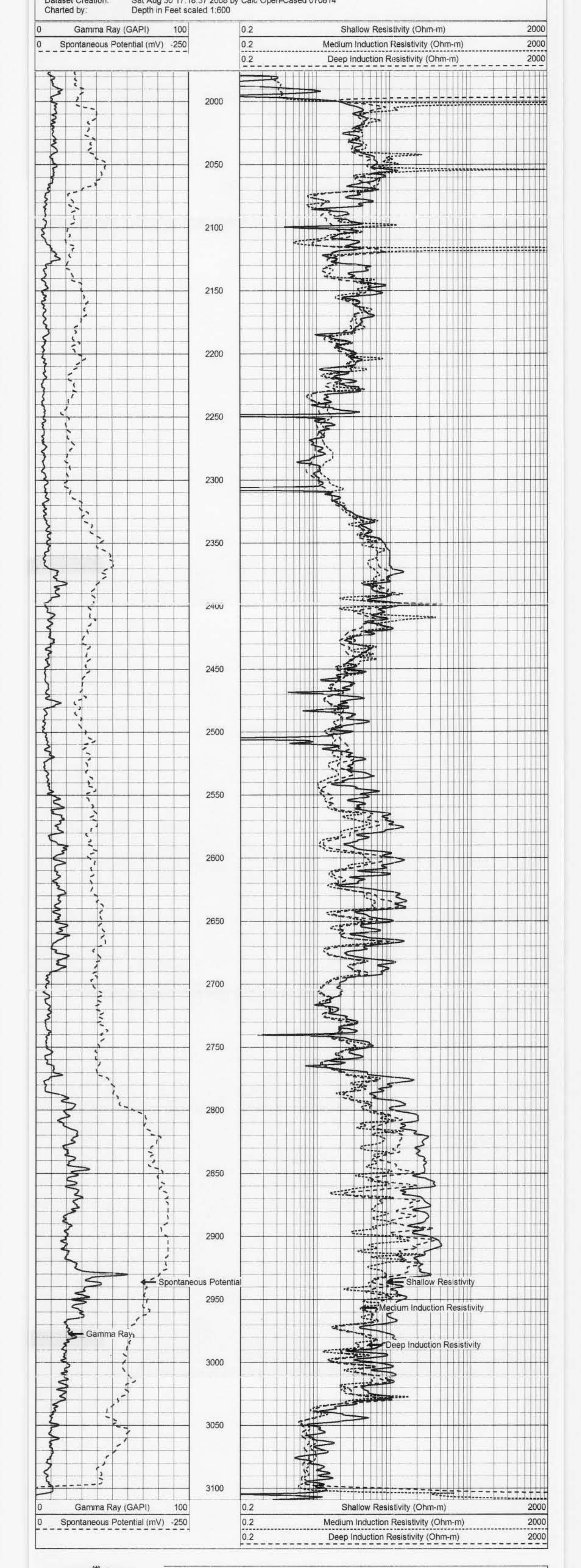
Database File: olitd.db
Dataset Pathname: TD/DILMP2
Presentation Format: dil
Dataset Creation: Sat Aug 30 17:18:37 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:1200

0	Gamma Ray (GAPI)	100	
0	Spontaneous Potential (mV)	-250	
0.2	Shallow Resistivity (Ohm-m)	2000	
0.2	Medium Induction Resistivity (Ohm-m)	2000	
0.2	Deep Induction Resistivity (Ohm-m)	2000	



MAIN PASS

0	Gamma Ray (GAPI)	100
0	Spontaneous Potential (mV)	-250
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Induction Resistivity (Ohm-m)	2000
0.2	Deep Induction Resistivity (Ohm-m)	2000

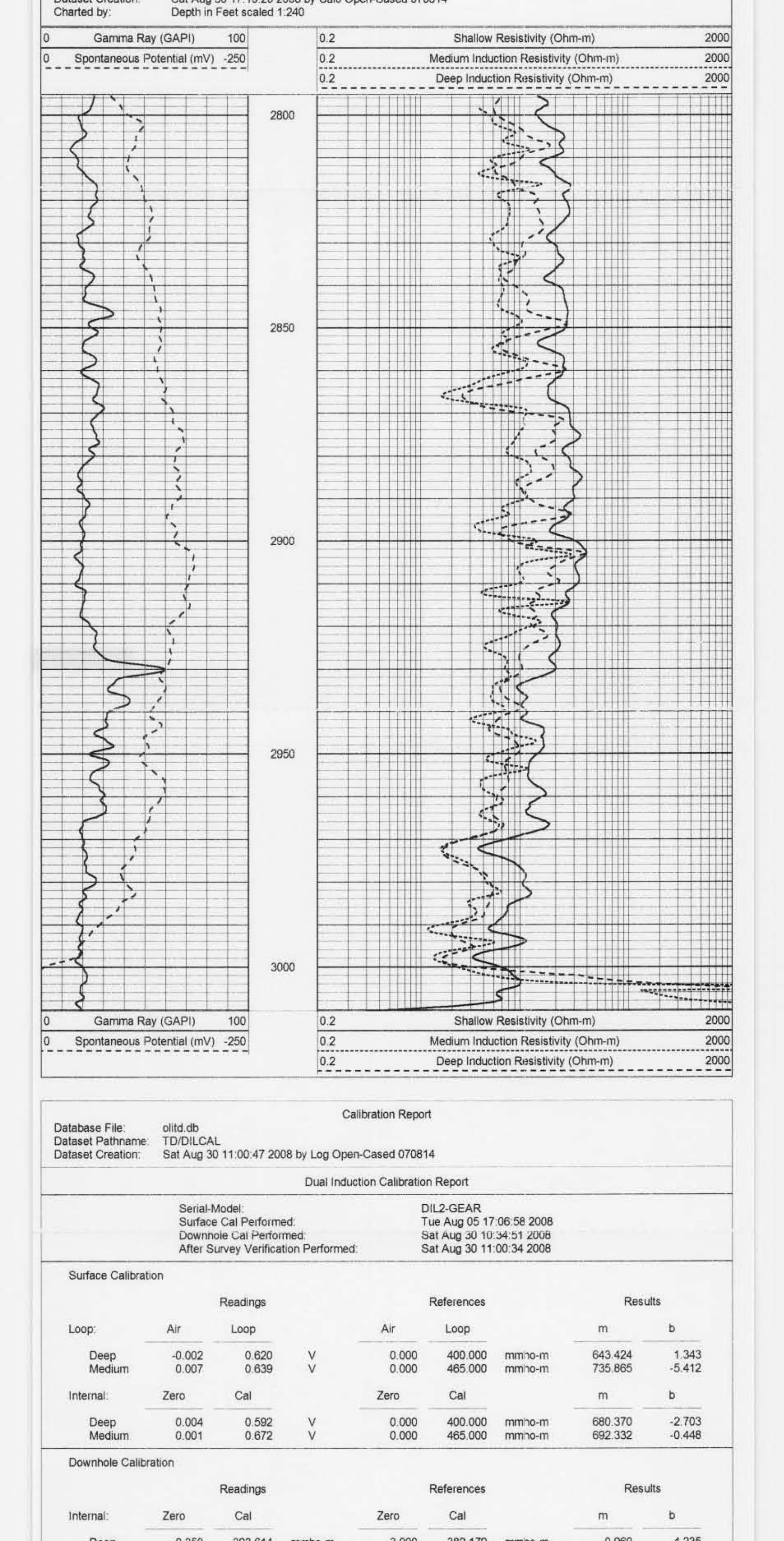


MAIN PASS

0	Gamma Ray (GAPI)	100
0	Spontaneous Potential (mV)	-250
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Induction Resistivity (Ohm-m)	2000
0.2	Deep Induction Resistivity (Ohm-m)	2000

REPEAT PPASS

0	Gamma Ray (GAPI)	100
0	Spontaneous Potential (mV)	-250
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Induction Resistivity (Ohm-m)	2000
0.2	Deep Induction Resistivity (Ohm-m)	2000



0	Gamma Ray (GAPI)	100
0	Spontaneous Potential (mV)	-250
0.2	Shallow Resistivity (Ohm-m)	2000
0.2	Medium Induction Resistivity (Ohm-m)	2000
0.2	Deep Induction Resistivity (Ohm-m)	2000

Calibration Report

Database File: olitd.db
Dataset Pathname: TD/DILCAL
Dataset Creation: Sat Aug 30 11:00:47 2008 by Log Open-Cased 070814

Dual Induction Calibration Report

Serial-Model: DIL2-GEAR
Surface Cal Performed: Tue Aug 05 17:06:58 2008
Downhole Cal Performed: Sat Aug 30 10:34:51 2008
After Survey Verification Performed: Sat Aug 30 11:00:34 2008

Surface Calibration

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.002	0.620	V	0.000	400.000	mmho-m	643.424	1.343
Medium	0.007	0.639	V	0.000	465.000	mmho-m	735.865	-5.412
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.004	0.592	V	0.000	400.000	mmho-m	680.370	-2.703
Medium	0.001	0.672	V	0.000	465.000	mmho-m	692.332	-0.448

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-0.350	393.614	mmho-m	3.900	382.179	mmho-m	0.960	4.235
Medium	6.297	531.521	mmho-m	-4.936	489.303	mmho-m	0.941	-10.861
Shallow	2.509	0.008	V	500.000	2.000	Ohm-m	199.171	0.375

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	0.605	404.948	mmho-m	-0.350	393.614	mmho-m	0.960	4.235
Medium	4.999	550.632	mmho-m	6.297	531.521	mmho-m	0.941	-10.861
Shallow	500.041	2.237	Ohm-m	500.000	2.000	Ohm-m	1.000	-0.238

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
SP	11.00					
CILD	10.50		DIL-GEAR (DIL2) GO_DIL/LL3/SP	21.25	3.50	150.00
CILM	7.00					
RLL3	2.00					

Dataset: olitd.db: field/well/TD/DILRP2
Total Length: 22.25 ft
Total Weight: 155.00 lb
O.D. 3.50 in

FLOWMETER LOG

ALLWEBBS ENTERPRISES, INC.

Company	OLI		
Well	IW-1		
Field	OKEECHOBEE LANDFILL		
County	OKEECHOBEE	State	FLORIDA
Location:	27 DEGREES, 20', 21" N; 80 DEGREES, 41', 34" W	API #:	Other Services SEE COMMENTS
SEC	TWP	RGE	
Permanent Datum		Elevation	Elevation K.B. D.F. G.L.
Log Measured From	GL		
Drilling Measured From	GL		

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE
State FLORIDA

Date	30-AUG-2008
Run Number	TD
Depth Driller	3100'
Depth Logger	3100'
Bottom Logged Interval	3100'
Top Log Interval	CASING
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

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Comments

XYC/GR
BHC/SONIC/VDL
DIL/LL3/SP
FCT
DHTVS

FLOWMETER MERGE

ALLWEBBS ENTERPRISES, INC.

Database File:	olitd.db
Dataset Pathname:	TD/FMDYN3
Presentation Format:	flow_mg
Dataset Creation:	Sun Aug 31 02:11:40 2008 by Log Open-Cased 070814
Charted by:	Depth in Feet scaled 1:240

0	L.S STATIC DOWN (ft/min)	100		0	FLOWPS_STATIC (cps)	50
0	L.S DYNAMIC DOWN (ft/min)	100		0	FLOWP_DYNAMIC (cps)	50
10	Average Caliper (in)	30				

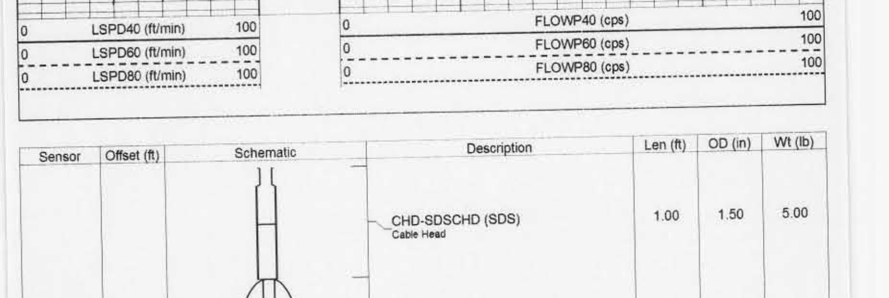
0	L.S STATIC DOWN (ft/min)	100		0	FLOWPS_STATIC (cps)	50
0	L.S DYNAMIC DOWN (ft/min)	100		0	FLOWP_DYNAMIC (cps)	50
10	Average Caliper (in)	30				

FLOW CALS 40, 60 & 80 FPM

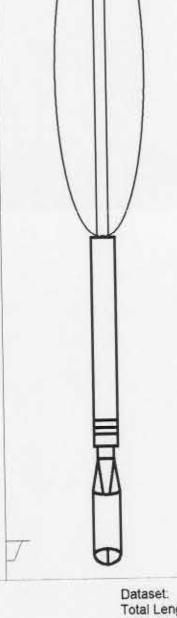
ALLWEBBS ENTERPRISES, INC.

Database File:	olitd.db
Dataset Pathname:	TD/CAL1
Presentation Format:	flow_mg
Dataset Creation:	Sat Aug 30 18:06:05 2008 by Log Open-Cased 070814
Charted by:	Depth in Feet scaled 1:240

0	LSPD40 (ft/min)	100		0	FLOWP40 (cps)	100
0	LSPD60 (ft/min)	100		0	FLOWP60 (cps)	100
0	LSPD80 (ft/min)	100		0	FLOWP80 (cps)	100



0	LSPD40 (ft/min)	100		0	FLOWP40 (cps)	100
0	LSPD60 (ft/min)	100		0	FLOWP60 (cps)	100
0	LSPD80 (ft/min)	100		0	FLOWP80 (cps)	100



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
			CBLINLINE	3.00	1.50	10.00
			FLOWMETER-TITAN (TITAN_3") TITIN_3'	3.00	1.69	25.00
FLOWP	0.25					
FLOWN	0.25					

Dataset:	olitd.db: field/well/TD/FMDYN3
Total Length:	7.00 ft
Total Weight:	40.00 lb
O.D.	1.69 in

![ALLWEBBS logo]

BOREHOLE COMPENSATED SONIC/VDL LOG

Company	OLI
Well	IW-1
Field	OKEECHOBEE LANDFILL
County	OKEECHOBEE
State	FLORIDA

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE State FLORIDA
Location: API # :
27 DEGREES, 20', 21" N;
80 DEGREES, 41', 34" W
SEC TWP RGE
Other Services: SEE COMMENTS

Permanent Datum	GL	Elevation	Elevation K.B. D.F. G.L.
Log Measured From	GL		
Drilling Measured From	GL		

Date	30-AUG-2008
Run Number	TD
Depth Driller	3100'
Depth Logger	3100'
Bottom Logged Interval	3100
Top Log Interval	CASING
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	TRUCK-1
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

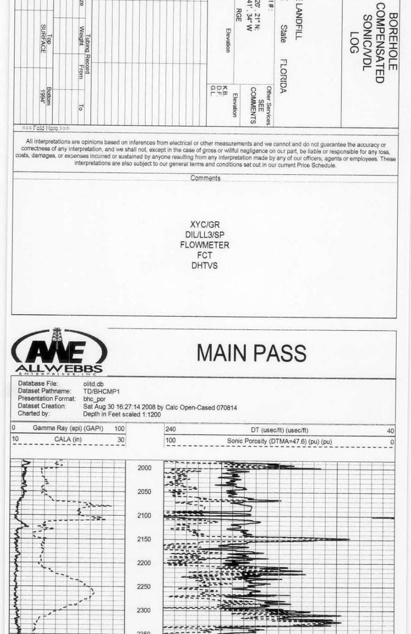
Comments

XYC/GR
DIL/LL3/SP
FLOWMETER
FCT
DHTVS

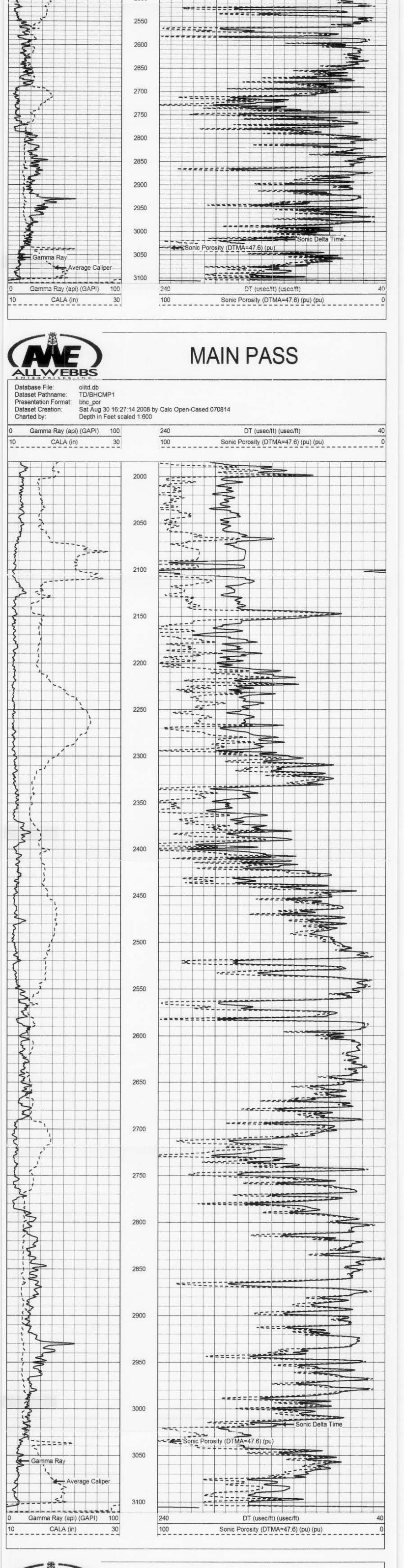
MAIN PASS

Database File: olitd.db
Dataset Pathname: TD/BHCMP1
Presentation Format: bhc_por
Dataset Creation: Sat Aug 30 16:27:14 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:1200

0 Gamma Ray (api) (GAPI) 100		240 DT (usec/ft) (usec/ft) 40
10 CALA (in) 30		100 Sonic Porosity (DTMA=47.6) (pu) (pu) 0



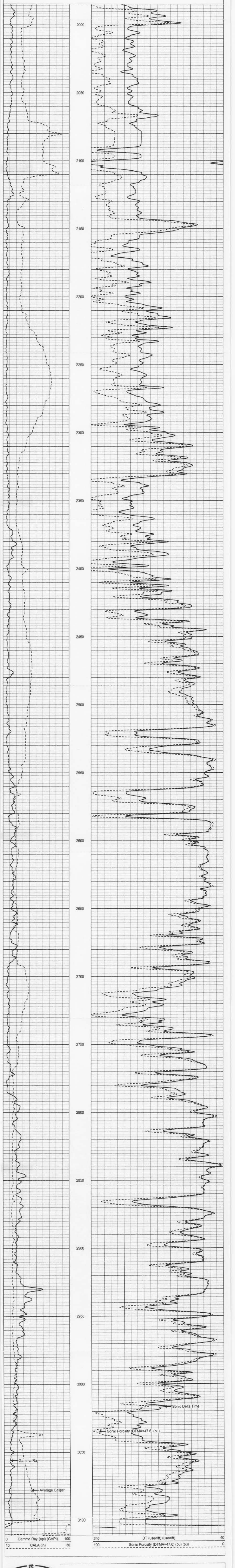
MAIN PASS



MAIN PASS

Database File: olitd.db
Dataset Pathname: TD/BHCMP1
Presentation Format: bhc_por
Dataset Creation: Sat Aug 30 16:27:14 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

0 Gamma Ray (api) (GAPI) 100		240 DT (usec/ft) (usec/ft) 40
10 CALA (in) 30		100 Sonic Porosity (DTMA=47.6) (pu) (pu) 0

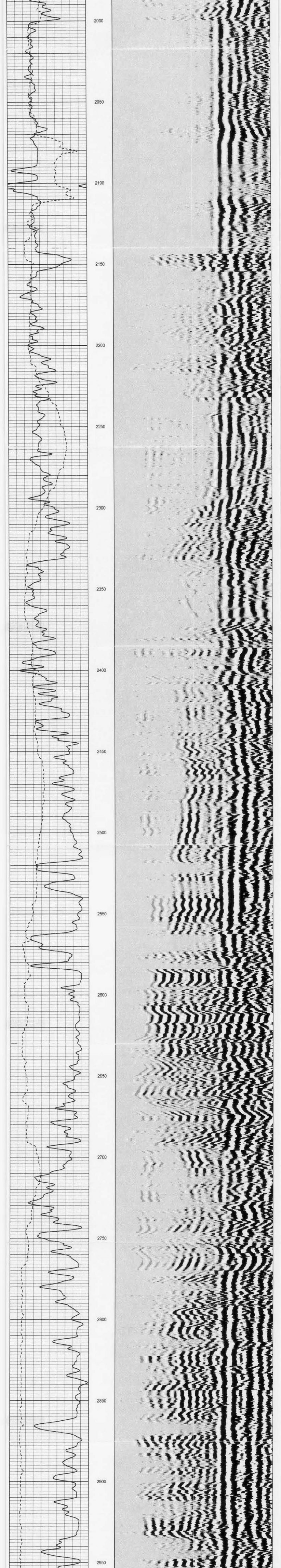


0 Gamma Ray (api) (GAPI) 100		240 DT (usec/ft) (usec/ft) 40
10 CALA (in) 30		100 Sonic Porosity (DTMA=47.6) (pu) (pu) 0

MAIN PASS

Database File: olitd.db
Dataset Pathname: TD/BHCMP1
Presentation Format: bhc
Dataset Creation: Sat Aug 30 16:27:14 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

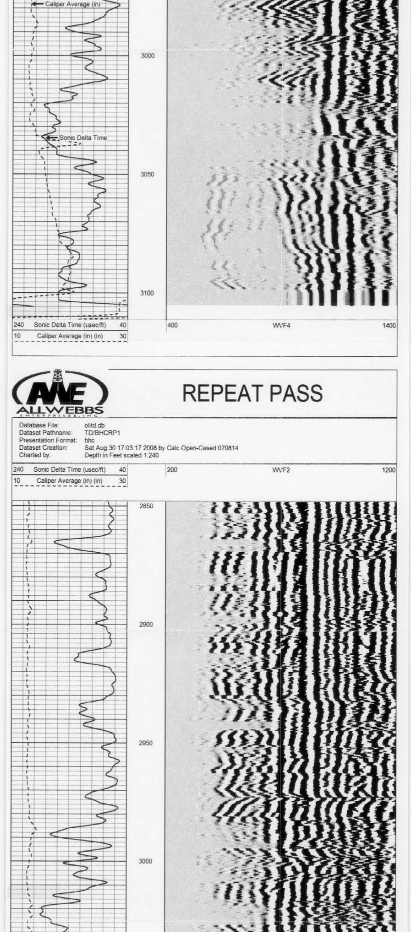
240 Sonic Delta Time (usec/ft) 40		400 WVF4 1400
10 Caliper Average (in) (in) 30		

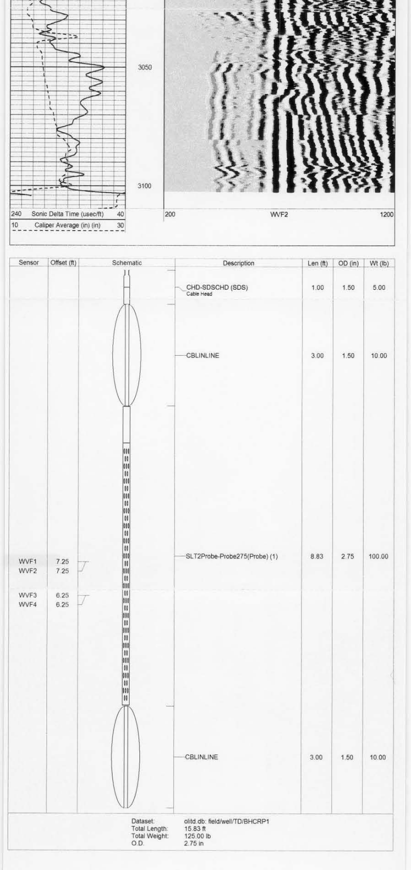


240 Sonic Delta Time (usec/ft) 40		400 WVF4 1400
10 Caliper Average (in) (in) 30		

REPEAT PASS

Database File: olitd.db
Dataset Pathname: TD/BHCRP1
Presentation Format: bhc
Dataset Creation: Sat Aug 30 17:03:17 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240





Company	OLI
Well	IW-1
Field	OKEECHOBEE LANDFILL
County	OKEECHOBEE
State	FLORIDA

FLUID CONDUCTIVITY TEMPERATURE LOG

ALLWEBBS ENTERPRISES, INC.

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE State FLORIDA

Location: API # :
27 DEGREES, 20', 21" N;
80 DEGREES, 41', 34" W

SEC TWP RGE

Other Services: SEE COMMENTS

Permanent Datum GL Elevation
Log Measured From GL
Drilling Measured From GL

Elevation: K.B. D.F. G.L.

Date	30-AUG-2008
Run Number	
Depth Driller	3100'
Depth Logger	3100'
Bottom Logged Interval	3100'
Top Log Interval	CASING
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	TRUCK-1
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
	12.25"	CASING	3100'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1934'
Prot. String				
Production String				
Liner				

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Comments

XYC/GR
BHC/SONIC/VDL
DIL/LL3/SP
FLOWMETER
DHTVS

ALLWEBBS ENTERPRISES, INC

FCT MERGE

Database File: olitd.db
Dataset Pathname: TD/FRTDY
Presentation Format: fct
Dataset Creation: Sun Aug 31 03:05:53 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

80 TEMP_DYNAMIC (degF) 100 | 20 FCON_DYNAMIC (um) 200000
80 TEMPS_STATIC (degF) 100 | 20 FCONS_STATIC (um) 200000
TEMP_DYN (degF) | TEMPS_STAT (degF) | FCONS_STAT (um) | FCON_DYN (um)

80 TEMP_DYNAMIC (degF) 100 | 20 FCON_DYNAMIC (um) 200000
80 TEMPS_STATIC (degF) 100 | 20 FCONS_STATIC (um) 200000
TEMP_DYN (degF) | TEMPS_STAT (degF) | FCONS_STAT (um) | FCON_DYN (um)

Calibration Report

Database File: olitd.db
Dataset Pathname: TD/FRTDY
Dataset Creation: Sun Aug 31 03:05:53 2008 by Log Open-Cased 070814

Temperature Calibration Report

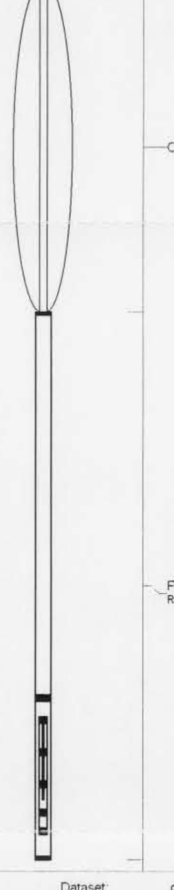
Serial Number: 1
Tool Model: RG
Performed: Wed Jul 23 14:04:42 2008

Point #	Reading	Reference	
1	5464.36	36.00	degF
2	7101.07	72.00	degF
3	11403.00	118.00	degF
4			degF
5			degF
6			degF
7			degF
8			degF
9			degF
10			degF

Calibration Report

Serial Number: 1
Tool Model: RG
Performed: Thu Jun 05 14:38:47 2008

Reference (um)	Reading ()
1000.000	1441.540
10000.000	9666.960
25000.000	24443.400
50000.000	41928.200



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
		CBLINLINE	3.00	1.50	10.00
		FRTEMP-RG (1) RG_FCON	5.00	1.50	25.00
FCON	0.50				
TEMP	0.33				

Dataset: olitd.db: field/well/TD/FRTDY
Total Length: 9.00 ft
Total Weight: 40.00 lb
O.D.: 1.50 in

Company	OLI	
Well	IW-1	
Field	OKEECHOBEE LANDFILL	
County	OKEECHOBEE	
State	FLORIDA	

DUAL INDUCTION LL3/SP LOG

ALLWEBBS ENTERPRISES, INC.

Company	OLI			
Well	IW-1			
Field	OKEECHOBEE LANDFILL			
County	OKEECHOBEE	State	FLORIDA	
Location:	API #: 27 DEGREES, 20', 21" N; 80 DEGREES, 41', 34" W			Other Services SEE COMMENTS
SEC	TWP	RGE		
Permanent Datum		Elevation		Elevation K.B. D.F. G.L.
Log Measured From	GL			
Drilling Measured From	GL			

Date	14-SEPT-2008
Run Number	TD2
Depth Driller	3500'
Depth Logger	3500'
Bottom Logged Interval	3500'
Top Log Interval	CASING
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				
TD2	12.25"	CASING	3500'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

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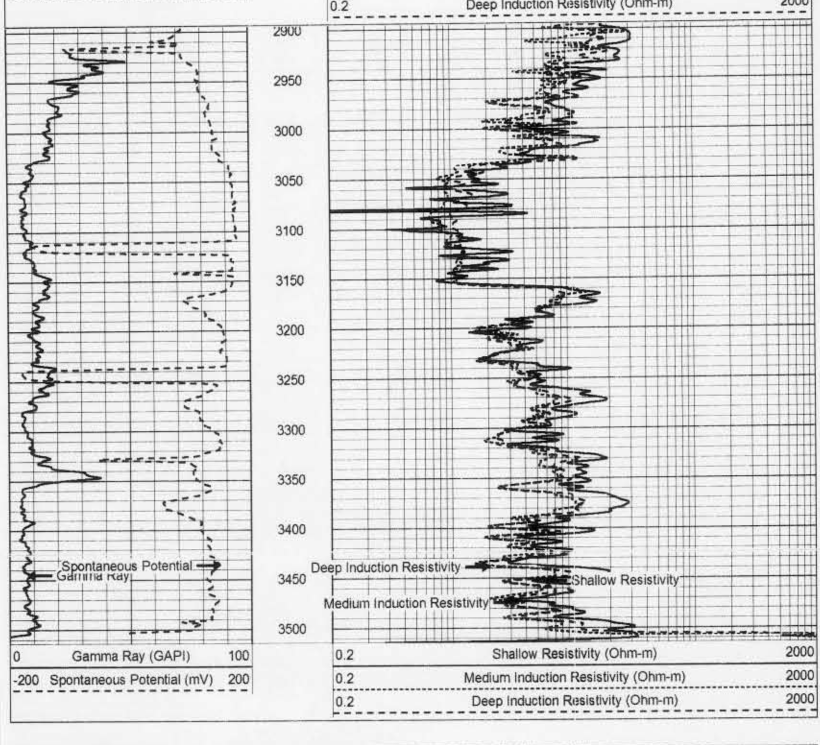
Comments

XYC/GR
BHC/SONIC/VDL
FLOWMETER
FCT
DHTVS

MAIN PASS

ALLWEBBS ENTERPRISES, INC.

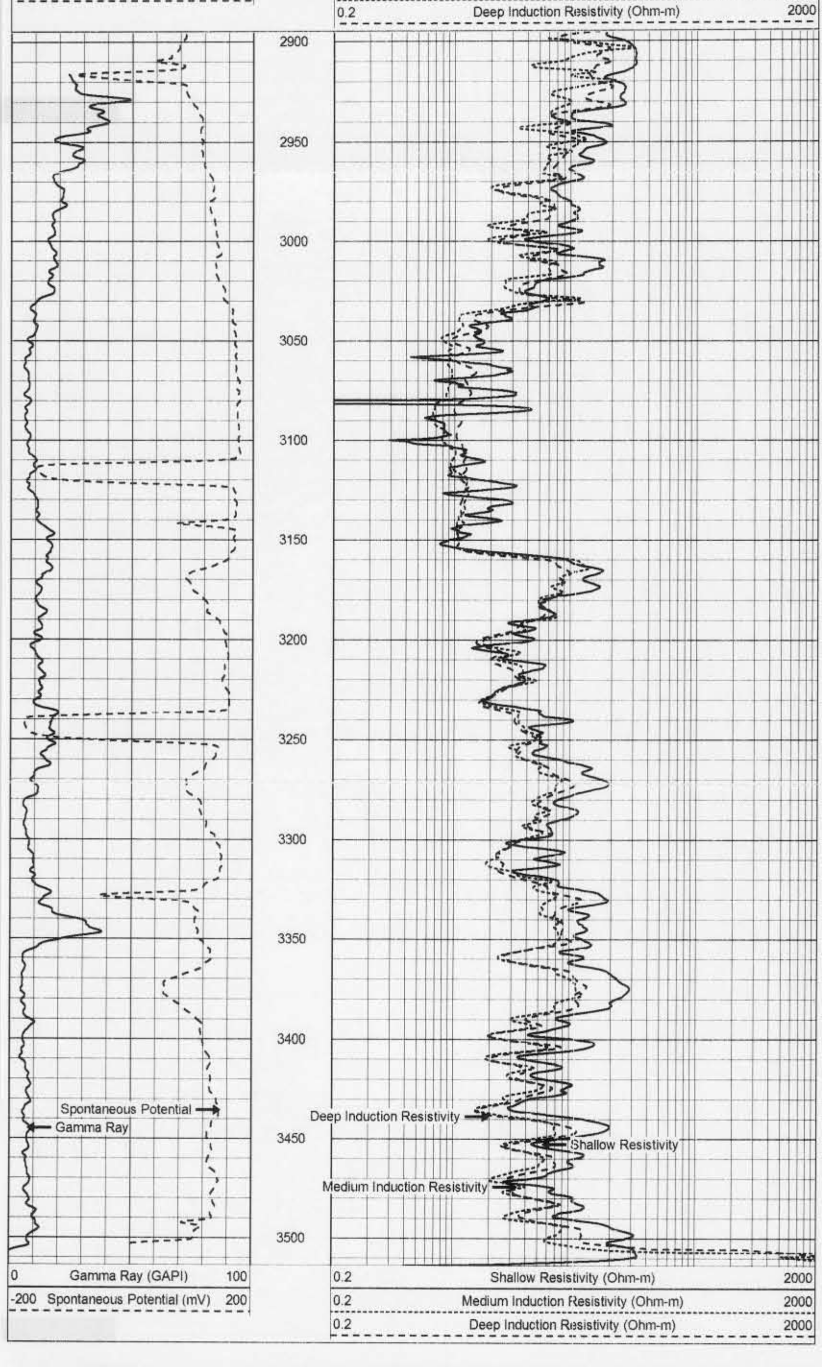
Database File: olitd.db
Dataset Pathname: TD2/DILMPFINA
Presentation Format: dil
Dataset Creation: Sun Sep 14 12:14:28 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:1200



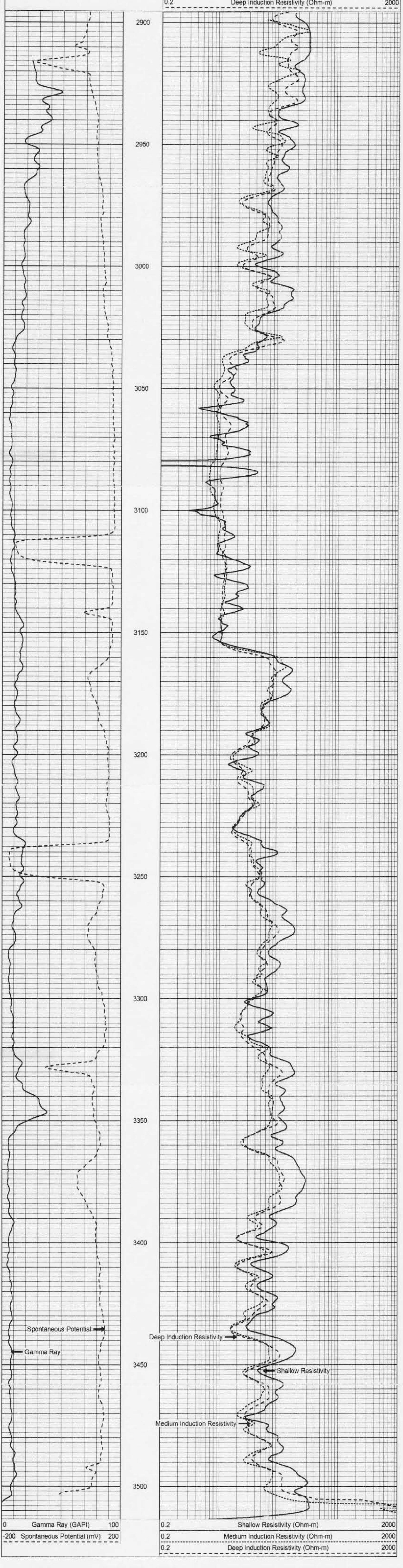
MAIN PASS

ALLWEBBS ENTERPRISES, INC.

Database File: olitd.db
Dataset Pathname: TD2/DILMPFINA
Presentation Format: dil
Dataset Creation: Sun Sep 14 12:14:28 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:600



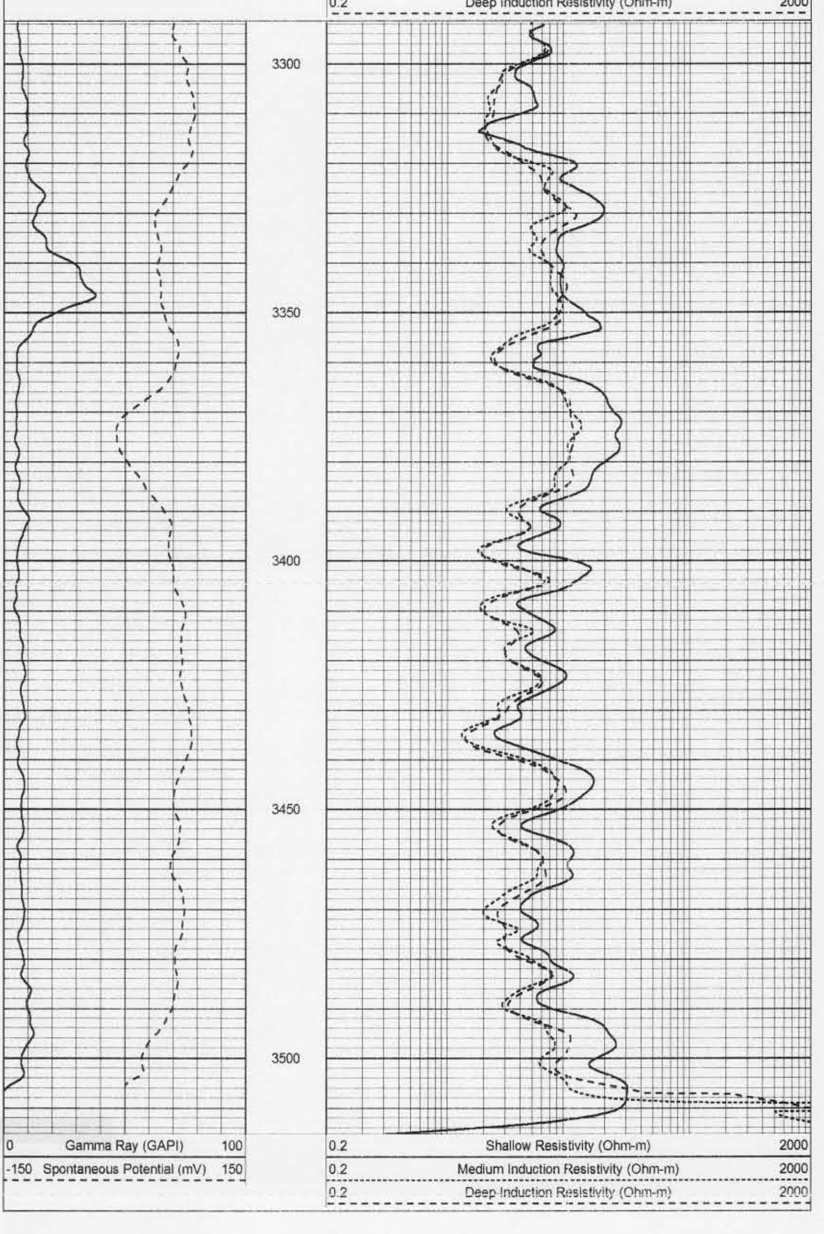
MAIN PASS



REPEAT PASS

ALLWEBBS ENTERPRISES, INC.

Database File: olitd.db
Dataset Pathname: TD2/DILRPFINA
Presentation Format: dil
Dataset Creation: Sun Sep 14 12:15:03 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240



Calibration Report

Dual Induction Calibration Report

Surface Calibration

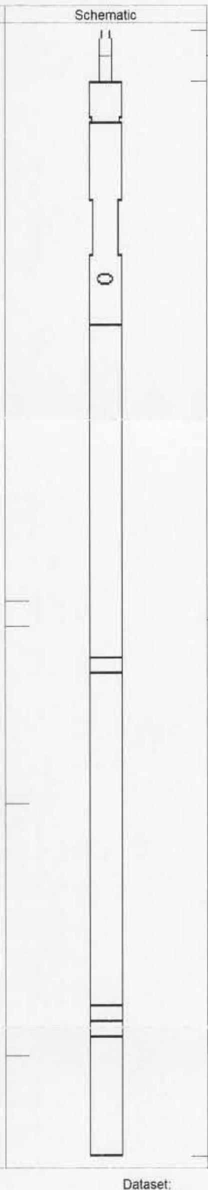
	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	-0.002	0.620	V	0.000	400.000	mmho-m	642.996	1.342
Medium	0.007	0.784	V	0.000	465.000	mmho-m	598.729	-4.404
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.004	0.592	V	0.000	400.000	mmho-m	680.370	-2.703
Medium	0.001	0.672	V	0.000	465.000	mmho-m	692.332	-0.448

Downhole Calibration

	Readings			References			Results	
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	-5.087	465.520	mmho-m	3.900	382.179	mmho-m	0.804	7.988
Medium	3.113	539.606	mmho-m	-4.936	489.303	mmho-m	0.921	-7.803
Shallow	2.507	0.009	V	500.000	2.000	Ohm-m	199.340	0.260

After Survey Verification

	Readings			Targets			Results	
Internal:	Zero	Cal		Zero	Cal		m'	b'
Deep	-3.512	389.157	mmho-m	-5.087	465.520	mmho-m	0.804	7.988
Medium	2.796	418.511	mmho-m	3.113	539.606	mmho-m	0.921	-7.803
Shallow	501.357	2.297	Ohm-m	500.000	2.000	Ohm-m	0.998	-0.292

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
SP	11.00					
CILD	10.50		DIL-GEAR (DIL2) GO_DIL/LL3/SP	21.25	3.50	150.00
CILM	7.00					
RLL3	2.00					

Dataset: olitd.db: field/well/TD2/DILMP
Total Length: 22.25 ft
Total Weight: 155.00 lb
O.D. 3.50 in

X-Y CALIPER GAMMA RAY LOG

ALLWEBBS ENTERPRISES, INC.

Company	OLI		
Well	IW-1		
Field	OKEECHOBEE LANDFILL		
County	OKEECHOBEE	State	FLORIDA
Location:	API #: 27 DEGREES, 20', 21" N; 80 DEGREES, 41', 34" W		Other Services SEE COMMENTS
SEC	TWP	RGE	
Permanent Datum	GL	Elevation	Elevation K.B. D.F. G.L.
Log Measured From	GL		
Drilling Measured From			

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE
State FLORIDA

Date	14-SEPT-2008
Run Number	TD2
Depth Driller	3500'
Depth Logger	3500'
Bottom Logged Interval	3500'
Top Log Interval	3000'
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				
TD2	12.25"	CASING	3500'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

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Comments

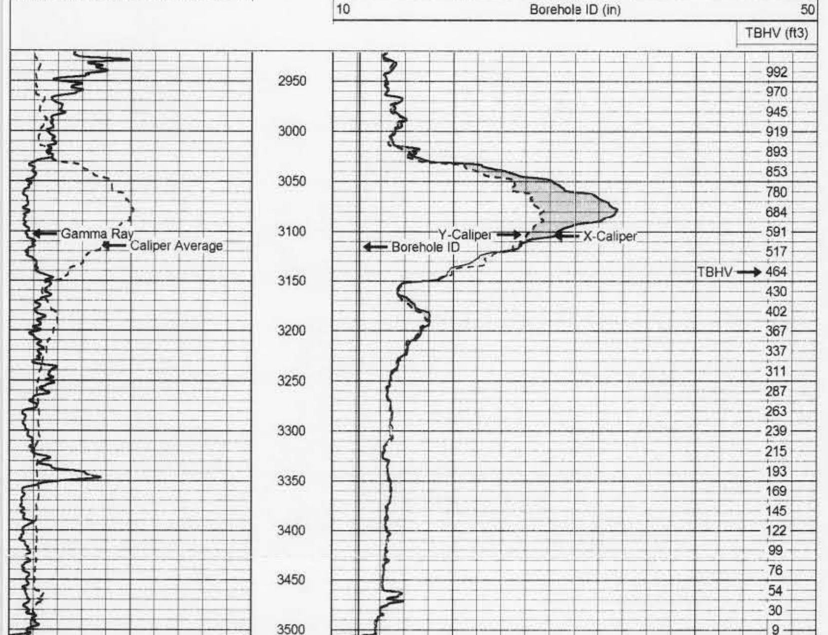
BHC/SONIC/VDL
DIL/LL3/SP
FLOWMETER
FCT
DHTVS

MAIN PASS

ALLWEBBS ENTERPRISES, INC.

Database File: olitd.db
Dataset Pathname: TD2/XYCMP
Presentation Format: xyc
Dataset Creation: Sun Sep 14 09:22:49 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:1200

0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	



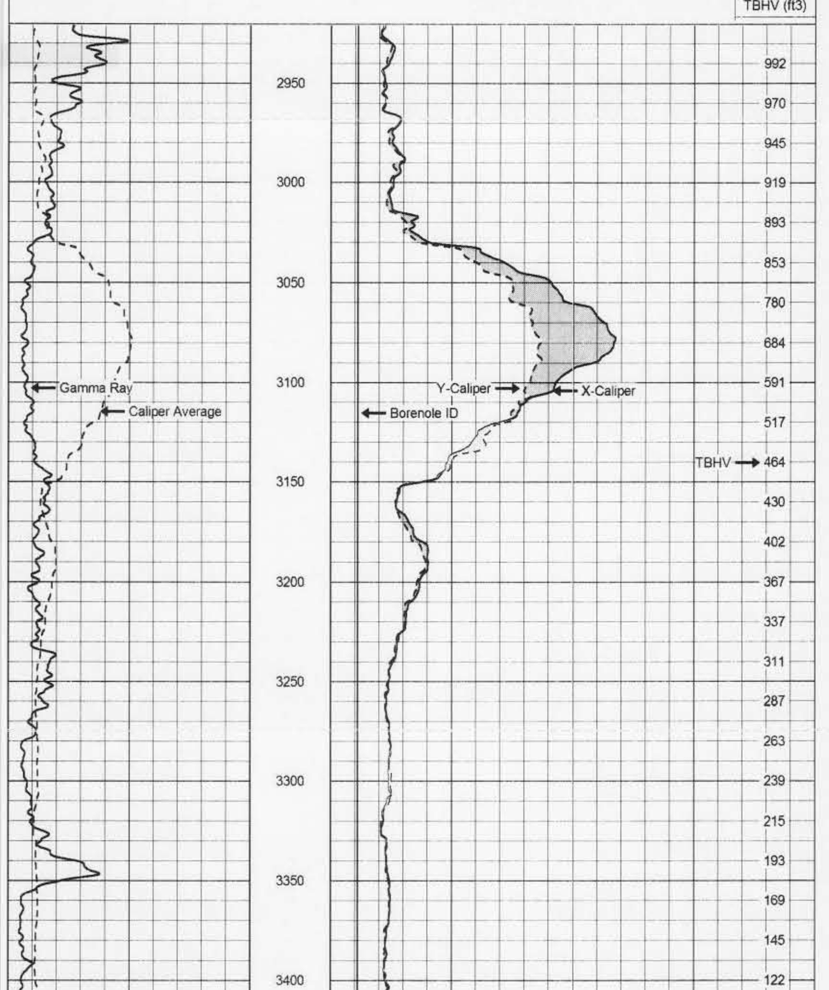
0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	

MAIN PASS

ALLWEBBS ENTERPRISES, INC.

Database File: olitd.db
Dataset Pathname: TD2/XYCMP
Presentation Format: xyc
Dataset Creation: Sun Sep 14 09:22:49 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	



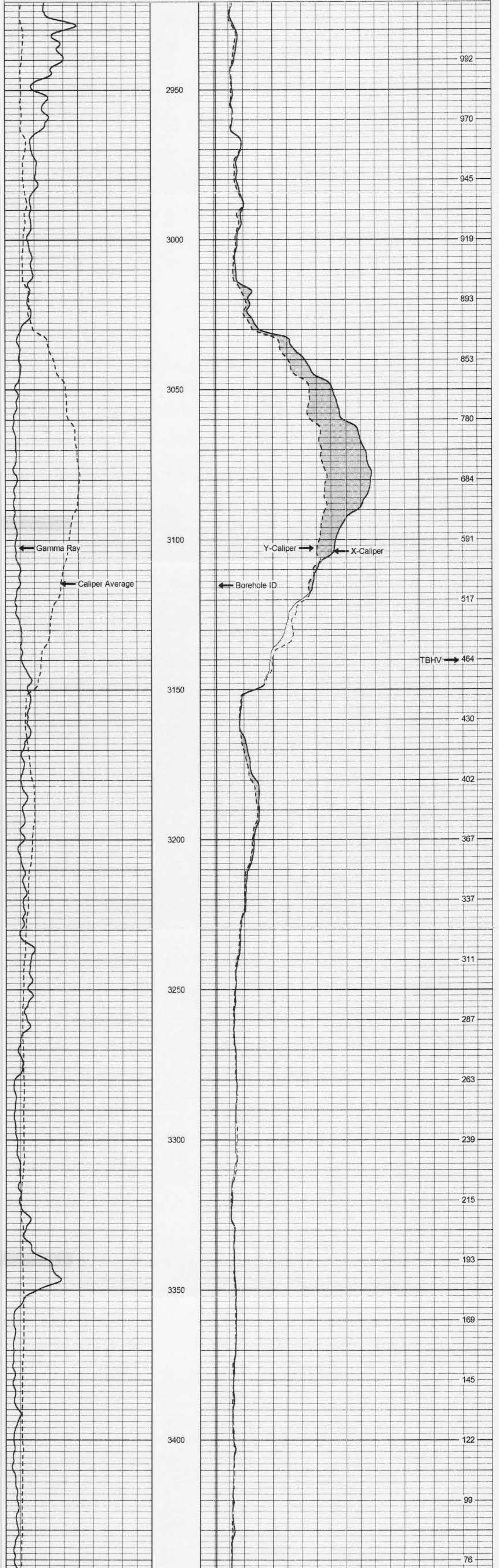
0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	

MAIN PASS

ALLWEBBS ENTERPRISES, INC.

Database File: olitd.db
Dataset Pathname: TD2/XYCMP
Presentation Format: xyc
Dataset Creation: Sun Sep 14 09:22:49 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	



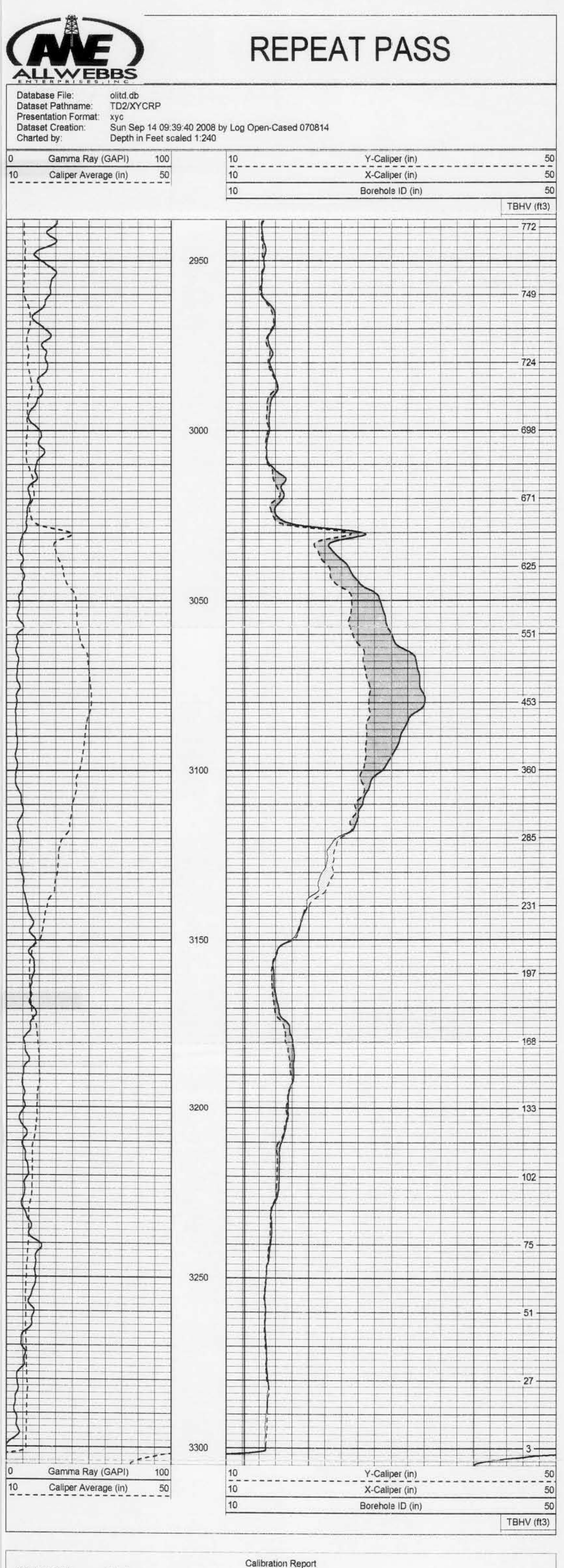
0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	

REPEAT PASS

ALLWEBBS ENTERPRISES, INC.

Database File: olitd.db
Dataset Pathname: TD2/XYCRP
Presentation Format: xyc
Dataset Creation: Sun Sep 14 09:39:40 2008 by Log Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	



0	Gamma Ray (GAPI)	100	10	Y-Caliper (in)	50
10	Caliper Average (in)	50	10	X-Caliper (in)	50
			10	Borehole ID (in)	50
				TBHV (ft3)	

Calibration Report

Database File: olitd.db
Dataset Pathname: TD2/XYCRP
Dataset Creation: Sun Sep 14 09:39:40 2008 by Log Open-Cased 070814

XY Caliper Calibration Report

Serial Number/Model: SDSDEMO-XY
Performed: Sun Sep 14 09:05:01 2008

Ring			X Caliper		Y Caliper	
1:	0	in	0	cps	0	cps
2:	7.75	in	368.9	cps	348.1	cps
3:	11.75	in	416.7	cps	401.8	cps
4:	42	in	907.1	cps	914.4	cps
5:		in		cps		cps
6:		in		cps		cps

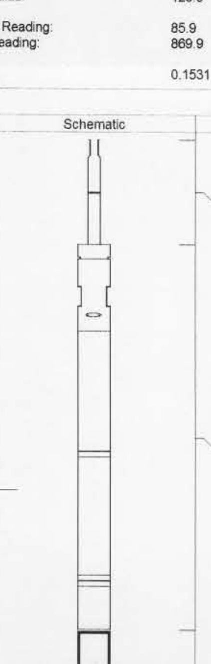
Gamma Ray Calibration Report

Serial Number: SDS
Tool Model: SDSGR
Performed: Sat Aug 30 08:06:45 2008

Calibrator Value: 120.0 GAPI

Background Reading: 85.9 cps
Calibrator Reading: 869.9 cps

Sensitivity: 0.1531 GAPI/cps

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
			GR-SDSGR (SDS) PROBE_GR	3.67	3.38	50.00
GR	7.33					

FLOWMETER LOG

ALLWEBBS ENTERPRISES, INC

Company	OLI		
Well	IW-1		
Field	OKEECHOBEE LANDFILL		
County	OKEECHOBEE	State	FLORIDA
Location:	API # : 27 DEGREES, 20' , 21" N; 80 DEGREES, 41' , 34" W		Other Services SEE COMMENTS
SEC	TWP	RGE	
Permanent Datum		Elevation	Elevation K.B. D.F. G.L.
Log Measured From	GL		
Drilling Measured From	GL		

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE
State FLORIDA

Date	14-SEPT-2008
Run Number	TD2
Depth Driller	3500'
Depth Logger	3500'
Bottom Logged Interval	3500'
Top Log Interval	CASING
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				
TD2	12.25"	CASING	3500'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

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Comments

XYC/GR
BHC/SONIC/VDL
DIL/LL3/SP
FCT
DHTVS

MERGED STATIC & DYNAMIC

ALLWEBBS ENTERPRISES, INC

Database File:	olitd.db
Dataset Pathname:	TD2/FMDY
Presentation Format:	flow_mg
Dataset Creation:	Sun Sep 14 17:57:57 2008 by Log Open-Cased 070814
Charted by:	Depth in Feet scaled 1:240

0 L.S STATIC DOWN (ft/min) 100
0 L.S DYNAMIC DOWN (ft/min) 100
0 FLOWP (cps) 50
0 FLOWPS (cps) 50

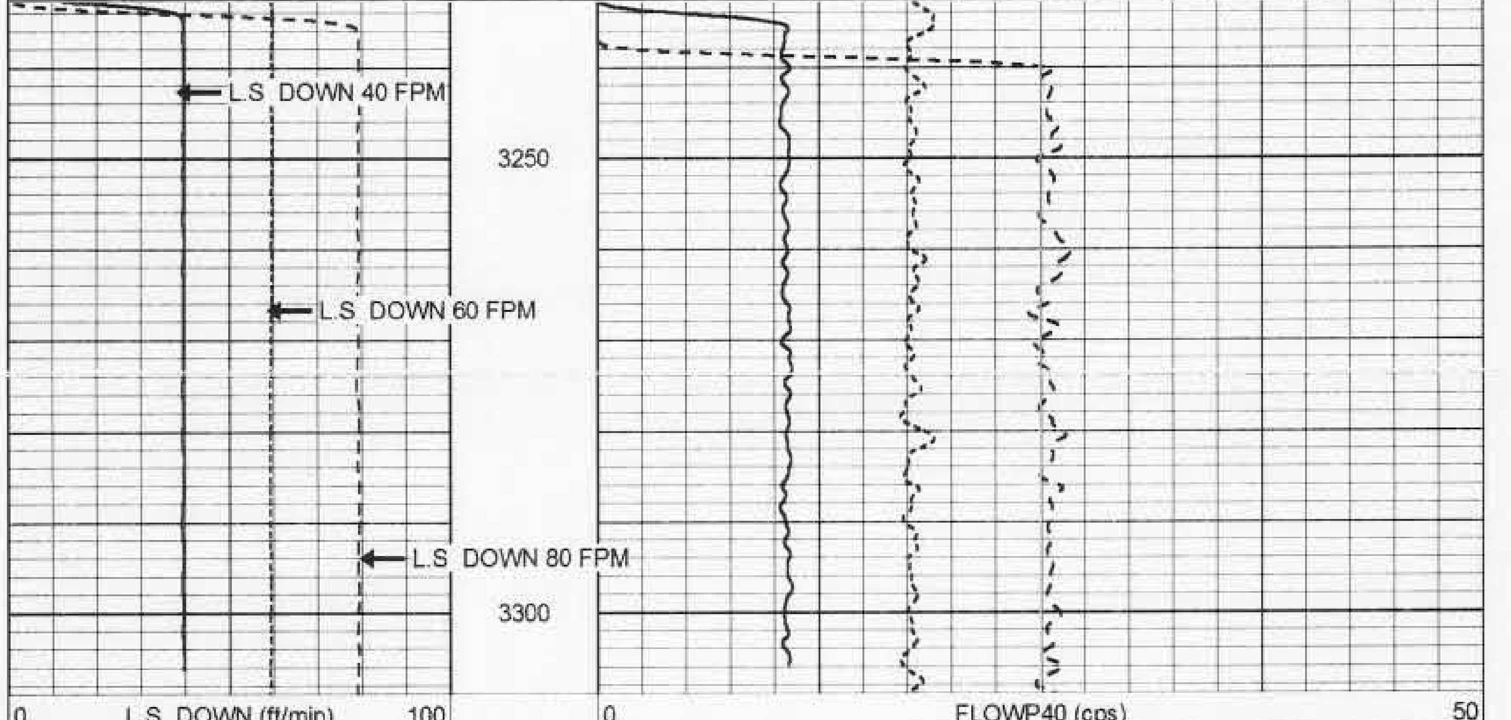
0 L.S STATIC DOWN (ft/min) 100
0 L.S DYNAMIC DOWN (ft/min) 100
0 FLOWP (cps) 50
0 FLOWPS (cps) 50

CALS 40,60 & 80 FPM

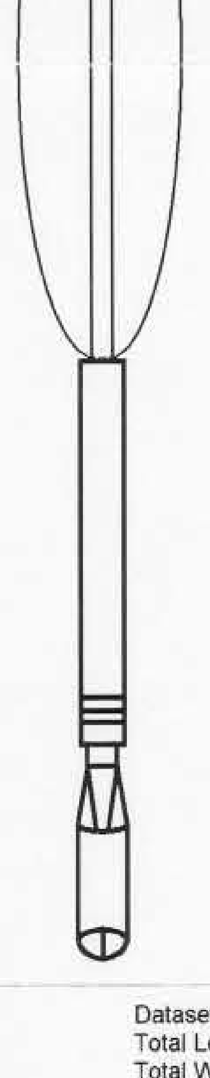
ALLWEBBS ENTERPRISES, INC

Database File:	olitd.db
Dataset Pathname:	TD2/FMCAL2
Presentation Format:	flow
Dataset Creation:	Sun Sep 14 17:23:51 2008 by Log Open-Cased 070814
Charted by:	Depth in Feet scaled 1:240

0 L.S DOWN (ft/min) 100
0 LSPD60 (ft/min) 100
0 LSPD80 (ft/min) 100
0 FLOWP40 (cps) 50
0 FLOWP60 (cps) 50
0 FLOWP80 (cps) 50



0 L.S DOWN (ft/min) 100
0 LSPD60 (ft/min) 100
0 LSPD80 (ft/min) 100
0 FLOWP40 (cps) 50
0 FLOWP60 (cps) 50
0 FLOWP80 (cps) 50



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
			CBLINLINE	3.00	1.50	10.00
			FLOWMETER-TITAN (TITAN_3") TITIN_3'	3.00	1.69	25.00
FLOWP	0.25					
FLOWN	0.25					

Dataset:	olitd.db: field/well/TD2/FMDY
Total Length:	7.00 ft
Total Weight:	40.00 lb
O.D.	1.69 in

ALLWEBBS ENTERPRISES, INC.

BOREHOLE COMPENSATED SONIC/VDL LOG

Company	OLI		
Well	IW-1		
Field	OKEECHOBEE LANDFILL		
County	OKEECHOBEE	State	FLORIDA
Location: 27 DEGREES, 20', 21" N; 80 DEGREES, 41', 34" W	API #:		Other Services: SEE COMMENTS
SEC	TWP	RGE	
Permanent Datum	GL	Elevation	Elevation K.B. D.F. G.L.
Log Measured From	GL		
Drilling Measured From	GL		

Company	OLI
Well	IW-1
Field	OKEECHOBEE LANDFILL
County	OKEECHOBEE
State	FLORIDA

Date	14-SEPT-2008
Run Number	TD2
Depth Driller	3500'
Depth Logger	3500'
Bottom Logged Interval	3500'
Top Log Interval	3000'
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUPITER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				
TD2	12.25"	CASING	3500'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T.	SURFACE	1994'
Prot. String				
Production String				
Liner				

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

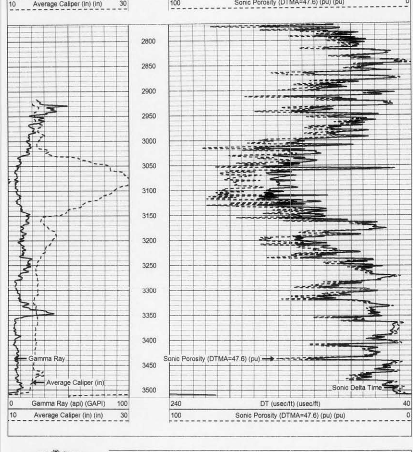
Comments

XYC/GR
DIL/LL3/SP
FLOWMETER
FCT
DHTVS

MAIN PASS

Database File: olitd.db
Dataset Pathname: TD2/BHCMPFIN
Presentation Format: bhc_por
Dataset Creation: Sun Sep 14 13:26:30 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:1200

0	Gamma Ray (api) (GAPI)	100	240	DT (usec/ft) (usec/ft)	40
10	Average Caliper (in) (in)	30	100	Sonic Porosity (DTMA=47.6) (pu) (pu)	0

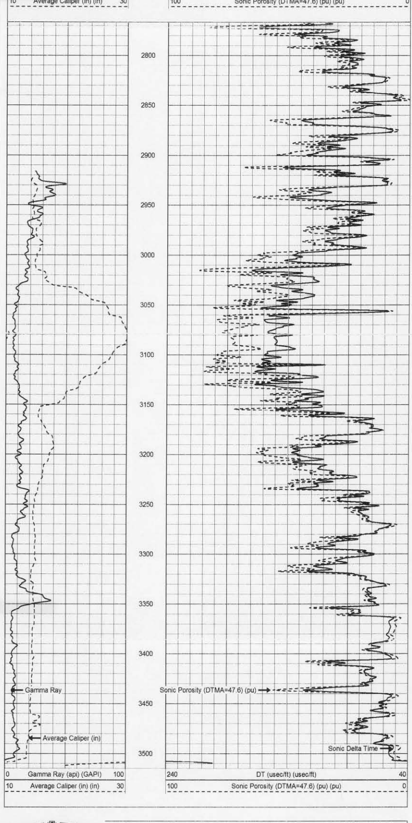


0	Gamma Ray (api) (GAPI)	100	240	DT (usec/ft) (usec/ft)	40
10	Average Caliper (in) (in)	30	100	Sonic Porosity (DTMA=47.6) (pu) (pu)	0

MAIN PASS

Database File: olitd.db
Dataset Pathname: TD2/BHCMPFIN
Presentation Format: bhc_por
Dataset Creation: Sun Sep 14 13:26:30 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:600

0	Gamma Ray (api) (GAPI)	100	240	DT (usec/ft) (usec/ft)	40
10	Average Caliper (in) (in)	30	100	Sonic Porosity (DTMA=47.6) (pu) (pu)	0

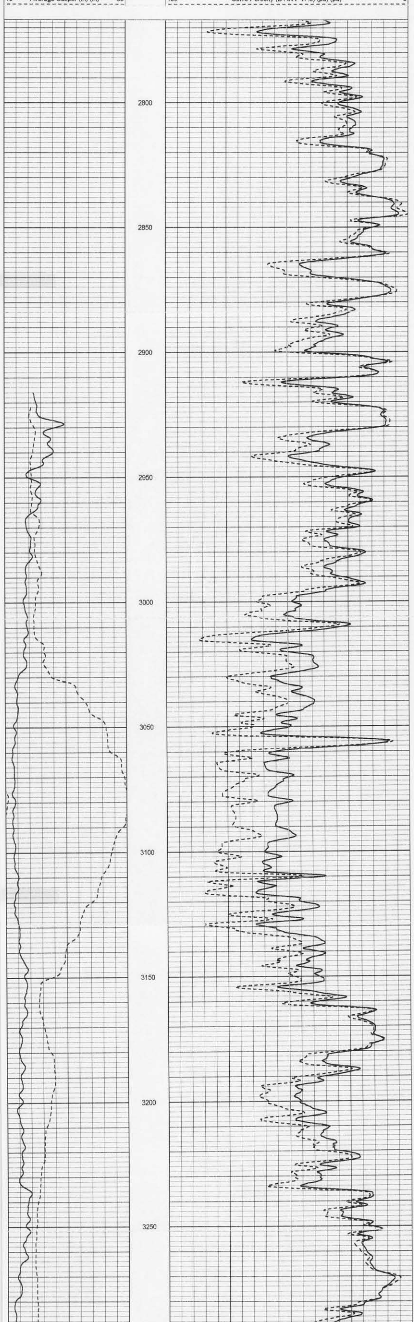


0	Gamma Ray (api) (GAPI)	100	240	DT (usec/ft) (usec/ft)	40
10	Average Caliper (in) (in)	30	100	Sonic Porosity (DTMA=47.6) (pu) (pu)	0

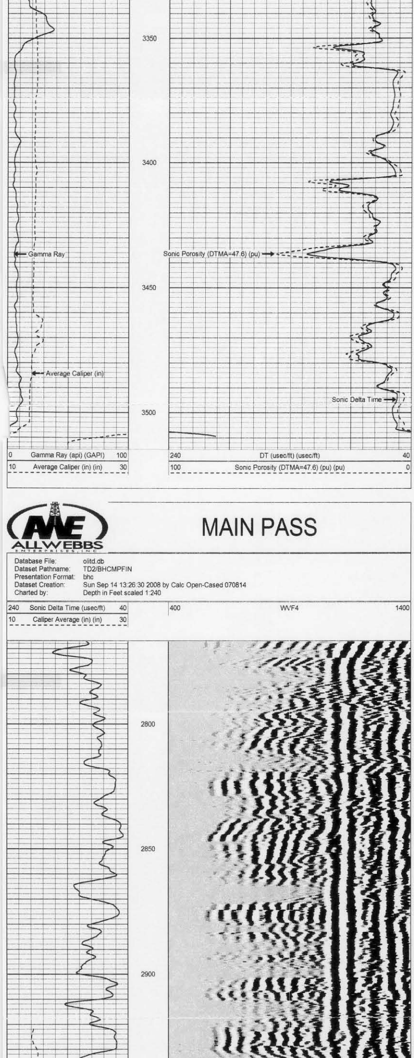
MAIN PASS

Database File: olitd.db
Dataset Pathname: TD2/BHCMPFIN
Presentation Format: bhc_por
Dataset Creation: Sun Sep 14 13:26:30 2008 by Calc Open-Cased 070814
Charted by: Depth in Feet scaled 1:240

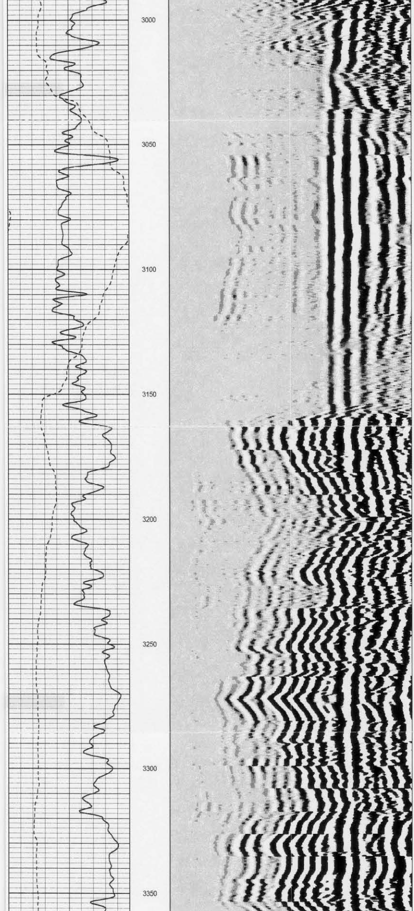
0	Gamma Ray (api) (GAPI)	100	240	DT (usec/ft) (usec/ft)	40
10	Average Caliper (in) (in)	30	100	Sonic Porosity (DTMA=47.6) (pu) (pu)	0

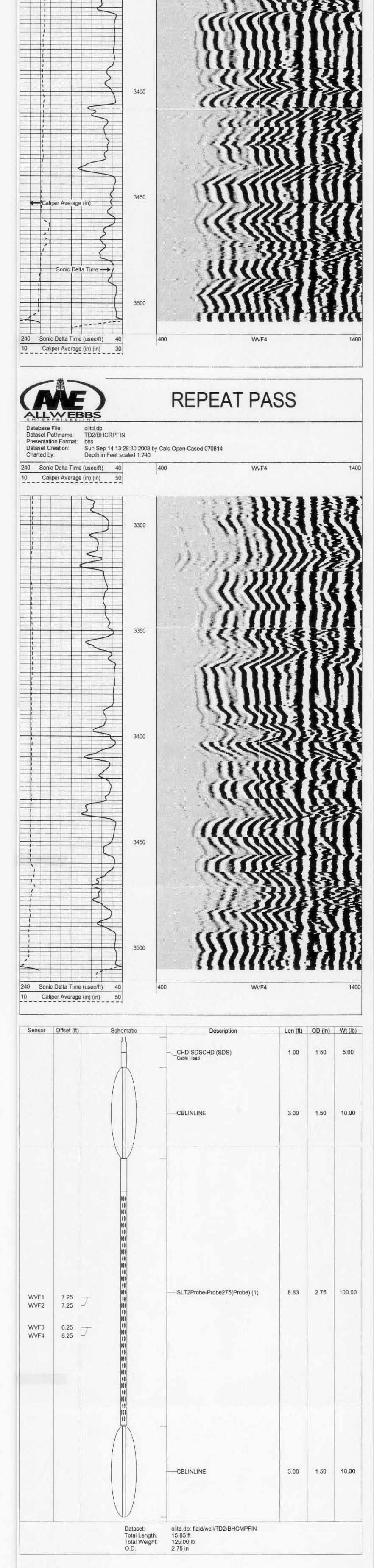


MAIN PASS



REPEAT PASS





FLUID CONDUCTIVITY TEMPERATURE LOG

ALLWEBBS ENTERPRISES, INC.

Company	OLI
Well	IW-1
Field	OKEECHOBEE LANDFILL
County	OKEECHOBEE
State	FLORIDA

Company OLI
Well IW-1
Field OKEECHOBEE LANDFILL
County OKEECHOBEE State FLORIDA

Location: API # :
27 DEGREES, 20', 21" N;
80 DEGREES, 41', 34" W

SEC TWP RGE

Other Services: SEE COMMENTS

Permanent Datum		Elevation	Elevation: K.B. D.F. G.L.
Log Measured From	GL		
Drilling Measured From	GL		

Date	14-SEPT-2008
Run Number	TD2
Depth Driller	3500'
Depth Logger	3500'
Bottom Logged Interval	3500'
Top Log Interval	CASING
Open Hole Size	12.25"
Type Fluid	WATER
Density / Viscosity	NA
Max. Recorded Temp.	93.6 DEGF.
Estimated Cement Top	NA
Time Well Ready	ON ARRIVAL
Time Logger on Bottom	0000
Equipment Number	VA-203
Location	JUIPTER
Recorded By	LEE
Witnessed By	J. McGRATH

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
TD	12.25"	CASING	3100'				
TD2	12.25"	CASING	3500'				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	26"	.375 W.T	SURFACE	1994'
Prot. String				
Production String				
Liner				

<<< Fold Here >>>

Comments

XYC/GR
BHC/SONIC/VDL
DIL/LL3/SP
FLOWMETER
DHTVS

MERGE STATIC & DYNAMIC

ALLWEBBS ENTERPRISES, INC.

Database File:	olitd.db
Dataset Pathname:	TD2/FRTDY
Presentation Format:	fct
Dataset Creation:	Sun Sep 14 16:24:29 2008 by Log Open-Cased 070814
Charted by:	Depth in Feet scaled 1:240

Calibration Report

Database File:	olitd.db
Dataset Pathname:	TD2/FRTDY
Dataset Creation:	Sun Sep 14 16:24:29 2008 by Log Open-Cased 070814

Temperature Calibration Report

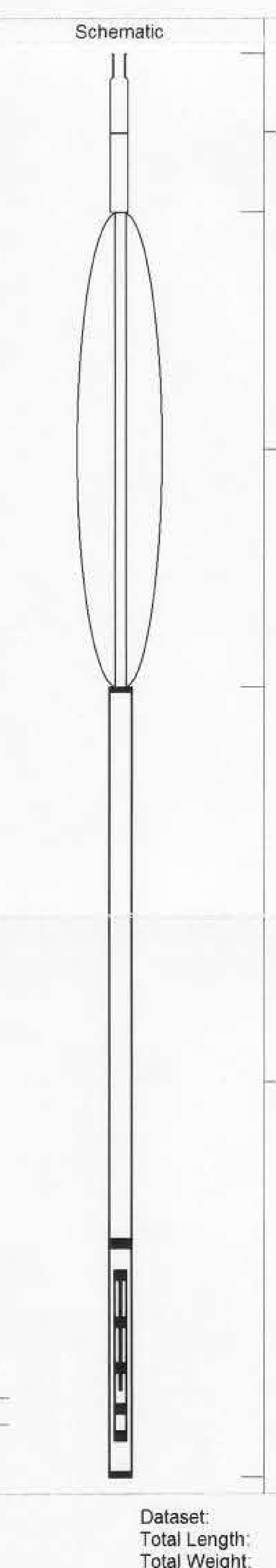
Serial Number:	1
Tool Model:	RG
Performed:	Wed Jul 23 14:04:42 2008

Point #	Reading	Reference	
1	5464.36	36.00	degF
2	7101.07	72.00	degF
3	11403.00	118.00	degF
4			degF
5			degF
6			degF
7			degF
8			degF
9			degF
10			degF

Calibration Report

Serial Number:	1
Tool Model:	RG
Performed:	Thu Jun 05 14:38:47 2008

Reference (um)	Reading ()
1000.000	1441.540
10000.000	9666.960
25000.000	24443.400
50000.000	41928.200



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
		CHD-SDSCHD (SDS) Cable Head	1.00	1.50	5.00
		CBLINLINE	3.00	1.50	10.00
		FRTEMP-RG (1) RG_FCON	5.00	1.50	25.00
FCON	0.50				
TEMP	0.33				

Dataset:	olitd.db: field/well/TD2/FRTDY
Total Length:	9.00 ft
Total Weight:	40.00 lb
O.D.:	1.50 in

APPENDIX D
TELEVISION SURVEY LOG - EXPLORATORY WELL: EW-1
OKEECHOBEE LANDFILL, INC.
OKEECHOBEE, FLORIDA

12 ¼-INCH PILOT HOLE
1996 FEET TO 3506 FEET BLS

FEET (BLS)	
1996 - 1997	Reduced visibility, cement at bottom of intermediate casing.
1997 - 2072	Oversize diameter hole, appears yellowish brown color (dolomite), abundant vugs visible, clear picture
2072 - 2082	Oversize diameter hole, appears yellowish brown color (dolomite), abundant vugs visible, fracturing visible, clear picture
2082 - 2108	Oversize diameter hole, appears yellowish brown color (dolomite), abundant large vugs, clear picture
2108 - 2112	Oversize diameter hole, appears yellowish brown color (dolomite), abundant large vugs and extensive fracturing, clear picture
2112 - 2138	Guage diameter hole, appears yellowish brown color (dolomite), abundant large vugs, cavern development visible at 2112 and 2122, fishing core overshot and oversize hole terminated at 2114, clear picture
2138 - 2148	Color change (yellowish brown), dolomite, gauge hole, clear picture
2148 - 2236	Dolomite (light brown) to 2100, large vugs at 2162, 2190, 2207, 2219, 2234, significant fracturing at 2224, clear picture
2236 - 2290	light Brown color (dolomite) appears to be very dense dolomite, infrequent solution features, mostly gauge hole
2290 - 2390	Gauge hole, cream colored very dense dolomitic limestone, solution cavities often filled with chert, fractures and solution cavities visible at 2377-2380, 2391, clear picture
2390 - 2528	Enlarged hole, cream colored limestone, vugs, fractures and solution cavities visible at 2398, 2428, 2437, 2464, 2478-2480, 2500, 2508,2515-2519, clear picture

2528 – 2538	Enlarged hole, yellowish brown dolomite, vugs, cloudy picture
2538 – 2552	Enlarged hole, cream colored dense limestone, clear picture
2552 – 2580	Gauge hole, yellowish brown dolomite, vugs, fractures and solution features at 2560, 2575, clear picture
2580 – 2585	Enlarged hole, cream colored dense limestone, clear picture
2585 – 2598	Enlarged hole, yellowish brown dolomite, vugs, fractures and solution cavities at 2590-2592, and clear picture
2598 – 2741	Enlarged hole, cream colored dense limestone, fractures and/or solution features at 2604, 2623-2626, 2631, 2647, 2660-2664, 2676, 2689, 2724, clear picture
2741 – 3150	Enlarged hole, yellowish brown dolomite, vugs, fractures and solution features at 2755, 2766, 2771- 2775, 2777, 2792, 2800-2804 2814, 2828, 2831, 2840-2852, 2875, 2912, 2929, 2943-2950, 2957, 2974-2983, 2992, 2997-3150, cavities at 2856-2862, 2892-2894 2907-2909, 2937-2939, significant cavity at 3033, clear picture until 3034, then cloudy to TD
3150 – 3506	Gauge hole, gray and olive dolomite with 10-25% gypsum, no visible porosity– END OF LOG

Okeechobee Landfill Inc. Permit No. 040842-017-UC Permit No. 040842-019-UC

16" Casing Tally

Joint #	Note			Below rig floor	Joint #	Note			Below rig floor
1	40.25		40.25	27.95	41	40.08		1646.24	1633.94
2	40.55		80.80	68.50	42	40.10		1686.34	1674.04
3	40.44		121.24	108.94	43	40.13		1726.47	1714.17
4	40.45		161.69	149.39	44	40.10		1766.57	1754.27
5	39.50		201.19	188.89	45	40.16		1806.73	1794.43
6	40.08		241.27	228.97	46	40.16		1846.89	1834.59
7	40.08		281.35	269.05	47	40.07		1886.96	1874.66
8	40.06		321.41	309.11	48	40.11		1927.07	1914.77
9	40.18		361.59	349.29	49	40.17		1967.24	1954.94
10	40.11		401.70	389.40	50	38.88		2006.12	1993.82
11	40.12		441.82	429.52	51	40.11		2046.23	2033.93
12	40.12		481.94	469.64	52	40.13		2086.36	2074.06
13	40.06		522.00	509.70	53	40.08		2126.44	2114.14
14	40.13		562.13	549.83	54	37.88		2164.32	2152.02
15	40.13		602.26	589.96	55	40.44		2204.76	2192.46
16	40.11		642.37	630.07	56	40.41		2245.17	2232.87
17	40.10		682.47	670.17	57	38.76		2283.93	2271.63
18	40.10		722.57	710.27	58	40.15		2324.08	2311.78
19	40.09		762.66	750.36	59	40.14		2364.22	2351.92
20	40.10		802.76	790.46	60	40.12		2404.34	2392.04
21	40.12		842.88	830.58	61	40.12		2444.46	2432.16
22	40.12		883.00	870.70	62	40.11		2484.57	2472.27
23	40.10		923.10	910.80	63	40.12		2524.69	2512.39
24	40.10		963.20	950.90	64	40.64		2565.33	2553.03
25	40.15		1003.35	991.05	65	40.57		2605.90	2593.60
26	40.09		1043.44	1031.14	66	40.59		2646.49	2634.19
27	40.13		1083.57	1071.27	67	40.73		2687.22	2674.92
28	40.24		1123.81	1111.51	68	40.14		2727.36	2715.06
29	40.10		1163.91	1151.61	69	40.57		2767.93	2755.63
30	40.14		1204.05	1191.75	70	40.67		2808.60	2796.30
31	40.12		1244.17	1231.87	71			2808.60	2796.30
32	40.16		1284.33	1272.03	72			2808.60	2796.30
33	40.08		1324.41	1312.11	73			2808.60	2796.30
34	40.17		1364.58	1352.28	74			2808.60	2796.30
35	40.12		1404.70	1392.40	75			2808.60	2796.30
36	40.12		1444.82	1432.52	76			2808.60	2796.30
37	40.56		1485.38	1473.08	77			2808.60	2796.30
38	40.56		1525.94	1513.64	78			2808.60	2796.30
39	40.12		1566.06	1553.76	79			2808.60	2796.30
40	40.10		1606.16	1593.86	80			2808.60	2796.30
subtotal	1606.16				subtotal	1202.44			

Depth of Casing BPL
with header stick-up of 4.00 Feet

2804.60

Casing Depth NAVD

-2747.74

Jim McG...

YIEH CORPORATION LIMITED

MILL CERTIFICATE

ODITY: CARBON STEEL PIPE PER SALES CONTRACT
NO. SEUSFP6C02TD3 DATED DECEMBER 11, 2006.

extra 16'

MER: OZONE INDUSTRIES CORPORATION
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

CERTIFICATE NO:PSCGEN6C01TC5
DATE OF ISSUE:4/29/2007

Invoice No. SEUSFP6C02TD3
LC NUMBER.: 5278996

RBON STEEL PIPES are tested according to ASTM A139 GR.B
o certify that in accordance with the relevant specifications and contracts.
RBON STEEL PIPES manufactured were tested and qualified by our Quality Control Department

TOTAL : 746 PCS / 29840FT / 1769.619MT

Heat Numbers	Steel	Size			Quantity			Dimensional	TESTING RESULTS											
		O.D.	W.T.	Length					CHEMICAL PROPERTIES(%)					PHYSICAL PROPERTIES			Welding properties	Hydrostatic Test Holding time:10s	Flattening	UT Test
	Grade	in	in	ft	Pcs	ft	MT	Inspection	C	Si	Mn	P	S	σs(Mpa)	σb(Mpa)	δ5(%)	σb	P = Psi	Test (B)	Test (B)
048505	B	34	0.375	40	3	120	7.338	OK	0.17	0.23	0.44	0.012	0.031	320	425	31	OK	500	OK	OK
014601	B	34	0.375	40	3	120	7.338	OK	0.15	0.20	0.39	0.010	0.029	300	420	32	OK	500	OK	OK
014404	B	34	0.375	40	3	120	7.338	OK	0.18	0.22	0.43	0.011	0.030	325	425	31.5	OK	500	OK	OK
055207	B	34	0.375	40	2	80	4.892	OK	0.17	0.24	0.45	0.013	0.031	310	420	31	OK	500	OK	OK
048702	B	34	0.375	40	3	120	7.338	OK	0.18	0.26	0.45	0.014	0.032	315	425	31	OK	500	OK	OK
054801	B	34	0.375	40	3	120	7.338	OK	0.17	0.25	0.44	0.015	0.032	315	420	30.5	OK	500	OK	OK
054804	B	34	0.375	40	3	120	7.338	OK	0.16	0.21	0.42	0.012	0.030	320	425	31	OK	500	OK	OK
054603	B	34	0.375	40	3	120	7.338	OK	0.15	0.19	0.40	0.009	0.028	305	420	32	OK	500	OK	OK
054605	B	34	0.375	40	3	120	7.338	OK	0.17	0.24	0.39	0.012	0.031	315	420	32	OK	500	OK	OK
048902	B	34	0.375	40	3	120	7.338	OK	0.16	0.22	0.34	0.011	0.026	315	420	31.5	OK	500	OK	OK
054401	B	34	0.375	40	2	80	4.892	OK	0.18	0.26	0.37	0.014	0.031	305	425	32	OK	500	OK	OK
054200	B	34	0.375	40	3	120	7.338	OK	0.17	0.23	0.40	0.018	0.030	305	425	31.5	OK	500	OK	OK
053602	B	34	0.375	40	3	120	7.338	OK	0.16	0.22	0.36	0.013	0.027	310	426	32	OK	500	OK	OK
047501	B	34	0.375	40	3	120	7.338	OK	0.16	0.21	0.39	0.012	0.029	305	420	32.5	OK	500	OK	OK
009106	B	34	0.375	40	3	120	7.338	OK	0.19	0.27	0.43	0.015	0.032	310	426	32	OK	500	OK	OK
047306	B	34	0.375	40	3	120	7.338	OK	0.15	0.20	0.35	0.009	0.028	305	420	32.5	OK	500	OK	OK
059701	[illegible]	34	0.375	40	2	80	4.892	OK	0.15	0.16	0.35	0.009	0.024	290	420	30.5	OK	500	OK	OK

YIEH CORPORATION LIMITED

Jim McG...

YIEH CORPORATION LIMITED

MILL CERTIFICATE

COMMODITY: CARBON STEEL PIPE PER SALES CONTRACT
NO. SEUSFP6C02TD3 DATED DECEMBER 11, 2006.

CUSTOMER: OZONE INDUSTRIES CORPORATION
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

CERTIFICATE NO:PSCNJN6C01TC5
DATE OF ISSUE:4/29/2007

Invoice No. SEUSFP6C02TD3
LC NUMBER.: 5279996

The CARBON STEEL PIPES are tested according to ASTM A139 GR.B
This is to certify that in accordance with the relevant specifications and contracts.
The CARBON STEEL PIPES manufactured were tested and qualified by our Quality Control Department.

TOTAL : 746 PCS / 29840FT / 1769.619MT

Pipes No.	Heat Numbers	Steel	Size			Quantity			Dimensional	TESTING RESULTS											
			O.D.	W.T.	Length					CHEMICAL PROPERTIES(%)					PHYSICAL PROPERTIES			Welding properties	Hydrostatic Test Holding time:10s.	Flattening	UT Test
		Grade	in	in	ft	Pcs	ft	MT	Inspection	C	Si	Mn	P	S	σs(Mpa)	σb(Mpa)	δ5(%)	σb	P = Psi	Test (B)	Test (B)
120	013807	B	34	0.375	40	2	80	4.892	OK	0.16	0.21	0.42	0.012	0.030	326	420	32	OK	500	OK	OK
121	047305	B	34	0.375	40	3	120	7.338	OK	0.19	0.25	0.48	0.016	0.033	315	425	31.5	OK	500	OK	OK
122	048101	B	34	0.375	40	3	120	7.338	OK	0.14	0.19	0.38	0.010	0.028	310	420	31	OK	500	OK	OK
123	008501	B	34	0.375	40	3	120	7.338	OK	0.15	0.20	0.39	0.010	0.030	315	426	31.5	OK	500	OK	OK
124	055204	B	34	0.375	40	3	120	7.335	OK	0.17	0.22	0.43	0.014	0.032	300	425	32	OK	500	OK	OK
125	065207	B	34	0.375	40	3	120	7.338	OK	0.18	0.24	0.41	0.013	0.031	295	420	31	OK	600	OK	OK
126	055024	B	34	0.375	40	3	120	7.338	OK	0.15	0.18	0.39	0.010	0.027	300	425	31	OK	500	OK	OK
127	042801	B	34	0.375	40	3	120	7.338	OK	0.17	0.21	0.42	0.013	0.030	300	420	32	OK	500	OK	OK
128	237804	B	34	0.375	40	3	120	7.338	OK	0.16	0.20	0.40	0.012	0.032	285	425	31	OK	500	OK	OK
129	048103	B	34	0.375	40	3	120	7.338	OK	0.18	0.23	0.43	0.016	0.032	295	425	30.5	OK	500	OK	OK
130	055205	B	34	0.375	40	3	120	7.338	OK	0.15	0.19	0.38	0.007	0.029	305	425	31	OK	500	OK	OK
131	055206	B	34	0.375	40	3	120	7.398	OK	0.16	0.22	0.41	0.011	0.031	280	425	31	OK	500	OK	OK
132	047302	B	34	0.375	40	3	120	7.338	OK	0.19	0.24	0.44	0.017	0.033	300	420	31	OK	500	OK	OK
133	047307	B	34	0.375	40	3	120	7.338	OK	0.19	0.25	0.48	0.015	0.032	310	420	31	OK	500	OK	OK
134	055001	B	34	0.375	40	3	120	7.338	OK	0.17	0.24	0.45	0.015	0.032	285	425	32	OK	500	OK	OK
135	054404	B	34	0.375	40	3	120	7.338	OK	0.18	0.26	0.47	0.016	0.033	305	425	31	OK	500	OK	OK
136	054403	B	34	0.375	40	2	80	4.892	OK	0.15	0.19	0.39	0.014	0.029	305	420	32	OK	500	OK	OK

YIEH CORPORATION LIMITED

ORIGINAL

LIAOYANG STEEL TUBE CO. LTD

Herein we confirm the steel pipes manufactured for your company are already [illegible] the inspecting [illegible] with the [illegible] the standard technical requirements of your company, the results shows all the pipes are qualified to issue this certificate especially.

Name of goods: [illegible] PIPE
Buyer:
Destination: [illegible]

Testing criterion: API 5L [illegible]
LETTER OF CREDIT NO. [illegible]

Inspection weight in charge: total [illegible]

Certificate No.: [illegible]
Size: [illegible]
Type: [illegible]

Material: [illegible]

Heat No	Consignment Quantity		Chemical Composition Of Material %									Hardness (HRB) max	Test Pressure 6.5Mpa ≥10S	Size and Visual	NDT	
	Pipe (Joint)	Length (M)	C	Si	Mn	P	S	Nb	V	Ti	Ceq				UT	RT
			$X10^3$													
7P07019	15	179.90	15	34	139	1.3	0.2	0.1	0.2	0.3	/	80	OK	OK	OK	OK
7P07021	14	167.88	15	35	140	1.3	0.2	0.1	0.1	0.4	/	79	OK	OK	OK	OK
7P07022	16	191.86	15	31	140	1.6	0.3	0.1	0.2	0.2	/	79	OK	OK	OK	OK
7P07023	12	143.91	16	32	140	1.9	0.2	0.1	0.2	0.3	/	80	OK	OK	OK	OK
7P06882	1	12.00	15	36	133	1.7	0.5	0.1	0.2	0.2	/	77	OK	OK	OK	OK

Mechanical Properties Of Welding seam			Mechanical Properties Of Material			Material Impact 0℃
Rm Mpa	Cold-bending180°		Y.S. Rp0.5Mpa	T.S. Rm Mpa	EL A%	Average (J)
	Face-bending	Root-bending				
560	OK	OK	385	555	39	/
550	OK	OK	380	545	39	/
550	OK	OK	385	545	39	/
555	OK	OK	380	550	40	/
535	OK	OK	380	535	38	/

Explanation:

1. PROCESS OF MANUFACTURE: [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. THIS QUALITY INSPECTION DOESN'T INCLUDE THE QUALITY OF [illegible]
6. ALL [illegible] PERPENDICULAR TO THE [illegible] OF THE PIPE, [illegible]
7. [illegible] FULL LENGTH [illegible]
8. [illegible]

LIAO YANG STEEL TUBE CO. LTD
辽阳钢管有限公司
检验专用章
INSPECTION ONLY

Person in charge: Yang [illegible] Inspector: Zhang [illegible] Date of issued: January 2, 2008 Address: [illegible] LIAOYANG CITY LIAONING PROVINCE P.R. CHINA

LIAOYANG STEEL TUBE CO. LTD

MILL CERTIFICATE

ORIGINAL

[illegible] the steel pipes manufactured for your company are already approved [illegible] qualified testing according the standard [illegible]
[illegible] all the pipes are qualified to issue this certificate [illegible].
[illegible] of goods: [illegible] PIPE
Buyer: [illegible] TRADE INTERNATIONAL [illegible]
Destination: HOUSTON, TX USA

Testing criterion: API 5L [illegible]
[illegible]

Material: [illegible]
Page: 1

Heat No	Consigement Quantity Pipe (Joint)	Length (FT)	C	Si	Mn	P	S	Nb	V	Ti	Hardness (HRB) max	Test Pressure 6.5Mpa ≥10S	Size and visual	NDT UT
			Chemical Composition Of Material % $X10^2$											
7QC04146	47	1849.10	14	27	146	0.4	0.7	0.1	0.1	0.2	76	OK	OK	OK
7QC04213	48	1888.80	15	28	145	0.3	0.6	0.1	0.1	0.2	79	OK	OK	OK
7QB03141	29	1140.30	14	26	147	0.4	0.5	0.1	0.1	0.2	74	OK	OK	OK

Mechanical Properties Of Welding seam: Rm Mpa	Cold-bending 180° Face-bending	Cold-bending 180° Root-bending	Mechanical Properties Of Material: Y.S. Rp0.5Mpa	T.S Rm Mpa	EL A%	Material Impact 0℃ Average (J)
530	OK	OK	370	545	36	95
540	OK	OK	365	530	34	93
520	OK	OK	365	530	38	92

Explanation

1. PROCESS OF MANUFACTURE: [illegible]
2. UT: [illegible]
3. [illegible]
4. [illegible] LOCATION OF SPECIMEN [illegible]
5. [illegible] LOCATION OF SPECIMEN [illegible]
6. THIS QUALITY INSPECTION [illegible] THE QUALITY OF TRANSPORTATION [illegible] UNLOADING
7. HEAT NO. AND PIPE NO. ARE ATTACHED.
8. [illegible] REPORT OF STEEL PIPE, HYDROSTATIC TESTING REPORT OF [illegible] REPORT FOR [illegible] ARE ATTACHED.
9. ALL PIPE [illegible] PERPENDICULAR TO THE AXIS OF THE PIPE AND [illegible]
10. ALL PIPE HAVE BEEN [illegible] PROTECTORS
11. [illegible]

Person in charge: Yang Yuehong Inspector: Zhang Junbao Date of issued: August 31, 2007 Address: [illegible] FANGONG ROAD LIAOYANG [illegible] CHINA

LIAOYANG STEEL TUBE CO. LTD 辽阳钢管有限公司 检验专用章 INSPECTION DEPARTMENT

LIAOYANG LARGE-SCALE STEEL PIPE PLANT

MILL TEST CERTIFICATE

CERTIFICATE No. 1765

Description: NEWLY PRODUCED PRIME QUALITY STEEL PIPE

ASTM/ASME A/SA 53-B EDITION 2002

PO.No: SF/QT3025

DATE: 2007.07.27

NO.	HEAT NO.	PIECES	SIZE OD (Inc)	SIZE WT (Inc)	SIZE length (ft)	WEIGHT (kg/m)	TOTAL WEIGHT (MT)	CHEMICAL COMPOSITION (wt%) C	Mn	P	S	Cu	Ni	Cr	Mo	V	BASE METAL MECHANICAL PROPERTIES Y.S. (MPa)	T.S. (MPa)	ELONGATION (%)
1	07AD3117	1	24	0.375	20	140.420	0.856	0.13	0.84	0.012	0.005	0.008	0.016	0.019	0.002	0.001	305	465	31
2	07AD3118	71	24	0.375	20	140.420	60.983	0.13	0.85	0.016	0.005	0.006	0.008	0.028	0.004	0.001	310	480	33
3	07AD3119	97	24	0.375	20	140.420	83.313	0.12	0.84	0.011	0.005	0.009	0.015	0.018	0.002	0.001	295	440	34
4	07AD3120	2	24	0.375	40	143.090	3.490	0.14	0.85	0.011	0.006	0.002	0.007	0.017	0.003	0.001	315	480	32
5	07BD3036	24	24	0.375	40	149.090	41.870	0.14	0.84	0.010	0.005	0.008	0.015	0.018	0.002	0.001	300	450	34

NO	HEAT NO.	WELD JOINT MECHANICAL PROPERTIES	FLATTENING	VISUAL&DIMENSIONS	U.T.	HYDROSTATIC PRESSURE (KPa)	DURATION OF TIME (s)
1	07AD3117	465	OK	OK	OK	4500	10
2	07AD3118	460	OK	OK	OK	4500	10
3	07AD3119	440	OK	OK	OK	4500	10
4	07AD3120	460	OK	OK	OK	4500	10
5	07BD3036	455	OK	OK	OK	4500	10

WE HERE CERTIFY THAT THE MATERIAL HEREIN DESCRIBED IS MERCURY FREE AND HAS BEEN MANUFACTURED,SAMPLED,TESTED AND INSPECTED IN ACCORDANCE WITH THE REQUIRE MENTS OF ABOVE SPECIFICATIONS AND PURCHASE ORDER,AND MET THE REQUIREMENTS.

The mill test certificate is issued by producer of Liao yang Large-Scale Steel Pipe Plant.

INSPECTOR:

ISSUER:

LIAOYANG LARGE-SCALE STEEL PIPE PLANT

MILL TEST CERTIFICATE

CERTIFICATE No. 1785

Description: NEWLY PRODUCED PRIME QUALITY STEEL PIPE

ASTM/ASME A/SA 53-B EDITION 2002

PO.No: SF/QT3025

DATE: 2007.07.27

NO.	HEAT NO.	PIECES	SIZE OD (inc)	SIZE WT (inc)	SIZE length (ft)	WEIGHT (kg/m)	TOTAL WEIGHT (MT)	C	Mn	P	S	Cu	Ni	Cr	Mo	V	Y.S. (MPa)	T.S. (MPa)	ELONGATION (%)
								CHEMICAL COMPOSITION (wt%)									BASE METAL MECHANICAL PROPERTIES		
1	07AD3117	1	24	0.375	20	140.420	0.856	0.13	0.84	0.012	0.005	0.008	0.015	0.019	0.002	0.001	305	465	31
2.	07AD3118	71	24	0.375	20	140.420	60.983	0.13	0.85	0.016	0.005	0.006	0.008	0.028	0.004	0.001	310	460	33
3	07AD3119	97	24	0.375	20	140.420	83.313	0.12	0.84	0.011	0.005	0.009	0.015	0.018	0.002	0.001	295	440	34
4	07AD3120	2	24	0.375	40	143.090	3.490	0.14	0.85	0.011	0.006	0.002	0.007	0.017	0.003	0.001	315	460	32
5	07BD3036	24	24	0.375	40	143.090	41.870	0.14	0.84	0.010	0.005	0.008	0.015	0.019	0.002	0.001	300	450	34

NO.	HEAT NO.	WELD JOINT MECHANICAL PROPERTIES	FLATTENING	VISUAL&DIMENSIONS	U.T.	HYDROSTATIC PRESSURE (KPa)	DURATION OF TIME (s)
1	07AD3117	465	OK	OK	OK	4500	10
2	07AD3118	460	OK	OK	OK	4500	10
3	07AD3119	440	OK	OK	OK	4500	10
4	07AD3120	460	OK	OK	OK	4500	10
5	07BD3036	455	OK	OK	OK	4500	10

WE HERE CERTIFY THAT THE MATERIAL HEREIN DESCRIBED IS MERCURY FREE AND HAS BEEN MANUFACTURED,SAMPLED,TESTED AND INSPECTED IN ACCORDANCE WITH THE REQUIRE MENTS OF ABOVE SPECIFICATIONS AND PURCHASE ORDER,AND MET THE REQUIREMENTS.

The mill test certificate is issued by producer of Liao yang Large-Scale Steel Pipe Plant.

INSPECTOR:

ISSUER:

YIEH CORPORATION LIMITED

MILL CERTIFICATE

COMMODITY: CARBON STEEL PIPE PER PURCHASE CONTRACT 02110707001
COST AND FREIGHT MIAMI, FLORIDA USA

CUSTOMER: OZONE INDUSTRIES CORPORATION
15465 PINE RIDGE ROAD
FORT MYERS, FL 33908

DATE:2007-12-12

Invoice No.SEUSFP7B01TD3
Certificate No.: PSCNJN7B01TC5
LC NUMBER.: 64405432

Pipes No.	Heat Numbers	Steel Grade	(Size) O.D.	W.T.	lenth	Quantity			Dimensional	TEST RESULTS CHEMICAL PROPERTIES(%)					PHYSICAL PROPERTIES			Welding properties	Hydrostatic Test Holding time:10s	Flattening	UT Test
			in	in	ft	(Pcs)	(ft)	(MT)	Inspection	C	Si	Mn	P	S	σs(Mpa)	σb(Mpa)	δ5(%)	σb	P = Psi	Test (B)	Test (B)
1	R7303773	B	34	0.375	39	104	4058	248.137	OK	0.13	0.14	0.39	0.025	0.031	365	425	31.5	OK	505	OK	OK
2	R7303774	B	44	0.375	39	52	2028	160.967	OK	0.14	0.16	0.39	0.013	0.034	365	425	31.5	OK	505	OK	OK
3	R730376	B	54	0.375	39	51	1989	194.056	OK	0.16	0.16	0.42	0.018	0.031	355	420	32.5	OK	505	OK	OK
TOTAL						207	8073	603.160													

Remark: The CARBON STEEL PIPES are tested according to ASTM A139 GR.B
This is to certify that in accordance with the relevant specifications and contracts.
The CARBON STEEL PIPES manufactured were tested and qualified by our Quality Control Department.

"VOLZHSKY PIPE PLANT"
OJSC

[illegible] Volzhsky, Volgograd region, Russia
Fax (8443) [illegible]
E-mail: [illegible]

MANUFACTURER:
VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

MILL TEST CERTIFICATE

[illegible]
DESCRIPTION OF GOODS:
CARBON STEEL [illegible] PIPES ACCORDING TO API 5L [illegible] EDITION/ [illegible]
16" x 0.500" [illegible]

[illegible] PRODUCTS, INC.
[illegible]

CERTIFICATE # [illegible] DATE OF ISSUE 26.[illegible].2006

CHEMICAL COMPOSITION, %

TENSILE TEST

IMPACT TEST

HYDROSTATIC TEST

NOTE

CARBON STEEL [illegible] PIPES ACCORDING TO API 5L [illegible]

[illegible]

FLATTENING TEST

MARKING: STENCILING

STEEL MAKING PROCESS: ELECTRIC FURNACE

NOTES: G: GOOD

[illegible]

TOTAL: QUANTITY OF PIPES [illegible] NET WEIGHT [illegible] LENGTH [illegible]

WE CONFIRM THAT PIPES [illegible]
NO REPAIR BY WELDING HAS BEEN CARRIED OUT. [illegible]

OTK

[illegible] VOLZHSKY PIPE PLANT
DATE [illegible]

[illegible]
[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	100		104
[illegible]		38		106
[illegible]		[illegible]		[illegible]
[illegible]	4	[illegible]		41
[illegible]	6	6		45
[illegible]	4	[illegible]		41

WE CONFIRM THAT THERE WAS NO CONTAMINATION BY MERCURY AND
NO REPAIR BY WELDING HAS BEEN CARRIED OUT. WE COMPLY WITH THE [illegible] 1430[illegible].3LB.

[illegible] - INSPECTION
[illegible] PIPE PLANT
DATE 12.08.08 [illegible]

VOLZHSKY TRUBNY

"VOLZHSKY PIPE PLANT" OJSC

404119, Volzhsky, Volgograd region, Russia
Fax (8443) 25-40-02
E-mail: [illegible]

MANUFACTURER:

VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

MILL TEST CERTIFICATE

[illegible] 1930/72/POR 10117. [illegible] 36-4352
DESCRIPTION OF GOODS:
CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L PSL1 (43RD EDITION)/ [illegible] ASTM A106/A 2004 (2004 EDITION) GR.B/C/ASTM A53/A [illegible] (2004 EDITION) GR.B/C/ASME SA 106 (2004 EDITION)/ASME SA53 (2004 EDITION) - [illegible], BEVELLED ENDS.
16" x 0.500" (406,4 x 12,7 MM)

"AMERICAN PIPING PRODUCTS, INC."
[illegible]
CHESTERFIELD, MO [illegible]

CERTIFICATE # 575 DATE OF ISSUE 21.05.2004

SIZE	HEAT NO / HEAT TREATMENT LOT NO	LOT NO	QUANTITY PIPES	LENGTH, FEET	NET WEIGHT TONS		C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	Nb	TOTAL CONTENT PROP. [illegible]		ORI-ENTA-TION	TEST SPE-CI-MEN	YS PSI	UTS PSI	EL. %	HARDNESS TEST	IMPACT TEST							HEAT TREAT-MENT		HYDROSTATIC TEST		NOTE
							x 100	x 100	x 100	x 1000	x 1000	x 100	x 100	x 100	x 100	x 100	x 100					min [illegible]	min [illegible]	min [illegible]	max [illegible]										min [illegible]	min [illegible]	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
GR.B/X42 16" x0.500" (406,4 x 12,7 MM) API 5L PSL1 GR.B/C ASTM A106 / A53 ASME SA-106 ASME SA-53	302115 / [illegible]	[illegible]-1491	40	3747.8[illegible]	182.330	H P P	[illegible]	[illegible]	[illegible]	7 7 7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0 0 0	[illegible] [illegible] 4612	[illegible]	[illegible]	[illegible]	53011	78001	42.9	1.0								[illegible]	[illegible]	[illegible]	CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L (2004) ASTM A106(2004) ASTM A53(2004) ASME SA-106(2004) ASME SA-53(2004) [illegible] [illegible] [illegible] [illegible] HYDROSTATIC PRESSURE [illegible] [illegible] IN ACCORDANCE WITH [illegible]

DESCRIPTION OF TESTS	VISUAL AND DIMENSIONS	[illegible] INSPECTION	DRIFT [illegible]	NONDESTRUCTIVE INSPECTION	COATING	FLATTENING TEST	MARKING: STENCILLING	STEEL MAKING PROCESS - ELECTRIC FURNACE
	G	G	G	G	G	G	G	

NOTES: G: GOOD
*1: H: HEAT ANALYSIS, P: PRODUCT ANALYSIS, [illegible]
*2: [illegible]
*3: L: LONGITUDINAL, T: TRANSVERSE
*4: [illegible]
*5: [illegible]
*6: [illegible]
TOTAL: QUANTITY OF PIPES 40 PCS NET WEIGHT 182.[illegible] T LENGTH 3747.[illegible] ft

*7: [illegible] VALUE, [illegible] AVERAGE VALUE
*8: HEAT TREATMENT, [illegible]
*9: [illegible] TEST, [illegible] ELECTROMAGNETIC TEST, [illegible] TEST
[illegible]
*10: [illegible]

WE CERTIFY THAT PIPES HAD NO COMMUNICATION BY MERCURY AND NO REPAIR BY WELDING HAS BEEN CARRIED OUT. [illegible] WITH THE STANDARD EN 10204.3.1B.

[illegible] - INSPECTION
VOLZHSKY PIPE PLANT
[illegible]

"VOLZHSKY PIPE PLANT" OJSC

404119, Volzhsky, Volgograd region, Russia
Fax (78443) [illegible]
E-mail: [illegible]

PAGE 1 OF 1

MANUFACTURER:
VOLZHSKY PIPE PLANT OJSC
404119, VOLZHSKY
VOLGOGRAD REGION
RUSSIA

MILL TEST CERTIFICATE
[illegible]
DESCRIPTION OF GOODS:
CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L [illegible] EDITION/ [illegible] A106/A 106M [illegible] EDITION [illegible] ASME SA-106 [illegible]
16" x 0.500" (406.4 x 12.7 MM)

"AMERICAN PIPING PRODUCTS, INC."
[illegible]
CHESTERFIELD, MO [illegible]

CERTIFICATE # 876 DATE OF ISSUE [illegible].2008

SIZE	HEAT No	LOT No	QUANTITY, PIPES	LENGTH, FEET	NET WEIGHT TONS	C	Si	Mn	P	S	Cr	Ni	Cu	Mo	Ti	V	NITROGEN	TENSILE TEST YS	TENSILE TEST UTS	EL. %	HARDNESS	HYDROSTATIC TEST	NOTE
1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	21	24	25	27	36	38
OD.0.500" 16" WT.500" API 5L PSL1 [illegible] ASTM A106 / A106M / ASTM A53/A53M ASME SA-106 ASME SA-53	881519	1-1971	84	3170.72	137.362	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	72546	76011	46.1	[illegible]	0	CARBON STEEL SEAMLESS PIPES ACCORDING TO API 5L (2004) ASTM A106 (2006) ASTM A53 (2007) ASME SA-106 (2004) ASME SA-53 (2004) LENGTH: MIN [illegible] FT MAX [illegible] FT [illegible]

DESCRIPTION OF TESTS	VISUAL AND DIMENSIONAL	BEVELING INSPECTION	NDE INSPECTION	NONDESTRUCTIVE INSPECTION	COATING	FLATTENING TEST	MARKING: STENCILING	STEEL MAKING PROCESS - ELECTRIC FURNACE
	G	G	G	G	G	G	G	

NOTES: G: GOOD
*1: H: HEAT ANALYSIS, P: PRODUCT ANALYSIS, C: CONTROL ANALYSIS, R: RECHECK ANALYSIS
*2: L: LOT TEST, H: HEAT CONTROL TEST, A: ADDITION TEST, R: RECHECK TEST
*3: L: LONGITUDINAL, T: TRANSVERSE
*4: [illegible]
*5: [illegible]
*6: [illegible]
TOTAL: QUANTITY OF PIPES 84 PCS NET WEIGHT 137.362 T LENGTH 3170.72 ft

*7: [illegible]
*8: [illegible]
*9: [illegible] ELECTROMAGNETIC TEST, UT: ULTRASONIC TEST
[illegible]
*10: [illegible]

WE CONFIRM THAT PIPES HAS NO CONTAMINATION BY MERCURY AND NO REPAIR BY WELDING [illegible]. MTC COMPLY WITH THE STANDARD EN 10204.3.1B.

OTK [illegible]

[illegible] - INSPECTION
VOLZHSKY PIPE PLANT
DATE: [illegible]

CHEMICAL COMPOSITION, %

WE CONFIRM THAT THERE HAS NO CONTAMINATION BY MERCURY AND
NO REPAIR BY WELDING HAS BEEN CARRIED OUT; WE COMPLY WITH THE STANDARD IN 10204.3.1B.

OTK

ENGINEER - INSPECTION

Cement Plan - 16" Final Casing

Mud Weight in Hole (lbs./gal)	8.4	Previous Casing ID (inches)	25.25
Casing OD (inches)	16	Depth of Previous casing (Fe	1994
Casing Wall Thickness (inches)	0.5	Measured Hole Volume from	1652.498
TD New Casing (feet)	2740	Measured Annular Volume frc	971.06
Guage Hole (inches)	24	Measured Annular Volume, B	0
Guage Hole Depth (Feet)	2740		

Plan Lifts Required to Grout (including pre 5 Actual Lifts Required to Grout (including pressure grout)

STAGE 1 (Pressure Grout)		120 BBLs Neat, 48 BBLs 12% Gel			Actual Tag Depth	2200
Planned lift (feet)	540	Expected Tag Depth		2200	: from Tag (feet)	540
volume for pressure grout stage in Barrels	168				Volume pumped (barells)	167.9
STAGE 2 (Via Tremie)		12% Gel			Actual Tag Depth	1710
Planned lift (feet)	600	Expected Tag Depth		1600	: from Tag (feet)	191
Planned volume for stage 2 in Barrels	187				Volume pumped (barells)	150
STAGE 3 (Via Tremie)		12% Gel			Actual Tag Depth	1499
Planned lift (feet)	800	Expected Tag Depth		1408	: from Tag (feet)	211
Planned volume for stage 3 in Barrels	297				Volume pumped (barells)	159
STAGE 4 (Via Tremie)		12% Gel			Actual Tag Depth	1243
Planned lift (feet)	800	Expected Tag Depth		1200	: from Tag (feet)	256
Planned volume for stage 4 in Barrels	297				Volume pumped (barells)	228
STAGE 5 (Via Tremie)		12% Gel			Actual Tag Depth	1239
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	4
Planned volume for stage 5 in Barrels	0				Volume pumped (barells)	61
STAGE 6 (Via Tremie)		12% Gel			Actual Tag Depth	1237
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	2
Planned volume for stage 6 in Barrels	0				Volume pumped (barells)	60
STAGE 7 (Via Tremie)		12% Gel			Actual Tag Depth	1234
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	3
Planned volume for stage 7 in Barrels	0				Volume pumped (barells)	201
STAGE 8 (Via Tremie)		12% Gel			Actual Tag Depth	1234
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	0
Planned volume for stage 8 in Barrels	0				Volume pumped (barells)	20
STAGE 9 (Via Tremie)		12% Gel			Actual Tag Depth	1234
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	0
Planned volume for stage 9 in Barrels	0				Volume pumped (barells)	40
STAGE 10 (Via Tremie)		12% Gel			Actual Tag Depth	1234
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	0
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	20
STAGE 11 (Via Tremie)		12% Gel			Actual Tag Depth	1234
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	0
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	20
STAGE 12 (Via Tremie)		12% Gel			Actual Tag Depth	1231
Planned lift (feet)	0	Expected Tag Depth		1200	: from Tag (feet)	3.5
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	20
STAGE 13 (Via Tremie)		12% Gel			Actual Tag Depth	1156
Planned lift (feet)	0	Expected Tag Depth		1180	: from Tag (feet)	74.5
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	40
STAGE 14 (Via Tremie)		12% Gel			Actual Tag Depth	887
Planned lift (feet)	0	Expected Tag Depth		856	: from Tag (feet)	269
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	257
STAGE 15 (Via Tremie)		12% Gel			Actual Tag Depth	733
Planned lift (feet)	0	Expected Tag Depth		587	: from Tag (feet)	154
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	242
STAGE 16 (Via Tremie)		12% Gel			Actual Tag Depth	216
Planned lift (feet)	0	Expected Tag Depth		400	: from Tag (feet)	517
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	225
STAGE 17 (Via Tremie)		12% Gel			Actual Tag Depth	0
Planned lift (feet)	0	Expected Tag Depth		0	: from Tag (feet)	216
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	90
STAGE 18 (Via Tremie)					Actual Tag Depth	0
Planned lift (feet)	0	Expected Tag Depth		0	: from Tag (feet)	0
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	0
STAGE 19 (Via Tremie)					Actual Tag Depth	0
Planned lift (feet)	0	Expected Tag Depth		0	: from Tag (feet)	0
Planned volume for stage 10 in Barrels	0				Volume pumped (barells)	0

Plan Submitted Date: 10-1-2008

Submitted By: David Webb, Jr. Total Vol 1743.862027

David Webb, Jr.