United States Department of Agriculture
Soil Conservation Service
Northeast NTC
160 East 7th Street
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Subject: Trip Report of GPR Field Assistance; Blountstown, Florida, April 17-20, 1989

Date: May 1, 1989

To: James W. Mitchell
State Conservationist
USDA-Soil Conservation Service
Federal Building, Room 248
401 S.E. 1st Avenue
Gainesville, Florida 32601

File code: 430-13-7

Purpose:

To provide ground-penetrating radar field assistance and guidance to radar specialists in Florida.

Principal Participants:

Jeff Allen, Soil Survey Party Leader, SCS, Blountstown, FL.
Edward Cummings, Soil Specialist (GPR), SCS, Lake City, FL.
Jim Doolittle, Soil Specialist (GPR), SCS, Chester, PA.
Wally George, Soil Scientist, SCS, Blountstown, FL.
Mike Jones, District Conservationist, SCS, Marianna, FL.
Daryl Leach, Soil Scientist, SCS, Blountstown, FL.
Douglas Lewis, Soil Specialist (GPR), SCS, Sebring FL.
Candice Trimble, District Conservationist, SCS, Quincy, FL.
Jeff Woods, District Conservationist, SCS, Blountstown, FL.

Activities:

I arrived in Blountstown on the afternoon of 17 April. Following a brief review of the planned activities for the week, the survey party and the radar specialists proceeded to the field to conduct soil transects. On the morning of April 17, GPR site investigations were conducted at the Jackson County Landfill Site and at a suspected sinkhole site in a residential area of Greenwood. The afternoon of April 17 and April 18 were spent conducting transects for the documentation of map unit composition for the Calhoun County Soil Survey. A soil-landscape study was conducted during the morning of April 19 in an area of Blanton soil. I returned to Chester, Pennsylvania, on the afternoon of April 19.

Observations and Comments:

Eddy Cummings and Doug Lewis are qualified GPR specialists. I am most impressed with the skills that they have developed since my last visit. They are knowledgeable of GPR settings needed to

properly calibrate the SIR-8 system and demonstrated a firm grasp of the field techniques needed to conduct soil transects.

This field assistance provided an opportunity for the discussion of new equipment available from the manufacturer, field techniques, and interpretations of radar imagery. The radar specialists were introduced to alternative methods of displaying radar data including cross-sectional graphs, two-dimensional contour plots and three dimensional block diagrams. These techniques are presently available to them for soil-landscape studies through the Field Investigation Staff, NSSC.

Specific accomplishments included:

1. Completion of nineteen transects for the soil survey of Calhoun County.

2. Completion of a reconnaissance survey of the Jackson County landfill and a sinkhole investigation in a residential area of Greenwood, Florida. The landfill survey provided an opportunity for officials of Jackson County to become acquainted with the tools of SCS, while allowing positive news coverage for SCS. The GPR survey was carried on the Panama City evening news and in the Jackson County Floridian (see enclosure 1). The TV interview was conducted by Eddy Cummings.

3. Introduction of radar specialists to grid-mapping procedures. With the assistance of the Blountstown Field Office, laid out and surveyed a 10000 foot area of Blanton soil. The District Conservationists explained surveying procedures, the operation of a engineering level, and the plotting of elevation data to soil scientists.

4. Completion of a small, soil-landscape study in an area of Blanton soil.

Soil Landscape Study:

A 100 x 100 foot area of Blanton sand, 0 to 5 percent slopes, was grid with surveying flags at 10 foot intervals. Ground elevations were obtain with an engineering transit for each grid intersect. Elevations were not tied to a benchmark and therefore the lowest ground surface point within the plot was taken as the 0.0 foot datum.

Blanton series is loamy, siliceous, thermic Grossarenic Paleudults. Depths to the loamy Bt horizon were plotted and scaled from the radar imagery. Enclosure 2 is a computer-simulated surface net diagram of the study site. This figure summarizes the relationship between the topography of the ground surface (A) and the underlying loamy sediments or Bt horizon (B). All measurements on this figure are in feet. Datum is 0.0 feet which is the lowest ground surface elevation in the study plot (x=100, y=90).

With the exception of the southwest corner, the ground surface closely mirrors the topography of the underlying loamy sediments. In the southeast corner, the depths to loamy sediments are slightly deeper and more variable. Here are found the included areas of Foxworth (thermic, coated Typic Quartzipsamments) soils.

Enclosure 3 represents two-dimensional contour maps of the study area. A contour map of the surface elevations has been constructed in "A". The contour interval is one foot. The ground surface slopes at a fairly uniform rate towards the northeast.

The depths to loamy sediments has been reconstructed in enclosure 3, "B". All depths are in inches. The small included area of Foxworth soil (>80 inches to loamy sediments) is evident along the lower left-hand border. Foxworth soils occupy about 4 percent of the study area.

Depths to loamy sediments vary slightly within the study area. Depths ranged from 48 to 93 inches. The lower quartile was 58 inches and the upper quartile was 66 inches. One-half the observations occurred within the interquartile range of 58 to 66 inches. The average and median depths to loamy sediments were 62 inches. As shown in enclosure 4, within the study area, fifty-one percent of the observation sites had loamy sediments between 40 and 60 inches and fifty-five percent had loamy sediments between depths of 60 and 80 inches.

This study was completed to acquaint radar specialists and field soil scientists with the field procedures needed to develop computer graphic models for segments to the soil landscapes. Additional copies of the graphs have been sent to Eddy Cummings for distribution to Jeff Allen.

I benefited from and deeply enjoyed the opportunity to return to Florida and work with members of your fine staff. With kind regards.

James A. Doolittle

James A. Doolittle
Soil Scientist (GPR)

cc:
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CITIZEN
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DRAWING LINES
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CJC
Indians drop twinbill — see page 5A

JACKSON COUNTY FLORIDAN

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WEDNESDAY April 19, 1989

Terrorist attack may loom in Atlantic City

NEWARK, N.J. (AP) – Two men believed to be planning a terrorist attack on Atlantic City have prompted a full-scale alert by state and local police, a newspaper reported today.

The attack reportedly was to be a retaliation against the United States for its April 14, 1986, bombing of Libyan leader Moammar Gadhafi's headquarters. The attack killed Gadhafi's infant daughter.

Sources told the newspaper that the terrorists were supposed to be traveling from New York to the casino resort with accomplices ready to help them escape through Mexico.

Listen to mom

UNIVERSAL CITY, Calif. (AP) – Gov. George Deukmejian is urging Californians to listen to their mothers.

The governor joined Jackie Stallone and Georgia Holt, the mothers of actors Sylvester Stallone and Cher, in kicking off a campaign on Tuesday to promote ride sharing and van-pool programs to help unclog freeways.

But he was a little late because of traffic congestion.

The campaign will feature the theme of rather universal motherly sayings. One advertisement depicts a woman who says: "We're not the first one to try to talk some sense into you about sharing."

Oil spill hearing starts today

WASHINGTON (AP) – The Alaska oil spill cleanup is under renewed scrutiny by Congress today, with Bush administration officials facing sharp criticism over the slow and sometimes confusing response by federal agencies.

Transportation Secretary Samuel Skinner, one of the administration's point men in the oil spill recovery, was to be the leadoff witness at a hearing by the Senate environmental protection subcommittee.

'Street justice' praised

JACKSONVILLE, Fla. (AP) – A judge has commended a 75-year-old disabled man who fought back and stabbed a man who tried to rob him on Christmas.

Circuit Judge R. Hudson Olliff praised Doc Steward's actions as "street justice" and Tuesday imposed a 10-year prison term on Steward's assailant, Danny Lamar Daniels, 38.

Battleship reports fire

NORFOLK, Va. (AP) – Fire broke out aboard the Navy battleship USS Iowa after an explosion this morning, officials said.

The explosion at occurred about 10 a.m. on one of the battleship's 16-inch gun turrets as the ship was taking part in a gunnery exercise about 330 miles northeast of Puerto Rico, Atlantic Fleet spokesman Lt. Commander Steve Burnett said.

The extent of damage and injuries was not known, Burnett said. He said a gun turret is normally occupied by 27 people.

Another Norfolk-based carrier, the Coral Sea, was nearby, Commander John Woodhouse said.

Stocks reach high

NEW YORK (AP) – The stock market has surged to a post-crash high, sparked by news that consumer prices rose 0.5 percent in March.

The Dow Jones average of 30 industrials shot up 41.81 points to close Tuesday at 2,379.40. It was the highest close since the October 1987 stock market crash. The Dow's previous post-crash high was 2347.14 on Feb. 7.

ALSO TODAY

Ann Landers	5B
Classified	7B
Comics	6B
Dr. Gott	5B
Editorial	4A
Lifestyles	1B
Goin's On	3B
Obit&Police	2A
Scoreboard	5A
Sports	5A
Weather	2A
Cash 3	4-5-4

Got a driver's license? Go to court

TALLAHASSEE, Fla. (AP) – Although two bills dealing with driver's licenses suffered different fates in House committee action, both involved close votes.

A pilot program to put all drivers on jury duty lists was approved by the House Judiciary Committee with an 11-10 vote Tuesday morning. Later in the day, a proposal to make first-time applicants for licenses prove they are drug-free died in the House Highway Safety Subcommittee by a 3-2 margin.

Currently, only registered voters are called for jury duty. Approximately 6 million Florida residents are registered to vote, and approximately 10 million are licensed to drive.

The bill approved by the committee would combine those two groups for Florida's jury pool in two pilot programs. The location of the programs would be decided by the state Supreme Court.

Rep. Bruce McEwan, R-Orlando, said the proposal was loaded with problems.

"Criminal defense lawyers are going to have a ball with this one," he said. "Because as soon as they get a conviction, the first thing they do is investigate that jury. They just find one person that shouldn't be on that jury, who isn't a citizen or is underage, they've got a new trial."

McEwan predicted problems were likely to surface with "the felons, with the green-carders, the illegals, the under-16s, the multi-state license problem." All of those mentioned by McEwan would be able to obtain drivers' licenses, but are not allowed to vote.

An identical measure is being considered in the Senate.

Meanwhile, the sponsor of the defeated bill said he wasn't giving up all hope.

"We'll be back, of course, with this proposal to see if we can convince more members," said Rep. John Renke, R-New Port Richey.

Renke said he would probably try to add the proposal to some of the other criminal justice bills that are being worked on. Renke said he thought his legislation would have fared better in both the full Highway Safety and Construction Committee and the full House.

Rep. Jack Ascherl, who chairs the subcommittee, cast the deciding vote.

"Overall, I think it just won't fly," said the Democrat from New Smyrna Beach.

Gov. Bob Martinez proposed the concept several weeks ago. A companion bill is still alive in the Senate.

Under the legislation, first-time applicants for driver's licenses would have to provide proof that they had tested negatively for drugs within the 30 days before the written and road tests.

Applicants would have to pay for their own tests, which they could have administered by their private physicians or by drug-testing clinics.

Paying tribute to freedom

By JONATHAN DECKER
Floridan Staff Writer

Freedom is something that many people take for granted: not the Marianna Optimist Club, however.

The club, which works for the betterment of youth, sponsored the third annual "Freedom Forum" yesterday at Chipola Junior College to promote patriotism and traditional American values among Jackson County high school students.

"We feel that traditional values of religious beliefs, free enterprise and value of the Constitution are declining, so the Marianna Optimist Club sponsors the Freedom Forum to restore traditional values and send an anti-drug message," said Paul Huang, chairman of the event. "If we don't value and protect our freedoms, we may just lose them."

Huang knows what he is talking about, being from Taiwan and having become an American citizen in 1970. The anti-drug message strikes pretty close to home for Huang, who cites an example from Chinese history from which Americans could learn.

"China 400 years ago was the center of technology and one of the most advanced civilizations, but when the Chinese people started smoking opium, things went downhill," he said. "China has yet to recover."

Speakers from The Spirit of Freedom, an organization that goes around the county promoting American values, were on hand at the forum to share their experiences with 11th grade students from Jackson County's six high schools.

"The decisions you make will have long-range effects on your life," said Lt. Dick Weber of the Atlanta Police Department. "The decisions you make will affect other people for better or worse."

Weber then did some role-playing with students from the audience involving drug use and teenage pregnancy, showing that drug abuse not only hurts them, but their parents as well. In addition, pregnancy not only affects the young people, but their your parents and grandparents as well.

"We can't go through life without affecting other people. Patrick, what would you do if someone hurt your mother?" Weber asked Patrick Bryant, a student at Marianna High School. Bryant responded that anyone hurting his mother would not remain healthy very long.

Weber then had Bryant role-play a conversation with his mother in which he was arrested for smoking marijuana.

"By smoking marijuana, you hurt your mother, and what did you say would happen to people who hurt your mother?" Weber asked.

Weber said also that decisions you make affect people you don't even know, citing his own experience involving his daughter in which a drunk driver caused an accident that made her permanently disfigured.

He also spoke on a positive note, stressing the importance of education and hard work.

"I've been speaking to kids since 1970," Weber said after the program. "I try to show them that the decisions they make while they're young affect where they're going with their future."

Weber added that some people had come up to him 15 years after a speaking engagement, telling him that they had straightened their lives around.

"The change comes from within, not without," he said. "I only provide the stimulation for the 'within' to work. Drugs are only a symptom of the problem. A lot of it has to do with self-esteem. If young people have self-esteem, they don't seek outside stimulation to become something they are not."

Also speaking at the engagement were Beverly Dowdy, who works with Florence, Ala., city schools in their drug-free schools program, and Pete McCoy, executive director of Spirit of Freedom, Inc., who spoke on patriotism.

Freedom Forum

Lt. Dick Weber of the Atlanta Police Department role-plays with Marianna High School student Patrick Bryant to drive home a point on drugs and individual responsibility.

Soil Experts

Several soil conservation officials were in Jackson County yesterday morning at the county's request to investigate the possibility of sinkhole features at the Jackson County Landfill East. Shown is soil scientist Ila (r) as two soil specialists look on. The group used radar to detect the presence of additional sinkholes or cavities adjacent to the site; however, no traces were found.

Radar: County inspects landfill to see if more sinkholes loom

By MARTHA WILLIAMS
Floridan Staff Writer

A group of soil conservation scientists and specialists used radar to survey the now-closed Jackson County Landfill East yesterday, but found no other traces of sinkholes within or around the area.

At the county's request, soil conservation officials were invited to the landfill to conduct a non-detailed "wildcat" survey and to get an overall view of what's on the site, at no cost to the county.

The area was probed at a depth of about 10 to 12 feet using radar, which shoots signals down to the soil. A printout is then produced, giving a recorded reading of the signals transmitted by the radar.

The sinkhole area surveyed lies adjacent to the landfill site ordered closed by the Florida Department of Environmental Regulations in 1987. After a trip around the perimeter of the landfill using the radar box, no traces of sinkholes or cavities were discovered.

County officials reported recently that a sinkhole had formed near the now-closed site. Some reports suggest the crater is 85 feet wide in some areas.

The radar helps detect cavities and sinkholes which are not readily detected by the naked eye. With the radar, there is no way of detecting whether a future sinkhole will develop, but it can detect what's currently on the site.

According to soil scientist Jim Doolittle, who is considered one of the nation's top authorities on the subject, the radar is very reliable under any weather conditions and is also faster and economical for soil survey.

"What we found today was nothing major," Doolittle said. "If a major cavity had been hit, it would show up greatly on the radar printout."

The radar, providing a unique form of ground penetration, prints out at subsurface conditions. Attached to the trailer hitch of the vehicle is a durable box-like structure which houses the radar antenna. Inside the vehicle is a graphic recorder and mainframe.

County Administrator Ernie Padgett said this type of testing about 10 or 12 years ago would've raised more concerns about the landfill site, and it's possible that an alternative site could have been selected.

The use of radar to detect sinkholes dates back to the 1970s. However, the first ground-penetrating radar unit wasn't brought to Florida until 1981. Since then, three new units have been added in the state. The units are used more in Florida because of the clay soil content.

Several county officials are meeting with DER in Pensacola today to let them know what the county plans to do about the existing sinkhole at the landfill.

Florida motorists hung up in traffic

TALLAHASSEE, Fla. (AP) – Florida motorists – already frustrated by traffic snarls – may be soon confronting worse conditions if lawmakers don't come up with more money for the state's transportation needs, a business group predicts.

Floridians for Better Transportation on Tuesday cited a study by a national research group that recommended Florida spend an additional $1.4 billion annually to keep up with its road needs.

"Florida simply cannot grow as it has and expect state transportation revenues to remain constant," said Don Crane, president of the group. "It's a formula for disaster."

"A gas tax increase of even 10 cents per gallon is actually cheaper than driving Florida roads under current conditions," said Crane, who estimated the new tax would cost an average driver about $50 more each year.

House tries to gauge Wright fallout

WASHINGTON (AP) – House Democrats, looking warily toward the task of judging Speaker Jim Wright's ethics, have heard his defense and now turn their ears to their constituents.

"When this hits the [House] floor, it's not going to be about justice," lamented Rep. Ron Dellums, D-Calif. "It's going to be about how it will play in Peoria."

Members began spreading across the nation to their home districts after the House adjourned Tuesday for a long Passover holiday weekend.

Before they left, Wright worked hard to fortify Democrats for the inevitable onslaught of questions they will face during the town meetings, picnics and barbecues of hometown politics.

Wright, knowing he had to talk to his members before they hit the road, had committee chairmen cancel any meetings that conflicted with a special caucus of all House Democrats.

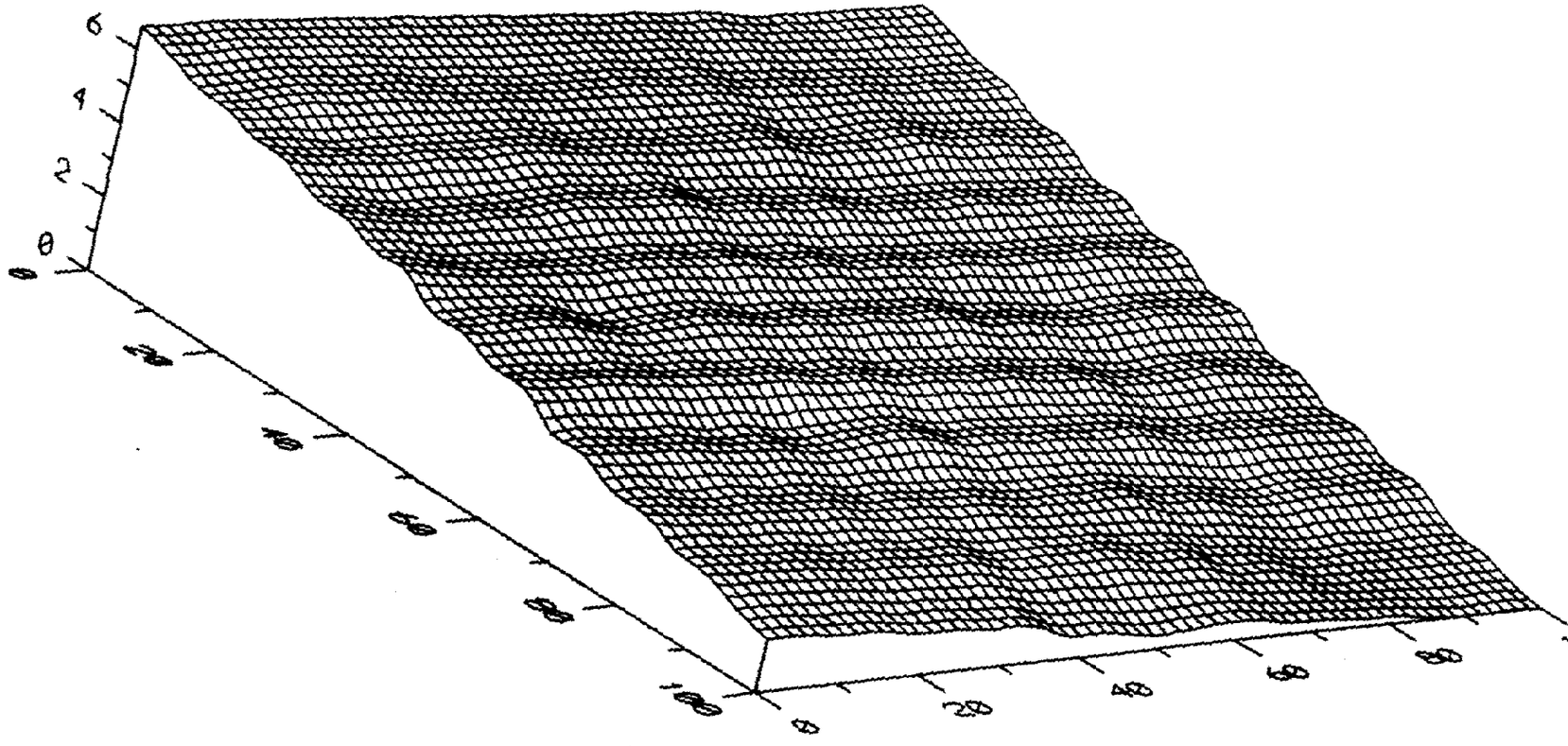
He spoke for 40 minutes in the closed session, disputing the ethics committee charges that he violated House rules in 69 instances involving his unusual book publishing deal and his benefits from a business partnership.

"I told them I intend to fight and I intend to win," he said.

Supporters were charged up. "There's a lot of outrage about how this whole process has become a Frankenstein" that's consuming Congress, said Rep. James Scheuer, D-N.Y. "There's never any allegation that he did anything with corrupt intent."

Ethics committee members said Tuesday the committee's work might last into June.

Jim Wright



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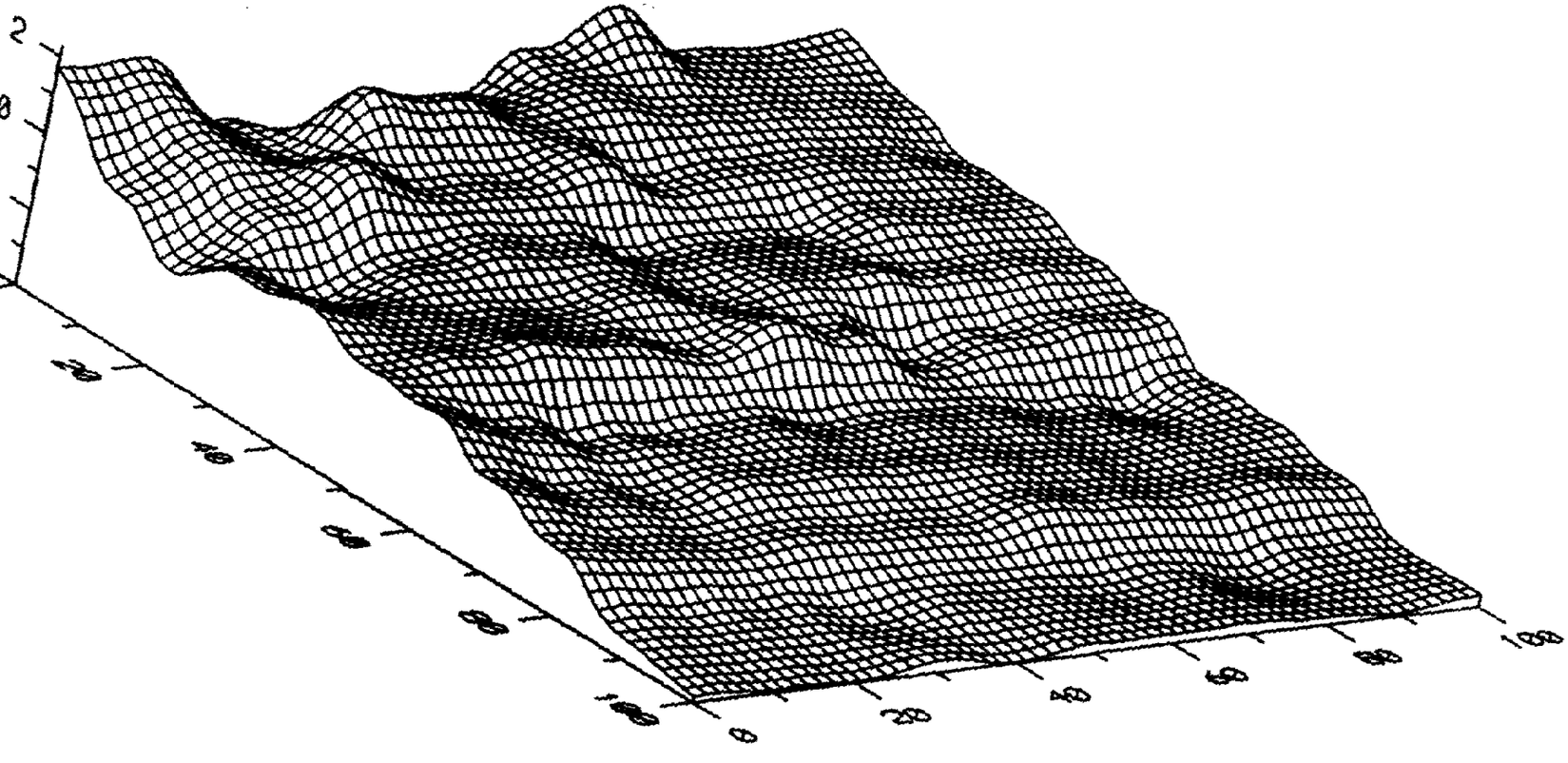

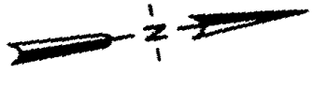

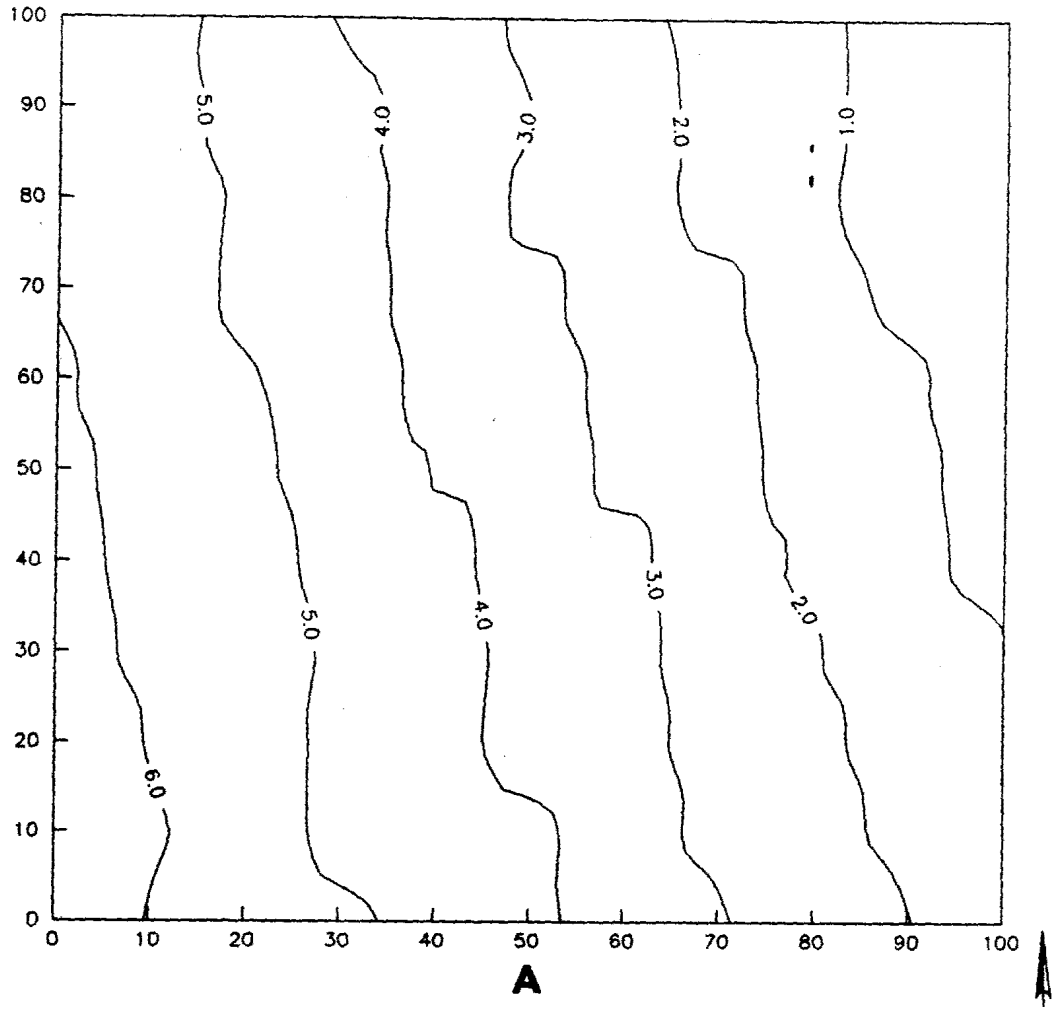
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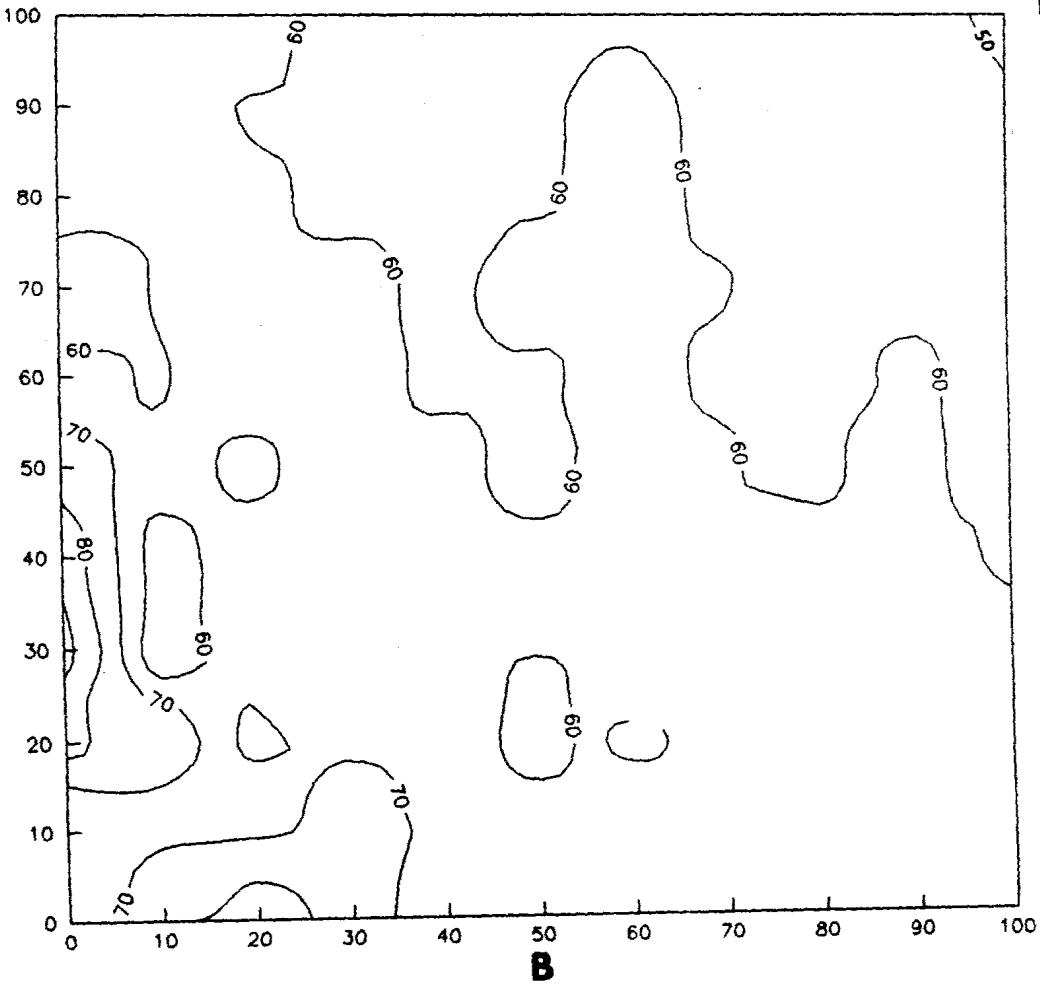
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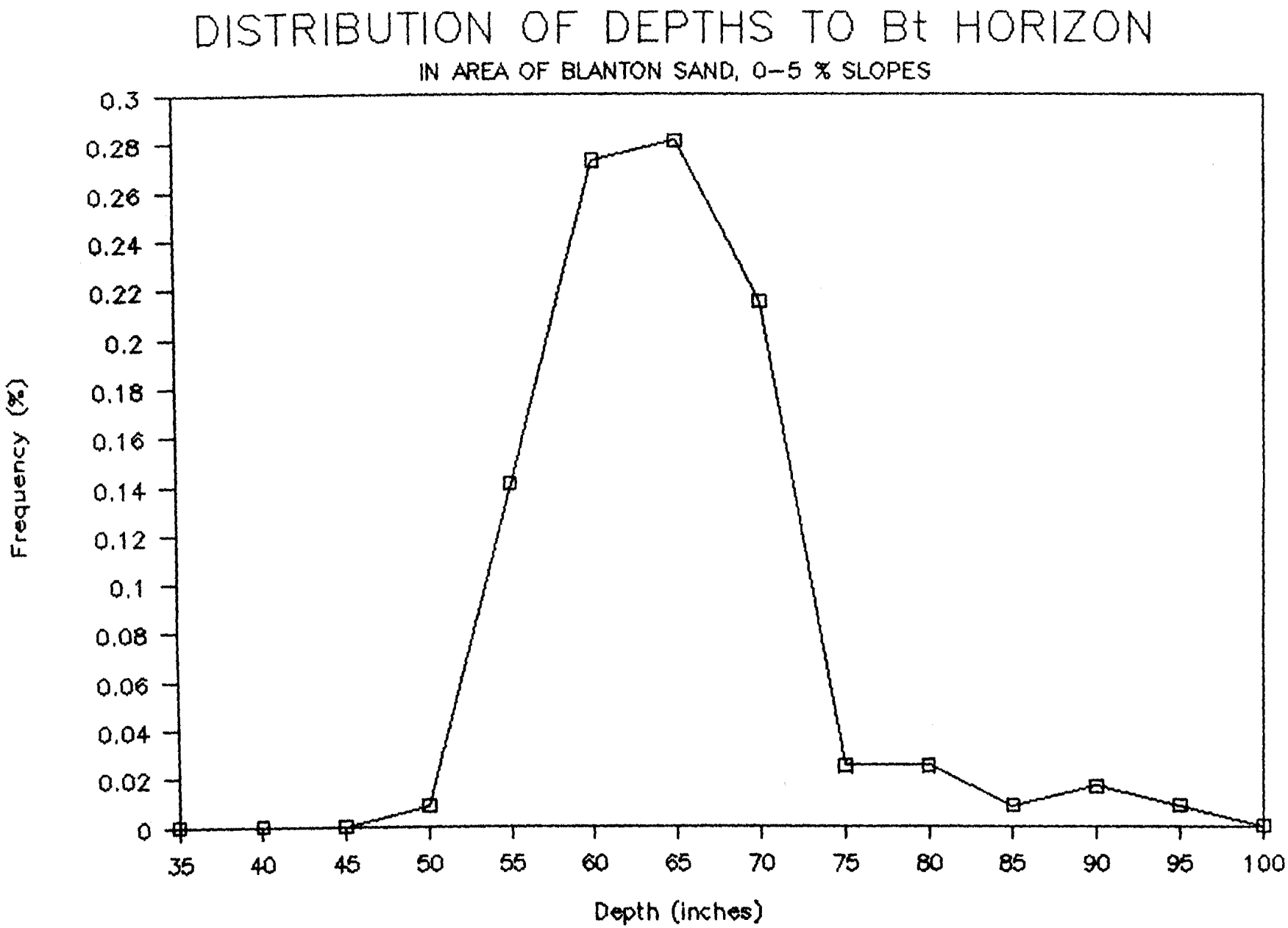
DISTRIBUTION OF DEPTHS TO Bt HORIZON
IN AREA OF BLANTON SAND, 0-5 % SLOPES
Frequency (%)
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Depth (inches)