

SCIENTIFIC OBSERVATION HOLE #1
KILAUEA EAST RIFT ZONE, HAWAII
SUMMARY REPORT OF DRILLING OPERATIONS

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Scientific Observation Hole #1

PURPOSE AND SCOPE

The Scientific Observation Hole program ("SOH") was undertaken as both a scientific research project, and to aid in evaluating the geothermal potential of the Kilauea East Rift Zone on the island of Hawaii.

The SOH drilling is providing the first extensive core ever taken in Hawaii. Continuous core yields invaluable information to geologists and other earth scientists concerning the Kilauea East Rift Zone. This information can be utilized as a model to interpret the past geologic history of Hawaii and other islands in the Hawaiian Archipelago. It also offers a unique insight into the current and future volcanic and erosional activity along the rift zone. To geologists, the core is a tangible geologic record spanning a period of time which began when this part of Hawaii was still thousands of feet below sea level. The core provides detailed information of the islands evolution through periods of volcanic aggradation, erosion, sedimentation, mass wasting, intrusive activity and subsidence to its current state.

SOH drilling is also instrumental in evaluating the extent of a commercially viable geothermal resource along the East Rift Zone. Deep core, geophysical logs, temperature profiles and injection testing will assist both the state of Hawaii and private developers in understanding the nature of the resource and aid in establishing realistic resource development goals. The core in particular, offers an opportunity to study alteration, mineralization and fracturing in reservoir rock which is unavailable in conventional rotary drilled holes.

After completion and testing the SOH's will, as their name implies, serve as long term observation holes. They will provide stations to monitor the effects of geothermal production throughout the rift zone. Changes in temperature and pressure will be monitored and deep fluid samples may be collected.

SOH-1 was the second in a series of 4 planned Scientific Observation Holes to be drilled in the Kilauea East Rift Zone. The target depth for the SOH's is 4,000 to 6,500 feet. Actual completion depth of each hole depends on drilling conditions, temperature and a number of other factors which are evaluated on a continuing basis as the holes are drilled. The drilling program was designed to remain as flexible as possible to accommodate a variety of potential situations as they are encountered.

CONTRACTOR AND EQUIPMENT

Tonto Drilling Services Inc. of Salt Lake City, Utah is the drilling contractor chosen for the SOH program. Tonto has provided an experienced crew and the Universal 5000 rotary/core drilling rig to undertake this unique project. The Universal 5000 drilling rig is one of only two such units in existence and is uniquely suited for the requirements of the SOH project. It has been extensively modified for geothermal work and to meet stringent noise limitations mandated by the county of Hawaii.

The drilling rig is mounted on a 3-axle trailer and weighs approximately 94,600 pounds. A self-elevating jack-up system permits raising the rig and placing a 10.5 foot high substructure under the mast. The substructure carries the weight associated with drilling, serves as a working floor and permits the above ground installation of blow out prevention equipment ("BOPE").

Specifications for the Universal 5000 drill rig include:

- a. Rotation head hoisting capacity of 100,000 pounds.
- b. Main hoist capacity of 88,000 pounds (single line, 1-3/16 inch cable).
- c. Rotation head pull down of 30,000 pounds.
- d. Rotation head speed variable from 0 to 2,250 RPM.
- e. Maximum rotation head output torque of 6,630 foot pounds.
- f. Wireline winch with 18,000 feet of 3/8 inch wire rope and a full drum pull of up to 1,500 feet per minute.
- g. Hydraulic system consisting of axial and radial piston pumps and motors designed as three independent open loop circuits.
- h. 56 foot mast with a 40 foot rod pull and stacking capacity.
- i. Hydraulically operated and self energizing casing and rod slips.

Depth rating of the Universal 5000 depends on the size of drill rods used, drilling conditions and other factors. In the case of NQ drill rods, which were used to complete SOH-1, the theoretical maximum depth is over 17,000 feet.

DRILLING OPERATIONS

SOH-1 was spudded-in at 2 PM on May 31 and completed to a total depth of 5,526 feet G.L. (Ground Level) on December 21, 1990. A total of 205 working days was involved in drilling the hole. Following a break for Christmas, completion and testing involved an additional 15 days and the rig was released on January 13, 1991. A brief summary of drilling activities is presented in Table 1 and graphically illustrated in Figure 1.

Surface Casing

SOH-1 was spudded-in with 101mm core (3.98" hole x 2.50" core) and drilled to 202 feet G.L. Total loss of drilling fluids occurred at 25 feet and drilling continued without returns. The hole was then opened to 12-1/4 inches with a Hughes ATJ-33C tricone bit and near-bit welded blade stabilizer. Total loss of drilling fluids occurred at 31 feet and drilling continued without returns to 202 feet.

9-5/8 inch K-55, 40 lb/ft buttress threaded and coupled casing was run open ended to 202 feet and set on bottom. The hole was dry to TD and the casing was cemented with 135 cubic feet of redimix concrete (5 sack mix w/ 1/2" minus aggregate). After 15 cubic feet of concrete was poured down the annulus, the casing was picked up off bottom several times to allow the cement to flow around the base of the casing and clean out any debris. The casing was then set back on bottom and the annulus filled with concrete to the surface.

Concrete volume was approximately 200% of theoretical, however, the annular space did not fill to surface. Cementing was completed with 3 top jobs using a total of 87 sacks of neat cement and 40 cubic feet of redimix.

Blow out prevention equipment (BOPE) was nipped up and tested to 600 psi. BOP equipment consisted of a 3M slip on wellhead with 2 inch flanged outlets, a 12 inch Type E double gate preventer with pipe and blind rams and 2 inch kill and flow lines attached to 2 inch 3M valves.

Intermediate (Protection) Casing

From 11:00 AM on June 9 until 4:00 PM on June 14 (5.2 days) the contractor was put on standby awaiting a decision by the Hawaii County Planning Commission to permit the next phase of the drilling operation.

When drilling operations resumed, 101mm core drilling proceeded from 202 - 1,996 feet with partial return of drilling fluids. Core drilling began on June 14 and reached 1,996 feet on July 1, a total of 18 days.

After running a deviation survey (Table 8), the hole was opened to 8-1/2 inches from 202 - 1,996 feet using a 8-1/2 inch Hughes ATJ-33C tricone and near bit welded blade stabalizer.

Hole opening began on July 2 and reached 1,996 feet on July 25, a total of 24 days. The drill rods were tripped out of the hole and 7 inch L-80, 35 pound/foot buttress threaded and coupled casing was run. Float equipment consisted of a guide shoe and float collar at the top of the first joint (39.5 feet from bottom). When 1,800 feet of casing (63,000 pounds) had been run, the 1 inch cable on the main winch line snapped behind the socket and the casing string dropped into the hole. A fishing tool was fabricated and the lifting plug retrieved. The remaining 7 inch casing was stabbed into the dropped section and made up. After an 80,000 pound pull failed to pick up the casing, a 5-5/8 inch tricone was run in to the float collar to clean any debris and verify the casing integrity. On July 29 Halliburton Services was used to cement the 7 inch casing.

7 Inch Casing Cementing

Pump 40 bbls water, followed with 6 bbls super flush ahead of lead slurry.

Lead slurry: 49 bbl silica/spherelite cement (11 lb/gal, 88 sk cement, 4,400 lb spherelite, 3,300 lb silica flour, 4% bentonite, 2% CaCl)

Tail slurry: 27 bbl silica cement (15.8 lb/gal, 93 sk cement 3,500 lb silica flour, 2% CFR-3)

Displacement: 68 bbl water. No cement returns to surface.

Top job #1: 27 bbl silica cement (100 sk cement, 3,500 lb silica flour, 2% CFR-3, 2% CaCl)

Top job #2: 18 bbl silica cement (47 sk cement, 1,900 lb silica flour, 50 c.f. perlite, 2% CFR-3, 3% bentonite, 3% CaCl)

Top job #3 18 bbl silica cement (47 sk cement, 1,900 lb silica flour, 50 c.f. perlite, 2% CFR-3, 3% CaCl)

Theoretical cementing volume: 254 cubic feet; cement required: 778 cubic feet.

BOP equipment was nipped up on July 30 and consisted of:

- a. 7 inch ESFO slip-on well head with 2 inch flanged outlets.
- b. 6 inch WKM 3M gate valve.
- c. 7 inch LWS double-gate preventer with gate and blind rams.
- d. High speed rotating head.
- e. 2 inch flow and kill lines connected to 2 inch 3M gate valves.

The BOP equipment was pressure tested to 600 psi.

4-1/2 Inch Casing

The cement and 7 inch float equipment were drilled out with a 5-7/8 inch tricone and 5 inch flush joint casing with left-hand buttress threads was set below the wellhead to 1,996 feet to provide a "sleeve" for the core drill rods.

Core drilling with 101mm (3.98" hole x 2.50" core) commenced on July 31 and advanced to 2,505 feet on August 7. Drilling progressed reasonably well with average daily footages of 78 feet per day. At 2,505 feet the hole was cemented back to 2,316 feet with 20 cubic feet of neat cement in an attempt to stabilize a poorly consolidated sandy interval below 2,419 feet. After drilling out cement, the 101mm core hole was advanced to 2,671 feet encountering several poorly consolidated sandy intervals. In an attempt to stabilize the hole, it was cemented back with 20 cubic feet of neat cement. While tripping in the hole on August 13 to drill out cement, several bridged-off intervals were encountered, beginning at 2,205 feet, and drilled out. While cleaning the hole the drill rods became stuck tight while making a connection at 2,234 feet.

A mechanical cutter was tripped in on NQ drill rods (2.75" O.D.) and the 101mm drill rods cut 3 feet above the core barrel. The core barrel assembly dropped down the hole after being cut free from the upper rods but the drill rods would not pull free. The rods were cut at 2,140 feet and finally at 1,995 feet before the upper portion could be pulled free and retrieved. After removing the 5 inch casing sleeve, the remaining 101mm drill rods were recovered by reaming over the rods with a 134mm casing shoe (5.28" O.D. x 4.125" I.D.). The reaming and recovery operation began on August 13 and was completed August 31 (18 days).

After retrieving the 101mm rods, the hole was opened to 5-7/8 inches with a tricone bit from 1,996 - 2,671 feet during a 10 day period from August 31 to September 10. Several zones of poorly consolidated sandy material and fractured unstable formation were encountered and reaming was slow and difficult requiring numerous redrills of unstable intervals. After briefly sticking the drill rods at 2,441 feet while tripping out of the hole, the rotary drill assembly was removed and drilling continued with a 134mm coring assembly (5.28" hole x 3.35" core).

The 134mm core hole was advanced from 2,671 - 3,022 feet in difficult conditions. While drilling the 134mm hole, average core runs were only 5.83 feet and core recovery averaged 87 percent. Due to the hard, fractured, abrasive and unstable nature of this interval, seven bits were consumed in coring 351 feet. Average bit life was slightly over 50 feet. These events resulted in an extremely high bit cost of \$34.42 per foot for the 134mm cored interval.

After completing the hole to 3,022 feet, a casing string was run to TD and consisted of: 1,017 feet of flush joint 4-1/2 inch, 11.6 pound/foot J-55 casing from 3,022 - 2,005 feet and short threaded and coupled 4-1/2 inch, 10.5 pound/foot J-55 casing from 2,005 feet to the surface. A guide shoe and float collar were run with the casing. The bottom 200 feet of the casing was cemented with neat cement on September 22.

HQ & NQ Core Drilling (3,022 - 5,526 feet)

Core drilling resumed with HQWL (3.83" hole x 2.50" core) in broken, unstable and abrasive hyaloclastics, basalt flows and intrusive rock from 3,022 - 4,325 feet. Drilling this 1,303 foot interval required 49 days, an average of 26.6 feet per day. The entire interval proved to be extremely difficult to core drill. Core runs in this interval averaged only 3.93 feet, core recovery dropped to 80.49 percent and 31 bits were consumed.

The hole was reduced to NQ (2.98" hole x 1.875" core) and cored from 4,325 - 4,880 feet with similar problems to those encountered while coring with HQ. This 555 foot section required an additional 24 days, an average of 23.1 feet per day. Core runs in this interval averaged 3.54 feet, core recovery averaged 88.62 percent and 6 more bits were consumed.

By contrast, HQ and NQ core drilling the 3,562 foot interval below 3,000 feet in SOH-4 averaged 71.2 feet per day during a 50 day period using only 7 bits (487 feet per bit) with mostly 10 foot core runs and nearly 100 percent core recovery. The problems hampering the core drilling efforts in SOH-1 are discussed below:

a. Short bit life: 31 HQ and 7 NQ bits were expended in drilling 1,649 feet. Average bit footage was 43.4 feet. Each bit change necessitated the time consuming and nonproductive process of tripping all drill rods out of the hole, replacing the bit and tripping back in the hole. In this interval the time involved was 5 - 7 hours, exclusive of cleaning and reaming the hole. The primary reason for short bit life was the pervasively fractured, hard and abrasive nature of the formation.

The fractured rock was generally broken into small (less than 3 inches) angular fragments which tended to roll around below, outside and inside the bit cutting surfaces. This action greatly accelerated deterioration of the bits inner and outer gauge. When inside bit gauge is lost, the core is unable to slide into the inner tube assembly. Loss of outside gauge made it necessary to spend time reaming the next bit through the undersized hole. The reaming process also caused considerable wear on the bit before any new hole was drilled.

b. Short core runs: The equipment used was designed to retrieve 10 foot sections of core. In this interval the average core retrieval was only 3.93 feet with NQ and 3.54 feet with HQ. Retrieval involves lowering an overshot attached to a 3/8 inch wireline until it latches onto the inner tube assembly, then pulling the inner tube to the surface and lowering an empty tube into position. The time involved depends on the hole depth, in this interval the retrieval operation required 20 - 30 minutes. If, for example, 10 short runs take place in a day, approximately 5 hours of time is lost to non-drilling core retrieval operations.

A ratcheting core barrel assembly was employed while coring HQ and produced a slight improvement in core runs. The ratcheting core barrel has a spring loaded ratchet device which engages when core entering the inner tube blocks off. When engaged it transmits a rapid series of sharp blows to the tube, hopefully, loosening the blockage.

c. Redrilling: The fractured, poorly consolidated rock above 4,880 feet proved to be unstable, with frequent caving. In order to clean the cave and material dropped from the inner tube, redrilling was required after most core runs to clean and stabilize the well bore. Since the core bit is not designed to efficiently grind up loose rubble, a small tricone bit was tripped in on five occasions to clean and stabilize the hole between 4,364 and 4,880 feet. Use of the tricone was successful in cleaning the hole but required additional trips in and out of the hole, which together with cleaning and reaming, often consumed over 24 hours of rig time.

d. Dropped core: The small size of the fractured rock often made it difficult to retain all of the rubble in the inner tube upon retrieval. Occasionally, a piece of this rock would wedge in the drill rods and prevent the empty inner tube from dropping into place. This would force the pulling of drill rods to clear the obstruction. Each trip resulted in the loss of up to 7 hours.

Regarding cost/time effectiveness, the only productive time spent during a core drilling operation is when the bit is on bottom, drilling new hole. Although necessary to continue drilling, time involved in core runs, bit changes, tripping drill rods, reaming and washing the hole, etc. is non-productive in terms of deepening the hole. As the above discussion illustrates, the majority of time in the 3,231 - 4,880 foot interval was consumed by non-coring operations.

Conditions for core drilling above 4,880 feet were extremely difficult and although the progress was slow and expensive, it is a tribute to the Tonto drilling crew that they were able to advance the hole in the adverse drilling environment.

Reasons for the hard, fractured and poorly consolidated nature of the formation are open for suggestion. An obvious correlation in SOH-4, SOH-1 and currently in SOH-2 indicate that the subaerial volcanics provide no significant problems to core drilling. Submarine volcanics and associated clastic material, however, create the hostile environment for core drilling described above. This environment persists until a depth is reached where substantial thermal alteration has taken place. Thermal alteration appears to decrease the abrasiveness and secondary mineralization and alteration bonds the fractured and poorly consolidated rock to a state of competence where core drilling can be efficiently accomplished. If this can be expected with regularity in the rift zone, core drilling should be avoided in the interval of submarine volcanics above the zone of thermal alteration.

The subaerial/submarine interface becomes deeper at locations inland with higher elevation. At SOH-4, with a surface elevation of 1,195 feet, the contact is at approximately 4,000 feet below sea level (5,554 ft. G.L.). At SOH-1 the surface elevation is 620 feet and the contact is at 1,831 feet below sea level (2,451 ft. G.L.). At the current hole, SOH-2, situated at an elevation of 270 feet, the contact is approximately 1,380 feet below sea level (1,680 ft. G.L.).

A deeper subaerial/submarine contact provides better opportunity for thermal alteration and mineralization. With this simple model, continuous coring appears to be most feasible at higher elevation sites along the rift zone as at SOH-4 and the planned SOH-3 hole. Regardless of the location, core drilling from the surface to the subaerial/submarine contact has proved to be feasible and provides valuable information for researchers. Rotary drilling is the most effective method for penetrating the interval of submarine volcanics and hyaloclastic material above the zone of thermal alteration. After casing this interval off, core drilling can resume with reasonable efficiency.

Noise Mitigation And Local Resident Complaints

Noise generated by drilling activities has been a major concern to nearby residents. To underscore this concern, Hawaii County restrictions accompanying the drilling permit limit noise levels at the nearest residence (in some instances slightly more than 1/4 mile) to 55 dBA during daylight hours and 45 dBA at night (7 PM - 7 AM). Although these levels have not been exceeded in 14 months of drilling operations, complaints are often filed simply because a resident can hear noise generated by the operation regardless of measured noise levels. During certain meteorological conditions, noise originating at the SOH site are audible at considerable distances from the site. Although it is not possible for the drilling operations to be completely inaudible, one of the SOH project's target goals is to eliminate even this nuisance level of noise.

Forty complaints were received while drilling SOH-1 (Table 3). Of these, thirty-eight were for noise, one for light and one for odor. Thirty of the complaints were from a single individual located over 1/2 mile from the drill site. All but one of the complaints were from individuals publicly opposed to geothermal development.

To minimize the potential nuisance impact of noises generated by round-the-clock drilling operations, the contractor made extensive modifications and additions to the equipment. Additional sound mitigation measures have been undertaken by Tonto and SOH personnel since the project began. Some of the measures include:

- a. Completely enclosing the main power plant, a 410 HP General Motors diesel unit, with sound dampening panels.
- b. Constructing sound absorbing duct work over air intake and discharge areas around the engine compartment.
- c. Modification of ancillary equipment normally powered by small gas or diesel engines. These are now driven by hydraulic motors, powered by the drilling rigs hydraulic system.
- d. Enclosing the main hydraulic winch at the top of the mast with sound dampening panels.
- e. Erecting sound dampening panels around the front of the drill rig and adjacent to other sources of excessive noise as they are isolated.
- d. Lining pipe rack slides with plywood to dampen noise as pipe and casing is lifted to the rig floor.
- e. Enclosing the rig floor with heavy wind walls and doors.
- f. Installation of large "hospital type" mufflers on the rig engine.
- g. Running equipment at lower speeds during night time operations, when practical, to lower noise levels.
- h. Suspension of night time operations when work involves excessive noise such as cementing operations.

As one source of noise is quieted, another is often exposed and each drill site poses a new variety of challenges due to differing topography, proximity to neighbors, etc. Evaluation and improving the sound mitigation measures is an ongoing task which will continue throughout the SOH project.

Ground Water Sampling

The surface elevation at SOH-1 is 620 feet and the static water level was measured at between 615 and 620 feet. On June 18, the 101mm core hole reached a depth of 669 feet. A bottom hole temperature of 79 F was measured and the hole was bailed with a 30 foot long bailer constructed of 2 inch galvanized pipe. Samples were collected after 2 hours, 3 hours and 4.5 hours respectively. Temperature increased slightly as the hole was bailed. Sample #3 had a temperature of 88 F. The samples were submitted for a standard water analysis.

Bottom Hole Temperatures

Core drilling presents an excellent opportunity to monitor formation temperatures on a real time basis as the hole is drilled. This results from several factors:

- a. The low rate at which drilling fluids are pumped during core drilling as opposed to rotary drilling larger holes. Pumping rates for core drilling are 10 - 20 gallons per minute while pump rates for rotary drilling larger holes are several hundred gallons per minute. Thus, even when all fluids flow into the formation surrounding the bore hole, the cooling effect is much less when core drilling than rotary drilling and temperature increases are more likely to be noted.
- b. Annular space between the well bore and drill rods is less than 0.15 inch in a core hole as opposed to several inches in rotary holes.
- c. The relatively thin walled core drill rods rapidly equilibrate to surrounding fluid temperatures, whereas, massive drill collars run behind rotary drill bits require a considerable period of time to reach thermal equilibration.

In order to anticipate potential safety problems related to formation temperatures, bottom hole temperature measurements are taken at intervals of approximately 50 feet. Since the SOH holes are not hampered by requirements of production casing design, additional casing strings can be set as required by changing down hole conditions. Measured bottom hole temperatures will deviate from actual formation temperatures depending on drilling fluid loss into the formation, pump rates, hole size and time of measurement after cessation of pumping.

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Table 1.
SOH-1 Drilling Summary

Dates	Day #	Activity
5/26 - 5/30		Move equipment to site, rig up install water line.
5/31 - 6/2	1 - 2	Core 101mm 0 - 202 ft
6/2 - 6/4	3 - 5	Open hole to 12-1/4" 0 - 202 ft.
6/4 - 6/8	5 - 9	Run 9-5/8" casing, cement and nipple up BOP equipment.
6/9 - 6/14	10 - 15	Stand by for decision from Hawaii County for approval to continue.
6/14 - 7/1	15 - 32	Core 101mm from 202 - 1,996 ft & run deviation survey.
7/2 - 7/25	33 - 56	Open hole to 8-1/2" 202 - 1,996 ft.
7/25 - 7/30	56 - 61	Run 7" casing, drop casing and fish out, cement and nipple up BOP equipment.
7/31 - 8/13	62 - 75	Core 101mm from 1,996 - 2,671 ft. Stick drill rods.
8/13 - 8/31	75 - 93	Fish and ream over 101 rods with 134mm bit and retrieve equipment.
8/31 - 9/10	93 - 103	Open hole to 5-7/8" from 1,996 - 2,671 ft.
9/10 - 9/20	103 - 113	Core 134mm from 2,671 - 3,022 ft.
9/21 - 9/22	114 - 115	Run 4-1/2" casing to 3,022 ft. and cement.
9/22 - 11/10	115 - 164	Core HQ from 3,022 - 4,325 ft.
11/11 - 12/21	165 - 205	Reduce to NQ, core 4,325 - 5,526 ft.
12/22 - 1/2	N/A N/A	Christmas break.
1/3 - 1/13	206 - 217	Condition hole, run tubing, log, test and rig down.

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
31-May	101mm	0.0	11.0	11.0	6.0	55%
31-May	101mm	11.0	21.0	10.0	10.0	100%
31-May	101mm	21.0	31.0	10.0	10.0	100%
31-May	101mm	31.0	41.0	10.0	10.0	100%
31-May	101mm	41.0	52.0	11.0	10.0	91%
31-May	101mm	52.0	62.0	10.0	6.0	60%
31-May	101mm	62.0	72.0	10.0	9.0	90%
31-May	101mm	62.0	72.0	10.0	9.0	90%
31-May	101mm	72.0	82.0	10.0	10.0	100%
31-May	101mm	82.0	92.0	10.0	8.0	80%
31-May	101mm	92.0	102.0	10.0	10.0	100%
31-May	101mm	102.0	112.0	10.0	10.0	100%
31-May	101mm	112.0	122.0	10.0	10.0	100%
01-Jun	101mm	122.0	132.0	10.0	10.0	100%
01-Jun	101mm	132.0	142.0	10.0	10.0	100%
01-Jun	101mm	142.0	152.0	10.0	9.5	95%
01-Jun	101mm	152.0	162.0	10.0	10.0	100%
01-Jun	101mm	162.0	170.0	8.0	6.0	75%
01-Jun	101mm	170.0	176.0	6.0	6.0	100%
01-Jun	101mm	176.0	182.0	6.0	6.0	100%
01-Jun	101mm	182.0	192.0	10.0	10.0	100%
01-Jun	101mm	192.0	202.0	10.0	10.0	100%
14-Jun	101mm	202.0	208.0	6.0	6.0	100%
14-Jun	101mm	208.0	218.0	10.0	10.0	100%
14-Jun	101mm	218.0	228.0	10.0	10.0	100%
14-Jun	101mm	228.0	238.0	10.0	9.5	95%
14-Jun	101mm	238.0	248.0	10.0	10.0	100%
14-Jun	101mm	248.0	252.0	4.0	4.0	100%
14-Jun	101mm	252.0	258.0	6.0	6.0	100%
14-Jun	101mm	258.0	265.0	7.0	6.5	93%
14-Jun	101mm	265.0	276.0	11.0	10.0	91%
14-Jun	101mm	276.0	287.0	11.0	10.0	91%
14-Jun	101mm	287.0	290.0	3.0	3.0	100%
15-Jun	101mm	290.0	300.0	10.0	10.0	100%
15-Jun	101mm	300.0	307.0	7.0	7.0	100%
15-Jun	101mm	307.0	311.5	4.5	2.5	56%
15-Jun	101mm	311.5	314.0	2.5	2.5	100%
15-Jun	101mm	314.0	320.0	6.0	6.0	100%
15-Jun	101mm	320.0	326.0	6.0	5.5	92%
15-Jun	101mm	326.0	334.0	8.0	7.5	94%
15-Jun	101mm	334.0	339.0	5.0	3.0	60%
15-Jun	101mm	339.0	346.0	7.0	7.0	100%
15-Jun	101mm	346.0	353.0	7.0	7.0	100%
15-Jun	101mm	353.0	359.0	6.0	4.5	75%
15-Jun	101mm	359.0	366.0	7.0	7.0	100%
15-Jun	101mm	366.0	371.0	5.0	2.5	50%
15-Jun	101mm	371.0	381.0	10.0	8.0	80%
15-Jun	101mm	381.0	387.0	6.0	6.0	100%
15-Jun	101mm	387.0	395.0	8.0	8.0	100%

Table 2

SDH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
15-Jun	101mm	395.0	405.0	10.0	10.0	100%
15-Jun	101mm	405.0	414.0	9.0	7.5	83%
15-Jun	101mm	414.0	425.0	11.0	9.0	82%
15-Jun	101mm	425.0	433.0	8.0	6.5	81%
16-Jun	101mm	433.0	441.0	8.0	7.5	94%
16-Jun	101mm	441.0	448.0	7.0	6.5	93%
16-Jun	101mm	448.0	451.0	3.0	3.0	100%
16-Jun	101mm	451.0	460.0	9.0	9.0	100%
16-Jun	101mm	460.0	470.0	10.0	10.0	100%
16-Jun	101mm	470.0	475.0	5.0	4.5	90%
16-Jun	101mm	475.0	484.0	9.0	9.0	100%
16-Jun	101mm	484.0	487.5	3.5	3.0	86%
16-Jun	101mm	487.5	490.5	3.0	1.5	50%
16-Jun	101mm	490.5	493.5	3.0	3.0	100%
16-Jun	101mm	493.5	498.0	4.5	3.0	67%
16-Jun	101mm	498.0	503.0	5.0	3.0	60%
16-Jun	101mm	503.0	513.0	10.0	10.0	100%
16-Jun	101mm	513.0	518.0	5.0	3.0	60%
16-Jun	101mm	518.0	528.0	10.0	8.5	85%
16-Jun	101mm	528.0	534.5	6.5	4.5	69%
16-Jun	101mm	534.5	539.0	4.5	3.5	78%
16-Jun	101mm	539.0	549.0	10.0	9.0	90%
16-Jun	101mm	549.0	556.0	7.0	7.0	100%
16-Jun	101mm	556.0	563.0	7.0	10.0	143%
17-Jun	101mm	563.0	573.0	10.0	8.0	80%
17-Jun	101mm	573.0	576.0	3.0	2.5	83%
17-Jun	101mm	576.0	583.0	7.0	7.0	100%
17-Jun	101mm	583.0	589.0	6.0	6.0	100%
17-Jun	101mm	589.0	592.0	3.0	3.0	100%
17-Jun	101mm	592.0	594.5	2.5	2.5	100%
17-Jun	101mm	594.5	602.0	7.5	6.5	87%
17-Jun	101mm	602.0	610.0	8.0	7.5	94%
17-Jun	101mm	610.0	616.0	6.0	6.0	100%
17-Jun	101mm	616.0	622.0	6.0	6.0	100%
17-Jun	101mm	622.0	631.0	9.0	8.0	89%
17-Jun	101mm	631.0	639.0	8.0	8.0	100%
17-Jun	101mm	639.0	647.0	8.0	8.0	100%
17-Jun	101mm	647.0	657.0	10.0	6.0	60%
17-Jun	101mm	657.0	665.0	8.0	4.5	56%
17-Jun	101mm	665.0	669.0	4.0	4.0	100%
18-Jun	101mm	669.0	675.0	6.0	5.0	83%
18-Jun	101mm	675.0	681.0	6.0	5.0	83%
18-Jun	101mm	681.0	691.0	10.0	10.0	100%
18-Jun	101mm	691.0	701.0	10.0	8.5	85%
18-Jun	101mm	701.0	710.5	9.5	9.0	95%
18-Jun	101mm	710.5	714.5	4.0	3.0	75%
18-Jun	101mm	714.5	717.0	2.5	0.0	0%
18-Jun	101mm	717.0	719.5	2.5	2.5	100%
18-Jun	101mm	719.5	720.5	1.0	1.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
18-Jun	101mm	720.5	723.0	2.5	1.0	40%
18-Jun	101mm	723.0	730.0	7.0	4.5	64%
18-Jun	101mm	730.0	732.0	2.0	1.0	50%
18-Jun	101mm	732.0	739.0	7.0	3.5	50%
18-Jun	101mm	739.0	749.0	10.0	10.0	100%
18-Jun	101mm	749.0	755.0	6.0	6.0	100%
19-Jun	101mm	755.0	761.0	6.0	4.0	67%
19-Jun	101mm	761.0	766.0	5.0	2.0	40%
19-Jun	101mm	766.0	772.5	6.5	6.5	100%
19-Jun	101mm	772.5	779.0	6.5	4.5	69%
19-Jun	101mm	779.0	780.5	1.5	0.5	33%
19-Jun	101mm	780.5	788.5	8.0	7.0	88%
19-Jun	101mm	788.5	792.5	4.0	3.5	88%
19-Jun	101mm	792.5	803.0	10.5	7.0	67%
19-Jun	101mm	803.0	813.0	10.0	9.0	90%
19-Jun	101mm	813.0	817.5	4.5	4.5	100%
19-Jun	101mm	817.5	820.0	2.5	2.5	100%
19-Jun	101mm	820.0	829.0	9.0	8.0	89%
19-Jun	101mm	829.0	839.0	10.0	10.0	100%
19-Jun	101mm	839.0	843.0	4.0	2.5	63%
19-Jun	101mm	843.0	853.0	10.0	6.5	65%
19-Jun	101mm	853.0	857.5	4.5	4.0	89%
19-Jun	101mm	857.5	866.0	8.5	7.0	82%
19-Jun	101mm	866.0	870.0	4.0	2.5	63%
19-Jun	101mm	870.0	874.0	4.0	3.5	88%
20-Jun	101mm	874.0	885.0	11.0	10.0	91%
20-Jun	101mm	885.0	894.0	9.0	9.0	100%
20-Jun	101mm	894.0	899.0	5.0	3.0	60%
20-Jun	101mm	899.0	904.0	5.0	5.0	100%
20-Jun	101mm	904.0	911.0	7.0	5.0	71%
20-Jun	101mm	911.0	921.0	10.0	10.0	100%
20-Jun	101mm	921.0	931.0	10.0	9.0	90%
20-Jun	101mm	931.0	934.0	3.0	3.0	100%
20-Jun	101mm	934.0	936.0	2.0	2.0	100%
20-Jun	101mm	936.0	944.0	8.0	6.0	75%
20-Jun	101mm	944.0	950.5	6.5	6.0	92%
20-Jun	101mm	950.5	956.5	6.0	4.0	67%
20-Jun	101mm	956.5	962.0	5.5	5.5	100%
20-Jun	101mm	962.0	971.0	9.0	7.5	83%
20-Jun	101mm	971.0	976.0	5.0	4.0	80%
20-Jun	101mm	976.0	984.0	8.0	7.0	88%
21-Jun	101mm	984.0	989.0	5.0	5.0	100%
21-Jun	101mm	989.0	994.0	5.0	5.0	100%
21-Jun	101mm	994.0	1,000.0	6.0	6.0	100%
21-Jun	101mm	1,000.0	1,006.0	6.0	6.0	100%
21-Jun	101mm	1,006.0	1,009.5	3.5	3.5	100%
21-Jun	101mm	1,009.5	1,010.0	0.5	0.5	100%
21-Jun	101mm	1,010.0	1,015.0	5.0	5.0	100%
21-Jun	101mm	1,015.0	1,025.0	10.0	10.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
21-Jun	101mm	1,025.0	1,029.0	4.0	3.5	88%
21-Jun	101mm	1,029.0	1,034.0	5.0	5.0	100%
21-Jun	101mm	1,034.0	1,036.0	2.0	2.0	100%
21-Jun	101mm	1,036.0	1,040.0	4.0	4.0	100%
22-Jun	101mm	1,040.0	1,048.0	8.0	5.0	63%
22-Jun	101mm	1,048.0	1,051.0	3.0	3.0	100%
22-Jun	101mm	1,051.0	1,055.0	4.0	4.0	100%
22-Jun	101mm	1,055.0	1,059.0	4.0	2.0	50%
22-Jun	101mm	1,059.0	1,065.0	6.0	6.0	100%
22-Jun	101mm	1,065.0	1,071.0	6.0	6.0	100%
22-Jun	101mm	1,071.0	1,072.5	1.5	1.5	100%
22-Jun	101mm	1,072.5	1,077.5	5.0	5.0	100%
22-Jun	101mm	1,077.5	1,087.0	9.5	9.5	100%
22-Jun	101mm	1,087.0	1,094.0	7.0	3.0	43%
22-Jun	101mm	1,094.0	1,100.0	6.0	6.0	100%
22-Jun	101mm	1,100.0	1,107.0	7.0	6.0	86%
22-Jun	101mm	1,107.0	1,112.0	5.0	3.0	60%
22-Jun	101mm	1,112.0	1,115.0	3.0	2.0	67%
22-Jun	101mm	1,115.0	1,123.0	8.0	7.5	94%
22-Jun	101mm	1,123.0	1,128.0	5.0	3.5	70%
22-Jun	101mm	1,128.0	1,136.5	8.5	8.0	94%
22-Jun	101mm	1,136.5	1,142.0	5.5	2.5	45%
23-Jun	101mm	1,142.0	1,148.0	6.0	4.0	67%
23-Jun	101mm	1,148.0	1,156.0	8.0	4.0	50%
23-Jun	101mm	1,156.0	1,163.0	7.0	5.0	71%
23-Jun	101mm	1,163.0	1,165.0	2.0	1.5	75%
23-Jun	101mm	1,165.0	1,169.5	4.5	3.0	67%
23-Jun	101mm	1,169.5	1,176.5	7.0	6.0	86%
23-Jun	101mm	1,176.5	1,180.0	3.5	3.0	86%
23-Jun	101mm	1,180.0	1,184.5	4.5	4.5	100%
23-Jun	101mm	1,184.5	1,188.5	4.0	3.0	75%
23-Jun	101mm	1,188.5	1,193.0	4.5	3.5	78%
23-Jun	101mm	1,193.0	1,198.0	5.0	4.5	90%
23-Jun	101mm	1,198.0	1,206.0	8.0	7.0	88%
23-Jun	101mm	1,206.0	1,213.0	7.0	7.0	100%
23-Jun	101mm	1,213.0	1,215.0	2.0	1.5	75%
23-Jun	101mm	1,215.0	1,220.5	5.5	5.0	91%
23-Jun	101mm	1,220.5	1,222.0	1.5	1.0	67%
23-Jun	101mm	1,222.0	1,227.5	5.5	5.0	91%
23-Jun	101mm	1,227.5	1,233.0	5.5	5.0	91%
23-Jun	101mm	1,233.0	1,241.0	8.0	7.0	88%
23-Jun	101mm	1,241.0	1,245.0	4.0	4.0	100%
24-Jun	101mm	1,245.0	1,256.0	11.0	10.0	91%
24-Jun	101mm	1,256.0	1,266.0	10.0	10.0	100%
24-Jun	101mm	1,266.0	1,268.0	2.0	1.0	50%
24-Jun	101mm	1,268.0	1,271.0	3.0	3.0	100%
24-Jun	101mm	1,271.0	1,274.0	3.0	1.5	50%
24-Jun	101mm	1,274.0	1,278.0	4.0	4.0	100%
24-Jun	101mm	1,278.0	1,281.5	3.5	3.5	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
24-Jun	101mm	1,281.5	1,285.0	3.5	3.0	86%
24-Jun	101mm	1,285.0	1,290.0	5.0	5.0	100%
24-Jun	101mm	1,290.0	1,295.0	5.0	4.5	90%
24-Jun	101mm	1,295.0	1,301.0	6.0	5.0	83%
24-Jun	101mm	1,301.0	1,306.5	5.5	5.0	91%
24-Jun	101mm	1,306.5	1,317.0	10.5	10.0	95%
24-Jun	101mm	1,317.0	1,322.0	5.0	4.0	80%
24-Jun	101mm	1,322.0	1,330.0	8.0	8.0	100%
24-Jun	101mm	1,330.0	1,334.0	4.0	2.5	63%
25-Jun	101mm	1,334.0	1,337.0	3.0	3.0	100%
25-Jun	101mm	1,337.0	1,346.0	9.0	9.0	100%
25-Jun	101mm	1,346.0	1,348.0	2.0	0.0	0%
25-Jun	101mm	1,348.0	1,357.0	9.0	9.0	100%
25-Jun	101mm	1,357.0	1,360.0	3.0	3.0	100%
25-Jun	101mm	1,360.0	1,370.0	10.0	10.0	100%
25-Jun	101mm	1,370.0	1,380.0	10.0	10.0	100%
25-Jun	101mm	1,380.0	1,384.0	4.0	2.5	63%
25-Jun	101mm	1,384.0	1,390.0	6.0	6.0	100%
25-Jun	101mm	1,390.0	1,394.0	4.0	2.5	63%
25-Jun	101mm	1,394.0	1,398.5	4.5	4.0	89%
25-Jun	101mm	1,398.5	1,402.0	3.5	2.0	57%
25-Jun	101mm	1,402.0	1,411.0	9.0	9.0	100%
25-Jun	101mm	1,411.0	1,414.0	3.0	3.0	100%
25-Jun	101mm	1,414.0	1,418.0	4.0	3.0	75%
26-Jun	101mm	1,418.0	1,419.5	1.5	0.5	33%
26-Jun	101mm	1,419.5	1,423.5	4.0	3.0	75%
26-Jun	101mm	1,423.5	1,434.0	10.5	8.0	76%
26-Jun	101mm	1,434.0	1,439.0	5.0	5.0	100%
26-Jun	101mm	1,439.0	1,446.0	7.0	6.5	93%
26-Jun	101mm	1,446.0	1,452.5	6.5	6.5	100%
26-Jun	101mm	1,452.5	1,459.0	6.5	6.5	100%
26-Jun	101mm	1,459.0	1,465.0	6.0	6.0	100%
26-Jun	101mm	1,465.0	1,475.0	10.0	10.0	100%
26-Jun	101mm	1,475.0	1,485.0	10.0	10.0	100%
26-Jun	101mm	1,485.0	1,495.0	10.0	8.5	85%
26-Jun	101mm	1,495.0	1,501.0	6.0	4.0	67%
26-Jun	101mm	1,501.0	1,508.0	7.0	6.0	86%
27-Jun	101mm	1,508.0	1,515.0	7.0	7.0	100%
27-Jun	101mm	1,515.0	1,521.0	6.0	3.5	58%
27-Jun	101mm	1,521.0	1,526.0	5.0	3.0	60%
27-Jun	101mm	1,526.0	1,533.0	7.0	6.0	86%
27-Jun	101mm	1,533.0	1,539.0	6.0	5.0	83%
27-Jun	101mm	1,539.0	1,548.0	9.0	7.5	83%
27-Jun	101mm	1,548.0	1,557.0	9.0	8.0	89%
27-Jun	101mm	1,557.0	1,564.0	7.0	7.0	100%
27-Jun	101mm	1,564.0	1,573.0	9.0	7.0	78%
27-Jun	101mm	1,573.0	1,578.0	5.0	4.0	80%
27-Jun	101mm	1,578.0	1,585.0	7.0	6.0	86%
27-Jun	101mm	1,585.0	1,589.0	4.0	2.5	63%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
27-Jun	101mm	1,589.0	1,596.0	7.0	6.0	86%
27-Jun	101mm	1,596.0	1,604.5	8.5	7.5	88%
27-Jun	101mm	1,604.5	1,615.0	10.5	10.0	95%
28-Jun	101mm	1,615.0	1,618.0	3.0	1.0	33%
28-Jun	101mm	1,618.0	1,623.0	5.0	0.5	10%
28-Jun	101mm	1,623.0	1,633.0	10.0	10.0	100%
28-Jun	101mm	1,633.0	1,643.0	10.0	6.0	60%
28-Jun	101mm	1,643.0	1,653.0	10.0	10.0	100%
28-Jun	101mm	1,653.0	1,655.0	2.0	1.0	50%
28-Jun	101mm	1,655.0	1,660.0	5.0	4.5	90%
28-Jun	101mm	1,660.0	1,671.0	11.0	10.0	91%
28-Jun	101mm	1,671.0	1,681.0	10.0	8.5	85%
28-Jun	101mm	1,681.0	1,687.5	6.5	4.5	69%
28-Jun	101mm	1,687.5	1,695.0	7.5	7.5	100%
28-Jun	101mm	1,695.0	1,702.0	7.0	6.0	86%
28-Jun	101mm	1,702.0	1,709.0	7.0	5.0	71%
29-Jun	101mm	1,709.0	1,719.0	10.0	9.0	90%
29-Jun	101mm	1,719.0	1,729.0	10.0	9.0	90%
29-Jun	101mm	1,729.0	1,737.0	8.0	8.0	100%
29-Jun	101mm	1,737.0	1,745.0	8.0	6.5	81%
29-Jun	101mm	1,745.0	1,750.0	5.0	2.5	50%
29-Jun	101mm	1,750.0	1,752.0	2.0	0.0	0%
29-Jun	101mm	1,752.0	1,756.0	4.0	3.0	75%
29-Jun	101mm	1,756.0	1,764.0	8.0	8.0	100%
29-Jun	101mm	1,764.0	1,774.0	10.0	10.0	100%
29-Jun	101mm	1,774.0	1,782.0	8.0	8.0	100%
29-Jun	101mm	1,782.0	1,792.0	10.0	10.0	100%
29-Jun	101mm	1,792.0	1,802.0	10.0	10.0	100%
30-Jun	101mm	1,802.0	1,813.0	11.0	10.0	91%
30-Jun	101mm	1,813.0	1,823.0	10.0	10.0	100%
30-Jun	101mm	1,823.0	1,832.0	9.0	8.5	94%
30-Jun	101mm	1,832.0	1,841.0	9.0	9.0	100%
30-Jun	101mm	1,841.0	1,851.0	10.0	10.0	100%
30-Jun	101mm	1,851.0	1,857.0	6.0	6.0	100%
30-Jun	101mm	1,857.0	1,862.0	5.0	5.0	100%
30-Jun	101mm	1,862.0	1,872.0	10.0	10.0	100%
30-Jun	101mm	1,872.0	1,882.0	10.0	10.0	100%
30-Jun	101mm	1,882.0	1,892.0	10.0	10.0	100%
30-Jun	101mm	1,892.0	1,902.0	10.0	10.0	100%
30-Jun	101mm	1,902.0	1,911.0	9.0	9.0	100%
01-Jul	101mm	1,911.0	1,918.0	7.0	5.0	71%
01-Jul	101mm	1,918.0	1,921.0	3.0	3.0	100%
01-Jul	101mm	1,921.0	1,931.0	10.0	10.0	100%
01-Jul	101mm	1,931.0	1,940.0	9.0	8.0	89%
01-Jul	101mm	1,940.0	1,946.0	6.0	6.0	100%
01-Jul	101mm	1,946.0	1,953.0	7.0	6.0	86%
01-Jul	101mm	1,953.0	1,957.0	4.0	4.0	100%
01-Jul	101mm	1,957.0	1,960.0	3.0	3.0	100%
01-Jul	101mm	1,960.0	1,964.0	4.0	4.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
01-Jul	101mm	1,964.0	1,967.0	3.0	2.5	83%
01-Jul	101mm	1,967.0	1,974.0	7.0	5.0	71%
01-Jul	101mm	1,974.0	1,981.0	7.0	6.5	93%
01-Jul	101mm	1,981.0	1,990.0	9.0	7.0	78%
01-Jul	101mm	1,990.0	1,996.0	6.0	6.0	100%
31-Jul	101mm	1,996.0	1,999.0	3.0	1.0	33%
31-Jul	101mm	1,999.0	2,003.0	4.0	4.0	100%
31-Jul	101mm	2,003.0	2,009.0	6.0	6.0	100%
31-Jul	101mm	2,009.0	2,012.0	3.0	3.0	100%
31-Jul	101mm	2,012.0	2,014.0	2.0	1.0	50%
01-Aug	101mm	2,014.0	2,018.0	4.0	4.0	100%
01-Aug	101mm	2,018.0	2,025.5	7.5	7.5	100%
01-Aug	101mm	2,025.5	2,030.5	5.0	5.0	100%
01-Aug	101mm	2,030.5	2,036.5	6.0	2.5	42%
01-Aug	101mm	2,036.5	2,040.0	3.5	3.5	100%
01-Aug	101mm	2,040.0	2,048.0	8.0	8.0	100%
01-Aug	101mm	2,048.0	2,056.0	8.0	8.0	100%
01-Aug	101mm	2,056.0	2,059.0	3.0	3.0	100%
01-Aug	101mm	2,059.0	2,060.0	1.0	0.5	50%
01-Aug	101mm	2,060.0	2,061.5	1.5	1.0	67%
01-Aug	101mm	2,061.5	2,074.5	13.0	2.0	15%
02-Aug	101mm	2,074.5	2,080.0	5.5	5.5	100%
02-Aug	101mm	2,080.0	2,086.5	6.5	6.5	100%
02-Aug	101mm	2,086.5	2,087.0	0.5	0.5	100%
02-Aug	101mm	2,087.0	2,097.0	10.0	10.0	100%
02-Aug	101mm	2,097.0	2,107.0	10.0	10.0	100%
02-Aug	101mm	2,107.0	2,117.0	10.0	10.0	100%
02-Aug	101mm	2,117.0	2,127.0	10.0	10.0	100%
02-Aug	101mm	2,127.0	2,137.0	10.0	10.0	100%
03-Aug	101mm	2,137.0	2,147.0	10.0	10.0	100%
03-Aug	101mm	2,147.0	2,157.5	10.5	10.5	100%
03-Aug	101mm	2,157.5	2,160.0	2.5	2.5	100%
03-Aug	101mm	2,160.0	2,166.5	6.5	6.5	100%
03-Aug	101mm	2,166.5	2,176.5	10.0	10.0	100%
03-Aug	101mm	2,176.5	2,184.0	7.5	7.5	100%
03-Aug	101mm	2,184.0	2,191.0	7.0	7.0	100%
03-Aug	101mm	2,191.0	2,201.0	10.0	10.0	100%
03-Aug	101mm	2,201.0	2,211.0	10.0	10.0	100%
04-Aug	101mm	2,211.0	2,219.0	8.0	8.0	100%
04-Aug	101mm	2,219.0	2,224.0	5.0	5.0	100%
04-Aug	101mm	2,224.0	2,231.0	7.0	7.0	100%
04-Aug	101mm	2,231.0	2,241.0	10.0	10.0	100%
04-Aug	101mm	2,241.0	2,251.0	10.0	10.0	100%
04-Aug	101mm	2,251.0	2,261.0	10.0	10.0	100%
04-Aug	101mm	2,261.0	2,266.0	5.0	4.5	90%
05-Aug	101mm	2,266.0	2,273.5	7.5	7.5	100%
05-Aug	101mm	2,273.5	2,283.5	10.0	10.0	100%
05-Aug	101mm	2,283.5	2,293.5	10.0	10.0	100%
05-Aug	101mm	2,293.5	2,304.0	10.5	10.5	100%

Table 2

SDH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
05-Aug	101mm	2,304.0	2,314.0	10.0	10.0	100%
05-Aug	101mm	2,314.0	2,324.5	10.5	10.0	95%
05-Aug	101mm	2,324.5	2,331.0	6.5	6.5	100%
05-Aug	101mm	2,331.0	2,338.0	7.0	7.0	100%
05-Aug	101mm	2,338.0	2,348.0	10.0	10.0	100%
05-Aug	101mm	2,348.0	2,358.0	10.0	10.0	100%
05-Aug	101mm	2,358.0	2,368.0	10.0	10.0	100%
06-Aug	101mm	2,368.0	2,378.5	10.5	7.5	71%
06-Aug	101mm	2,378.5	2,388.5	10.0	10.0	100%
06-Aug	101mm	2,388.5	2,399.0	10.5	10.5	100%
06-Aug	101mm	2,399.0	2,409.0	10.0	10.0	100%
06-Aug	101mm	2,409.0	2,419.5	10.5	10.5	100%
06-Aug	101mm	2,419.5	2,429.5	10.0	10.0	100%
06-Aug	101mm	2,429.5	2,437.5	8.0	6.0	75%
06-Aug	101mm	2,437.5	2,448.0	10.5	0.5	5%
06-Aug	101mm	2,448.0	2,450.0	2.0	2.0	100%
06-Aug	101mm	2,450.0	2,455.0	5.0	5.0	100%
06-Aug	101mm	2,455.0	2,465.0	10.0	10.0	100%
06-Aug	101mm	2,465.0	2,475.0	10.0	10.0	100%
06-Aug	101mm	2,475.0	2,481.0	6.0	6.0	100%
07-Aug	101mm	2,481.0	2,491.0	10.0	10.0	100%
07-Aug	101mm	2,491.0	2,501.0	10.0	10.0	100%
07-Aug	101mm	2,501.0	2,505.5	4.5	4.5	100%
09-Aug	101mm	2,505.5	2,510.0	4.5	4.5	100%
09-Aug	101mm	2,510.0	2,520.0	10.0	10.0	100%
09-Aug	101mm	2,520.0	2,530.0	10.0	10.0	100%
09-Aug	101mm	2,530.0	2,540.0	10.0	10.0	100%
10-Aug	101mm	2,540.0	2,550.0	10.0	10.0	100%
10-Aug	101mm	2,550.0	2,560.0	10.0	10.0	100%
10-Aug	101mm	2,560.0	2,569.5	9.5	9.5	100%
10-Aug	101mm	2,569.5	2,580.0	10.5	10.5	100%
10-Aug	101mm	2,580.0	2,590.0	10.0	4.5	45%
10-Aug	101mm	2,590.0	2,600.0	10.0	10.0	100%
10-Aug	101mm	2,600.0	2,610.0	10.0	5.0	50%
10-Aug	101mm	2,610.0	2,620.0	10.0	10.0	100%
10-Aug	101mm	2,620.0	2,629.0	9.0	9.0	100%
10-Aug	101mm	2,629.0	2,639.0	10.0	10.0	100%
10-Aug	101mm	2,639.0	2,645.0	6.0	5.0	83%
11-Aug	101mm	2,645.0	2,655.0	10.0	10.0	100%
11-Aug	101mm	2,655.0	2,661.0	6.0	6.0	100%
11-Aug	101mm	2,661.0	2,671.0	10.0	3.5	35%
10-Sep	134mm	2,671.0	2,679.0	8.0	8.0	100%
10-Sep	134mm	2,679.0	2,691.0	12.0	12.0	100%
10-Sep	134mm	2,691.0	2,702.0	11.0	11.0	100%
10-Sep	134mm	2,702.0	2,708.0	6.0	6.0	100%
10-Sep	134mm	2,708.0	2,714.0	6.0	6.0	100%
10-Sep	134mm	2,714.0	2,717.0	3.0	0.0	0%
11-Sep	134mm	2,717.0	2,721.0	4.0	4.0	100%
11-Sep	134mm	2,721.0	2,726.0	5.0	5.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
11-Sep	134mm	2,726.0	2,730.0	4.0	4.0	100%
11-Sep	134mm	2,730.0	2,732.0	2.0	2.0	100%
11-Sep	134mm	2,732.0	2,733.0	1.0	1.0	100%
11-Sep	134mm	2,733.0	2,738.0	5.0	5.0	100%
12-Sep	134mm	2,738.0	2,752.0	14.0	5.0	36%
12-Sep	134mm	2,752.0	2,755.0	3.0	3.0	100%
12-Sep	134mm	2,755.0	2,758.0	3.0	0.0	0%
12-Sep	134mm	2,758.0	2,763.0	5.0	1.0	20%
12-Sep	134mm	2,763.0	2,768.0	5.0	0.0	0%
12-Sep	134mm	2,768.0	2,770.0	2.0	2.0	100%
13-Sep	134mm	2,770.0	2,782.0	12.0	12.0	100%
13-Sep	134mm	2,782.0	2,793.0	11.0	11.0	100%
13-Sep	134mm	2,793.0	2,805.0	12.0	12.0	100%
13-Sep	134mm	2,805.0	2,816.0	11.0	11.0	100%
13-Sep	134mm	2,816.0	2,827.0	11.0	11.0	100%
13-Sep	134mm	2,827.0	2,836.0	9.0	9.0	100%
14-Sep	134mm	2,836.0	2,846.0	10.0	6.0	60%
14-Sep	134mm	2,846.0	2,851.0	5.0	1.0	20%
14-Sep	134mm	2,851.0	2,852.0	1.0	0.0	0%
14-Sep	134mm	2,852.0	2,855.0	3.0	3.0	100%
14-Sep	134mm	2,855.0	2,861.0	6.0	6.0	100%
14-Sep	134mm	2,861.0	2,865.0	4.0	1.5	38%
15-Sep	134mm	2,865.0	2,866.0	1.0	0.0	0%
15-Sep	134mm	2,866.0	2,868.0	2.0	0.0	0%
16-Sep	134mm	2,868.0	2,871.0	3.0	0.0	0%
16-Sep	134mm	2,871.0	2,874.0	3.0	0.0	0%
16-Sep	134mm	2,874.0	2,877.0	3.0	0.0	0%
16-Sep	134mm	2,877.0	2,889.0	12.0	5.0	42%
16-Sep	134mm	2,889.0	2,892.0	3.0	2.5	83%
16-Sep	134mm	2,892.0	2,894.0	2.0	2.0	100%
16-Sep	134mm	2,894.0	2,896.0	2.0	1.0	50%
17-Sep	134mm	2,896.0	2,901.0	5.0	5.0	100%
17-Sep	134mm	2,901.0	2,910.0	9.0	9.0	100%
17-Sep	134mm	2,910.0	2,914.0	4.0	4.0	100%
17-Sep	134mm	2,914.0	2,918.0	4.0	4.0	100%
17-Sep	134mm	2,918.0	2,922.0	4.0	4.0	100%
17-Sep	134mm	2,922.0	2,926.0	4.0	3.0	75%
17-Sep	134mm	2,926.0	2,927.0	1.0	0.0	0%
17-Sep	134mm	2,927.0	2,928.5	1.5	0.5	33%
17-Sep	134mm	2,928.5	2,930.0	1.5	0.5	33%
17-Sep	134mm	2,930.0	2,933.0	3.0	3.0	100%
17-Sep	134mm	2,933.0	2,935.5	2.5	0.0	0%
18-Sep	134mm	2,935.5	2,938.0	2.5	0.5	20%
18-Sep	134mm	2,938.0	2,944.0	6.0	6.0	100%
18-Sep	134mm	2,944.0	2,946.0	2.0	0.0	0%
18-Sep	134mm	2,946.0	2,947.0	1.0	1.0	100%
18-Sep	134mm	2,947.0	2,949.0	2.0	0.0	0%
18-Sep	134mm	2,949.0	2,950.0	1.0	0.5	50%
18-Sep	134mm	2,950.0	2,951.5	1.5	1.5	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
18-Sep	134mm	2,951.5	2,952.0	0.5	0.0	0%
18-Sep	134mm	2,952.0	2,954.5	2.5	0.5	20%
18-Sep	134mm	2,954.5	2,957.0	2.5	2.5	100%
19-Sep	134mm	2,957.0	2,961.0	4.0	4.0	100%
19-Sep	134mm	2,961.0	2,967.0	6.0	6.0	100%
19-Sep	134mm	2,967.0	2,973.0	6.0	6.0	100%
19-Sep	134mm	2,973.0	2,977.0	4.0	4.0	100%
19-Sep	134mm	2,977.0	2,983.0	6.0	6.0	100%
19-Sep	134mm	2,983.0	2,986.0	3.0	3.0	100%
19-Sep	134mm	2,986.0	2,989.0	3.0	3.0	100%
19-Sep	134mm	2,989.0	2,993.0	4.0	4.0	100%
20-Sep	134mm	2,993.0	2,997.0	4.0	4.0	100%
20-Sep	134mm	2,997.0	3,003.0	6.0	6.0	100%
20-Sep	134mm	3,003.0	3,008.0	5.0	5.0	100%
20-Sep	134mm	3,008.0	3,020.0	12.0	12.0	100%
20-Sep	134mm	3,020.0	3,021.0	1.0	0.0	0%
22-Sep	134mm	3,021.0	3,027.0	6.0	6.0	100%
22-Sep	134mm	3,027.0	3,037.0	10.0	10.0	100%
23-Sep	134mm	3,037.0	3,047.5	10.5	10.5	100%
23-Sep	134mm	3,047.5	3,058.0	10.5	10.5	100%
23-Sep	134mm	3,058.0	3,068.0	10.0	10.0	100%
23-Sep	134mm	3,068.0	3,078.0	10.0	10.0	100%
23-Sep	134mm	3,078.0	3,088.0	10.0	10.0	100%
23-Sep	134mm	3,088.0	3,098.0	10.0	10.0	100%
23-Sep	134mm	3,098.0	3,104.0	6.0	6.0	100%
24-Sep	134mm	3,104.0	3,113.0	9.0	9.0	100%
24-Sep	134mm	3,113.0	3,121.0	8.0	10.0	125%
24-Sep	134mm	3,121.0	3,133.0	12.0	10.0	83%
24-Sep	134mm	3,133.0	3,143.0	10.0	10.0	100%
24-Sep	134mm	3,143.0	3,152.0	9.0	9.0	100%
24-Sep	134mm	3,152.0	3,162.0	10.0	10.0	100%
24-Sep	134mm	3,162.0	3,172.0	10.0	10.0	100%
25-Sep	134mm	3,172.0	3,182.0	10.0	10.0	100%
25-Sep	134mm	3,182.0	3,192.0	10.0	10.0	100%
25-Sep	134mm	3,192.0	3,202.0	10.0	10.0	100%
25-Sep	134mm	3,202.0	3,207.0	5.0	5.0	100%
25-Sep	134mm	3,207.0	3,211.0	4.0	4.0	100%
25-Sep	134mm	3,211.0	3,221.0	10.0	10.0	100%
25-Sep	134mm	3,221.0	3,231.0	10.0	10.0	100%
26-Sep	HQ	3,231.0	3,237.0	6.0	6.0	100%
26-Sep	HQ	3,237.0	3,241.0	4.0	4.0	100%
26-Sep	HQ	3,241.0	3,246.0	5.0	5.0	100%
26-Sep	HQ	3,246.0	3,251.0	5.0	5.0	100%
26-Sep	HQ	3,251.0	3,257.0	6.0	6.0	100%
26-Sep	HQ	3,257.0	3,261.0	4.0	4.0	100%
26-Sep	HQ	3,261.0	3,266.0	5.0	5.0	100%
27-Sep	HQ	3,266.0	3,275.0	9.0	9.0	100%
27-Sep	HQ	3,275.0	3,285.0	10.0	10.0	100%
27-Sep	HQ	3,285.0	3,295.0	10.0	10.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
27-Sep	HQ	3,295.0	3,298.0	3.0	1.0	33%
27-Sep	HQ	3,298.0	3,303.0	5.0	3.0	60%
27-Sep	HQ	3,303.0	3,305.0	2.0	0.0	0%
27-Sep	HQ	3,305.0	3,305.5	0.5	0.0	0%
27-Sep	HQ	3,305.5	3,308.0	2.5	0.0	0%
28-Sep	HQ	3,308.0	3,314.0	6.0	1.0	17%
28-Sep	HQ	3,314.0	3,318.0	4.0	0.0	0%
28-Sep	HQ	3,318.0	3,320.0	2.0	0.5	25%
28-Sep	HQ	3,320.0	3,323.5	3.5	0.0	0%
28-Sep	HQ	3,323.5	3,325.0	1.5	0.5	33%
28-Sep	HQ	3,325.0	3,327.0	2.0	2.0	100%
28-Sep	HQ	3,327.0	3,329.0	2.0	2.0	100%
29-Sep	HQ	3,329.0	3,332.0	3.0	0.0	0%
29-Sep	HQ	3,332.0	3,336.0	4.0	0.5	13%
29-Sep	HQ	3,336.0	3,337.0	1.0	0.5	50%
29-Sep	HQ	3,337.0	3,339.0	2.0	2.0	100%
29-Sep	HQ	3,339.0	3,343.0	4.0	4.0	100%
29-Sep	HQ	3,343.0	3,346.0	3.0	3.0	100%
30-Sep	HQ	3,346.0	3,352.0	6.0	6.0	100%
30-Sep	HQ	3,352.0	3,356.0	4.0	4.0	100%
30-Sep	HQ	3,356.0	3,364.0	8.0	8.0	100%
30-Sep	HQ	3,364.0	3,368.0	4.0	3.0	75%
30-Sep	HQ	3,368.0	3,372.0	4.0	4.0	100%
30-Sep	HQ	3,372.0	3,377.0	5.0	5.0	100%
01-Oct	HQ	3,377.0	3,385.0	8.0	8.0	100%
01-Oct	HQ	3,385.0	3,389.0	4.0	1.5	38%
01-Oct	HQ	3,389.0	3,393.0	4.0	2.0	50%
01-Oct	HQ	3,393.0	3,396.0	3.0	1.0	33%
01-Oct	HQ	3,396.0	3,397.5	1.5	1.0	67%
01-Oct	HQ	3,397.5	3,399.0	1.5	1.5	100%
01-Oct	HQ	3,399.0	3,402.0	3.0	3.0	100%
02-Oct	HQ	3,402.0	3,405.0	3.0	2.0	67%
02-Oct	HQ	3,405.0	3,408.0	3.0	3.0	100%
02-Oct	HQ	3,408.0	3,411.0	3.0	1.0	33%
02-Oct	HQ	3,411.0	3,414.0	3.0	0.2	7%
02-Oct	HQ	3,414.0	3,415.5	1.5	1.0	67%
02-Oct	HQ	3,415.5	3,417.0	1.5	1.5	100%
02-Oct	HQ	3,417.0	3,422.0	5.0	5.0	100%
03-Oct	HQ	3,422.0	3,429.0	7.0	7.0	100%
03-Oct	HQ	3,429.0	3,438.0	9.0	9.0	100%
03-Oct	HQ	3,438.0	3,447.0	9.0	9.0	100%
03-Oct	HQ	3,447.0	3,453.0	6.0	6.0	100%
03-Oct	HQ	3,453.0	3,462.0	9.0	9.0	100%
04-Oct	HQ	3,462.0	3,472.0	10.0	10.0	100%
04-Oct	HQ	3,472.0	3,482.0	10.0	6.0	60%
04-Oct	HQ	3,482.0	3,491.0	9.0	9.0	100%
04-Oct	HQ	3,491.0	3,498.0	7.0	7.0	100%
05-Oct	HQ	3,498.0	3,508.0	10.0	10.0	100%
05-Oct	HQ	3,508.0	3,510.0	2.0	0.0	0%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
05-Oct	HQ	3,510.0	3,512.0	2.0	1.0	50%
05-Oct	HQ	3,512.0	3,512.5	0.5	0.0	0%
06-Oct	HQ	3,512.5	3,513.0	0.5	0.1	20%
06-Oct	HQ	3,513.0	3,523.0	10.0	7.0	70%
06-Oct	HQ	3,523.0	3,527.0	4.0	0.0	0%
06-Oct	HQ	3,529.0	3,532.0	3.0	0.0	0%
06-Oct	HQ	3,532.0	3,538.0	6.0	0.0	0%
07-Oct	HQ	3,538.0	3,540.5	2.5	0.3	12%
07-Oct	HQ	3,540.5	3,541.0	0.5	0.0	0%
07-Oct	HQ	3,541.0	3,545.0	4.0	0.0	0%
07-Oct	HQ	3,545.0	3,548.0	3.0	0.0	0%
07-Oct	HQ	3,548.0	3,549.0	1.0	0.0	0%
07-Oct	HQ	3,549.0	3,550.0	1.0	0.0	0%
08-Oct	HQ	3,550.0	3,550.5	0.5	0.0	0%
08-Oct	HQ	3,550.5	3,559.0	8.5	1.0	12%
08-Oct	HQ	3,559.0	3,564.0	5.0	3.0	60%
08-Oct	HQ	3,564.0	3,564.5	0.5	0.0	0%
09-Oct	HQ	3,564.0	3,570.0	6.0	6.0	100%
09-Oct	HQ	3,570.0	3,574.0	4.0	4.0	100%
09-Oct	HQ	3,574.0	3,576.0	2.0	2.0	100%
09-Oct	HQ	3,576.0	3,580.0	4.0	4.0	100%
09-Oct	HQ	3,580.0	3,590.0	10.0	4.0	40%
10-Oct	HQ	3,590.0	3,600.0	10.0	10.0	100%
10-Oct	HQ	3,600.0	3,608.0	8.0	8.0	100%
10-Oct	HQ	3,608.0	3,610.0	2.0	1.0	50%
10-Oct	HQ	3,610.0	3,618.0	8.0	8.0	100%
10-Oct	HQ	3,618.0	3,621.0	3.0	3.0	100%
10-Oct	HQ	3,621.0	3,625.0	4.0	2.0	50%
11-Oct	HQ	3,625.0	3,630.0	5.0	2.0	40%
11-Oct	HQ	3,630.0	3,633.0	3.0	3.0	100%
11-Oct	HQ	3,633.0	3,637.0	4.0	4.0	100%
11-Oct	HQ	3,637.0	3,646.0	9.0	9.0	100%
11-Oct	HQ	3,646.0	3,650.0	4.0	2.0	50%
11-Oct	HQ	3,650.0	3,660.0	10.0	10.0	100%
12-Oct	HQ	3,660.0	3,670.0	10.0	10.0	100%
12-Oct	HQ	3,670.0	3,680.0	10.0	10.0	100%
12-Oct	HQ	3,680.0	3,690.0	10.0	10.0	100%
12-Oct	HQ	3,690.0	3,700.0	10.0	10.0	100%
12-Oct	HQ	3,700.0	3,706.0	6.0	6.0	100%
12-Oct	HQ	3,706.0	3,716.0	10.0	10.0	100%
13-Oct	HQ	3,716.0	3,726.0	10.0	10.0	100%
13-Oct	HQ	3,726.0	3,732.0	6.0	6.0	100%
13-Oct	HQ	3,732.0	3,740.0	8.0	8.0	100%
13-Oct	HQ	3,740.0	3,749.0	9.0	4.5	50%
13-Oct	HQ	3,749.0	3,755.0	6.0	6.0	100%
13-Oct	HQ	3,755.0	3,765.0	10.0	10.0	100%
13-Oct	HQ	3,765.0	3,775.0	10.0	10.0	100%
14-Oct	HQ	3,775.0	3,785.0	10.0	10.0	100%
14-Oct	HQ	3,785.0	3,795.0	10.0	10.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
14-Oct	HQ	3,795.0	3,805.0	10.0	10.0	100%
14-Oct	HQ	3,805.0	3,814.0	9.0	9.0	100%
14-Oct	HQ	3,814.0	3,824.0	10.0	10.0	100%
14-Oct	HQ	3,824.0	3,834.0	10.0	10.0	100%
14-Oct	HQ	3,834.0	3,844.0	10.0	10.0	100%
15-Oct	HQ	3,844.0	3,849.0	5.0	5.0	100%
15-Oct	HQ	3,849.0	3,853.0	4.0	4.0	100%
15-Oct	HQ	3,853.0	3,855.0	2.0	1.0	50%
15-Oct	HQ	3,855.0	3,858.0	3.0	3.0	100%
15-Oct	HQ	3,858.0	3,862.0	4.0	4.0	100%
15-Oct	HQ	3,862.0	3,863.0	1.0	1.0	100%
15-Oct	HQ	3,863.0	3,865.5	2.5	0.5	20%
15-Oct	HQ	3,865.5	3,867.0	1.5	1.5	100%
15-Oct	HQ	3,867.0	3,870.0	3.0	2.0	67%
16-Oct	HQ	3,870.0	3,872.0	2.0	0.0	0%
16-Oct	HQ	3,872.0	3,874.0	2.0	2.0	100%
16-Oct	HQ	3,874.0	3,876.0	2.0	2.0	100%
16-Oct	HQ	3,876.0	3,884.0	8.0	7.5	94%
16-Oct	HQ	3,884.0	3,885.0	1.0	0.0	0%
16-Oct	HQ	3,885.0	3,887.5	2.5	2.5	100%
16-Oct	HQ	3,887.5	3,892.0	4.5	4.0	89%
17-Oct	HQ	3,892.0	3,895.0	3.0	3.0	100%
17-Oct	HQ	3,895.0	3,897.0	2.0	2.0	100%
17-Oct	HQ	3,897.0	3,904.0	7.0	7.0	100%
17-Oct	HQ	3,904.0	3,906.0	2.0	2.0	100%
17-Oct	HQ	3,906.0	3,908.0	2.0	2.0	100%
17-Oct	HQ	3,908.0	3,911.0	3.0	3.0	100%
17-Oct	HQ	3,911.0	3,918.5	7.5	7.5	100%
17-Oct	HQ	3,918.5	3,920.0	1.5	1.5	100%
18-Oct	HQ	3,920.0	3,920.5	0.5	0.5	100%
18-Oct	HQ	3,920.5	3,922.0	1.5	0.0	0%
18-Oct	HQ	3,922.0	3,924.0	2.0	2.0	100%
18-Oct	HQ	3,924.0	3,926.0	2.0	2.0	100%
18-Oct	HQ	3,926.0	3,934.0	8.0	8.0	100%
19-Oct	HQ	3,934.0	3,939.0	5.0	4.5	90%
19-Oct	HQ	3,939.0	3,944.0	5.0	5.0	100%
19-Oct	HQ	3,944.0	3,949.0	5.0	5.0	100%
19-Oct	HQ	3,949.0	3,951.0	2.0	2.0	100%
19-Oct	HQ	3,951.0	3,956.0	5.0	5.0	100%
19-Oct	HQ	3,956.0	3,966.0	10.0	10.0	100%
19-Oct	HQ	3,966.0	3,968.0	2.0	2.0	100%
19-Oct	HQ	3,968.0	3,971.0	3.0	3.0	100%
19-Oct	HQ	3,971.0	3,976.0	5.0	5.0	100%
20-Oct	HQ	3,976.0	3,981.0	5.0	5.0	100%
20-Oct	HQ	3,981.0	3,986.0	5.0	5.0	100%
20-Oct	HQ	3,986.0	3,991.0	5.0	5.0	100%
21-Oct	HQ	3,991.0	3,996.0	5.0	4.0	80%
21-Oct	HQ	3,996.0	4,003.0	7.0	7.0	100%
21-Oct	HQ	4,003.0	4,005.0	2.0	2.0	100%

Table 2

SDH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
21-Oct	HQ	4,005.0	4,010.0	5.0	5.0	100%
21-Oct	HQ	4,010.0	4,012.0	2.0	2.0	100%
21-Oct	HQ	4,012.0	4,015.0	3.0	3.0	100%
21-Oct	HQ	4,015.0	4,020.0	5.0	4.0	80%
21-Oct	HQ	4,020.0	4,023.0	3.0	0.0	0%
21-Oct	HQ	4,023.0	4,025.0	2.0	1.0	50%
21-Oct	HQ	4,025.0	4,026.0	1.0	0.0	0%
22-Oct	HQ	4,026.0	4,028.0	2.0	2.0	100%
22-Oct	HQ	4,028.0	4,028.5	0.5	0.5	100%
22-Oct	HQ	4,028.5	4,030.0	1.5	1.0	67%
22-Oct	HQ	4,030.0	4,033.0	3.0	3.0	100%
22-Oct	HQ	4,033.0	4,034.0	1.0	1.0	100%
22-Oct	HQ	4,034.0	4,037.0	3.0	2.0	67%
23-Oct	HQ	4,037.0	4,043.0	6.0	6.0	100%
23-Oct	HQ	4,043.0	4,046.0	3.0	3.0	100%
23-Oct	HQ	4,046.0	4,050.0	4.0	3.0	75%
23-Oct	HQ	4,050.0	4,052.0	2.0	2.0	100%
23-Oct	HQ	4,052.0	4,053.0	1.0	1.0	100%
23-Oct	HQ	4,053.0	4,056.5	3.5	3.5	100%
23-Oct	HQ	4,056.5	4,061.0	4.5	3.0	67%
23-Oct	HQ	4,061.0	4,062.5	1.5	0.5	33%
23-Oct	HQ	4,062.5	4,063.5	1.0	1.0	100%
23-Oct	HQ	4,063.5	4,064.0	0.5	0.0	0%
24-Oct	HQ	4,064.0	4,064.5	0.5	0.5	100%
24-Oct	HQ	4,064.5	4,065.5	1.0	1.0	100%
24-Oct	HQ	4,065.5	4,069.0	3.5	2.0	57%
24-Oct	HQ	4,069.0	4,071.0	2.0	1.0	50%
24-Oct	HQ	4,071.0	4,072.5	1.5	0.0	0%
24-Oct	HQ	4,072.5	4,074.0	1.5	1.5	100%
24-Oct	HQ	4,074.0	4,074.5	0.5	0.5	100%
24-Oct	HQ	4,074.5	4,078.5	4.0	4.0	100%
24-Oct	HQ	4,078.5	4,081.5	3.0	3.0	100%
25-Oct	HQ	4,081.5	4,085.0	3.5	3.5	100%
25-Oct	HQ	4,085.0	4,087.0	2.0	2.0	100%
25-Oct	HQ	4,087.0	4,088.5	1.5	1.0	67%
25-Oct	HQ	4,088.5	4,091.0	2.5	2.5	100%
25-Oct	HQ	4,091.0	4,093.0	2.0	2.0	100%
25-Oct	HQ	4,093.0	4,094.0	1.0	0.5	50%
25-Oct	HQ	4,094.0	4,097.0	3.0	3.0	100%
25-Oct	HQ	4,097.0	4,098.0	1.0	0.5	50%
26-Oct	HQ	4,098.0	4,100.0	2.0	2.0	100%
26-Oct	HQ	4,100.0	4,105.0	5.0	4.0	80%
26-Oct	HQ	4,105.0	4,106.0	1.0	0.5	50%
26-Oct	HQ	4,106.0	4,106.1	0.1	0.1	100%
26-Oct	HQ	4,106.1	4,108.5	2.4	2.0	83%
26-Oct	HQ	4,108.5	4,110.0	1.5	0.5	33%
26-Oct	HQ	4,110.0	4,111.5	1.5	1.0	67%
26-Oct	HQ	4,111.5	4,113.0	1.5	1.5	100%
27-Oct	HQ	4,113.0	4,115.0	2.0	0.5	25%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
27-Oct	HQ	4,115.0	4,116.0	1.0	0.5	50%
27-Oct	HQ	4,116.0	4,119.0	3.0	3.0	100%
27-Oct	HQ	4,119.0	4,119.5	0.5	0.5	100%
27-Oct	HQ	4,119.5	4,120.5	1.0	0.2	20%
28-Oct	HQ	4,120.5	4,130.0	9.5	9.5	100%
28-Oct	HQ	4,130.0	4,132.5	2.5	2.5	100%
28-Oct	HQ	4,132.5	4,134.5	2.0	1.5	75%
28-Oct	HQ	4,134.5	4,135.0	0.5	0.5	100%
29-Oct	HQ	4,135.0	4,140.5	5.5	5.5	100%
29-Oct	HQ	4,140.5	4,145.0	4.5	3.5	78%
29-Oct	HQ	4,145.0	4,151.0	6.0	5.5	92%
29-Oct	HQ	4,151.0	4,156.0	5.0	5.0	100%
29-Oct	HQ	4,156.0	4,162.0	6.0	3.5	58%
29-Oct	HQ	4,162.0	4,166.0	4.0	3.0	75%
29-Oct	HQ	4,166.0	4,167.0	1.0	0.0	0%
30-Oct	HQ	4,167.0	4,168.5	1.5	0.5	33%
30-Oct	HQ	4,168.5	4,173.0	4.5	3.0	67%
30-Oct	HQ	4,173.0	4,176.0	3.0	1.0	33%
30-Oct	HQ	4,176.0	4,180.0	4.0	1.0	25%
30-Oct	HQ	4,180.0	4,181.0	1.0	1.0	100%
30-Oct	HQ	4,181.0	4,181.5	0.5	0.5	100%
31-Oct	HQ	4,181.5	4,182.0	0.5	0.5	100%
31-Oct	HQ	4,182.0	4,184.0	2.0	2.0	100%
31-Oct	HQ	4,184.0	4,186.0	2.0	1.0	50%
31-Oct	HQ	4,186.0	4,188.0	2.0	1.5	75%
01-Nov	HQ	4,188.0	4,196.5	8.5	2.5	29%
01-Nov	HQ	4,196.5	4,198.5	2.0	2.0	100%
01-Nov	HQ	4,198.5	4,200.5	2.0	1.5	75%
01-Nov	HQ	4,200.5	4,202.0	1.5	1.5	100%
01-Nov	HQ	4,202.0	4,205.0	3.0	3.0	100%
01-Nov	HQ	4,205.0	4,209.0	4.0	2.5	63%
01-Nov	HQ	4,209.0	4,211.0	2.0	1.5	75%
01-Nov	HQ	4,211.0	4,214.0	3.0	1.5	50%
02-Nov	HQ	4,214.0	4,218.5	4.5	2.0	44%
02-Nov	HQ	4,218.5	4,222.5	4.0	1.0	25%
02-Nov	HQ	4,222.5	4,223.5	1.0	1.0	100%
02-Nov	HQ	4,223.5	4,226.0	2.5	1.0	40%
03-Nov	HQ	4,226.0	4,231.0	5.0	4.0	80%
03-Nov	HQ	4,231.0	4,234.0	3.0	3.0	100%
03-Nov	HQ	4,234.0	4,236.0	2.0	1.5	75%
03-Nov	HQ	4,236.0	4,236.5	0.5	0.0	0%
04-Nov	HQ	4,236.5	4,239.5	3.0	2.5	83%
04-Nov	HQ	4,239.5	4,242.0	2.5	2.0	80%
04-Nov	HQ	4,242.0	4,244.0	2.0	1.0	50%
04-Nov	HQ	4,244.0	4,248.0	4.0	2.0	50%
05-Nov	HQ	4,248.0	4,253.0	5.0	0.5	10%
05-Nov	HQ	4,253.0	4,255.0	2.0	2.0	100%
05-Nov	HQ	4,255.0	4,258.0	3.0	0.5	17%
05-Nov	HQ	4,258.0	4,259.5	1.5	1.5	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
05-Nov	HQ	4,259.5	4,260.5	1.0	0.0	0%
06-Nov	HQ	4,260.5	4,261.0	0.5	0.0	0%
06-Nov	HQ	4,261.0	4,262.0	1.0	0.5	50%
06-Nov	HQ	4,262.0	4,270.0	8.0	5.0	63%
06-Nov	HQ	4,270.0	4,273.0	3.0	1.0	33%
06-Nov	HQ	4,273.0	4,274.0	1.0	1.0	100%
06-Nov	HQ	4,274.0	4,277.0	3.0	1.0	33%
06-Nov	HQ	4,277.0	4,280.0	3.0	2.0	67%
06-Nov	HQ	4,280.0	4,284.0	4.0	4.0	100%
06-Nov	HQ	4,284.0	4,287.0	3.0	1.5	50%
07-Nov	HQ	4,287.0	4,289.5	2.5	2.5	100%
07-Nov	HQ	4,289.5	4,299.0	9.5	9.5	100%
07-Nov	HQ	4,299.0	4,300.0	1.0	1.0	100%
07-Nov	HQ	4,300.0	4,302.0	2.0	0.5	25%
08-Nov	HQ	4,302.0	4,305.5	3.5	1.0	29%
08-Nov	HQ	4,305.5	4,306.5	1.0	0.5	50%
08-Nov	HQ	4,306.5	4,307.0	0.5	0.5	100%
09-Nov	HQ	4,307.0	4,311.0	4.0	3.0	75%
09-Nov	HQ	4,311.0	4,315.0	4.0	4.0	100%
09-Nov	HQ	4,315.0	4,318.0	3.0	0.0	0%
09-Nov	HQ	4,318.0	4,320.0	2.0	2.0	100%
09-Nov	HQ	4,320.0	4,323.0	3.0	1.0	33%
09-Nov	HQ	4,323.0	4,324.5	1.5	0.0	0%
11-Nov	NQ	4,324.5	4,326.5	2.0	1.0	50%
11-Nov	NQ	4,326.5	4,327.5	1.0	1.0	100%
11-Nov	NQ	4,327.5	4,331.5	4.0	2.0	50%
11-Nov	NQ	4,331.5	4,333.5	2.0	1.0	50%
11-Nov	NQ	4,333.5	4,335.0	1.5	0.0	0%
12-Nov	NQ	4,335.0	4,345.0	10.0	7.0	70%
12-Nov	NQ	4,345.0	4,349.0	4.0	1.0	25%
12-Nov	NQ	4,349.0	4,351.5	2.5	2.0	80%
12-Nov	NQ	4,351.5	4,355.0	3.5	2.0	57%
12-Nov	NQ	4,355.0	4,358.0	3.0	1.5	50%
12-Nov	NQ	4,358.0	4,360.0	2.0	0.5	25%
13-Nov	NQ	4,360.0	4,362.0	2.0	2.0	100%
13-Nov	NQ	4,362.0	4,363.5	1.5	0.0	0%
13-Nov	NQ	4,363.5	4,364.0	0.5	0.0	0%
15-Nov	NQ	4,364.0	4,369.0	5.0	1.0	20%
15-Nov	NQ	4,369.0	4,377.0	8.0	8.0	100%
15-Nov	NQ	4,377.0	4,387.0	10.0	10.0	100%
16-Nov	NQ	4,387.0	4,393.5	6.5	6.5	100%
16-Nov	NQ	4,393.5	4,404.0	10.5	10.5	100%
16-Nov	NQ	4,404.0	4,407.5	3.5	3.5	100%
16-Nov	NQ	4,407.5	4,410.5	3.0	2.0	67%
16-Nov	NQ	4,410.5	4,414.0	3.5	3.5	100%
16-Nov	NQ	4,414.0	4,417.0	3.0	3.0	100%
16-Nov	NQ	4,417.0	4,420.5	3.5	3.5	100%
16-Nov	NQ	4,420.5	4,422.0	1.5	1.0	67%
16-Nov	NQ	4,422.0	4,423.0	1.0	0.5	50%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
16-Nov	NQ	4,423.0	4,425.0	2.0	1.5	75%
16-Nov	NQ	4,425.0	4,429.0	4.0	4.0	100%
17-Nov	NQ	4,429.0	4,433.0	4.0	4.0	100%
17-Nov	NQ	4,433.0	4,437.5	4.5	4.5	100%
17-Nov	NQ	4,437.5	4,442.5	5.0	5.0	100%
17-Nov	NQ	4,442.5	4,444.5	2.0	2.0	100%
17-Nov	NQ	4,444.5	4,446.0	1.5	0.5	33%
17-Nov	NQ	4,446.0	4,447.5	1.5	1.5	100%
17-Nov	NQ	4,447.5	4,450.0	2.5	2.5	100%
17-Nov	NQ	4,450.0	4,451.5	1.5	1.0	67%
17-Nov	NQ	4,451.5	4,455.5	4.0	4.0	100%
17-Nov	NQ	4,455.5	4,460.0	4.5	4.0	89%
18-Nov	NQ	4,460.0	4,464.5	4.5	4.5	100%
18-Nov	NQ	4,464.5	4,466.5	2.0	2.0	100%
18-Nov	NQ	4,466.5	4,470.0	3.5	3.5	100%
18-Nov	NQ	4,470.0	4,472.0	2.0	2.0	100%
18-Nov	NQ	4,472.0	4,473.0	1.0	0.0	0%
18-Nov	NQ	4,473.0	4,474.5	1.5	1.0	67%
18-Nov	NQ	4,474.5	4,479.5	5.0	5.0	100%
18-Nov	NQ	4,479.5	4,487.0	7.5	7.5	100%
18-Nov	NQ	4,487.0	4,490.0	3.0	3.0	100%
19-Nov	NQ	4,490.0	4,500.0	10.0	10.0	100%
19-Nov	NQ	4,500.0	4,510.0	10.0	10.0	100%
19-Nov	NQ	4,510.0	4,520.0	10.0	10.0	100%
19-Nov	NQ	4,520.0	4,523.0	3.0	3.0	100%
19-Nov	NQ	4,523.0	4,524.5	1.5	1.0	67%
19-Nov	NQ	4,524.5	4,530.0	5.5	5.5	100%
20-Nov	NQ	4,530.0	4,534.0	4.0	4.0	100%
20-Nov	NQ	4,534.0	4,542.0	8.0	8.0	100%
20-Nov	NQ	4,542.0	4,545.0	3.0	3.0	100%
20-Nov	NQ	4,545.0	4,549.5	4.5	4.5	100%
20-Nov	NQ	4,549.5	4,557.0	7.5	7.5	100%
21-Nov	NQ	4,557.0	4,565.0	8.0	8.0	100%
21-Nov	NQ	4,565.0	4,572.0	7.0	7.0	100%
21-Nov	NQ	4,572.0	4,575.5	3.5	3.5	100%
21-Nov	NQ	4,575.5	4,578.0	2.5	0.5	20%
21-Nov	NQ	4,578.0	4,580.0	2.0	0.5	25%
21-Nov	NQ	4,580.0	4,581.5	1.5	0.5	33%
21-Nov	NQ	4,581.5	4,583.0	1.5	1.5	100%
21-Nov	NQ	4,583.0	4,585.0	2.0	0.5	25%
21-Nov	NQ	4,585.0	4,587.0	2.0	2.0	100%
21-Nov	NQ	4,587.0	4,589.0	2.0	0.5	25%
21-Nov	NQ	4,589.0	4,595.0	6.0	6.0	100%
22-Nov	NQ	4,595.0	4,597.0	2.0	2.0	100%
23-Nov	NQ	4,597.0	4,597.5	0.5	0.0	0%
23-Nov	NQ	4,597.5	4,599.0	1.5	1.0	67%
23-Nov	NQ	4,599.0	4,600.5	1.5	0.5	33%
23-Nov	NQ	4,600.5	4,602.0	1.5	0.0	0%
24-Nov	NQ	4,602.0	4,603.0	1.0	0.5	50%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
24-Nov	NQ	4,603.0	4,604.5	1.5	1.5	100%
24-Nov	NQ	4,604.5	4,605.0	0.5	0.0	0%
24-Nov	NQ	4,605.0	4,607.0	2.0	2.0	100%
24-Nov	NQ	4,607.0	4,609.0	2.0	2.0	100%
24-Nov	NQ	4,609.0	4,610.0	1.0	1.0	100%
24-Nov	NQ	4,610.0	4,612.0	2.0	2.0	100%
24-Nov	NQ	4,612.0	4,614.5	2.5	2.0	80%
24-Nov	NQ	4,614.5	4,621.0	6.5	6.5	100%
25-Nov	NQ	4,621.0	4,624.0	3.0	3.0	100%
25-Nov	NQ	4,624.0	4,632.0	8.0	8.0	100%
25-Nov	NQ	4,632.0	4,635.0	3.0	3.0	100%
25-Nov	NQ	4,635.0	4,639.5	4.5	4.5	100%
25-Nov	NQ	4,639.5	4,643.0	3.5	3.5	100%
25-Nov	NQ	4,643.0	4,644.0	1.0	1.0	100%
25-Nov	NQ	4,644.0	4,646.0	2.0	2.0	100%
25-Nov	NQ	4,646.0	4,647.5	1.5	1.5	100%
25-Nov	NQ	4,647.5	4,648.0	0.5	0.0	0%
25-Nov	NQ	4,648.0	4,649.0	1.0	0.3	30%
25-Nov	NQ	4,649.0	4,650.0	1.0	0.5	50%
26-Nov	NQ	4,650.0	4,651.0	1.0	0.5	50%
26-Nov	NQ	4,651.0	4,660.0	9.0	9.0	100%
26-Nov	NQ	4,660.0	4,661.5	1.5	0.5	33%
26-Nov	NQ	4,661.5	4,666.5	5.0	5.0	100%
26-Nov	NQ	4,666.5	4,667.5	1.0	0.0	0%
26-Nov	NQ	4,667.5	4,669.0	1.5	1.5	100%
26-Nov	NQ	4,669.0	4,675.0	6.0	6.0	100%
26-Nov	NQ	4,675.0	4,677.5	2.5	2.5	100%
26-Nov	NQ	4,677.5	4,680.5	3.0	3.0	100%
26-Nov	NQ	4,680.5	4,684.5	4.0	4.0	100%
27-Nov	NQ	4,684.5	4,689.0	4.5	4.5	100%
27-Nov	NQ	4,689.0	4,695.0	6.0	6.0	100%
27-Nov	NQ	4,695.0	4,698.5	3.5	3.5	100%
29-Nov	NQ	4,699.0	4,701.0	2.0	2.0	100%
29-Nov	NQ	4,701.0	4,704.0	3.0	2.5	83%
29-Nov	NQ	4,704.0	4,705.5	1.5	0.5	33%
29-Nov	NQ	4,705.5	4,707.5	2.0	2.0	100%
29-Nov	NQ	4,707.5	4,709.0	1.5	1.0	67%
29-Nov	NQ	4,709.0	4,710.5	1.5	1.0	67%
29-Nov	NQ	4,710.5	4,714.0	3.5	3.5	100%
29-Nov	NQ	4,714.0	4,719.0	5.0	5.0	100%
29-Nov	NQ	4,719.0	4,721.0	2.0	1.5	75%
29-Nov	NQ	4,721.0	4,723.5	2.5	2.5	100%
30-Nov	NQ	4,723.5	4,724.5	1.0	0.5	50%
30-Nov	NQ	4,724.5	4,727.5	3.0	3.0	100%
30-Nov	NQ	4,727.5	4,730.0	2.5	2.5	100%
30-Nov	NQ	4,730.0	4,733.5	3.5	2.0	57%
30-Nov	NQ	4,733.5	4,735.0	1.5	1.0	67%
30-Nov	NQ	4,735.0	4,736.0	1.0	0.5	50%
30-Nov	NQ	4,736.0	4,739.0	3.0	3.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
30-Nov	NQ	4,739.0	4,744.0	5.0	5.0	100%
30-Nov	NQ	4,744.0	4,748.0	4.0	4.0	100%
30-Nov	NQ	4,748.0	4,753.0	5.0	5.0	100%
01-Dec	NQ	4,753.0	4,754.0	1.0	0.5	50%
01-Dec	NQ	4,754.0	4,755.5	1.5	0.5	33%
01-Dec	NQ	4,755.5	4,757.5	2.0	1.0	50%
01-Dec	NQ	4,757.5	4,760.0	2.5	2.5	100%
01-Dec	NQ	4,760.0	4,761.0	1.0	1.0	100%
01-Dec	NQ	4,761.0	4,762.0	1.0	0.0	0%
01-Dec	NQ	4,762.0	4,766.0	4.0	3.5	88%
01-Dec	NQ	4,766.0	4,771.0	5.0	5.0	100%
01-Dec	NQ	4,771.0	4,773.5	2.5	2.5	100%
01-Dec	NQ	4,773.5	4,777.5	4.0	4.0	100%
02-Dec	NQ	4,777.5	4,782.0	4.5	4.5	100%
02-Dec	NQ	4,782.0	4,786.0	4.0	4.0	100%
02-Dec	NQ	4,786.0	4,788.0	2.0	2.0	100%
02-Dec	NQ	4,788.0	4,790.5	2.5	2.5	100%
02-Dec	NQ	4,790.5	4,793.0	2.5	2.5	100%
02-Dec	NQ	4,793.0	4,797.0	4.0	4.0	100%
02-Dec	NQ	4,797.0	4,803.0	6.0	6.0	100%
02-Dec	NQ	4,803.0	4,812.0	9.0	9.0	100%
04-Dec	NQ	4,812.0	4,819.5	7.5	7.5	100%
04-Dec	NQ	4,819.5	4,829.5	10.0	10.0	100%
04-Dec	NQ	4,829.5	4,838.5	9.0	9.0	100%
04-Dec	NQ	4,838.5	4,848.5	10.0	10.0	100%
04-Dec	NQ	4,848.5	4,855.5	7.0	7.0	100%
05-Dec	NQ	4,855.5	4,865.5	10.0	10.0	100%
05-Dec	NQ	4,865.5	4,871.5	6.0	6.0	100%
05-Dec	NQ	4,871.5	4,872.5	1.0	1.0	100%
05-Dec	NQ	4,872.5	4,875.5	3.0	0.0	0%
05-Dec	NQ	4,875.5	4,879.0	3.5	0.0	0%
05-Dec	NQ	4,879.0	4,880.0	1.0	0.0	0%
06-Dec	NQ	4,880.0	4,880.5	0.5	0.5	100%
06-Dec	NQ	4,880.5	4,888.5	8.0	8.0	100%
07-Dec	NQ	4,888.5	4,904.0	15.5	10.0	65%
07-Dec	NQ	4,904.0	4,913.5	9.5	9.5	100%
07-Dec	NQ	4,913.5	4,920.5	7.0	7.0	100%
07-Dec	NQ	4,920.5	4,930.5	10.0	10.0	100%
07-Dec	NQ	4,930.5	4,941.0	10.5	10.0	95%
08-Dec	NQ	4,941.0	4,951.0	10.0	10.0	100%
08-Dec	NQ	4,951.0	4,961.0	10.0	10.0	100%
08-Dec	NQ	4,961.0	4,971.0	10.0	10.0	100%
08-Dec	NQ	4,971.0	4,981.0	10.0	10.0	100%
08-Dec	NQ	4,981.0	4,991.0	10.0	10.0	100%
09-Dec	NQ	4,991.0	5,001.0	10.0	10.0	100%
09-Dec	NQ	5,001.0	5,011.0	10.0	10.0	100%
09-Dec	NQ	5,011.0	5,021.0	10.0	10.0	100%
09-Dec	NQ	5,021.0	5,030.5	9.5	7.5	79%
09-Dec	NQ	5,030.5	5,034.5	4.0	4.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
09-Dec	NQ	5,034.5	5,040.5	6.0	6.0	100%
09-Dec	NQ	5,040.5	5,043.5	3.0	2.0	67%
10-Dec	NQ	5,043.5	5,052.0	8.5	8.5	100%
10-Dec	NQ	5,052.0	5,055.5	3.5	3.5	100%
10-Dec	NQ	5,055.5	5,057.5	2.0	2.0	100%
10-Dec	NQ	5,057.5	5,061.0	3.5	3.5	100%
10-Dec	NQ	5,061.0	5,066.5	5.5	4.0	73%
10-Dec	NQ	5,066.5	5,067.5	1.0	1.0	100%
10-Dec	NQ	5,067.5	5,069.5	2.0	2.0	100%
10-Dec	NQ	5,069.5	5,072.5	3.0	2.5	83%
10-Dec	NQ	5,072.5	5,078.0	5.5	5.5	100%
11-Dec	NQ	5,078.0	5,083.0	5.0	5.0	100%
11-Dec	NQ	5,083.0	5,091.0	8.0	8.0	100%
11-Dec	NQ	5,091.0	5,095.0	4.0	4.0	100%
11-Dec	NQ	5,095.0	5,098.5	3.5	3.5	100%
11-Dec	NQ	5,098.5	5,108.5	10.0	9.0	90%
11-Dec	NQ	5,108.5	5,111.5	3.0	2.0	67%
11-Dec	NQ	5,111.5	5,114.5	3.0	0.5	17%
11-Dec	NQ	5,114.5	5,116.0	1.5	1.5	100%
11-Dec	NQ	5,116.0	5,116.5	0.5	0.5	100%
12-Dec	NQ	5,116.5	5,119.5	3.0	3.0	100%
12-Dec	NQ	5,119.5	5,123.0	3.5	3.5	100%
12-Dec	NQ	5,123.0	5,126.5	3.5	3.5	100%
12-Dec	NQ	5,126.5	5,135.0	8.5	8.5	100%
12-Dec	NQ	5,135.0	5,145.0	10.0	9.0	90%
12-Dec	NQ	5,145.0	5,155.0	10.0	10.0	100%
12-Dec	NQ	5,155.0	5,159.0	4.0	3.5	88%
13-Dec	NQ	5,159.0	5,163.0	4.0	4.0	100%
13-Dec	NQ	5,163.0	5,167.0	4.0	4.0	100%
13-Dec	NQ	5,167.0	5,173.0	6.0	3.0	50%
13-Dec	NQ	5,173.0	5,177.0	4.0	4.0	100%
13-Dec	NQ	5,177.0	5,180.5	3.5	3.0	86%
13-Dec	NQ	5,180.5	5,182.5	2.0	1.5	75%
13-Dec	NQ	5,182.5	5,190.5	8.0	8.0	100%
13-Dec	NQ	5,190.5	5,198.5	8.0	8.0	100%
14-Dec	NQ	5,198.5	5,203.5	5.0	5.0	100%
14-Dec	NQ	5,203.5	5,208.5	5.0	5.0	100%
14-Dec	NQ	5,208.5	5,218.5	10.0	10.0	100%
14-Dec	NQ	5,218.5	5,227.0	8.5	8.5	100%
14-Dec	NQ	5,227.0	5,237.0	10.0	10.0	100%
14-Dec	NQ	5,237.0	5,247.0	10.0	10.0	100%
15-Dec	NQ	5,247.0	5,267.0	20.0	10.0	50%
15-Dec	NQ	5,267.0	5,277.0	10.0	10.0	100%
15-Dec	NQ	5,277.0	5,287.0	10.0	10.0	100%
15-Dec	NQ	5,287.0	5,295.5	8.5	8.5	100%
16-Dec	NQ	5,295.5	5,305.5	10.0	10.0	100%
16-Dec	NQ	5,305.5	5,313.0	7.5	7.5	100%
16-Dec	NQ	5,313.0	5,322.0	9.0	9.0	100%
16-Dec	NQ	5,322.0	5,332.0	10.0	10.0	100%

Table 2

SOH-1
Coring Performance

Date	Core Size	Run Start	Run End	Footage Cored	Footage Recovered	Percent Recovery
16-Dec	NQ	5,332.0	5,342.0	10.0	10.0	100%
17-Dec	NQ	5,342.0	5,352.0	10.0	10.0	100%
17-Dec	NQ	5,352.0	5,362.0	10.0	10.0	100%
17-Dec	NQ	5,362.0	5,372.0	10.0	10.0	100%
17-Dec	NQ	5,372.0	5,382.0	10.0	10.0	100%
18-Dec	NQ	5,382.0	5,392.0	10.0	10.0	100%
18-Dec	NQ	5,392.0	5,402.0	10.0	10.0	100%
18-Dec	NQ	5,402.0	5,412.0	10.0	10.0	100%
18-Dec	NQ	5,412.0	5,422.0	10.0	10.0	100%
19-Dec	NQ	5,422.0	5,432.0	10.0	10.0	100%
19-Dec	NQ	5,432.0	5,442.0	10.0	10.0	100%
19-Dec	NQ	5,442.0	5,452.0	10.0	5.0	50%
19-Dec	NQ	5,452.0	5,456.5	4.5	4.0	89%
20-Dec	NQ	5,456.5	5,466.5	10.0	10.0	100%
20-Dec	NQ	5,466.5	5,476.5	10.0	10.0	100%
20-Dec	NQ	5,476.5	5,486.0	9.5	9.5	100%
20-Dec	NQ	5,486.0	5,496.0	10.0	10.0	100%
20-Dec	NQ	5,496.0	5,506.0	10.0	10.0	100%
21-Dec	NQ	5,506.0	5,516.0	10.0	10.0	100%
21-Dec	NQ	5,516.0	5,526.0	10.0	10.0	100%
Overall Totals				5,534.0	4,862.7	88%

Table 3
SOH-1 Complaints

#	Date	Resident	Complaint
1	JUN 1	D. Pommerenk	Rig light shines in her window & sound gives her a headache.
2	JUN 4	P. Majeska	Machine noise woke him up last night and was curious about source.
3	JUN 4	D. Pommerenk	Noise complaint and is worried about permanent hearing damage. Also claims "hum in her head" caused by HGP-A has come back.
4	JUN 4	B. Petricci	Noise complaint, "doesn't like it" and is "keeping notes."
5	JUN 4	R. Jones	Noise wakes him up some nights, interested in measurements at Loughlins home.
6	JUN 13	B. Gold	Light and noise complaint.
7	JUN 28	D. Pommerenk	Noise complaint and wants combination to access road gate lock.
8	JUL 17	D. Pommerenk	Noise complaint.
9	JUL 25	B. Petricci	Noise complaint.
10	JUL 25	D. Pommerenk	Noise complaint.
11	JUL 26	D. Pommerenk	Noise complaint.
12	JUL 31	D. Pommerenk	Noise complaint.
13	AUG 2	G. Pommerenk	"Wants to know if its his imagination or is rig operation getting louder".
14	AUG 10	D. Pommerenk	Noise complaint.
15	AUG 11	D. Pommerenk	Claims 46db at her house, and "doesn't know how much more she can take".
16	AUG 28	D. Pommerenk	Noise complaint.
17	AUG 28	S. Phillips	Noise complaint.
18	SEP 3	S. Phillips	Noise complaint.

#	Date	Resident	Complaint
19	SEP 3	S. Phillips	Noise complaint
20	SEP 7	D. Pommerenk	Noise complaint and complained because she couldn't reach crew on rig mobile phone.
21	SEP 24	D. Pommerenk	Claims "SOH noise wakes children 3 times per week".
22	SEP 26	D. Pommerenk	Noise complaint.
23	SEP 28	S. Philips	Noise complaint.
24	OCT 9	A. Sarhanis	Claims SOH noise wakes him up.
25	OCT 16	D. Muller	Heard machinery noise one night, wanted to know what was going on.
26	OCT 21	D. Pommerenk	SOH lights are shining in her window.
27	OCT 22	D. Pommerenk	Noise complaint.
28	OCT 27	D. Pommerenk	Noise complaint.
29	OCT 28	D. Pommerenk	Noise complaint.
30	NOV 1	D. Pommerenk	Noise complaint.
31	NOV 4	D. Pommerenk	Noise complaint.
32	NOV 5	D. Pommerenk	Noise complaint.
33	NOV 21	D. Pommerenk	"Strange smell" around her house all day yesterday and "worse right now".
34	NOV 26	D. Pommerenk	Noise complaint.
35	DEC 4	G. Pommerenk	Noise complaint.
36	DEC 17	D. Pommerenk	Noise complaint.
37	JAN 5	D. Pommerenk	Noise complaint.
38	JAN 6	D. Pommerenk	Noise complaint and claimed she read 50db on the noise meter she received for Christmas.
39	JAN 7	D. Pommerenk	Noise complaint and claimed she read 52db on her noise meter.
40	JAN 7	D. Pommerenk	Noise complaint.

Table 4
SOH-1 Core Bits

Bit #	Bit Size	S/N	Depth In	Depth Out	Footage Cut	Cost	Cum. Bit	
							Cost/ Foot	Cost/ Foot
1	101mm	17700-3	0	381	381	1,016.00	2.67	2.67
2	101mm	17700-1	381	592	211	1,016.00	4.82	3.43
3	101mm	17700-5	592	730	138	1,016.00	7.36	4.18
4	101mm	17700-6	730	1,010	280	1,016.00	3.63	4.02
5	101mm	19925-6	1,010	1,034	24	858.00	35.75	4.76
6	101mm	L-68514	1,034	1,115	81	858.00	10.59	5.18
7	101mm	17700-2	1,115	1,278	163	1,015.00	6.23	5.32
8	101mm	19999-3	1,278	1,459	181	949.00	5.24	5.31
9	101mm	19999-5	1,459	1,655	196	949.00	4.84	5.25
10	101mm	19999-4	1,655	1,996	341	949.00	2.78	4.83
11	101mm	19999-1	1,996	2,014	18	949.00	52.72	5.26
12	101mm	19999-2	2,014	2,074	60	1,016.00	16.93	5.60
13	101mm	L-68517	2,074	2,201	127	1,016.00	8.00	5.74
14	101mm	L-68515	2,201	2,331	130	1,016.00	7.82	5.85
15	101mm	L-68516	2,331	2,481	150	1,016.00	6.77	5.91 101mm bit cost/ft.
16	101mm	19999-6	2,481	2,671	190	1,016.00	5.35	5.87 \$5.87
17	134mm	L-71870	2,671	2,717	46	1,759.00	38.24	6.42
18	134mm	L-71871	2,717	2,768	51	1,759.00	34.49	6.93
19	134mm	L-72641	2,768	2,851	83	1,643.00	19.80	7.31
20	134mm	L-72642	2,851	2,868	17	1,643.00	96.65	7.84
21	134mm	L-73246	2,868	2,884	16	1,759.00	109.94	8.40
22	134mm	73246	2,884	2,949	65	1,759.00	27.06	8.81 134mm bit cost/ft.
23	134mm	73370	2,949	3,022	73	1,759.00	24.10	9.18 \$34.42
24	HQ	3567419	3,022	3,231	209	785.66	3.76	8.83
25	HQ	M62357-1	3,231	3,305	74	555.26	7.50	8.80
26	HQ	L-63216	3,305	3,318	13	789.00	60.69	9.01
27	HQ	M63564-6	3,318	3,332	14	786.00	56.14	9.20
28	HQ	L-63213	3,332	3,368	36	789.00	21.92	9.34
29	HQ	M63564-10	3,368	3,399	31	786.00	25.35	9.49
30	HQ	L-3208	3,399	3,414	15	788.70	52.58	9.68
31	HQ	15648-10	3,414	3,510	96	792.00	8.25	9.64
32	HQ	L-68480	3,510	3,512	2	801.90	400.95	9.86
33	HQ	M63564-24	3,512	3,529	17	785.66	46.22	10.03
34	HQ	L-68515	3,529	3,541	12	1,051.60	87.63	10.30
35	HQ	M63564-11	3,541	3,550	9	785.66	87.30	10.49
36	HQ	71942-2	3,550	3,564	14	842.85	60.20	10.69
37	HQ	X9-956	3,564	3,625	61	918.50	15.06	10.76
38	HQ	68474	3,625	3,726	101	843.70	8.35	10.70
39	HQ	19993-8	3,726	3,870	144	800.20	5.56	10.50
40	HQ	20180-3	3,870	3,922	52	816.64	15.70	10.57
41	HQ	20180-6	3,922	3,980	58	816.64	14.08	10.62
42	HQ	M6-0309-3	3,980	4,025	45	785.66	17.46	10.70
43	HQ	M4-0308-2	4,025	4,064	39	785.66	20.15	10.79
44	HQ	M4-0308-3	4,064	4,098	34	785.66	23.11	10.89

Table 4
SOH-1 Core Bits

Bit #	Bit Size	S/N	Depth In	Depth Out	Footage Cut	Cost	Cost/ Foot	Cum. Bit Cost/ Foot
45	HQ	M4-0308-1	4,098	4,120	22	785.66	35.71	11.03
46	HQ	20180-2	4,120	4,135	15	816.64	54.44	11.18
47	HQ	M4-0308-4	4,135	4,167	32	785.66	24.55	11.29
48	HQ	BL-20180-1	4,167	4,182	15	816.64	54.44	11.44
49	HQ	05-8387	4,182	4,214	32	673.20	21.04	11.51
50	HQ	05-8396	4,214	4,236	22	673.24	30.60	11.61
51	HQ	L-77550	4,236	4,260	24	843.70	35.15	11.75
52	HQ	05-8399	4,260	4,302	42	673.20	16.03	11.79
53	HQ	05-8397	4,302	4,324	22	673.20	30.60	11.88 HQ bit cost/ft.
54	HQ	L-77689	4,324	4,324	0	843.70	N/A	12.08 \$18.80
55	NQ	L-33201	4,324	4,334	10	627.00	62.70	12.20
56	NQ	9809-5	4,334	4,364	30	482.69	16.09	12.22
57	NQ	MX5-6583-4	4,364	4,364	0	481.60	N/A	12.33
58	NQ	L-74607	4,364	4,597	233	627.00	2.69	11.84
59	NQ	05-10589	4,597	4,699	102	559.75	5.49	11.71
60	NQ	L-74606	4,699	4,812	113	627.00	5.55	11.56
61	NQ	L-67694	4,812	4,880	68	576.40	8.48	11.52 NQ bit cost/ft
62	NQ	L-67701	4,880	5,526	646	576.40	0.89	10.28 \$3.79

Total Bit Cost \$56,786.63

Bits used for reaming over stuck drill rods

1	134mm	L-71770	1,996	2,016	20	1,609.00	80.45
2	134mm	L-71794	2,016	2,029	13	2,385.00	183.46
3	134mm	L-71795	2,029	2,063	34	2,385.00	70.15
4	134mm	L-71923	2,063	2,072	9	1,342.00	149.11
5	134mm	L-71924	2,072	2,123	51	1,324.00	25.96
6	134mm	L-71925	2,123	2,218	95	1,342.00	14.13
7	134mm	L-71926	2,218	2,230	12	1,342.00	111.83

Total Reaming Bit Cost \$11,729.00

Coring stabilizers, reamers
& other down hole consumable items. \$30,988.94

Total bits & other down hole consumables. \$99,504.57

Table 5
SOH DRILLING EXPENDITURES

ACTIVITY	SOH-1		SOH-4	
	COST	% TOTAL	COST	% TOTAL
SITE & ROAD CONSTRUCTION	5,589	0.34%	4,500	0.31%
MOB, PREP. & SET-UP	17,621	1.07%	23,099	1.57%
RIG, LABOR, FOOTAGE CHG. & TAX	961,614	58.51%	735,347	50.13%
RENTAL EQUIPMENT	138,732	8.44%	105,468	7.19%
BITS (core and rotary)	73,569	4.48%	35,775	2.44%
MISC. DOWN HOLE EQUIP.	30,989	1.89%	36,297	2.47%
MUDS	91,810	5.59%	94,534	6.44%
WATER (trucking & county charges)	16,401	1.00%	91,972	6.27%
CMT. & CMT SERVICES	33,525	2.04%	36,029	2.46%
WELLHEAD, CASING & FLOAT EQUIP.	87,890	5.35%	96,651	6.59%
BOP EQUIP. (Rental equipment)	52,921	3.22%	29,693	2.02%
TRANSPORTATION	10,254	0.62%	18,524	1.26%
MISC MATERIALS	8,770	0.53%	8,577	0.58%
MISC LABOR & SERVICES	11,461	0.70%	10,266	0.70%
SUPERVISION	82,200	5.00%	58,800	4.01%
GEOPHYSICAL LOGGING	0	0.00%	58,445	3.98%
OTHER	20,198	1.23%	22,836	1.56%
TOTAL EXPENDITURES	1,643,544		1,466,813	

Table 6
SDH-1
DRILLING COSTS AND ACTIVITIES

Activity	Date	Day Number	Footage Start	Footage End	Daily Footage	Daily Cost	Cost-to Date
Mob & set-up	May 1 - 31	0		0		42,916	42,916 SITE CONSTRUCTION,
Core 101mm	01-Jun	1	0	122	122	10,057	52,973 MOB & SET-UP
Core 101 & open 12.5"	02-Jun	2	122	202	80	8,079	61,052 Total Cost \$42,916
Open 12-1/2"	03-Jun	3	30	100	0	7,090	68,142
Open 12-1/2"	04-Jun	4	100	188	0	7,725	75,867
Open 12-1/2" case & cmt	05-Jun	5	188	202	0	10,163	86,030
Cmt	06-Jun	6	202	202	0	5,539	91,569 CORE, OPEN TO 12-1/4"
Cmt	07-Jun	7	202	202	0	7,591	99,160 CASE & CEMENT (0 - 212 ft)
Cmt	08-Jun	8	202	202	0	5,316	104,476 202 ft. @ \$66,972
Cmt, test BOP	09-Jun	9	202	202	0	5,412	109,888 Cost/foot \$331.54
Wait on county	10-Jun	10	202	202	0	5,142	115,030
Wait on county	11-Jun	11	202	202	0	5,057	120,087
Wait on county	12-Jun	12	202	202	0	5,066	125,153
Wait on county	13-Jun	13	202	202	0	5,057	130,210 DELAY - COUNTY OF HAWAII
Wait on county	14-Jun	14	202	202	0	5,093	135,303 Total Cost \$29,061
Wait & core 101mm	15-Jun	15	202	290	88	7,292	142,595
Core 101mm	16-Jun	16	290	433	143	8,473	151,068
Core 101mm	17-Jun	17	433	563	130	7,849	158,917
Core 101mm	18-Jun	18	563	669	106	7,986	166,903
Core 101mm	19-Jun	19	669	755	86	8,449	175,352
Core 101mm	20-Jun	20	755	874	119	7,101	182,453
Core 101mm	21-Jun	21	874	984	110	7,554	190,007
Core 101mm	22-Jun	22	984	1,040	56	8,673	198,680
Core 101mm	23-Jun	23	1,040	1,142	102	8,003	206,683
Core 101mm	24-Jun	24	1,142	1,245	103	7,322	214,005
Core 101mm	25-Jun	25	1,245	1,334	89	8,212	222,217
Core 101mm	26-Jun	26	1,334	1,418	84	6,890	229,107
Core 101mm	27-Jun	27	1,418	1,508	90	8,256	237,363
Core 101mm	28-Jun	28	1,508	1,615	107	7,865	245,228
Core 101mm	29-Jun	29	1,615	1,709	94	8,215	253,443 CORE 101mm (202 - 1995 ft)
Core 101mm	30-Jun	30	1,709	1,802	93	7,685	261,128 1,793 ft. @ \$136,457
Core 101mm	01-Jul	31	1,802	1,911	109	7,327	268,455 Cost/foot \$76.11
Core 101mm dev sur.	02-Jul	32	1,911	1,996	85	6,951	275,406
Open 8.5"	03-Jul	33	202	271	69	11,479	286,885
Open 8.5"	04-Jul	34	271	432	161	7,002	293,887
Open 8.5"	05-Jul	35	432	549	117	6,441	300,328
Open 8.5" & cmt back	06-Jul	36	549	555	6	8,344	308,672
Drl cmt 253 - 430 ft.	07-Jul	37	555	555	0	8,072	316,744
Drl cmt & open 8.5"	08-Jul	38	555	573	18	7,830	324,574
Open 8.5"	09-Jul	39	573	590	17	8,393	332,967
Down for repairs.	10-Jul	40	590	590	0	5,363	338,330
Repairs & open 8.5"	11-Jul	41	590	621	31	5,917	344,247
Open 8.5" cmt & drl cmt	12-Jul	42	621	629	8	7,645	351,892
Drl cmt 290 - 583 ft.	13-Jul	43	629	629	0	6,206	358,098
Drl cmt & open 8.5"	14-Jul	44	629	770	141	6,770	364,868
Open 8.5" & cmt back	15-Jul	45	770	796	26	7,670	372,538

Table 6
SDH-1
DRILLING COSTS AND ACTIVITIES

Activity	Date	Day Number	Footage Start	Footage End	Daily Footage	Daily Cost	Cost-to Date
Drl cmt & open 8.5"	16-Jul	46	796	870	74	6,684	379,222
Open 8.5"	17-Jul	47	870	1,023	153	7,817	387,039
Open 8.5"	18-Jul	48	1,023	1,180	157	7,943	394,982
Open 8.5" cmt & drl cmt	19-Jul	49	1,180	1,200	20	7,815	402,797
Drl cmt & open 8.5"	20-Jul	50	1,200	1,298	98	6,950	409,747
Open 8.5"	21-Jul	51	1,298	1,412	114	6,690	416,437
Open 8.5"	22-Jul	52	1,412	1,574	162	7,548	423,985
Open 8.5"	23-Jul	53	1,574	1,731	157	6,808	430,793
Open 8.5"	24-Jul	54	1,731	1,820	89	6,401	437,194
Open 8.5"	25-Jul	55	1,820	1,958	138	7,171	444,365
Open 8.5" lay dn rods	26-Jul	56	1,958	1,996	38	6,634	450,999
Run csg, drop, fish.	27-Jul	57	1,996	1,996	0	6,260	457,259
Fishing	28-Jul	58	1,996	1,996	0	6,045	463,304
Fish, rig for cmt	29-Jul	59	1,996	1,996	0	40,677	503,981
Cmt	30-Jul	60	1,996	1,996	0	33,333	537,314
Rig BOP, test, drl cmt	31-Jul	61	1,996	1,996	0	6,834	544,148
Drl cmt, core 101mm	01-Aug	62	1,996	2,014	18	7,345	551,493
Core 101mm	02-Aug	63	2,014	2,074	60	5,889	557,382
Core 101mm	03-Aug	64	2,074	2,137	63	6,166	563,548
Core 101mm	04-Aug	65	2,137	2,201	64	6,215	569,763
Core 101mm	05-Aug	66	2,201	2,266	65	5,985	575,748
Core 101mm	06-Aug	67	2,266	2,368	102	7,644	583,392
Core 101mm	07-Aug	68	2,368	2,481	113	7,891	591,283
Core 101mm & cmt back	08-Aug	69	2,481	2,505	24	5,891	597,174
Drl out cmt.	09-Aug	70	2,505	2,505	0	6,394	603,568
Drl out cmt.	10-Aug	71	2,505	2,505	0	4,853	608,421
Core 101mm	11-Aug	72	2,505	2,645	140	8,438	616,859
Core 101mm & cmt back	12-Aug	73	2,645	2,671	26	5,878	622,737
RIH, stick rods	13-Aug	74	2,671	2,671	0	5,874	628,611
RIH, cut rods	14-Aug	75	2,671	2,671	0	5,494	634,105
Cut & jar rods	15-Aug	76	2,671	2,671	0	6,833	640,938
make up 134mm rods	16-Aug	77	2,671	2,671	0	6,540	647,478
Ream over w/ 134mm	17-Aug	78	1,996	2,009	13	8,010	655,488
Ream over w/ 134mm	18-Aug	79	2,009	2,024	15	9,222	664,710
Ream over w/ 134mm	19-Aug	80	2,024	2,039	15	9,485	674,195
Ream over w/ 134mm	20-Aug	81	2,039	2,060	21	6,980	681,175
Ream over w/ 134mm	21-Aug	82	2,060	2,063	3	5,799	686,974
Ream over w/ 134mm	22-Aug	83	2,063	2,072	9	9,338	696,312
Ream over w/ 134mm	23-Aug	84	2,072	2,086	14	7,704	704,016
Ream over w/ 134mm	24-Aug	85	2,086	2,118	32	6,670	710,686
Ream over w/ 134mm	25-Aug	86	2,118	2,138	20	7,607	718,293
Ream over w/ 134mm	26-Aug	87	2,138	2,170	32	6,669	724,962
Ream over w/ 134mm	27-Aug	88	2,170	2,213	43	6,424	731,386
Ream over w/ 134mm	28-Aug	89	2,213	2,218	5	7,784	739,170
Ream over w/ 134mm	29-Aug	90	2,218	2,230	12	6,402	745,572
Fish out 101mm rods	30-Aug	91	2,230	2,230	0	5,925	751,497

OPEN HOLE, FISH, CASE &
CEMENT (202 - 1,996 ft)
1,794 ft. @ \$268,742
Cost/foot \$149.80

CORE 101mm (1,996 - 2,671 ft)
675 ft. @ \$84,463
Cost/foot \$125.13

Table 6
SOH-1
DRILLING COSTS AND ACTIVITIES

Activity	Date	Day Number	Footage Start	Footage End	Daily Footage	Daily Cost	Cost-to Date
Fish & open 5-7/8" hole	31-Aug	92	1,996	2,010	14	13,053	764,550
Open 5-7/8" hole	01-Sep	93	2,010	2,082	72	5,835	770,385
Open 5-7/8" hole	02-Sep	94	2,082	2,152	70	6,041	776,426
Open 5-7/8" hole	03-Sep	95	2,152	2,183	31	6,897	783,323
Open 5-7/8" hole	04-Sep	96	2,183	2,277	94	6,223	789,546
Open 5-7/8" hole	05-Sep	97	2,277	2,369	92	6,484	796,030
Open 5-7/8" hole	06-Sep	98	2,369	2,451	82	6,655	802,685 FISH, REAM OVER STUCK RODS
Open 5-7/8" hole & wash	07-Sep	99	2,451	2,506	55	7,834	810,519 & OPEN HOLE TO 5-5/8"
Wash hole	08-Sep	100	2,506	2,506	0	6,328	816,847 (1,996 - 2,671 ft)
Open 5-7/8" hole	09-Sep	101	2,506	2,600	94	6,916	823,763 Total Cost \$201,709
Open hole, stick rods	10-Sep	102	2,600	2,671	71	6,557	830,320
POH, core 134mm	11-Sep	103	2,671	2,717	46	10,316	840,636
Core 134mm	12-Sep	104	2,717	2,738	21	8,191	848,827
Core 134mm	13-Sep	105	2,738	2,770	32	8,172	856,999
Core 134mm	14-Sep	106	2,770	2,836	66	6,691	863,690
Core 134mm	15-Sep	107	2,836	2,865	29	8,394	872,084
Core 134mm	16-Sep	108	2,865	2,868	3	7,919	880,003
Core 134mm	17-Sep	109	2,868	2,896	28	9,167	889,170 CORE 134mm 2,671 - 3,022 ft
Core 134mm	18-Sep	110	2,896	2,935	39	6,960	896,130 & SET 4-1/2" CSG.
Core 134mm	19-Sep	111	2,935	2,957	22	8,648	904,778 351 ft. @ \$73,047
Core 134mm	20-Sep	112	2,957	2,993	36	6,802	911,580 Cost/foot \$208.11
Core 134mm	21-Sep	113	2,993	3,022	29	7,717	919,297
Run & cut 4.5" csg	22-Sep	114	3,022	3,022	0	7,096	926,393
WOC, core HQ	23-Sep	115	3,022	3,037	15	23,329	949,722 CASING OPERATIONS
Core HQ	24-Sep	116	3,037	3,104	67	6,551	956,273 4-1/2" CASING 0 - 3,022 ft
Core HQ	25-Sep	117	3,104	3,172	68	6,221	962,494 & CEMENT
Core HQ	26-Sep	118	3,172	3,231	59	6,784	969,278 Total cost \$23,026
Core HQ	27-Sep	119	3,231	3,266	35	7,478	976,756
Core HQ	28-Sep	120	3,266	3,308	42	6,732	983,488
Core HQ	29-Sep	121	3,308	3,329	21	7,172	990,660
Core HQ	30-Sep	122	3,329	3,346	17	7,295	997,955
Core HQ	01-Oct	123	3,346	3,377	31	6,999	1,004,954
Core HQ	02-Oct	124	3,377	3,402	25	7,682	1,012,636
Core HQ	03-Oct	125	3,402	3,422	20	6,067	1,018,703
Core HQ	04-Oct	126	3,422	3,462	40	6,193	1,024,896
Core HQ	05-Oct	127	3,462	3,498	36	6,054	1,030,950
Core HQ	06-Oct	128	3,498	3,512	14	9,532	1,040,482
Core HQ	07-Oct	129	3,512	3,538	26	7,639	1,048,121
Core HQ	08-Oct	130	3,538	3,550	12	6,896	1,055,017
Core HQ	09-Oct	131	3,550	3,565	15	6,532	1,061,549
Core HQ	10-Oct	132	3,565	3,590	25	6,790	1,068,339
Core HQ	11-Oct	133	3,590	3,625	35	6,138	1,074,477
Core HQ	12-Oct	134	3,625	3,660	35	6,902	1,081,379
Core HQ	13-Oct	135	3,660	3,716	56	6,176	1,087,555
Core HQ	14-Oct	136	3,716	3,775	59	7,405	1,094,960
Core HQ	15-Oct	137	3,775	3,844	69	6,265	1,101,225

Table 6
SOH-1
DRILLING COSTS AND ACTIVITIES

Activity	Date	Day Number	Footage Start	Footage End	Daily Footage	Daily Cost	Cost-to Date
Core HQ	16-Oct	138	3,844	3,870	26	6,095	1,107,320
Core HQ	17-Oct	139	3,870	3,892	22	7,423	1,114,743
Core HQ	18-Oct	140	3,892	3,920	28	6,308	1,121,051
Core HQ	19-Oct	141	3,920	3,934	14	7,024	1,128,075
Core HQ	20-Oct	142	3,934	3,976	42	6,348	1,134,423
Core HQ	21-Oct	143	3,976	3,992	16	7,033	1,141,456
Core HQ	22-Oct	144	3,992	4,025	33	6,186	1,147,642
Core HQ	23-Oct	145	4,025	4,037	12	7,661	1,155,303
Core HQ	24-Oct	146	4,037	4,064	27	7,145	1,162,448
Core HQ	25-Oct	147	4,064	4,081	17	7,908	1,170,356
Core HQ	26-Oct	148	4,081	4,098	17	7,389	1,177,745
Core HQ	27-Oct	149	4,098	4,113	15	6,492	1,184,237
Core HQ	28-Oct	150	4,113	4,120	7	7,156	1,191,393
Core HQ	29-Oct	151	4,120	4,135	15	7,423	1,198,816
Core HQ	30-Oct	152	4,135	4,167	32	6,546	1,205,362
Core HQ	31-Oct	153	4,167	4,181	14	7,602	1,212,964
Core HQ	01-Nov	154	4,181	4,188	7	7,187	1,220,151
Core HQ	02-Nov	155	4,188	4,214	26	6,121	1,226,272
Core HQ	03-Nov	156	4,214	4,226	12	6,771	1,233,043
Core HQ	04-Nov	157	4,226	4,236	10	8,342	1,241,385
Core HQ	05-Nov	158	4,236	4,248	12	5,940	1,247,325
Core HQ	06-Nov	159	4,248	4,260	12	6,538	1,253,863
Core HQ	07-Nov	160	4,260	4,287	27	6,037	1,259,900
Core HQ	08-Nov	161	4,287	4,302	15	6,817	1,266,717
Core HQ	09-Nov	162	4,302	4,307	5	6,025	1,272,742
Core HQ	10-Nov	163	4,307	4,324	17	6,884	1,279,626
Reduce to NQ	11-Nov	164	4,324	4,324	0	6,921	1,286,547
Core NQ	12-Nov	165	4,324	4,334	10	6,124	1,292,671
Core NQ	13-Nov	166	4,334	4,360	26	6,436	1,299,107
Core NQ	14-Nov	167	4,360	4,364	4	6,748	1,305,855
Core NQ	15-Nov	168	4,364	4,364	0	6,872	1,312,727
Core NQ	16-Nov	169	4,364	4,387	23	7,078	1,319,805
Core NQ	17-Nov	170	4,387	4,429	42	6,851	1,326,656
Core NQ	18-Nov	171	4,429	4,460	31	7,162	1,333,818
Core NQ	19-Nov	172	4,460	4,490	30	6,178	1,339,996
Core NQ	20-Nov	173	4,490	4,530	40	6,415	1,346,411
Core NQ	21-Nov	174	4,530	4,565	35	6,200	1,352,611
Core NQ	22-Nov	175	4,565	4,595	30	6,398	1,359,009
Core NQ	23-Nov	176	4,595	4,597	2	6,488	1,365,497
Core NQ	24-Nov	177	4,597	4,602	5	7,950	1,373,447
Core NQ	25-Nov	178	4,602	4,621	19	6,142	1,379,589
Core NQ	26-Nov	179	4,621	4,650	29	6,348	1,385,937
Core NQ	27-Nov	180	4,650	4,684	34	6,283	1,392,220
Core NQ	28-Nov	181	4,684	4,699	15	6,834	1,399,054
Core NQ	29-Nov	182	4,699	4,699	0	7,126	1,406,180
Core NQ	30-Nov	183	4,699	4,723	24	6,753	1,412,933

CORE HQ (3,022 - 4,325 FT)
1,303 ft. @ \$360,154
Cost/foot \$276.40

Table 6
SOH-1
DRILLING COSTS AND ACTIVITIES

Activity	Date	Day Number	Footage Start	Footage End	Daily Footage	Daily Cost	Cost-to Date
Core NQ	01-Dec	184	4,723	4,753	30	6,462	1,419,395
Core NQ	02-Dec	185	4,753	4,777	24	6,365	1,425,760
Core NQ	03-Dec	186	4,777	4,812	35	6,262	1,432,022
Core NQ	04-Dec	187	4,812	4,812	0	6,483	1,438,505
Core NQ	05-Dec	188	4,812	4,855	43	6,815	1,445,320
Core NQ	06-Dec	189	4,855	4,880	25	6,667	1,451,987
Core NQ	07-Dec	190	4,880	4,888	8	6,557	1,458,544
Core NQ	08-Dec	191	4,888	4,941	53	6,164	1,464,708
Core NQ	09-Dec	192	4,941	4,991	50	6,128	1,470,836
Core NQ	10-Dec	193	4,991	5,043	52	6,191	1,477,027
Core NQ	11-Dec	194	5,043	5,078	35	5,852	1,482,879
Core NQ	12-Dec	195	5,078	5,116	38	5,901	1,488,780
Core NQ	13-Dec	196	5,116	5,159	43	6,044	1,494,824
Core NQ	14-Dec	197	5,159	5,198	39	6,349	1,501,173
Core NQ	15-Dec	198	5,198	5,247	49	6,032	1,507,205
Core NQ	16-Dec	199	5,247	5,295	48	5,842	1,513,047
Core NQ	17-Dec	200	5,295	5,342	47	5,951	1,518,998
Core NQ	18-Dec	201	5,342	5,382	40	5,875	1,524,873
Core NQ	19-Dec	202	5,382	5,422	40	5,799	1,530,672
Core NQ	20-Dec	203	5,422	5,456	34	5,641	1,536,313
Core NQ	21-Dec	204	5,456	5,506	50	5,730	1,542,043
TD hole, survey	22-Dec	205	5,506	5,526	20	3,493	1,545,536
Condition hole, shut in	23-Dec	206	5,526	5,526	0	2,986	1,548,522
Condition hole	04-Jan	207	5,526	5,526	0	10,518	1,559,040
Condition, standby	05-Jan	208	5,526	5,526	0	5,454	1,564,494
Run temp & press. logs	06-Jan	209	5,526	5,526	0	6,236	1,570,730
Run gam. & cal. logs	07-Jan	210	5,526	5,526	0	5,662	1,576,392
Lay dn rods, run tubing	08-Jan	211	5,526	5,526	0	30,657	1,607,049
Hang tubing, install w/h	09-Jan	212	5,526	5,526	0	13,357	1,620,406
Test, log & rig down	10-Jan	213	5,526	5,526	0	5,427	1,625,833
Loggine & rig down	11-Jan	214	5,526	5,526	0	5,115	1,630,948
Rig down & repairs	12-Jan	215	5,526	5,526	0	5,271	1,636,219
Rigging down	13-Jan	216	5,526	5,526	0	4,271	1,640,490
Rig down & move	14-Jan	217	5,526	5,526	0	3,054	1,643,544

CORE NQ (4,325 - 5,526 FT)
1,201 ft. @ \$258,989
Cost/foot \$215.64

COMPLETION, TESTING &
RIG DOWN

Total Cost \$98,008

TOTAL DRILLING COSTS: \$1,643,544

Table 7

SOH-1
Hole Deviation Measurements

<u>Depth (feet)</u>	<u>Angle (degrees)</u>	<u>Bearing</u>
1,130	0.50	S
1,250	0.50	S
1,370	0.75	S
1,490	1.00	S-5-E
1,610	1.00	S-5-E
1,730	1.00	S-10-E
1,850	1.00	S-10-E
1,990	0.75	S-10-W
3,400	2.50	S-40-W

Figure 1

SOH-1

Time vs. Depth

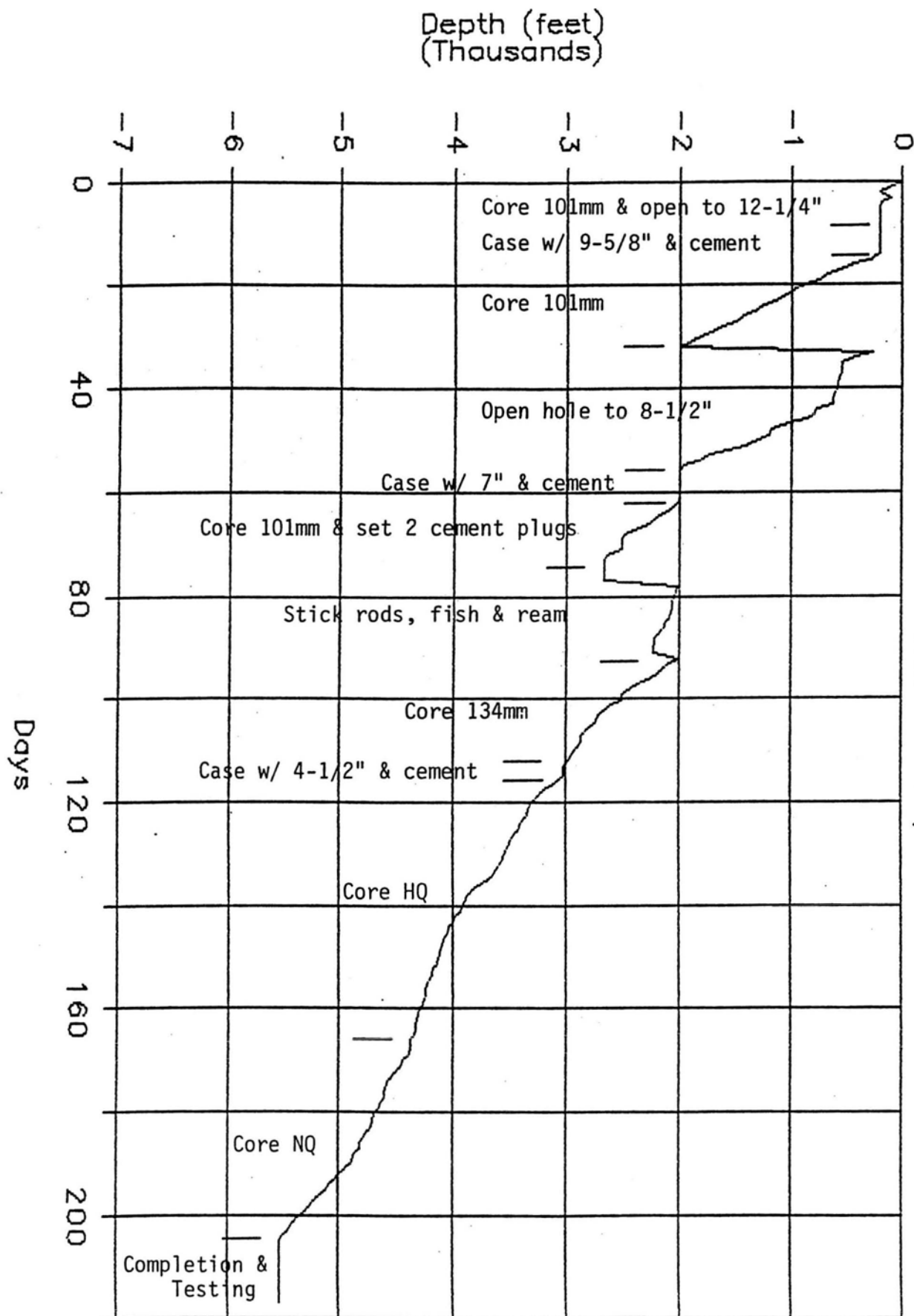


Figure 2

SOH-1

Cost vs. Depth

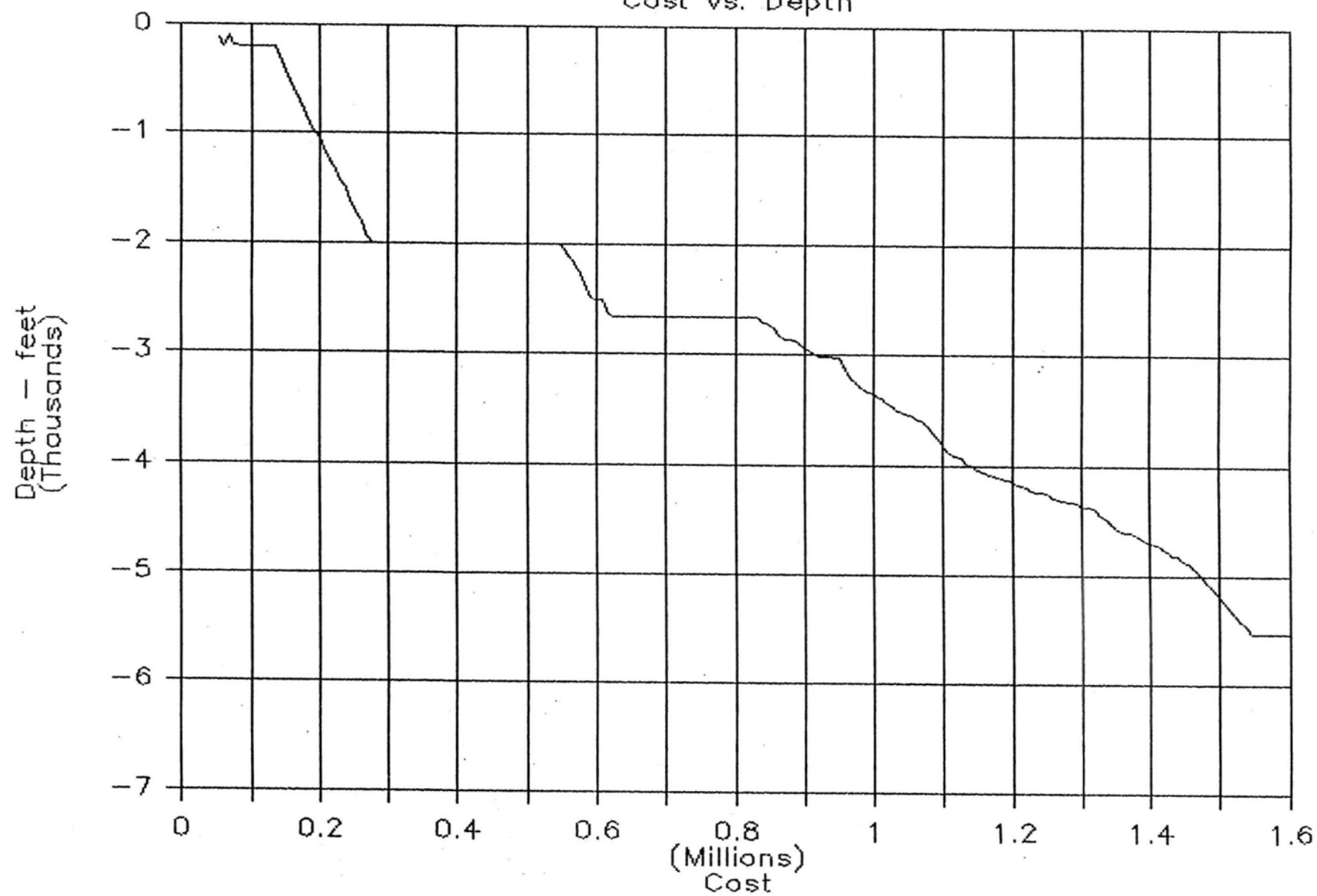


Figure 3

SOH-1

Cost vs. Days

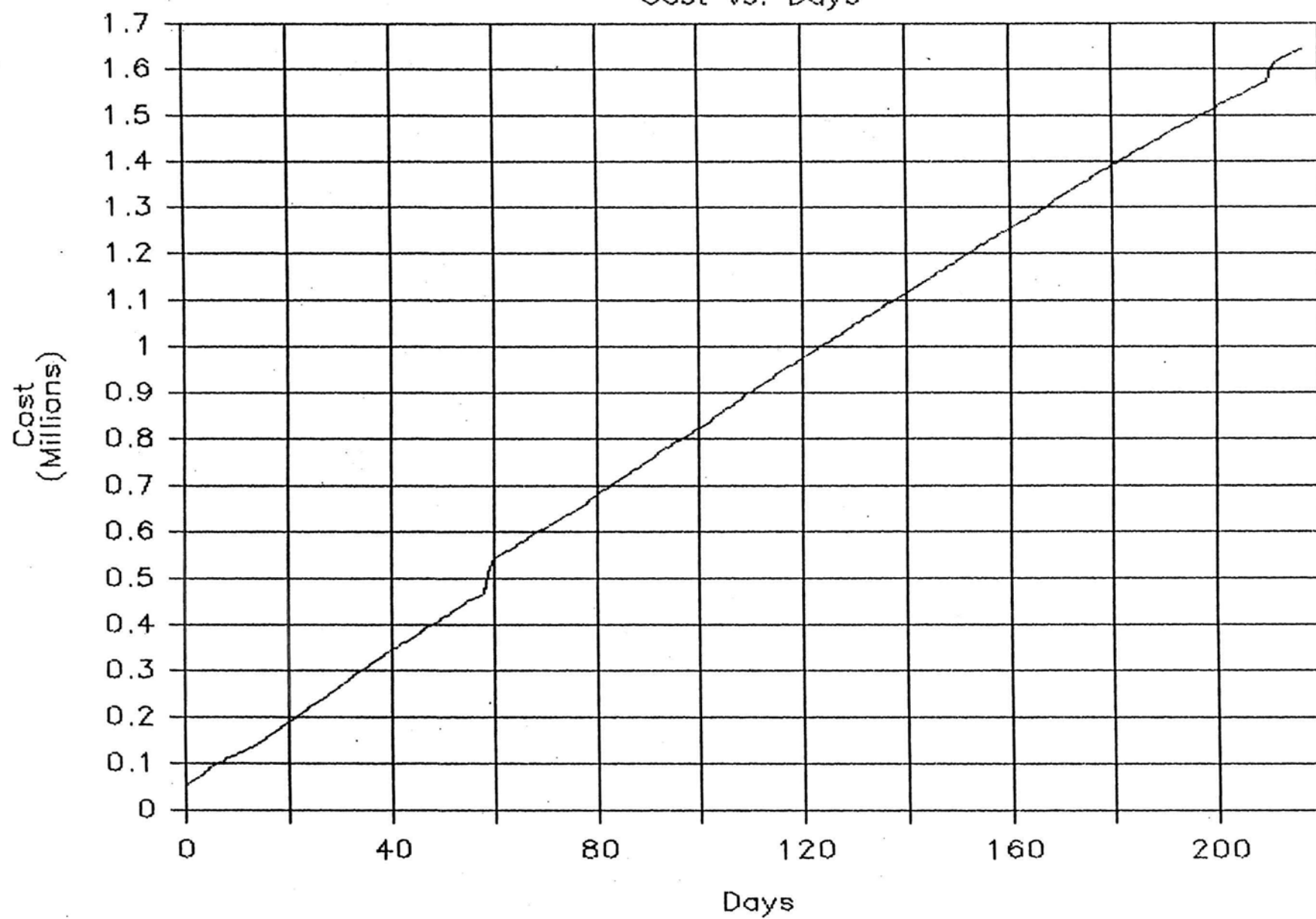


Figure 4

SOH-1

Coring Cost/Foot

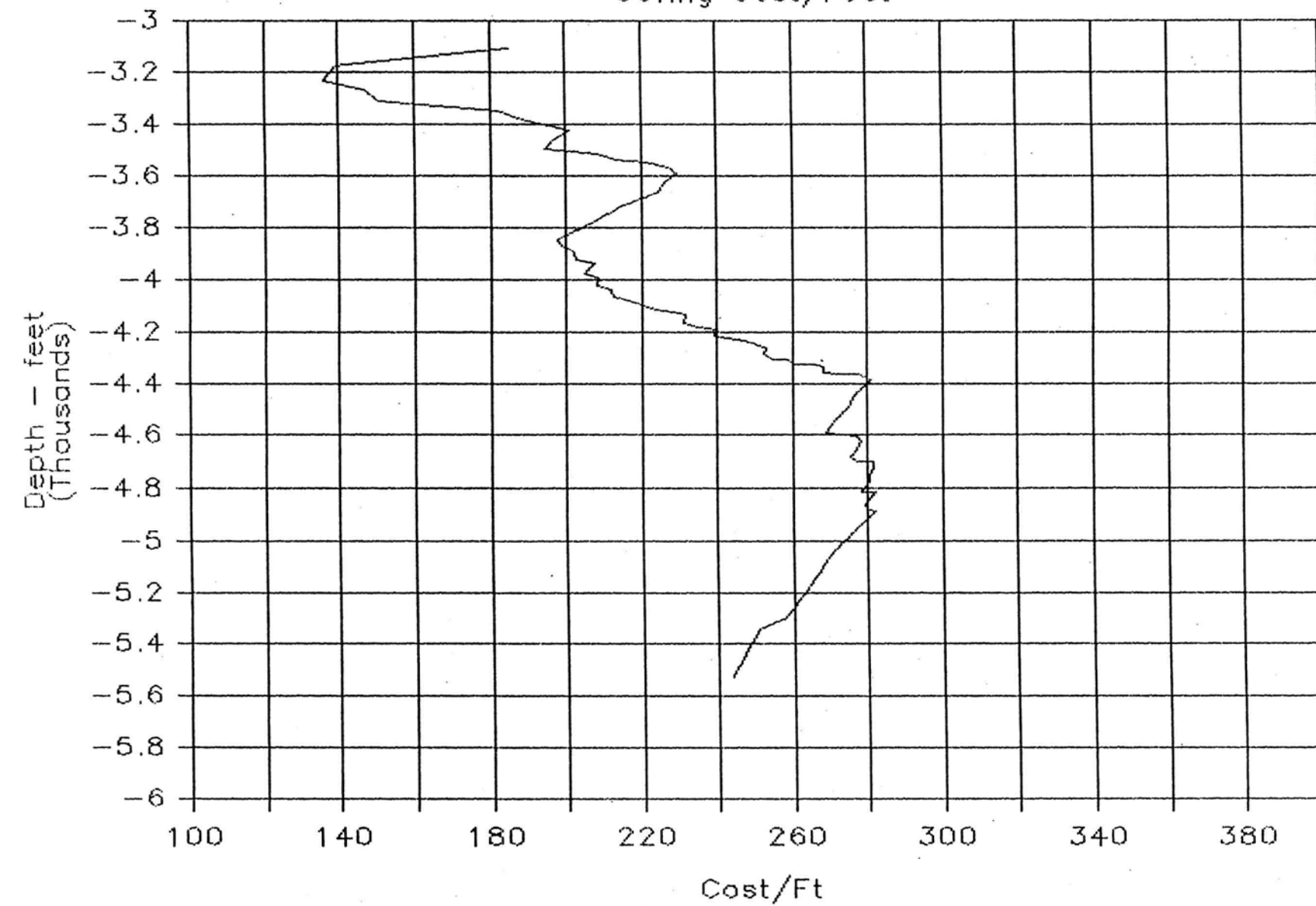


Figure 5

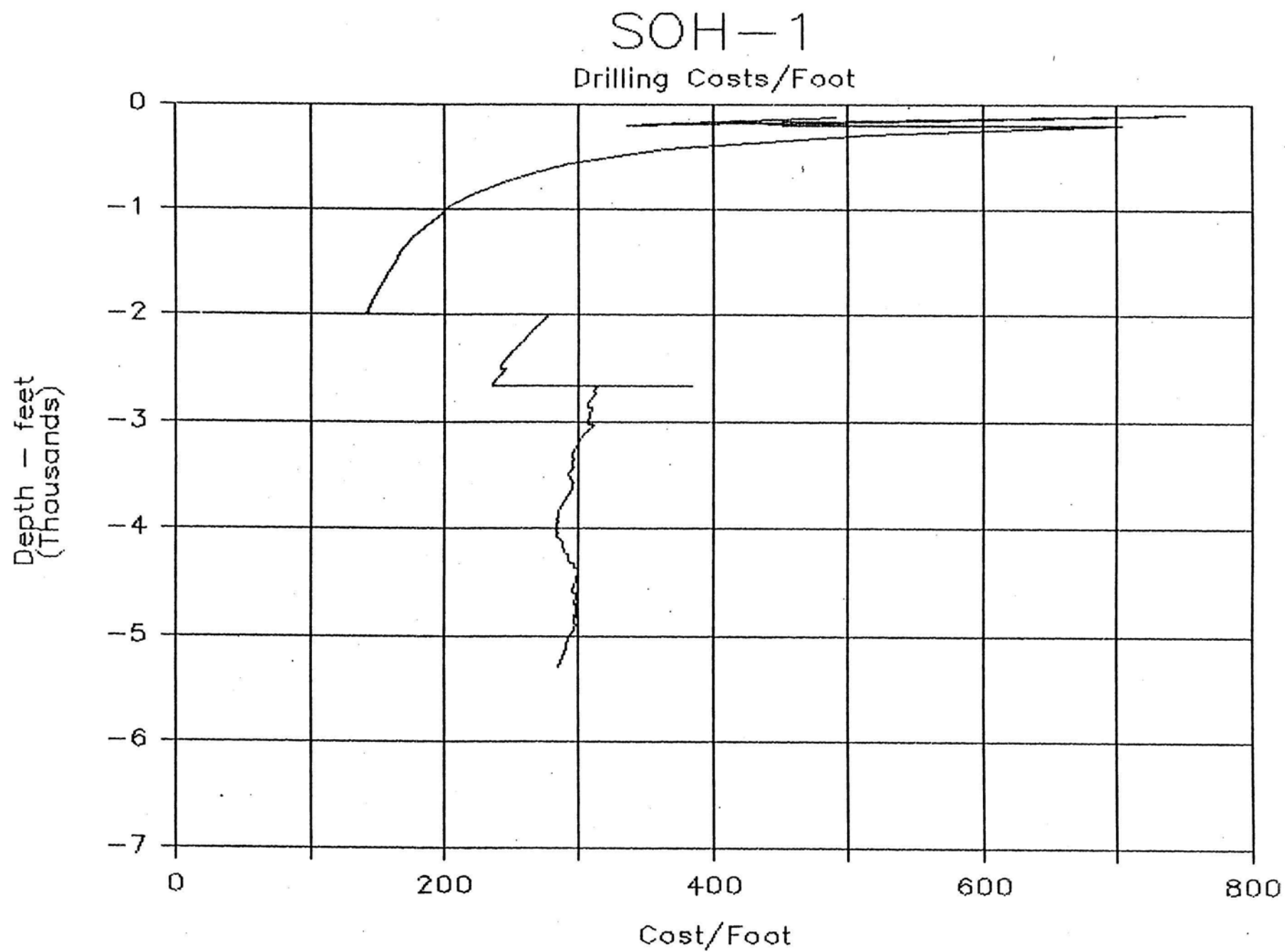
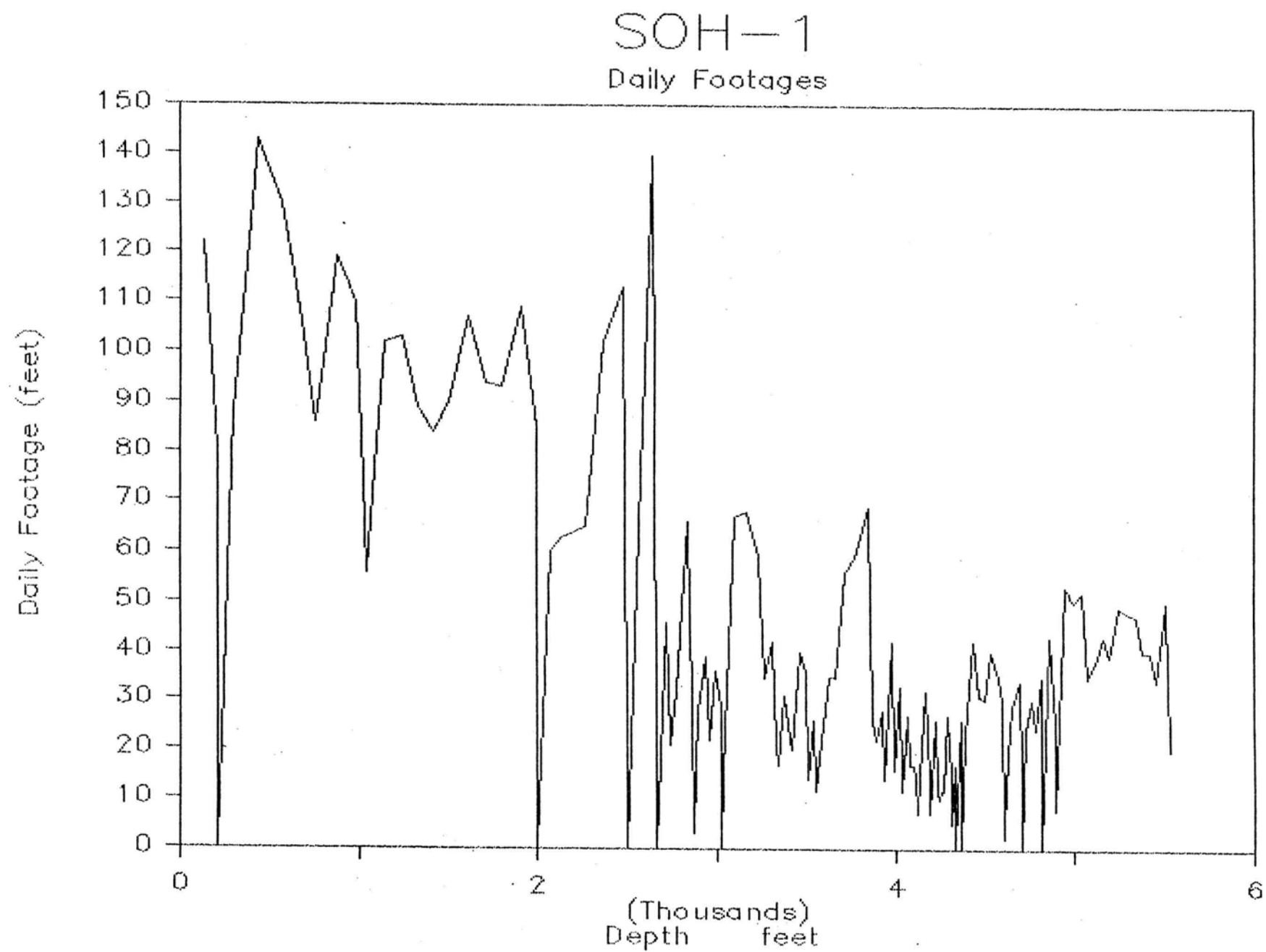


Figure 6



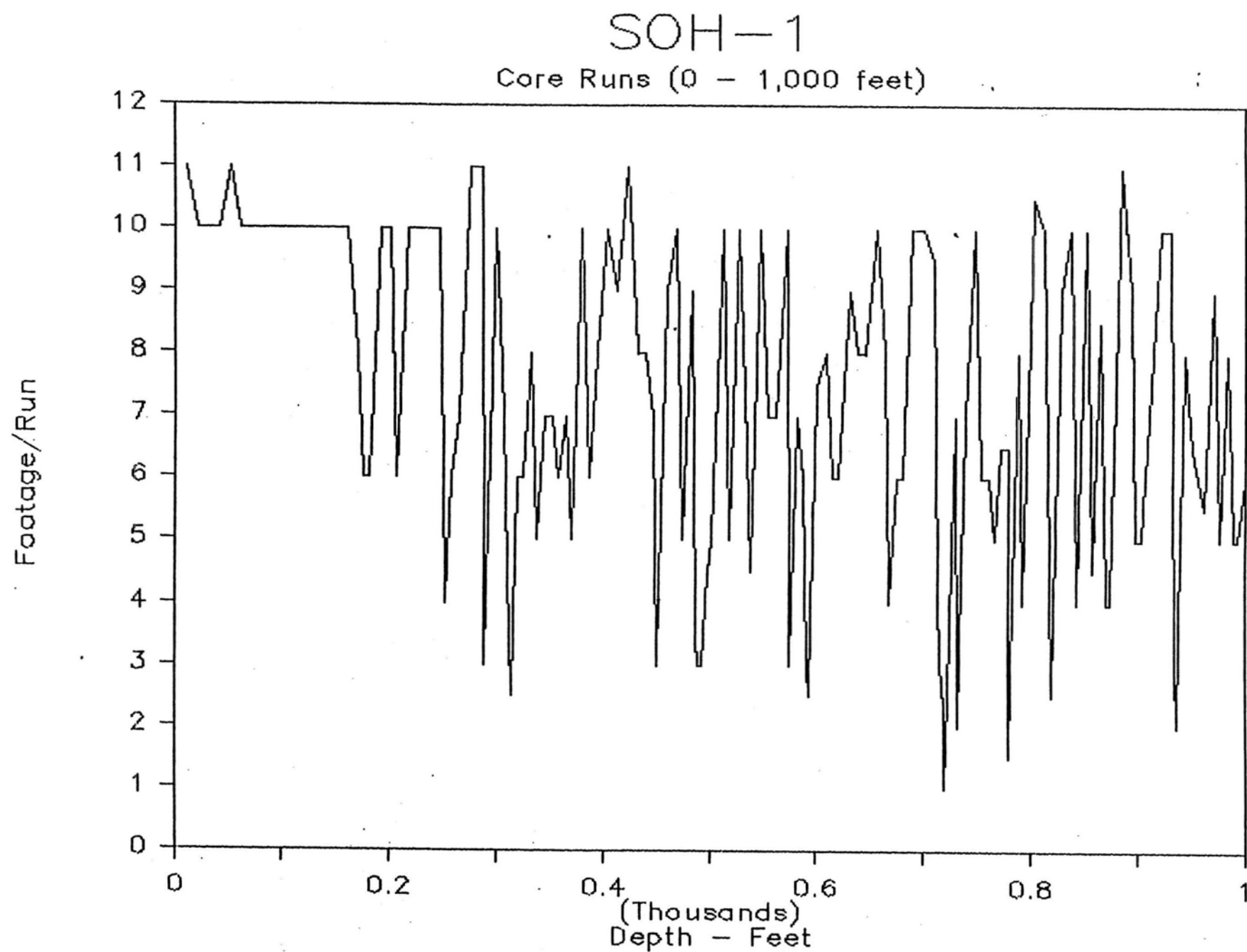


Figure 7a

SOH-1

Core Runs (1,000 - 2,000 feet)

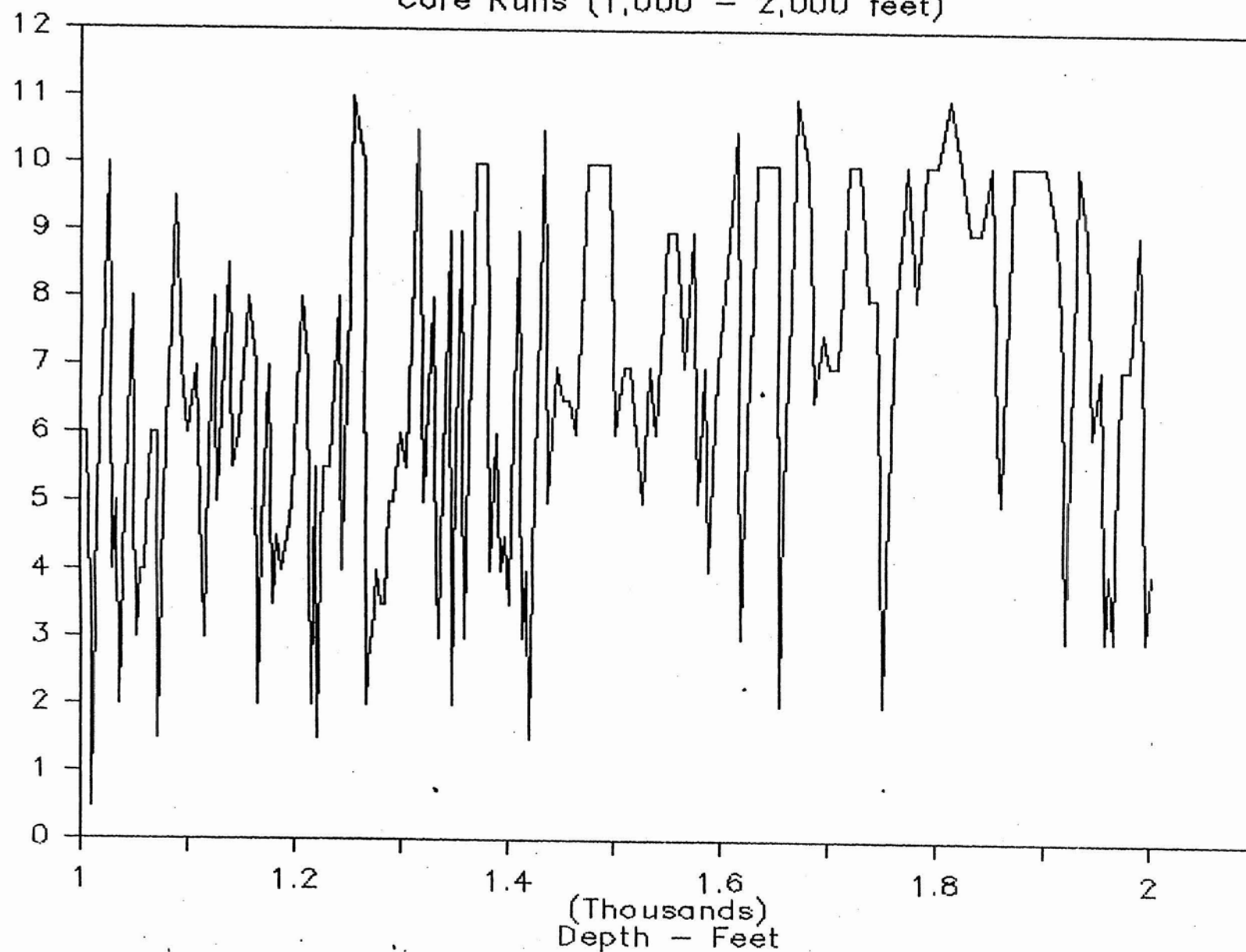


Figure 7b

SOH-1

Core Runs (2,000 - 3,000 feet)

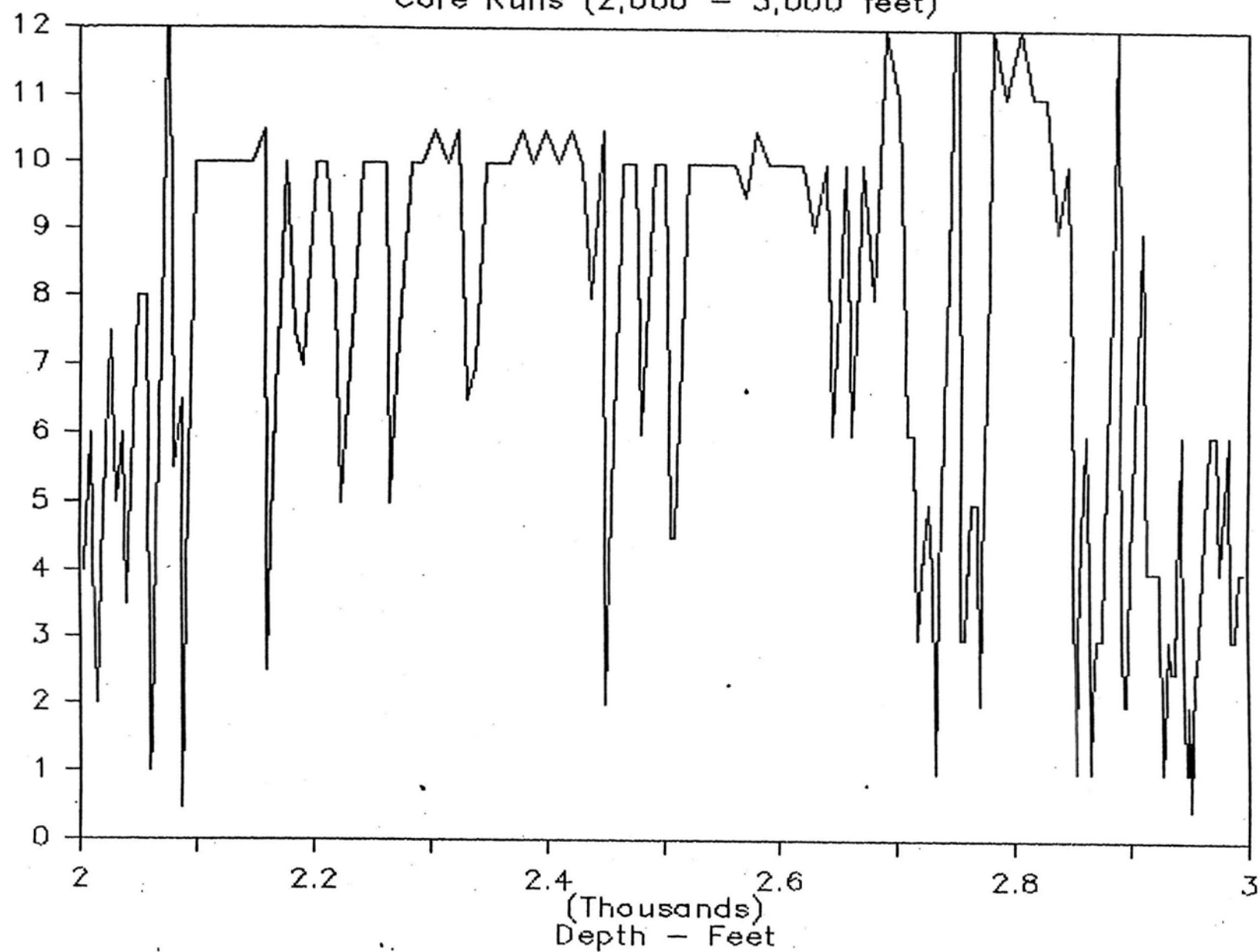


Figure 7c

SOH-1

Core Runs (3,000 - 4,000 feet)

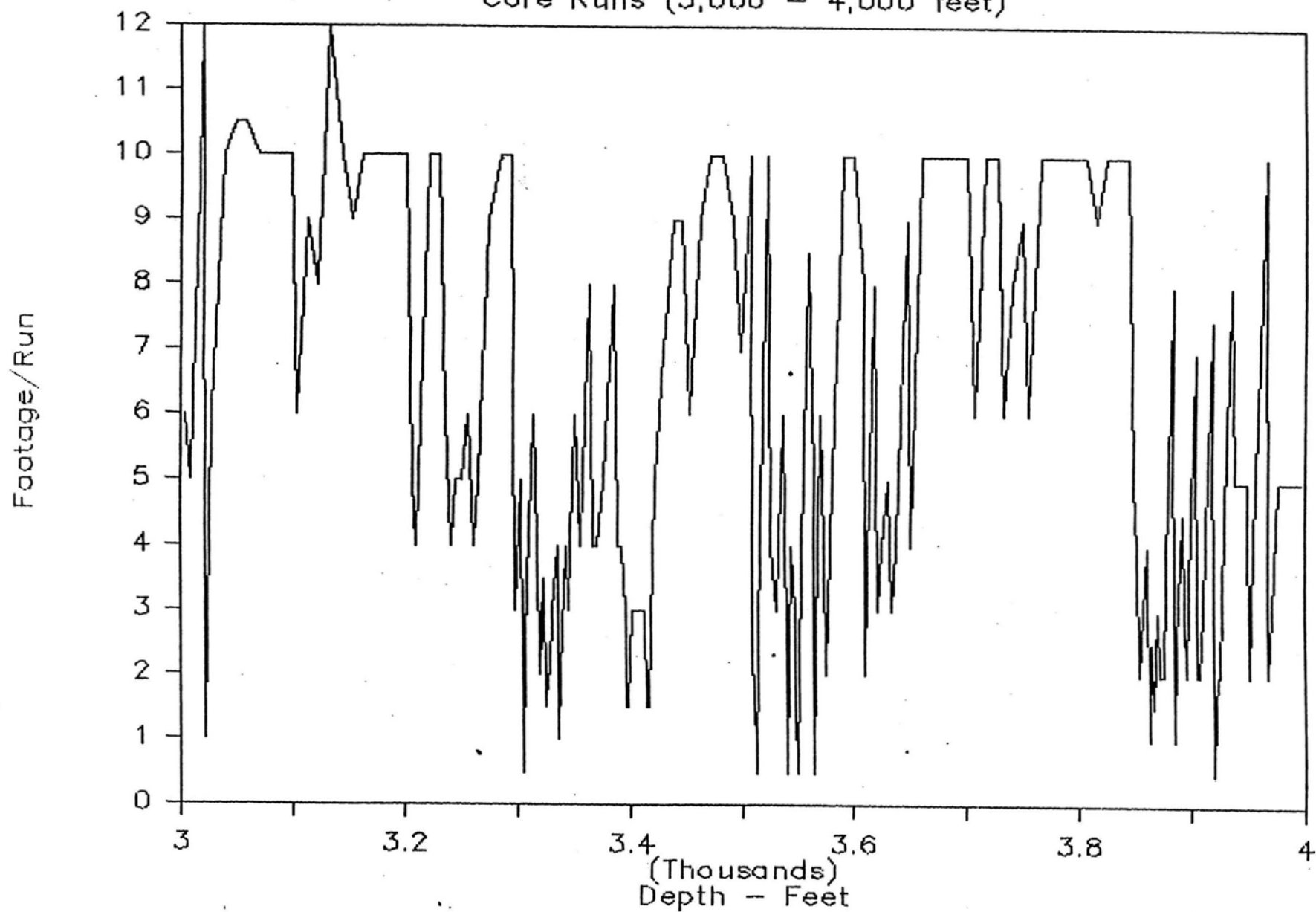


Figure 7d

SOH-1

Core Runs (4,000 - 5,000 feet)

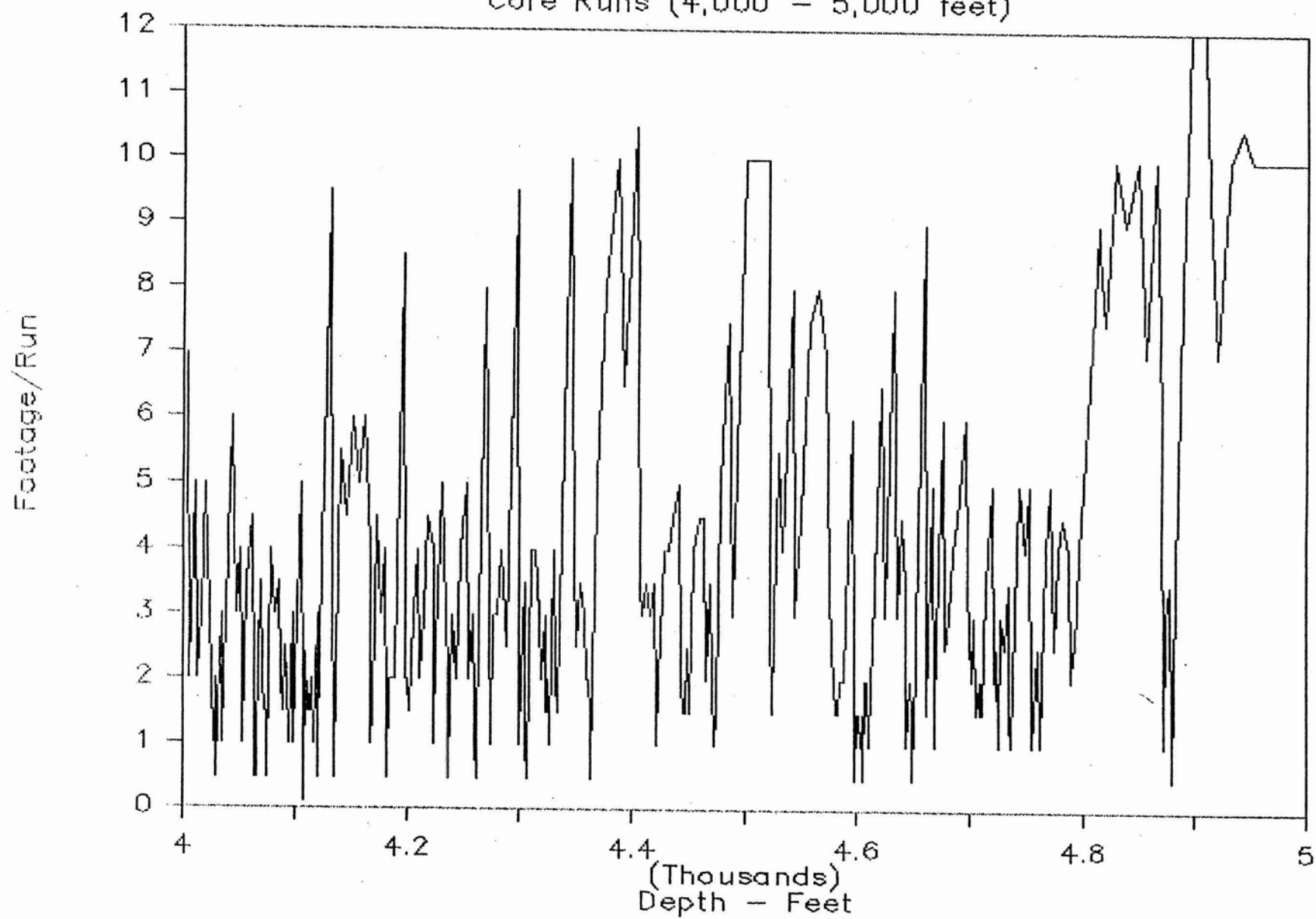


Figure 7e

SOH-1

Core Runs (5,000 - 5,526 feet)

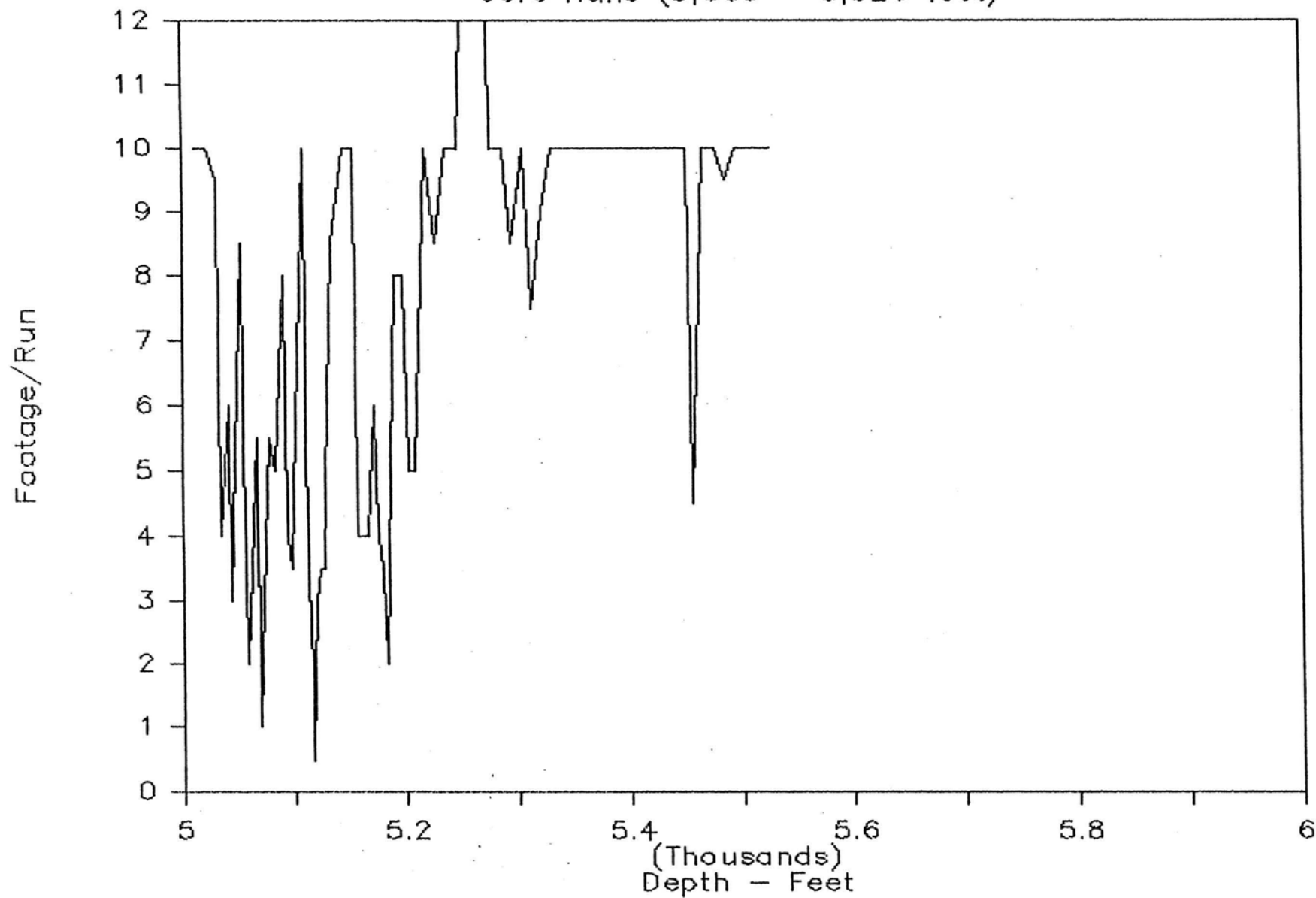
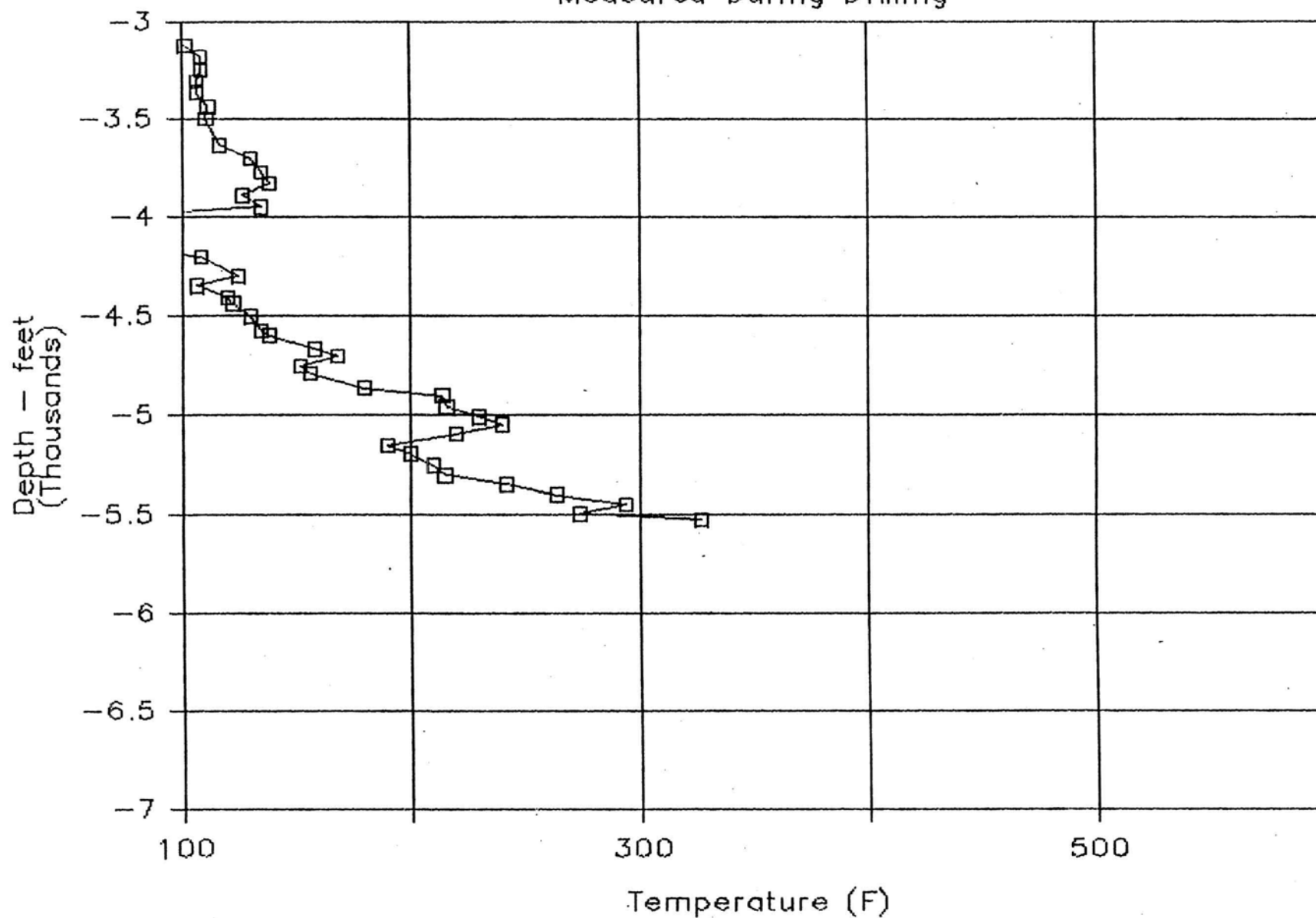


Figure 7f

Figure 8

SOH-1 BOTTOM HOLE TEMPERATURES

Measured During Drilling



SOH-1

Temperature Survey: January 5, 1991

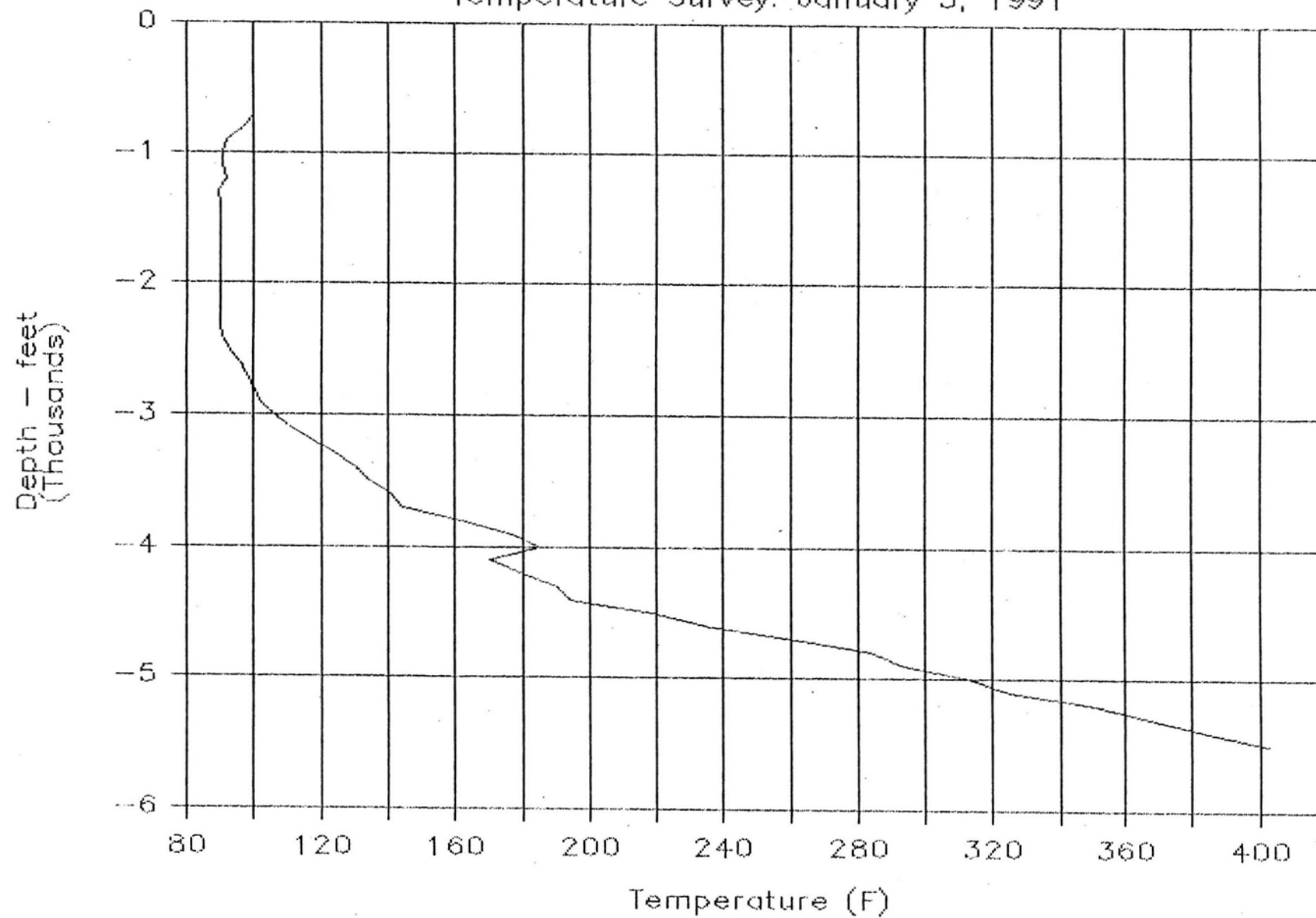


Figure 9

Figure 10

Completed SOH-1 Schematic

0 - 202 ft. - 12-1/4" hole
9-5/8" K-55, 40#/ft. casing
Cemented w/ redimix concrete

202 - 1,996 ft. - 8-1/2" hole
7" L-80, K-55, 35#/ft. casing
Cemented w/ silica/spherelite cement

1,996 - 2,671 ft. - 5-7/8" hole

2,671 - 3,022 ft. - CHD-134 hole (5.27")
4-1/2" casing 0-3,022 ft.

0-2,005 ft. J-55, 10.5 #/ft., ST&C
2,005 - 3,022 ft. J-55, 11.6#/ft., flush joint
Bottom 200 ft. cemented w/ neat cement

3,022 - 4,325 ft. - HQWL hole (3.83" hole x 2.50" core)

4,325 - 5,526 ft. - NQ hole (2.98" hole x 1.875" core)

Completion tubing - NQ (2.75" O.D. x 2.375" I.D.)
5.2#/ft., perforated w/ 1/2" holes on 6" centers

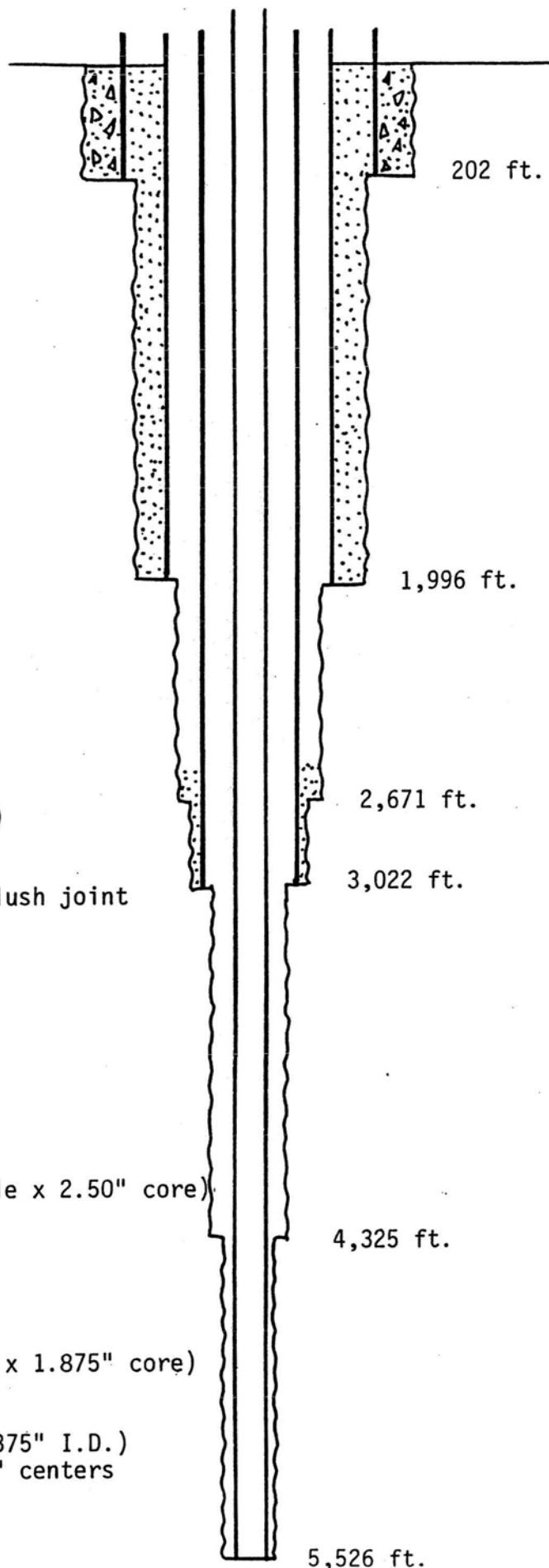


Figure 11

SOH-1 Completion Wellhead

1. Companion Flange - 2-9/16" 3M x 3" L.P.
2. Gate Valve - 2-9/16" Foster Flow-Seal w/ T-24 trim
3. Tubing Head Adapter - 7-1/16" 3M x 2-9/16" 3M
4. 7" EFSO Slip On Wellhead
5. Gate Valves - 2-1/16" 3M Foster Flow-Seal w/ T-24 trim
6. Companion Flanges - 2-1/16" 3M x 2" L.P.
7. 7" L-80, 35#/ft. casing
8. NQ Completion Tubing (2.75" O.D., 5.5#/ft.)
9. 9-5/8" K-55, 40#/ft. casing

