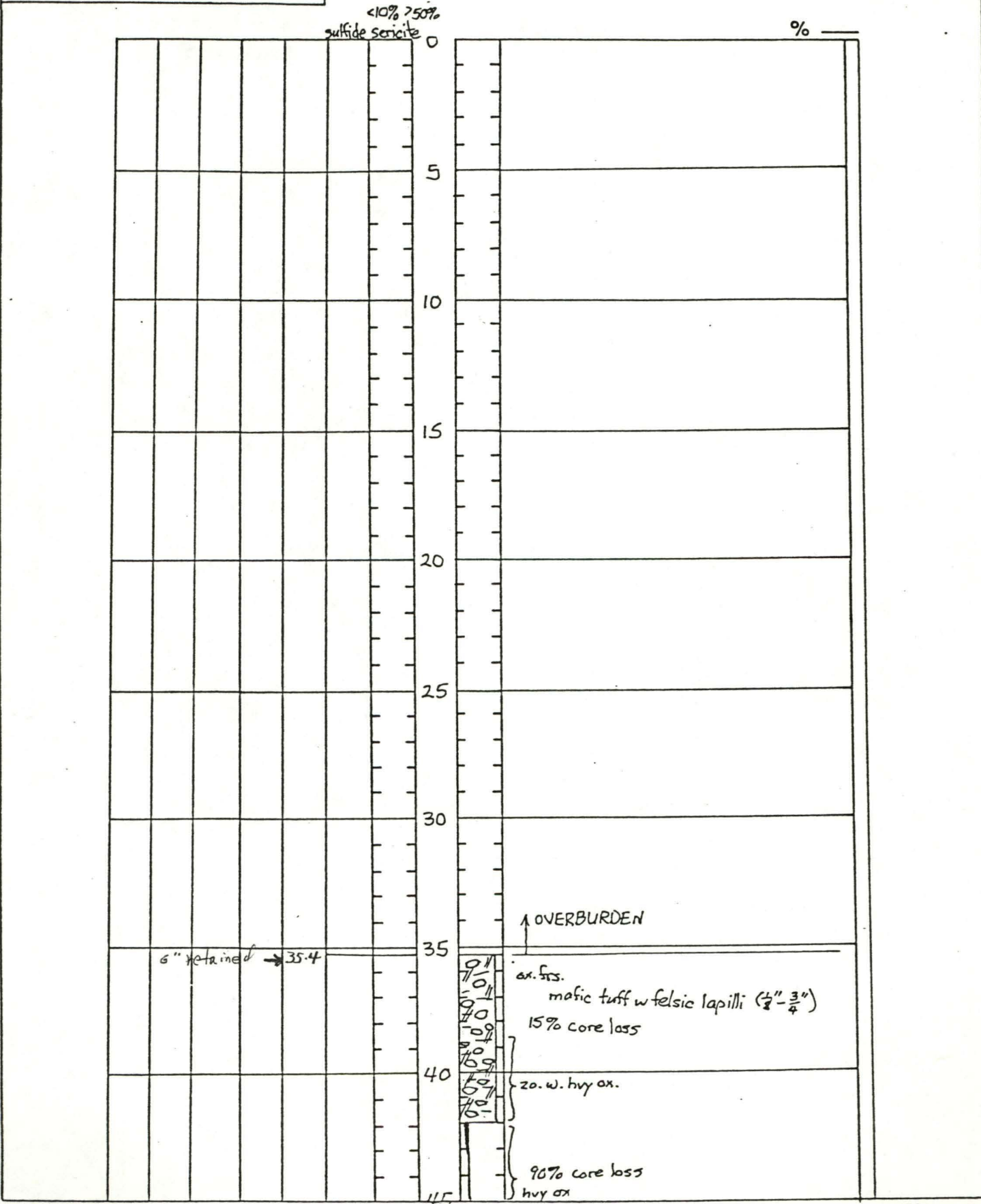


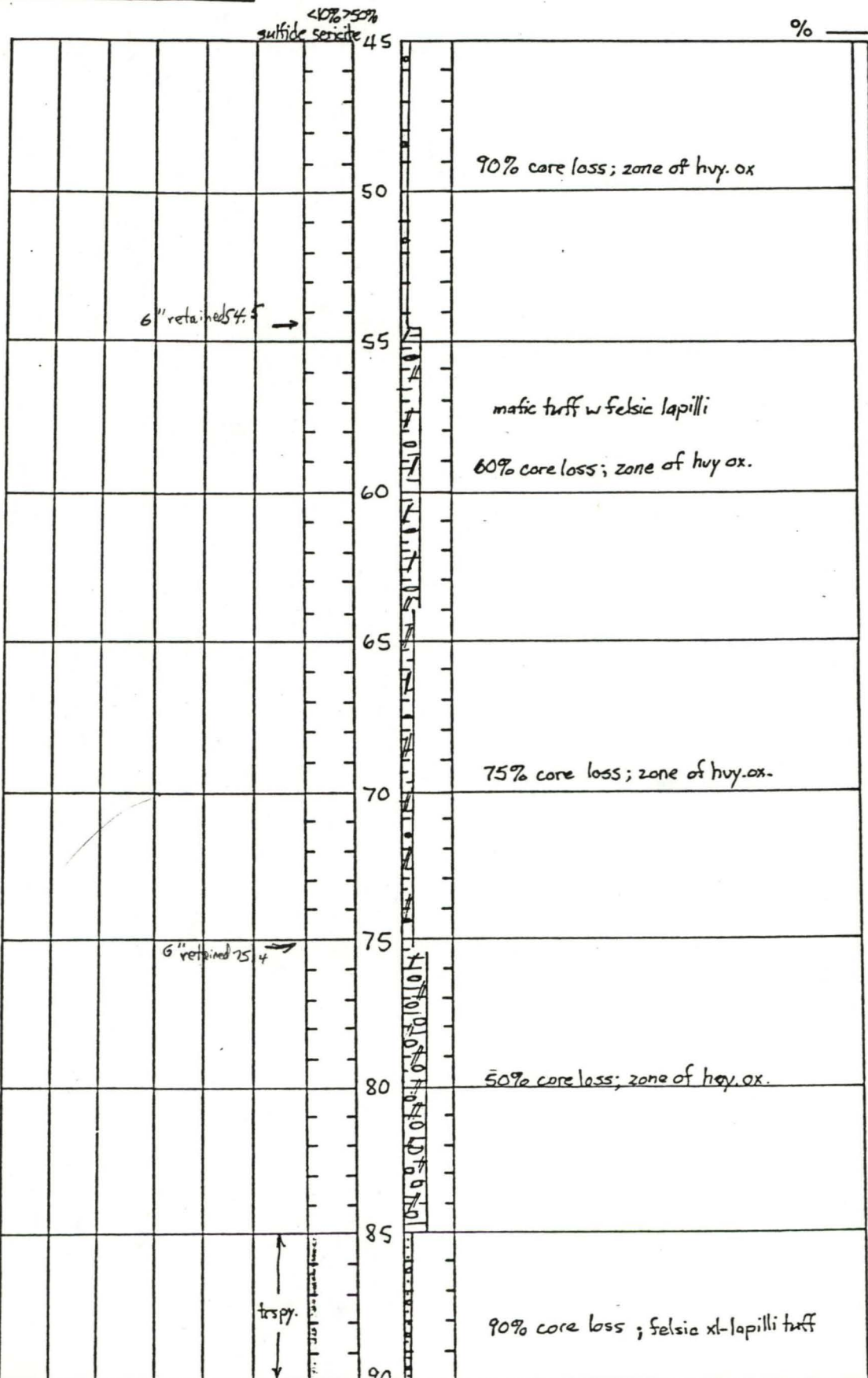
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 County RANDOLPH State N.C. Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates 354420, 800110  
 Elev. 610' Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started     /     /     Completed     /     /     Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



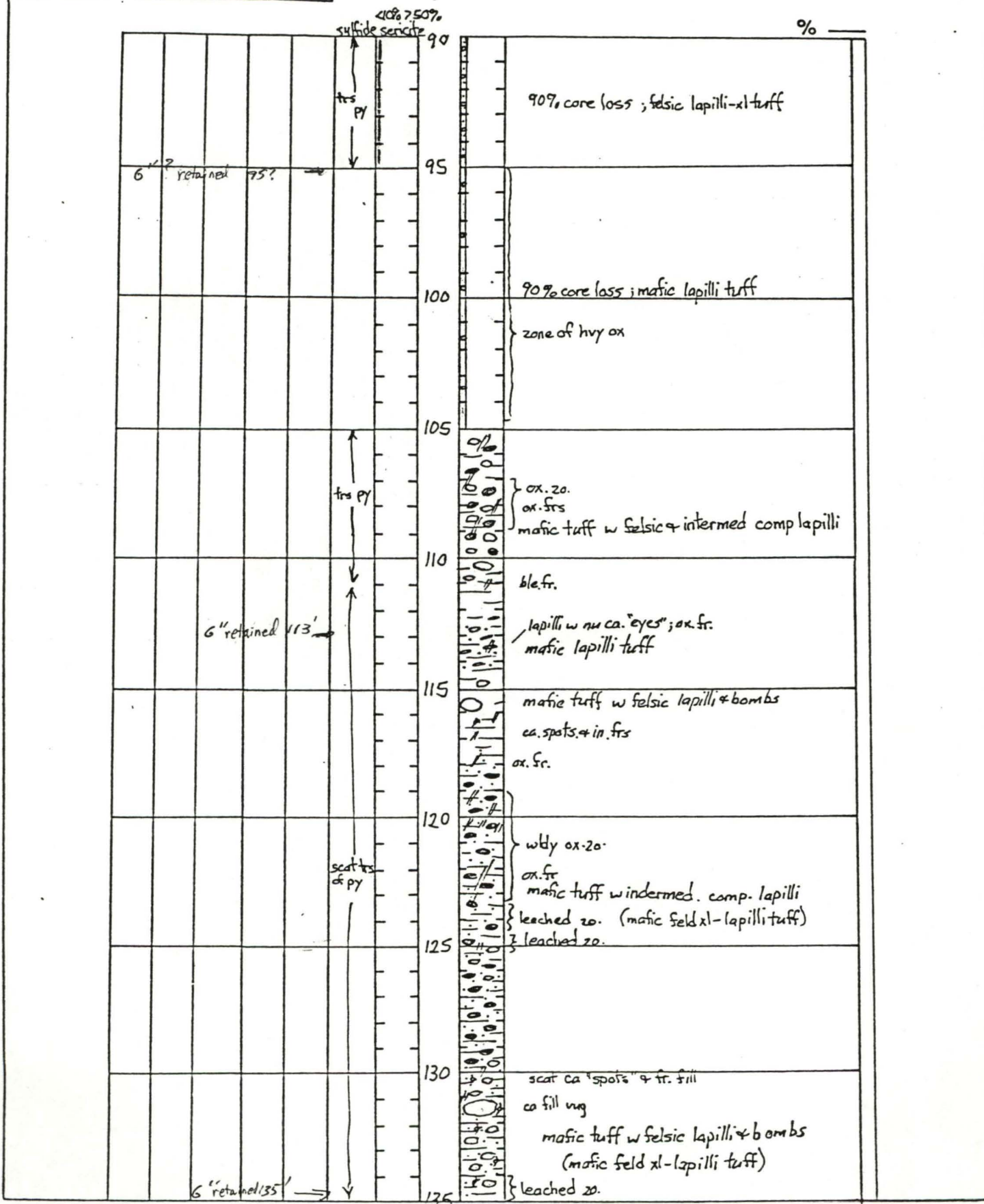
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started     /     /     Completed     /     /     Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



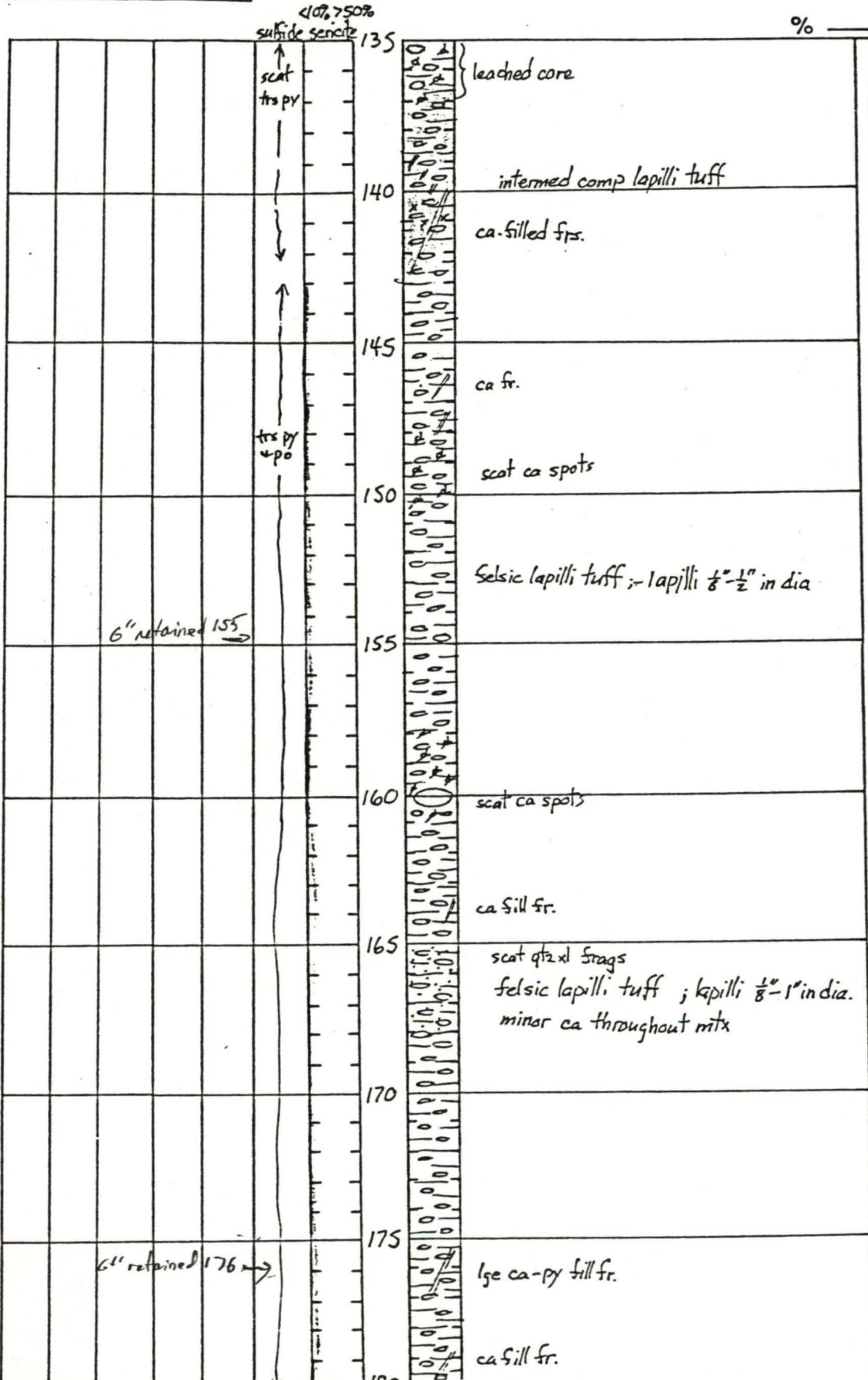
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Completed \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



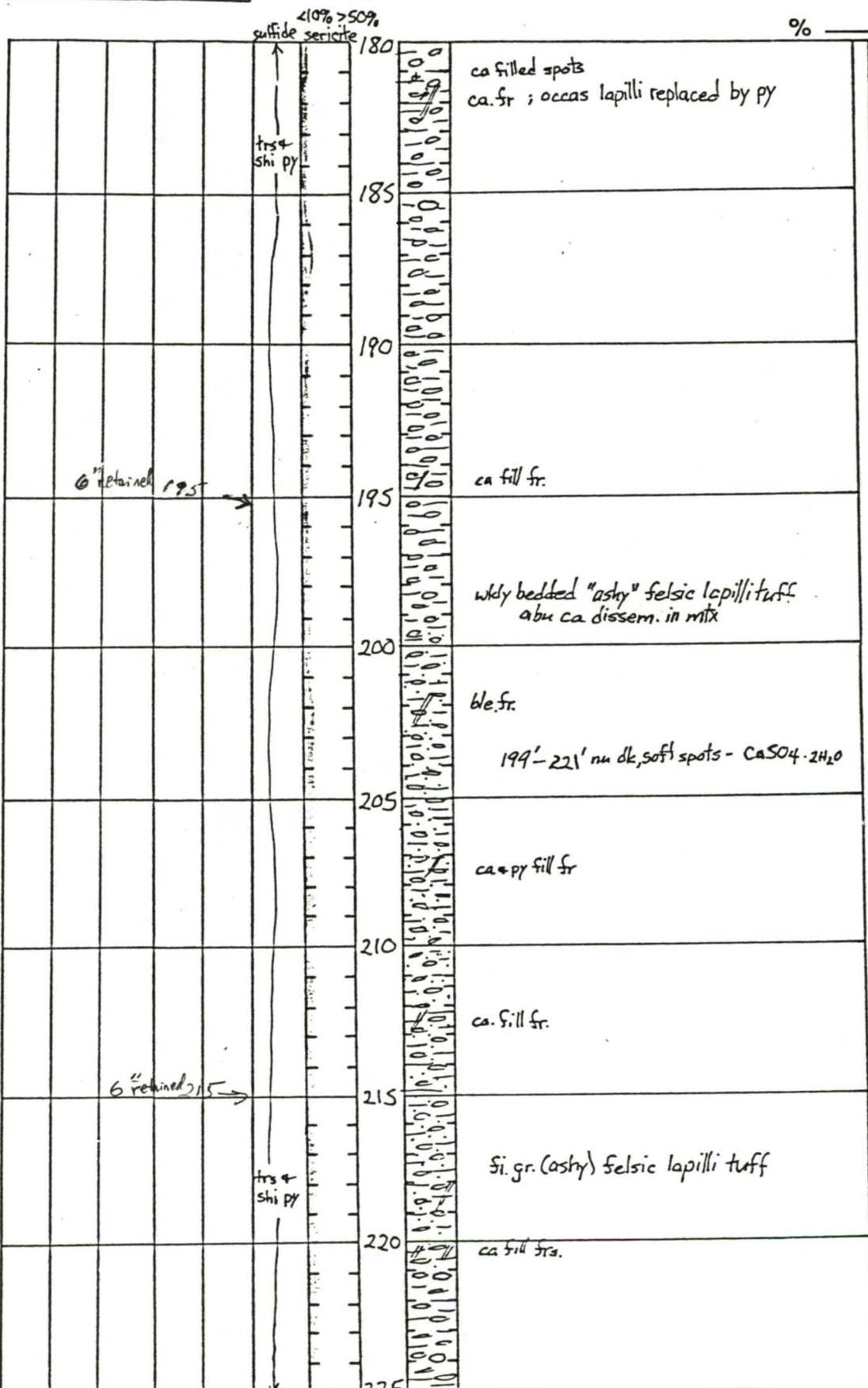
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started   /  /   Completed   /  /   Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



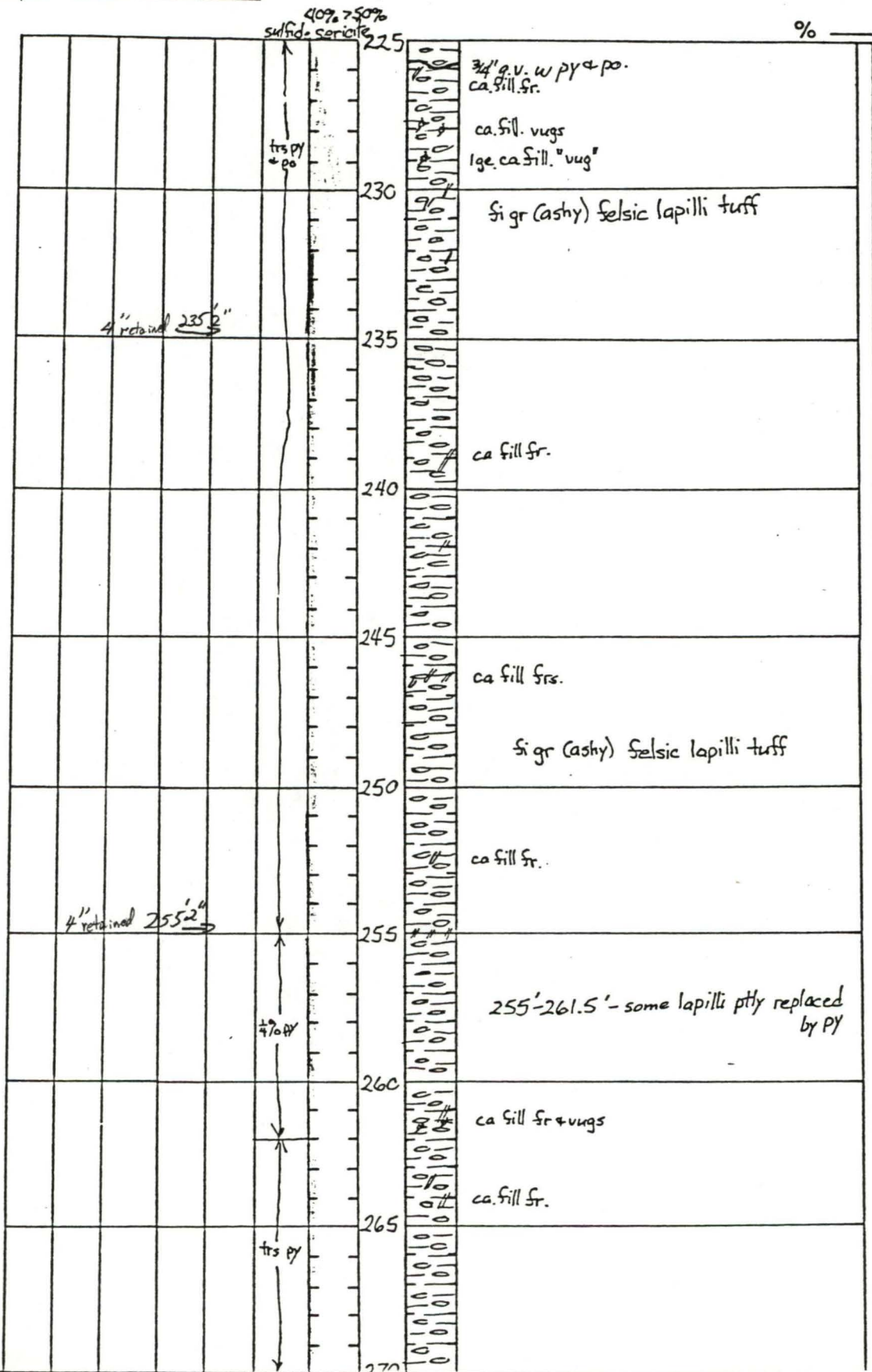
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started   /  /   Completed   /  /   Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



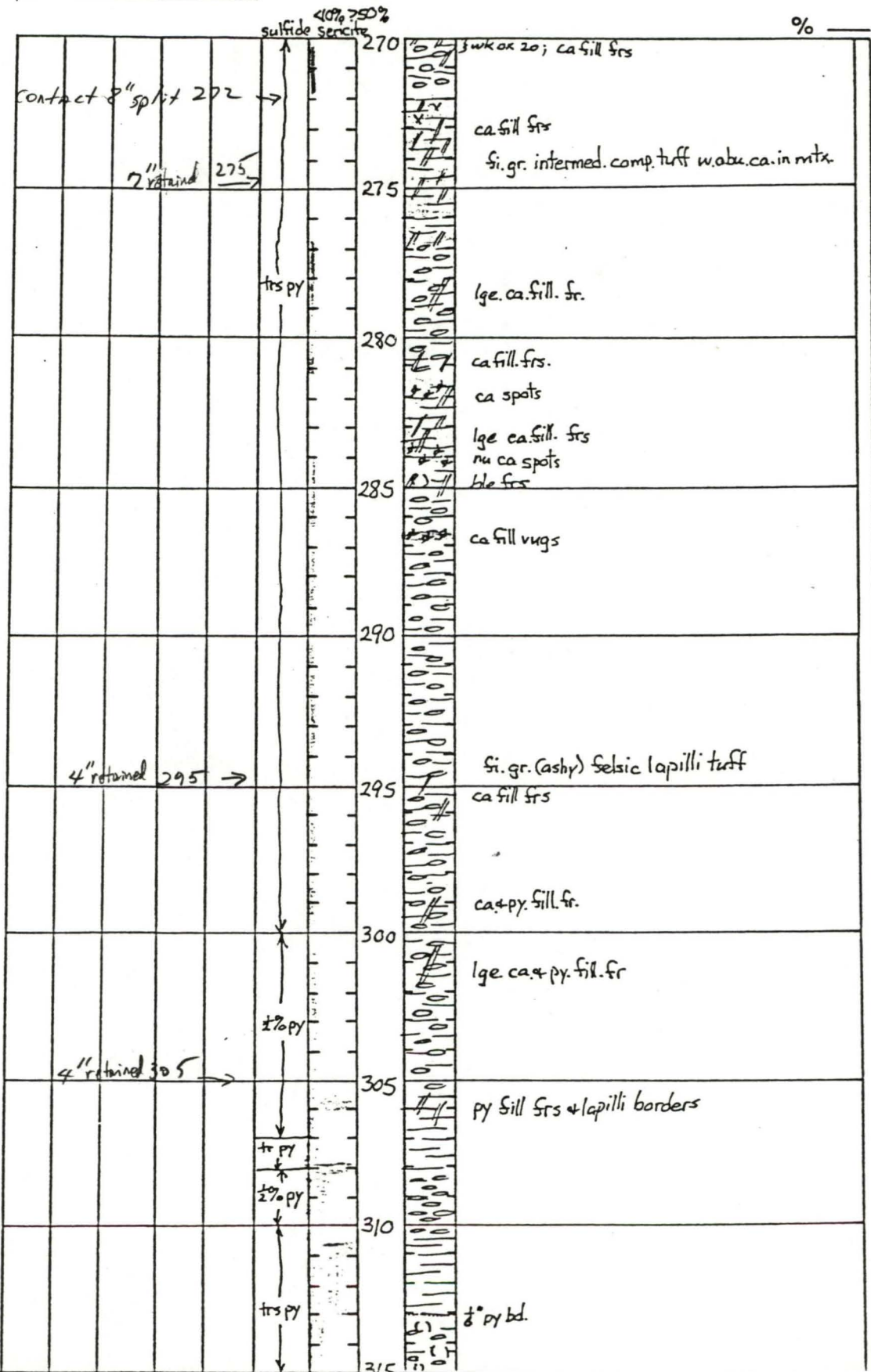
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started     /     /     Completed     /     /     Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



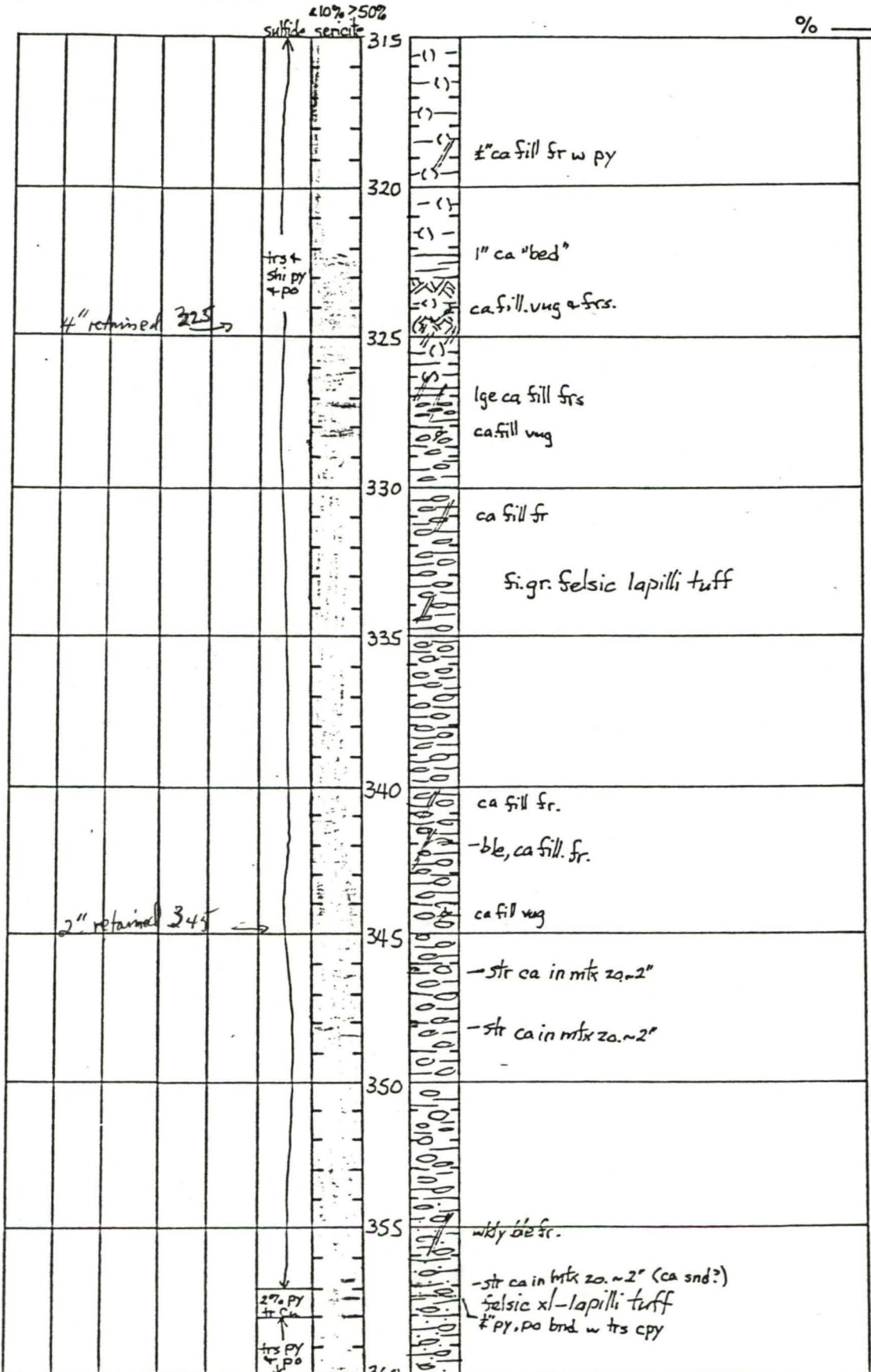
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started     /     /     Completed     /     /     Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



Hole No. GNJK-2 Property \_\_\_\_\_ Area Jones-Keystone Au Project  
 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

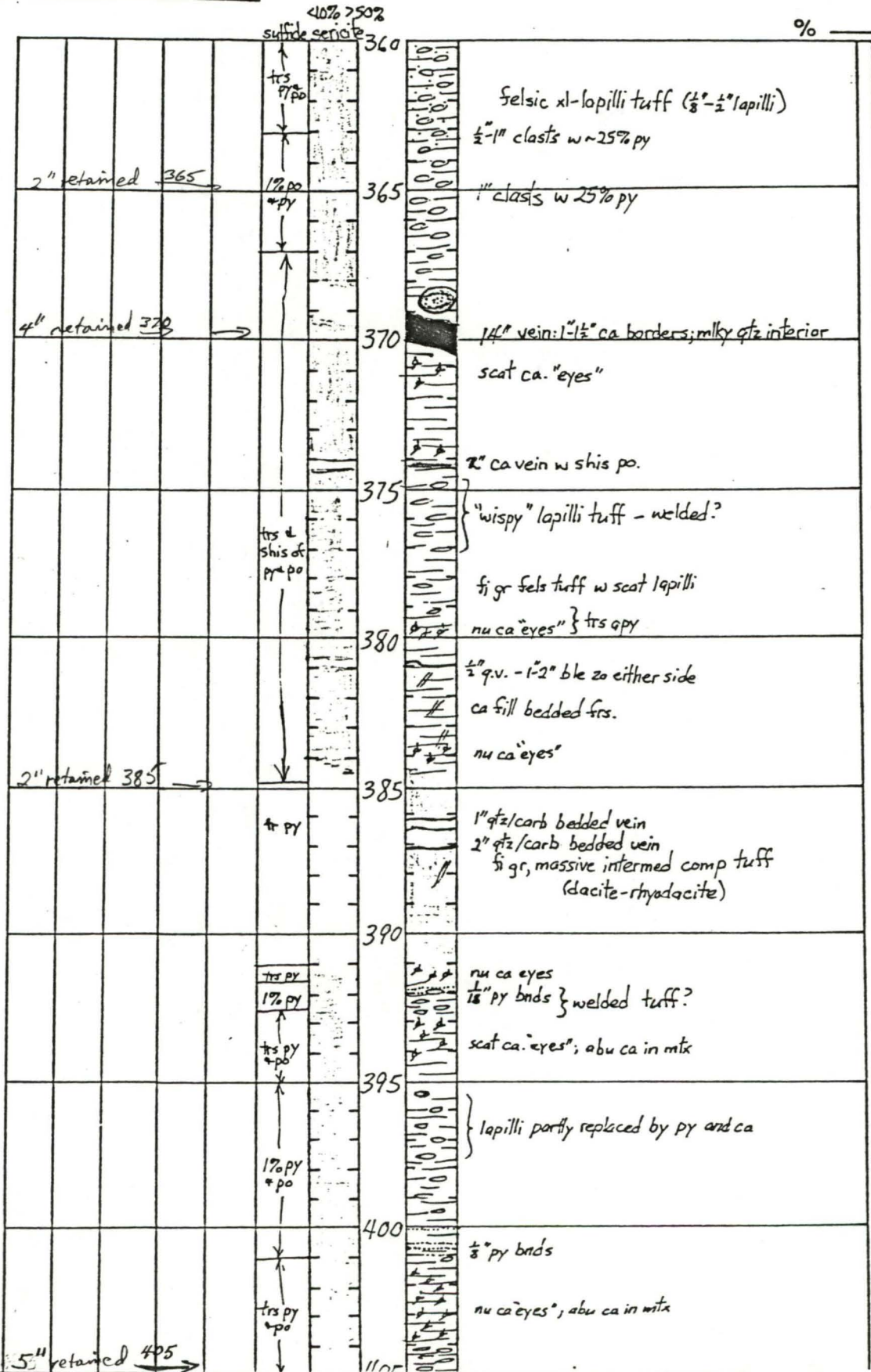
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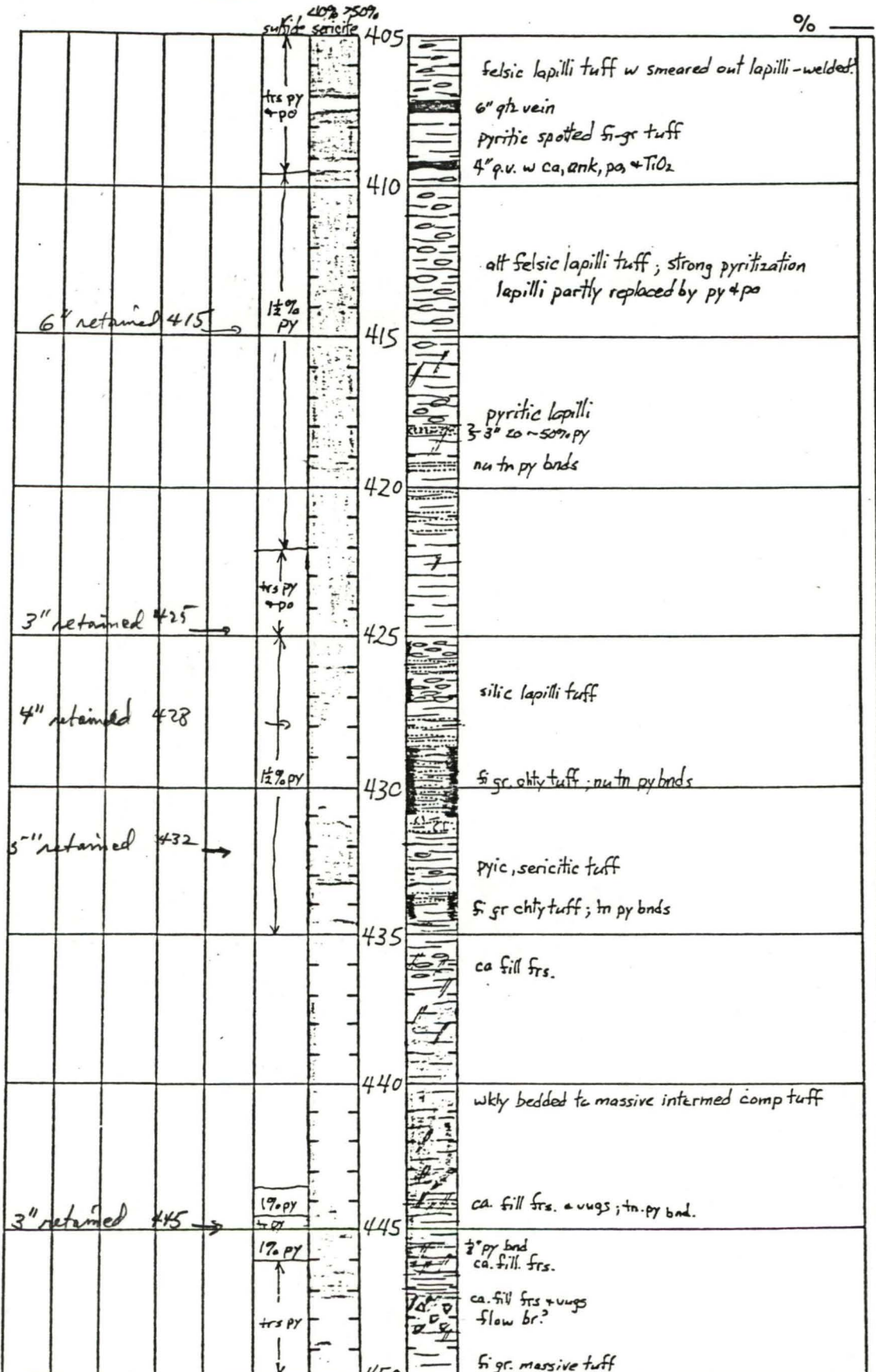
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 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started 1/1 Completed 1/1 Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By T.A. Paris



Hole No. GNJK-2 Property \_\_\_\_\_ Area Jones-Keystone Au Project  
 County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_  
 Coordinates \_\_\_\_\_  
 Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started     /     /     Completed     /     /     Casing \_\_\_\_\_  
 Core Disposition \_\_\_\_\_ Logged By J.A. Paris



Hole No. G.NJK-2 Property \_\_\_\_\_ Area Jones-Keystone Au Project

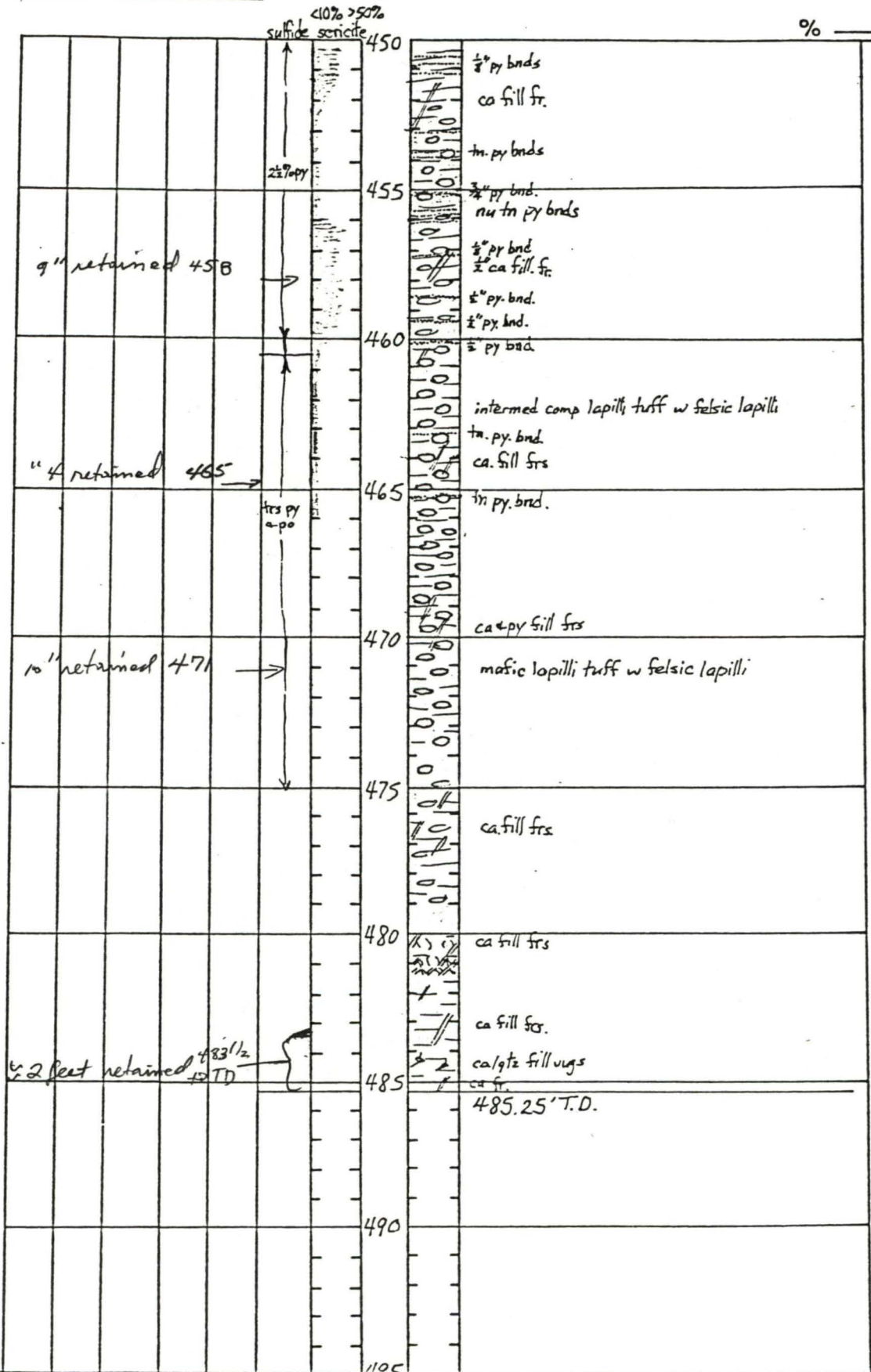
County \_\_\_\_\_ State \_\_\_\_\_ Quad \_\_\_\_\_ T. D. \_\_\_\_\_

Coordinates \_\_\_\_\_

Elev. \_\_\_\_\_ Bearing \_\_\_\_\_ Incl. \_\_\_\_\_ Contractor \_\_\_\_\_

Started     /     /     Completed     /     /     Casing \_\_\_\_\_

Core Disposition \_\_\_\_\_ Logged By T.A. Paris



<u>SAMPLE #</u>	<u>INTERVAL</u>	<u>THICKNESS</u>	<u>SPLIT FOR</u>
1	330-335	5	— FOLIATION — ↓
2	335-340	5	
3	340-345	5	
4	345-350	5	
5	350-355	5	
6	355-360	5	
7	360-365	5	
8	365-370	5	
9	370-375	5	
10	375-380	5	
11	380-385	5	
12	385-390	5	
13	390-395	5	
14	395-400	5	
15	400-405	5	
16	405-410	5	
17	410-415	5	
18	415-420	5	
19	420-425	5	
20	425-430	5	
21	430-435	5	
22	435-440	5	

# Blue Ridge Analytical Laboratory, Inc.

Post Office Box 7545 • Charlottesville • Virginia • 22906 • 804-973-4353

April 10, 1980

Job No. 780

U.S. Borax & Chemical Corp.  
P.O. Box 10831  
Knoxville, Tenn. 37919

Attn: Harry Dunn

Submitted by: Bill Szymanski

## Certificate of Analysis

DRILL CORE

There are 22 rock samples analyzed as follows:

<u>Sample Number</u>	<u>ppm Au</u>	<u>Sample Number</u>	<u>ppm Au</u>
GNJK-1	.25	GNJK-12	.25
GNJK-2	.20	GNJK-13	.35
GNJK-3	.22	GNJK-14	.28
GNJK-4	.26	GNJK-15	.38
GNJK-5	.31	GNJK-16	.18
GNJK-6	.28	GNJK-17	.23
GNJK-7	.23	GNJK-18	.37
GNJK-8	.22	GNJK-19	.16
GNJK-9	.23	GNJK-20	.21
GNJK-10	.25	GNJK-21	.21
GNJK-11	.21	GNJK-22	.20

GNJK-2

Respectfully submitted:

*Donald W. Foss*

Donald W. Foss  
President

DWF:jaw

Samples are GNJK 2-

600SW —

700SW —

800SW —

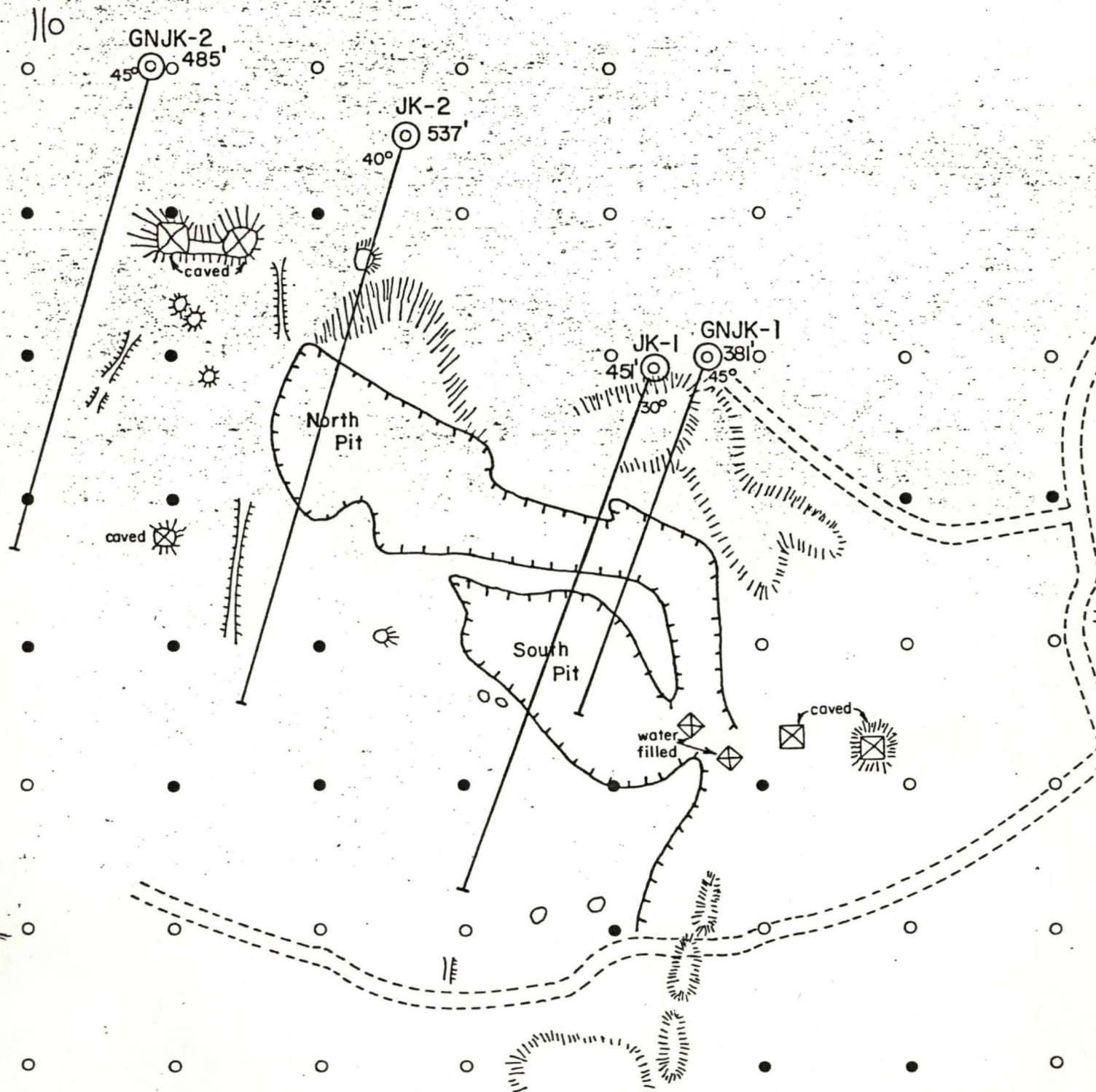
900SW —

000SW —

100SW —







200SW —

SN —



RA-C-1-80 GNJK-1  
✓ RA-C-2-80 GNJK-2

### LEGEND

- GNJK-1  U.S. Borax D.D.H.
- JK-1  Asarco D.D.H.
-  500' Total Depth
-  48' Inclination
-  Soil Sample less than .1 ppm Au
-  Soil Sample greater than .1 ppm Au

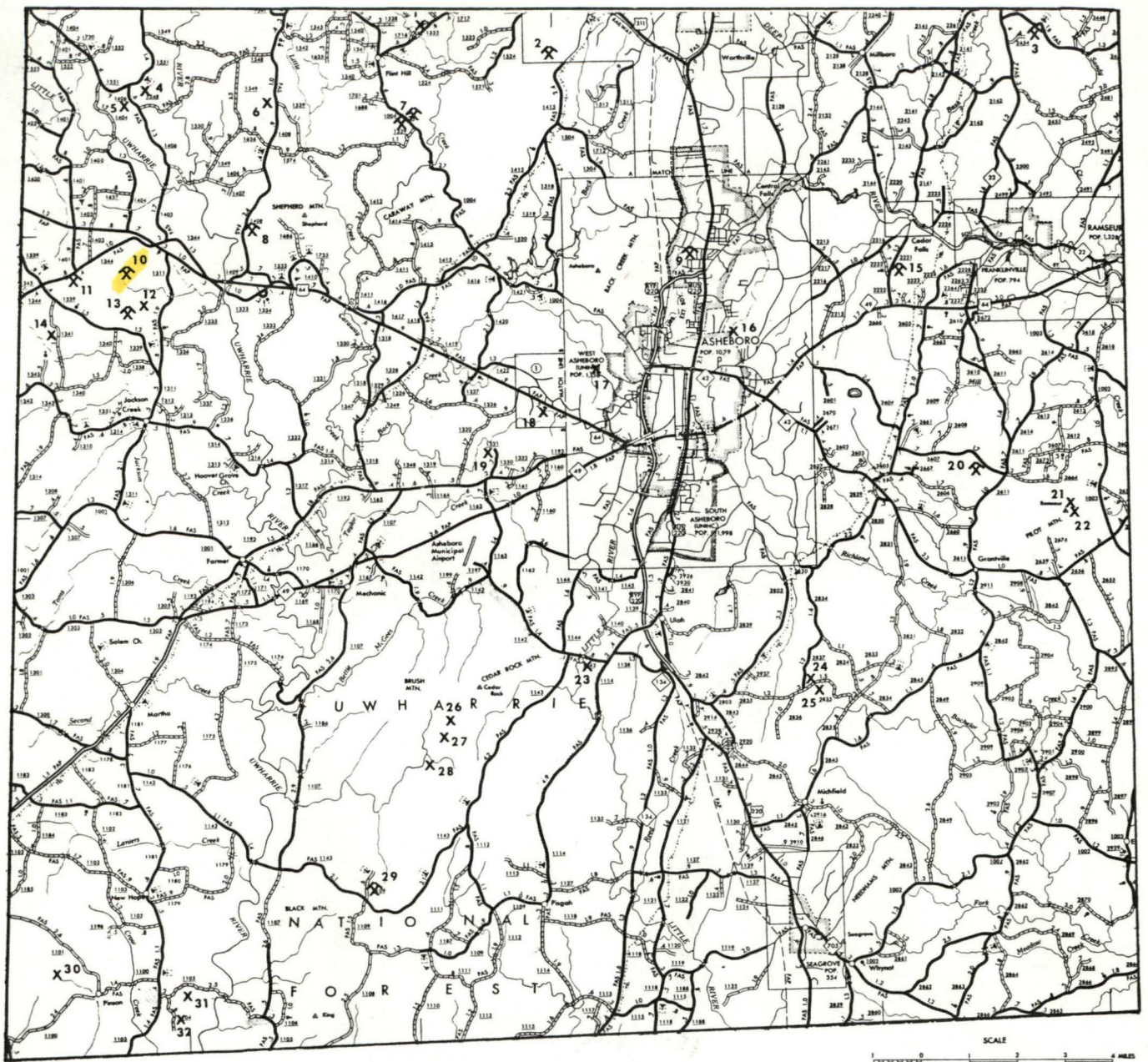
 U.S. GEOLOGICAL SURVEY  
EXPLORATION

JONES KEYSTONE PROJECT  
DRILL HOLE LOCATIONS

Exhibit 5

SCALE: 1" = 100'

Jones Keystone



- |                       |                     |                      |
|-----------------------|---------------------|----------------------|
| 1 Merrill             | 12 Kindley          | 23 Branson           |
| 2 New Sawyer          | 13 Parish           | 24 Smith             |
| 3 Allred              | 14 Delft            | 25 Goliham and Smith |
| 4 Copple, Spencer     | 15 Redding          | 26 Dowd              |
| 5 and Ruth            | 16 Pritchard        | 27 Rush              |
| 6 Jones and Laughlin  | 17 Gray             | 28 Gluyas            |
| 7 Sawyer Complex      | 18 McAllister       | 29 Uharie            |
| 8 Hoover Hill         | 19 Newby            | 30 Talbert and Hill  |
| 9 Scarlet             | 20 Spoon            | 31 Griffin           |
| 10 Jones-Keystone     | 21 Pilot Mtn. No. 1 | 32 Stafford          |
| 11 Southern Homestake | 22 Pilot Mtn. No. 2 |                      |

Figure 19. Randolph County Deposits

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A lease was obtained and detailed soil (exhibit 3), rock, and pit sampling and mapping were conducted in late 1979 - early 1980. Also in early 1980 core from three holes drilled by Asarco at the Jones-Keystone Mine was obtained on loan and logged (exhibit 4).

Data obtained from Asarco showed only non-economic gold mineralization. From our soil and rock sampling however, it was decided to drill our own holes. A contract was secured with Cementation Corporation of America for core drilling. Two holes were drilled in March 1980 (exhibit 5 - map; exhibit 6 - log).

D.D.H. GNJK-1 was drilled to investigate the quartz-sericite schist unit cropping out in the south pit of the main workings. The hole was drilled to a depth of 381 feet (linear) at an inclination of 45° and a bearing of S20°E. Stratigraphic picks made in the field place the top of the quartz-sericite schist unit at 270 feet and the top of the footwall lapilli tuff unit, of intermediate composition, at 365 feet.

A total of 24 split core samples from a 112 foot section of GNJK-1 were analyzed for gold. The sampled section includes the entire quartz-sericite schist unit. No interval in excess of five feet was found to contain more than 0.03 oz/tn Au (exhibit 7).

D.D.H. GNJK-2 was drilled to a depth of 485 feet (linear), also at an inclination of 45°, and a bearing of S20°E. The hole was located approximately 400 feet NW of GNJK-1 to examine bedrock underlying soil and soil float anomalies west of the main workings and the continuity of the quartz-sericite schist unit. The tops of the quartz-sericite schist and footwall lapilli tuff units were picked in the field at 270 feet and 435 feet, respectively.

Twenty-two split core samples from a 110 foot section of GNJK-2 were analyzed for Au. Again, the entire quartz-sericite schist unit was sampled. No value greater than 0.01 oz/tn Au was found, however, the entire zone averages 0.007 oz/tn Au indicating a broad zone of non-economic gold mineralization.

Upon completion of drilling well record forms were filed with the North Carolina Department of Natural Resources and Community Development (exhibit 8).

The following conclusions are supported by drill core and assay data:

- (1) Uneconomic, low-grade gold mineralization is hosted by a quartz-sericite schist unit, and continues down dip from the weathered and largely mined-out surface outcrop. This fact is further substantiated by data obtained from Asarco.
- (2) Gold values for fresh rock are lower than those reported in the literature for decomposed rock, however, it is not known if processes of supergene enrichment are responsible for the differences.

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25° E.  
is iron  
amillary  
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pyrite(?).  
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1848 by  
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Plate 8B. Shaft at Hoover Hill Mine

northeast-trending, sheared and brecciated zones of rhyolite. Older reports indicate that free gold was found along the planes of contact between the quartz in the shoots and the sheared rhyolite. Sphalerite is disseminated through the sheared and brecciated zones in the rhyolite. The color of the sphalerite ranges from reddish black to light greenish brown. Pyrite (auriferous?) is disseminated throughout, generally exhibiting good cubic outlines. Some pyrite has been smeared out along fractures while other pyrite was emplaced with the quartz that healed the fractures. The sphalerite is usually associated with the more fractured zones and is disseminated through the silicified zones and sheared, brecciated country rock. There is massive white orthoclase feldspar in the brecciated rhyolite that, along with the quartz, has healed fractures. The biotite in the breccia appears confined to clots or clusters, some of which show minor silicification. Chlorite is minor and is disseminated through the quartz-feldspar matrix. A few pieces of bornite have been observed in the breccia. The ore deposit is apparently fault controlled.

### Jones-Keystone Mine (AuM)

**Location:** The Jones-Keystone mine is in western Randolph County, 11.7 miles west of Asheboro and 13.3 miles southwest of Randleman. To reach the mine, travel 1.0 mile southwest on SR 1344 from its intersection with U. S. Highway 64. Turn south (left) onto a farm road and go 0.65 mile. The mine is 100 yards S. 50° W. of the old farm road.

**Workings:** The mine was active in 1852 and was apparently operated until the Civil War. The mine was reopened in the late 1870's but was idle from 1881 to 1883. In 1884, the mine was reopened and was worked intermittently until 1903. A considerable amount of development work was undertaken in the 1930's but

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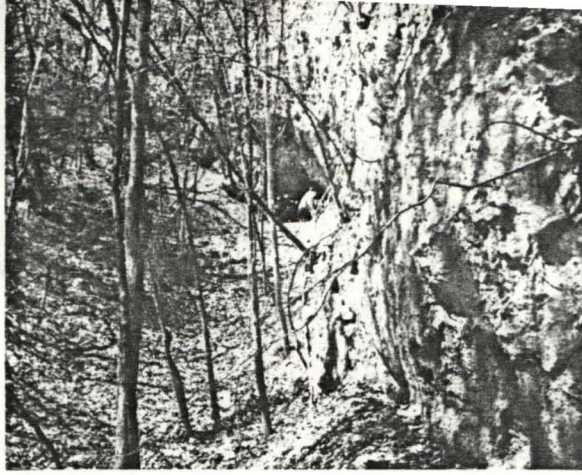


Plate 8C. Open cut , Jones-Keystone Mine

there is no record of production. Mining was carried out in two large open pits and several shafts. In 1968, many large pits and shafts remained along with three Chilean mills and one or more cyanide vats.

**Geology:** Mining was concentrated in sheared, silicified, felsic volcanic rock. Minor quartz stringers in the silicified zone strike N. 30° to 48° E., and dip vertically. The silicified zone and the workings strike N. 60° E. and the zone dips 80° NW. Pyrite and pyrite cavities are disseminated throughout the zone.

Earlier reports indicate pyrophyllite composes a major portion of some samples. The silicified zones were said to be about 50 feet wide and iron-rich zones exposed were 30 feet wide. Gold was supposedly disseminated throughout the rock and a great deal of it was lost during processing because of the fineness of the gold.

#### **Jones and Laughlin Mine (AuP)**

**Location:** The Jones and Laughlin mine is in western Randolph County, 10.2 miles northwest of Asheboro and 9.3 miles west-southwest of Randleman. The mine is 510 feet due west of the intersection of SR 1408 and SR 1539.

**Workings:** One partially filled shaft was on the property in 1967. Apparently, only prospect work was carried out here.

**Geology:** Prospecting was carried out in a quartz vein enclosed by gray-green to black, porphyritic rhyolite. The quartz is fractured and healed with silica and contains pyrite altering to limonite in the fractures. Pyrite and chalcopyrite after pyrite are also in the fractures. The rhyolite contains disseminated vugs filled with limonite which has altered from pyrite. The rhyolite is fractured, and the phenocrysts, now altered, seem to have

Location:  
County, 11.5  
southwest of  
0.7 mile near  
mile southwest  
miles south  
1311 and U  
road and east  
of the road  
south side of

**Workings:**  
on the prop  
1890's, but

**Geology:**  
iron-stained  
40° E. and  
altered to  
rock contain  
formed from  
hematite in  
no evidence

#### **McAllister**

**Location:**  
southwest  
four. The r  
road on the  
site the int  
Follow the  
direction.  
direction.  
and then g

**Workings:**  
Civil War  
feet deep.  
trench 20  
and trend  
workings  
hill.

**Geology:**  
zone of fe  
dips 70°  
sericite-ch  
arsenopyr  
and silicit  
few relic  
rock. Epi  
larite are  
foot zone  
inches by  
limonite