

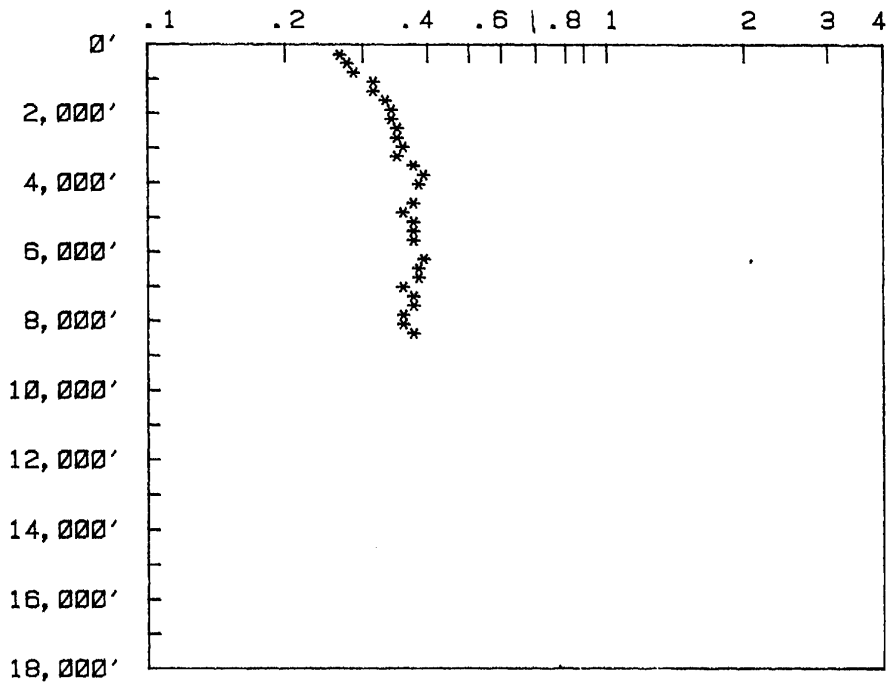
Vitrinite type and vitrinite reflectance data of cuttings from the
Texaco Inc. Nicolai Creek Unit No. 4 well

Received 20 July 1989 Total of 54 pages in report

Data From - Tom Edison

TEXACO NICOLAI CREEK#4

| DEPTH | % REFL. |
|-------|---------|
| 310 | .27 |
| 550 | .28 |
| 820 | .29 |
| 1090 | .32 |
| 1360 | .32 |
| 1630 | .34 |
| 1900 | .35 |
| 2170 | .35 |
| 2440 | .36 |
| 2710 | .36 |
| 2980 | .37 |
| 3250 | .36 |
| 3520 | .39 |
| 3790 | .41 |
| 4060 | .40 |
| 4600 | .39 |
| 4870 | .37 |
| 5140 | .39 |
| 5410 | .39 |
| 5680 | .39 |
| 6220 | .41 |
| 6490 | .40 |
| 6760 | .40 |
| 7030 | .37 |
| 7300 | .39 |
| 7570 | .39 |
| 7840 | .37 |
| 8110 | .37 |
| 8380 | .39 |



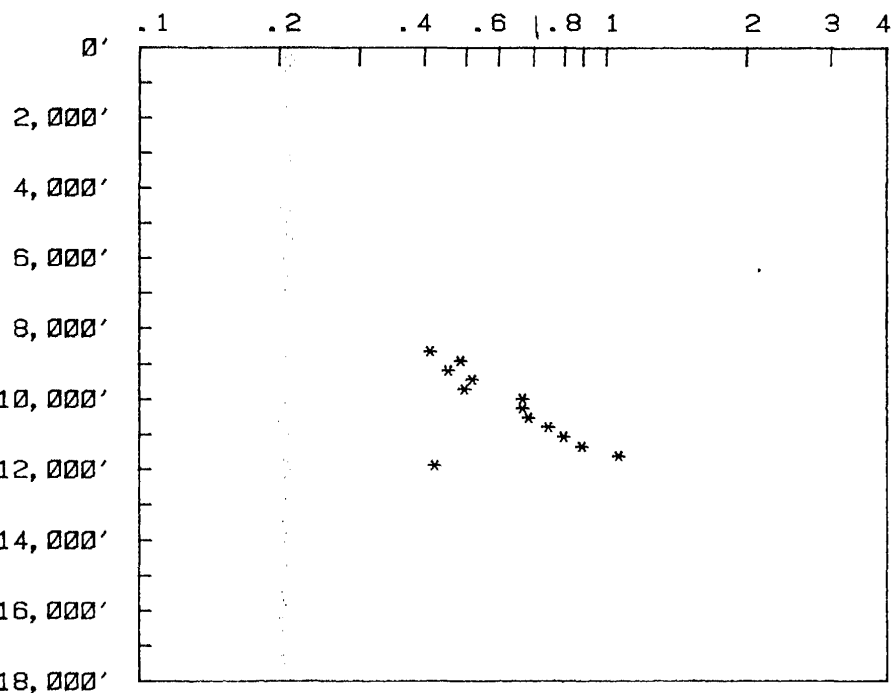
DEPTH vs REFLECTANCE

Data From - Tom Edison

TEXACO NICOLAI CREEK#4

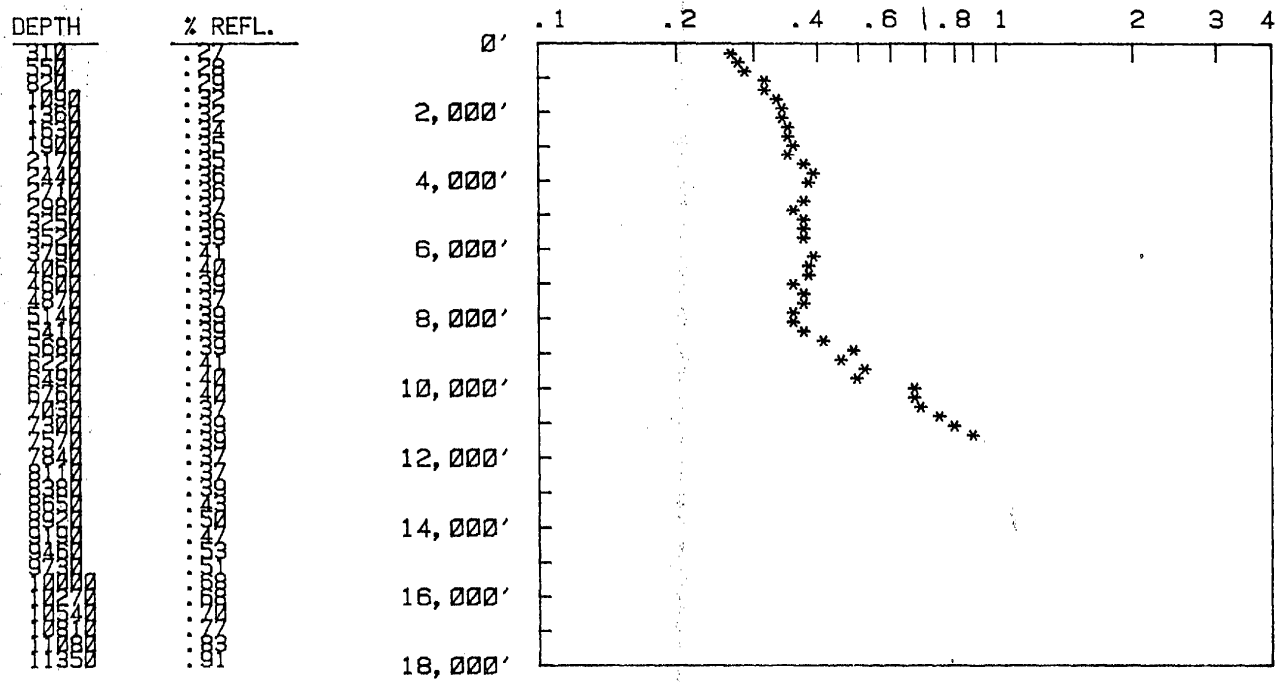
DEPTH % REFL.

8650 .43
 8920 .50
 9190 .47
 9460 .53
 9730 .51
 10000 .68
 10270 .68
 10540 .70
 10810 .77
 11080 .83
 11350 .91
 11620 1.09
~~11890 .44~~



DEPTH vs REFLECTANCE

TEXACO NICOLAI CREEK#4



DEPTH vs REFLECTANCE

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

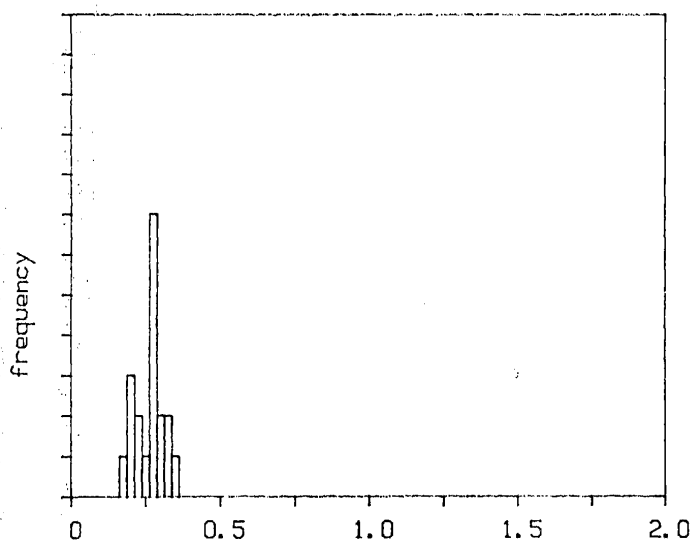
PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

ALASKA DEPTH: 310-550 ft
COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .19 | .20 | .20 | .21 | .23 | .24 | .26 |
| .28 | .29 | .29 | .29 | .29 | .29 | .29 |
| .30 | .31 | .33 | .33 | .37 | | |



NO OF MEAS. = 19

AVG. REFL. = .27

STD. DEV. = .05

COMMENTS:

TAI:
FLUORESCENCE; RARE DULL ORANGE

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

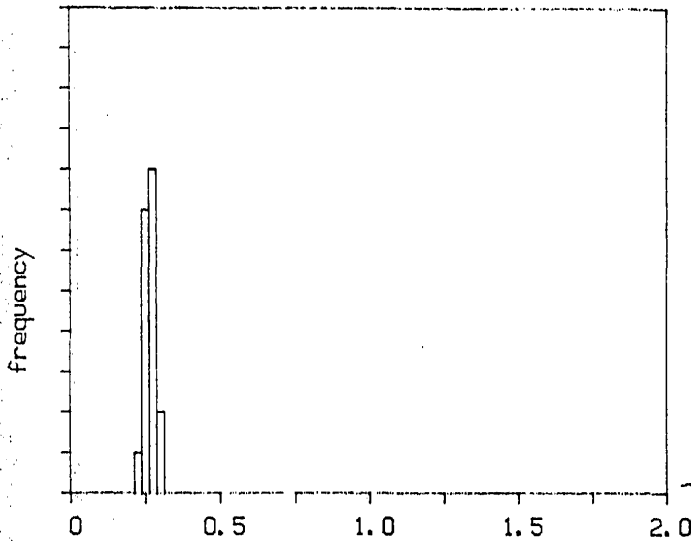
PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4
ALASKA
COOK INLET

DEPTH: 550-820 ft

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .23 | .25 | .26 | .26 | .27 | .27 | .27 |
| .27 | .28 | .28 | .29 | .29 | .29 | .29 |
| .29 | .29 | .30 | .31 | | | |



TAI:

FLUORESCENCE: RARE TO COMMON BRIGHT TO
DARK ORANGE

→ 2.04 (MAXIMUM REFLECTANCE PRESENT)

NO OF MEAS. = 18

AVG. REFL. = .28

STD. DEV. = .02

COMMENTS: SUBERINITE AND DESMOCOLLINITE PRESENT. A FEW VESICULATED COKE PARTICLES ARE PRESENT WITH R_0 RANGING TO ABOUT 2%. THE VESICULATIONS USUALLY HAVE OXIDATION RIMS, INDICATING THAT OXIDATION OCCURRED DURING THE PLASTIC STAGE.

T. A. EDISON
335 FLORIDA ST.
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(707) 551-1097

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

ALASKA

DEPTH: 820-1090 ft

COOK INLET

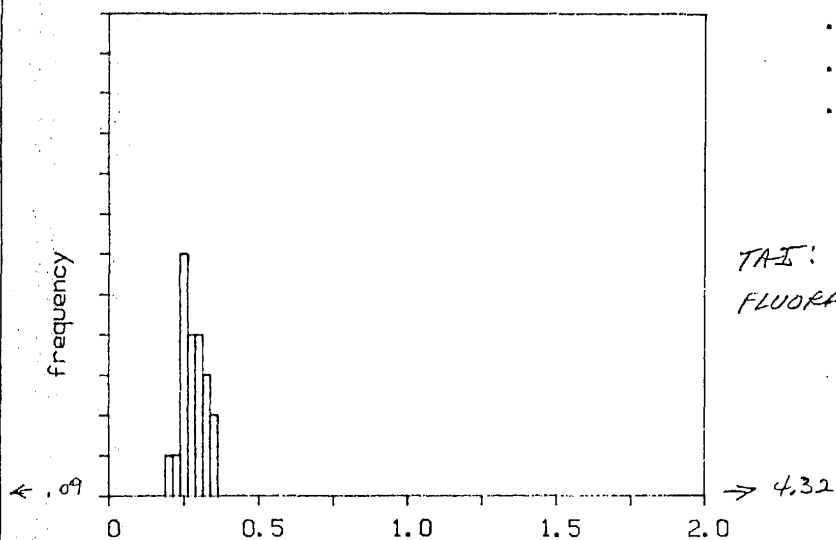
REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .22 | .24 | .25 | .25 | .25 | .26 | .26 |
| .27 | .29 | .29 | .29 | .29 | .30 | .31 |
| .32 | .32 | .34 | .34 | .34 | .35 | .35 |

TAI:

FLUORESCENCE: RARE YELLOW

COMMON DARK ORANGE



NO OF MEAS. = 21

AVG. REFL. = .29

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8527

PERCENT REFLECTANCE @ 546 nm

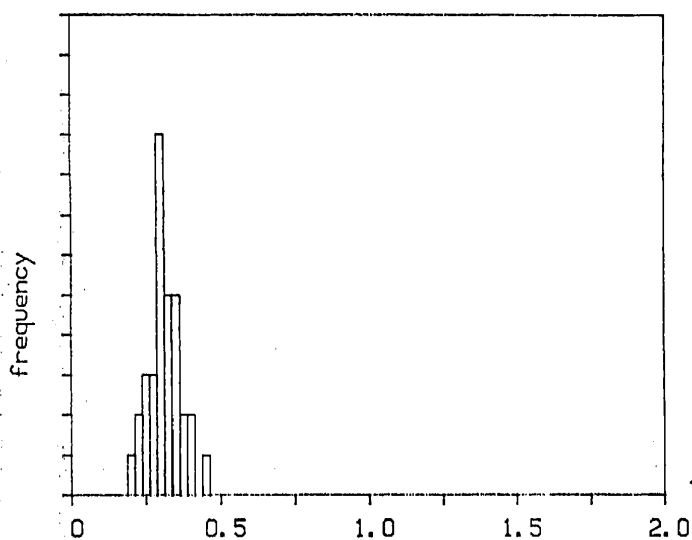
NICOLAI CREEK UNIT #4

ALASKA

DEPTH: 1090-1360 ft

REFLECTANCE VALUES

COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .21 | .23 | .24 | .26 | .26 | .27 | .28 |
| .29 | .29 | .30 | .30 | .30 | .30 | .31 |
| .31 | .31 | .31 | .32 | .33 | .33 | .33 |
| .34 | .34 | .35 | .35 | .35 | .35 | .35 |
| .38 | .39 | .40 | .42 | .45 | | |

TAI:

FLUORESCENCE: RARE BRIGHT ORANGE
COMMON DARK ORANGE

→ 5.3

NO OF MEAS. = 33
AVG. REFL. = .32
STD. DEV. = .05
COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

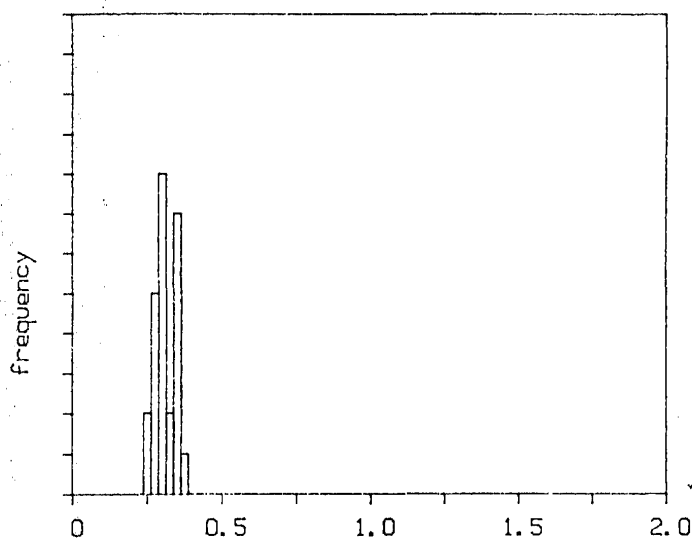
ALASKA

DEPTH: 1360-1630 ft

REFLECTANCE VALUES

COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .26 | .27 | .28 | .29 | .29 | .29 | .29 |
| .30 | .31 | .31 | .32 | .32 | .32 | .32 |
| .32 | .33 | .34 | .35 | .35 | .35 | .36 |
| .36 | .37 | .37 | .39 | | | |



TAI:

FLUORESCENCE: RARE TO COMMON
DARK ORANGE

→ 5.44

NO OF MEAS. = 25

AVG. REFL. = .32

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8887

PERCENT REFLECTANCE @ 546 nm

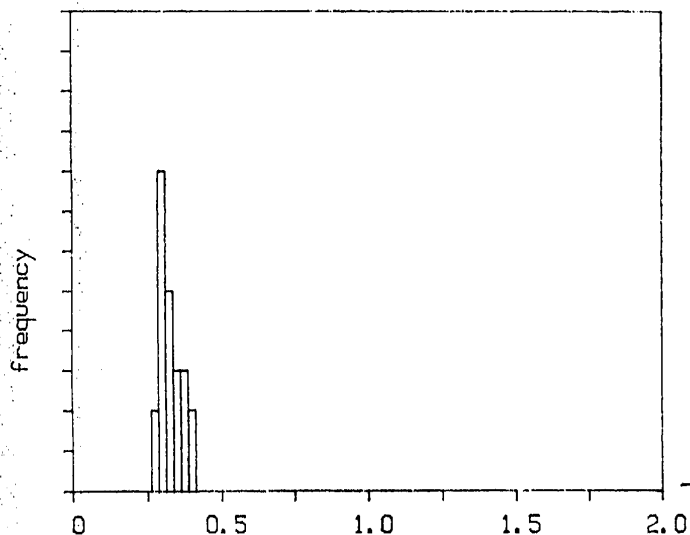
NICOLAI CREEK UNIT #4

ALASKA

DEPTH: 1630-1900 ft

REFLECTANCE VALUES

COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .28 | .29 | .30 | .30 | .30 | .30 | .31 |
| .31 | .32 | .32 | .33 | .33 | .34 | .34 |
| .34 | .35 | .35 | .36 | .38 | .38 | .38 |
| .40 | .41 | | | | | |

TAI:

FLUORESCENCE: RARE DARK ORANGE

NO OF MEAS. = 23
AVG. REFL. = .34
STD. DEV. = .03
COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707)-554-8887

PERCENT REFLECTANCE @ 546 nm

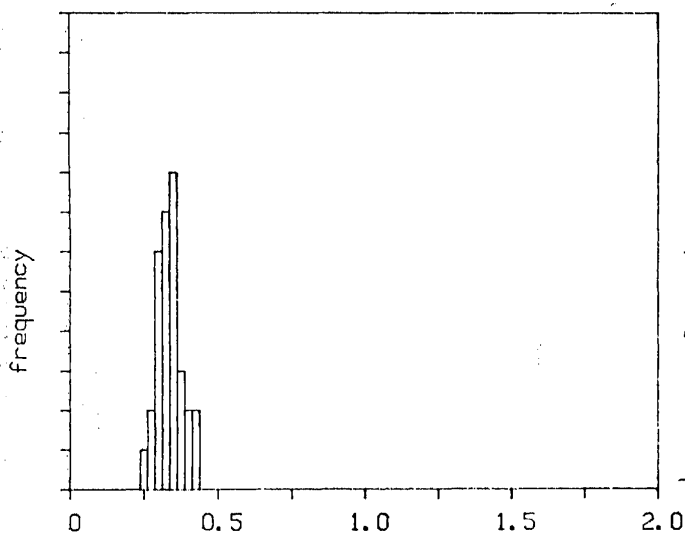
NICOLAI CREEK UNIT #4

ALASKA

DEPTH: 1900-2170 ft

REFLECTANCE VALUES

COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .27 | .28 | .29 | .30 | .30 | .31 | .32 |
| .32 | .32 | .33 | .33 | .34 | .34 | .34 |
| .34 | .34 | .35 | .35 | .36 | .36 | .36 |
| .37 | .37 | .37 | .38 | .38 | .39 | .40 |
| .42 | .43 | .44 | | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW AND
BRIGHT ORANGE; COMMON DARK
ORANGE

→ 5.0

NO OF MEAS. = 31

AVG. REFL. = .35

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8587

PERCENT REFLECTANCE @ 546 nm

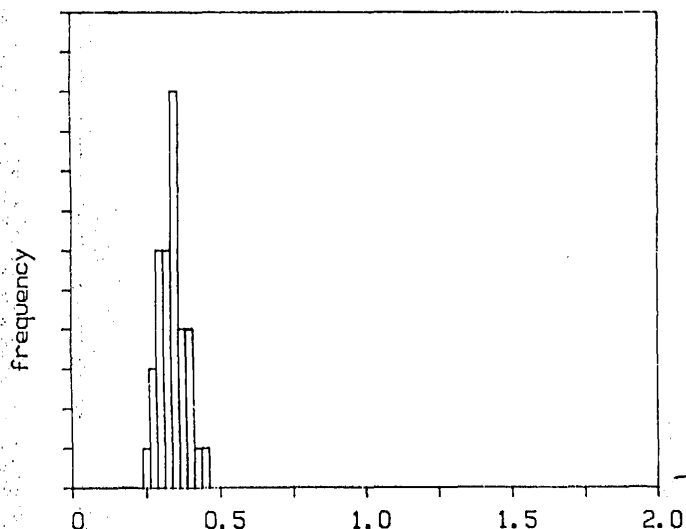
NICOLAI CREEK UNIT #4

ALASKA

DEPTH: 2170-2440 ft

COOK INLET

REFLECTANCE VALUES



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .27 | .28 | .29 | .29 | .30 | .30 | .30 |
| .32 | .32 | .32 | .33 | .33 | .33 | .33 |
| .34 | .34 | .35 | .35 | .35 | .35 | .35 |
| .35 | .36 | .37 | .37 | .37 | .38 | .38 |
| .39 | .39 | .40 | .40 | .41 | .42 | .44 |
| .45 | | | | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW AND
YELLOW-ORANGE; COMMON DARK ORANGE

→ 2.6

NO OF MEAS. = 36

AVG. REFL. = .35

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 551-6657

PERCENT REFLECTANCE @ 546 nm

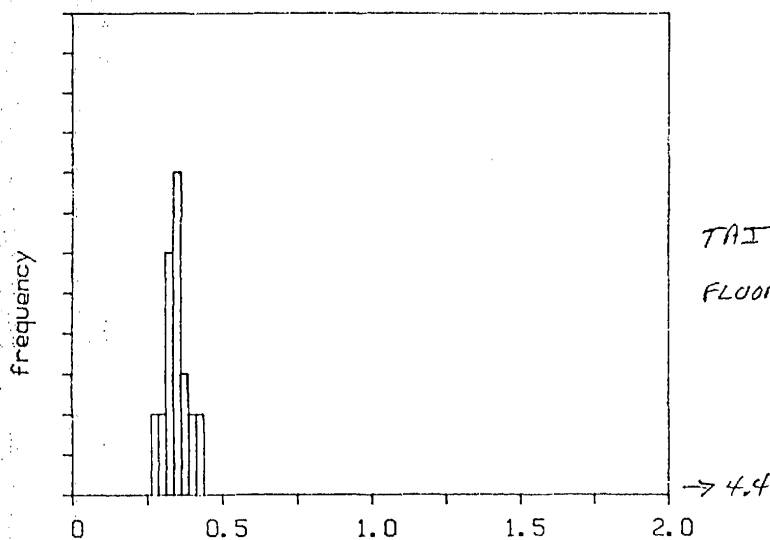
NICOLAI CREEK UNIT #4

ALASKA

DEPTH: 2440-2710 ft

REFLECTANCE VALUES

LOC: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .28 | .29 | .31 | .32 | .33 | .33 | .34 |
| .34 | .34 | .34 | .35 | .35 | .35 | .36 |
| .36 | .36 | .37 | .37 | .38 | .38 | .39 |
| .42 | .42 | .43 | .43 | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW; COMMON
ORANGE TO DARK ORANGE

NO OF MEAS. = 25

AVG. REFL. = .36

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707)-554-8697

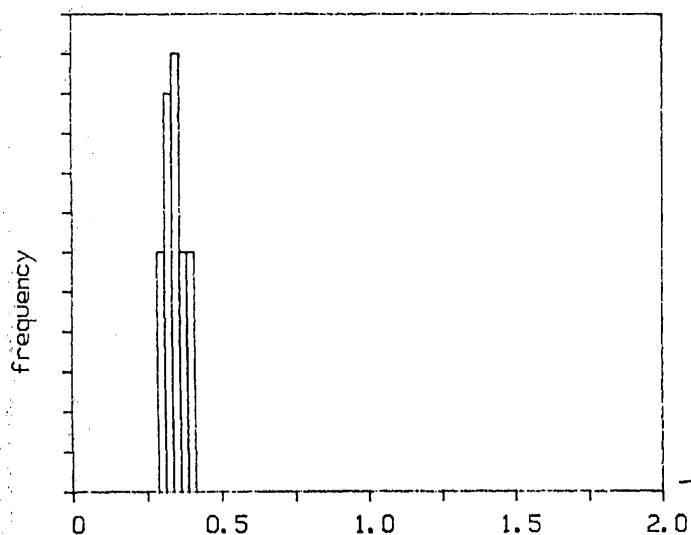
PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 2710-2980 ft

PROJECT: COOK INLET

REFLECTANCE VALUES



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .30 | .30 | .31 | .31 | .31 | .32 | .33 |
| .33 | .33 | .33 | .33 | .33 | .33 | .34 |
| .34 | .34 | .35 | .35 | .35 | .35 | .36 |
| .36 | .37 | .37 | .37 | .37 | .37 | .38 |
| .39 | .39 | .39 | .39 | .39 | .40 | .40 |
| .41 | .41 | .41 | .42 | | | |

TAI:

FLUORESCENCE: RARE TO COMMON ORANGE TO
DARK ORANGE

NO OF MEAS. = 39

AVG. REFL. = .36

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

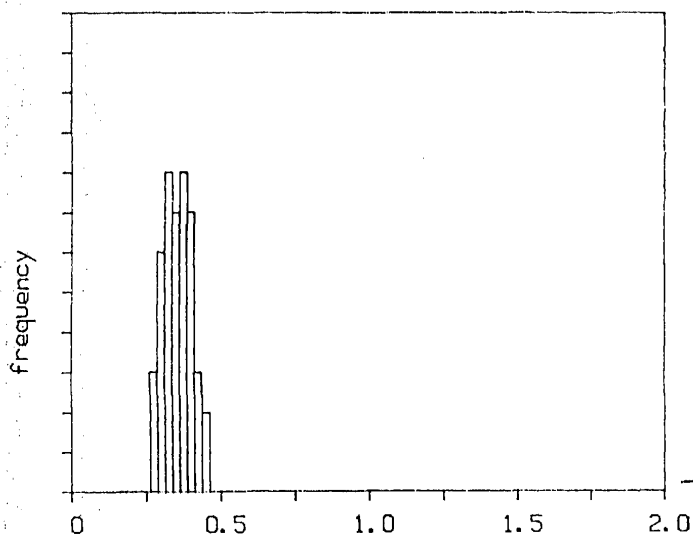
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 2980-3250 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .28 | .28 | .28 | .30 | .30 | .31 | .31 |
| .32 | .32 | .33 | .33 | .33 | .34 | .34 |
| .34 | .34 | .34 | .35 | .35 | .35 | .36 |
| .36 | .37 | .37 | .38 | .38 | .38 | .38 |
| .39 | .39 | .39 | .39 | .40 | .40 | .40 |
| .41 | .42 | .42 | .42 | .44 | .44 | .44 |
| .45 | .45 | | | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW;
COMMON ORANGE TO DARK ORANGE

→ 4.0

NO OF MEAS. = 44

AVG. REFL. = .37

STD. DEV. = .05

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-9687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

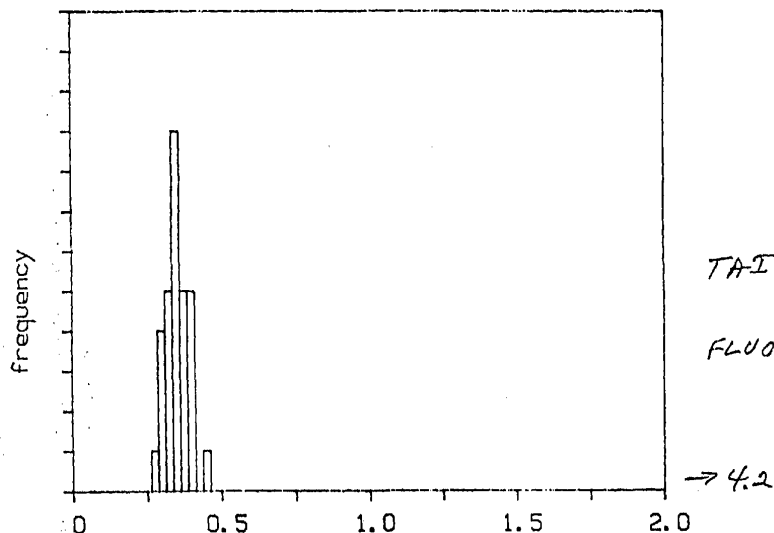
COFRC: ALASKA

DEPTH: 3250-3520 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .28 | .30 | .31 | .32 | .32 | .33 | .33 |
| .34 | .34 | .34 | .35 | .35 | .36 | .36 |
| .37 | .37 | .37 | .37 | .37 | .38 | .38 |
| .39 | .39 | .39 | .40 | .40 | .40 | .40 |
| .40 | .46 | | | | | |



NO OF MEAS. = 30
AVG. REFL. = .36
STD. DEV. = .04
COMMENTS:

TAI:

FLUORESCENCE: RARE DARK ORANGE

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8587

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

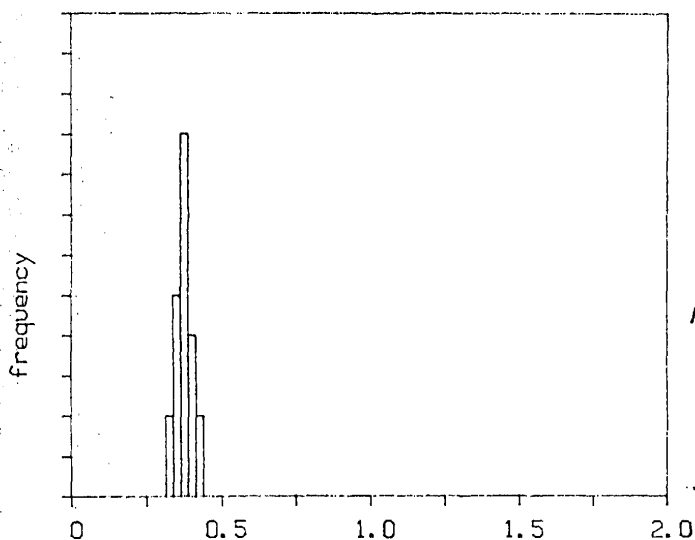
COFRC: ALASKA

DEPTH: 3520-3790 ft

REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .33 | .34 | .35 | .37 | .37 | .37 | .37 |
| .38 | .38 | .38 | .39 | .39 | .39 | .39 |
| .39 | .39 | .40 | .40 | .41 | .42 | .43 |
| .44 | | | | | | |



TAI:

FLUORESCENCE: RARE TO COMMON DARK
YELLOW-ORANGE

NO OF MEAS. = 22

AVG. REFL. = .39

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

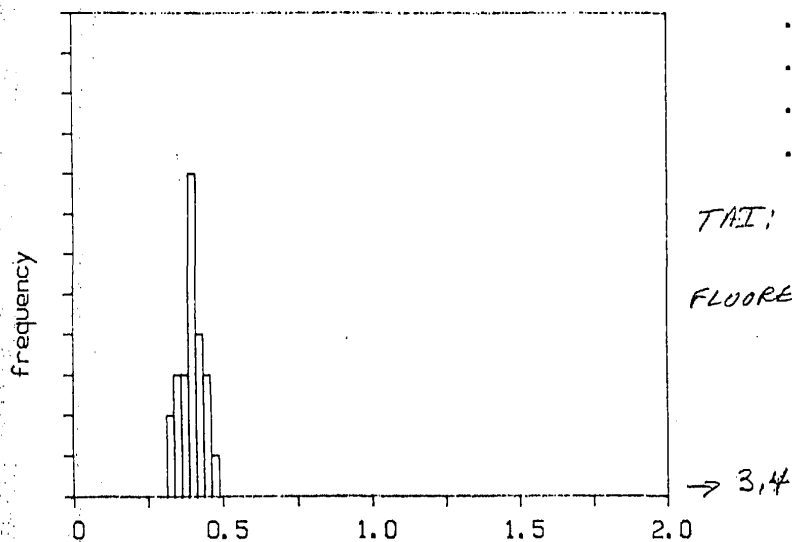
NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 3790-4060 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .33 | .34 | .35 | .36 | .37 | .39 | .39 |
| .39 | .40 | .40 | .40 | .41 | .41 | .42 |
| .42 | .42 | .43 | .44 | .44 | .44 | .45 |
| .46 | .47 | .48 | | | | |



NO OF MEAS. = 24

AVG. REFL. = .41

STD. DEV. = .04

COMMENTS:

TAI:

FLOURESCENCE: RAPE BRIGHT YELLOW;
COMMON DARK YELLOW-ORANGE

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

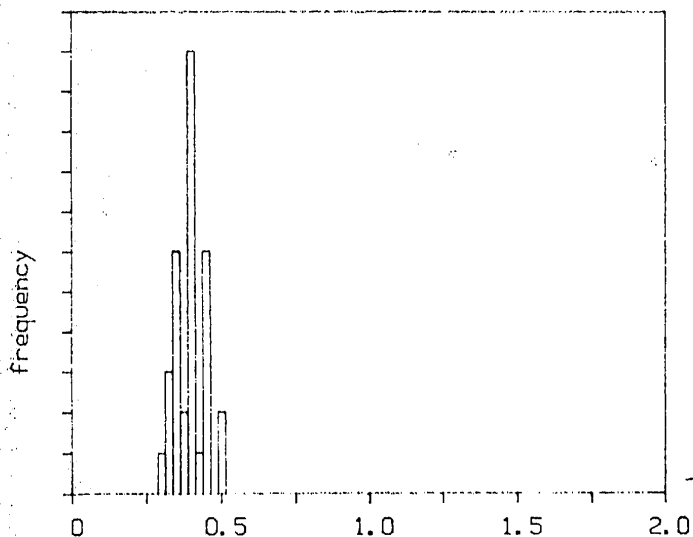
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 4060-4330 ft

PROJECT: COOK INLET

REFLECTANCE VALUES



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .32 | .33 | .34 | .34 | .35 | .35 | .36 |
| .36 | .37 | .37 | .38 | .38 | .40 | .40 |
| .40 | .40 | .40 | .40 | .40 | .40 | .41 |
| .41 | .42 | .43 | .45 | .45 | .46 | .46 |
| .47 | .47 | .50 | .50 | | | |

THI:

FLUORESCENCE: RARE BRIGHT YELLOW AND
BRIGHT YELLOW-ORANGE

→ 4.5

NO OF MEAS. = 32

AVG. REFL. = .4

STD. DEV. = .05

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

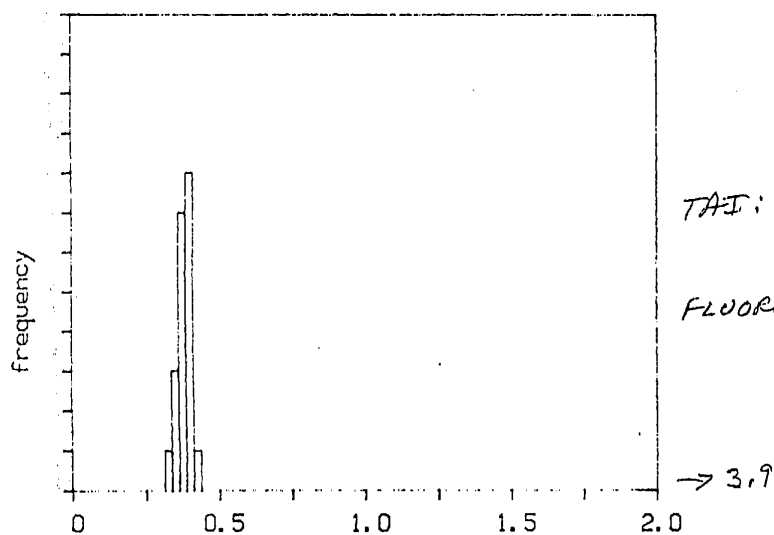
NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 4600-4870 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .33 | .35 | .36 | .37 | .38 | .38 | .38 |
| .39 | .39 | .39 | .39 | .40 | .40 | .40 |
| .40 | .40 | .41 | .41 | .42 | .43 | |



NO OF MEAS. = 20

AVG. REFL. = .39

STD. DEV. = .02

COMMENTS:

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW;
COMMON BRIGHT TO DARK ORANGE.

T. A. EDISON
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PERCENT REFLECTANCE @ 546 nm

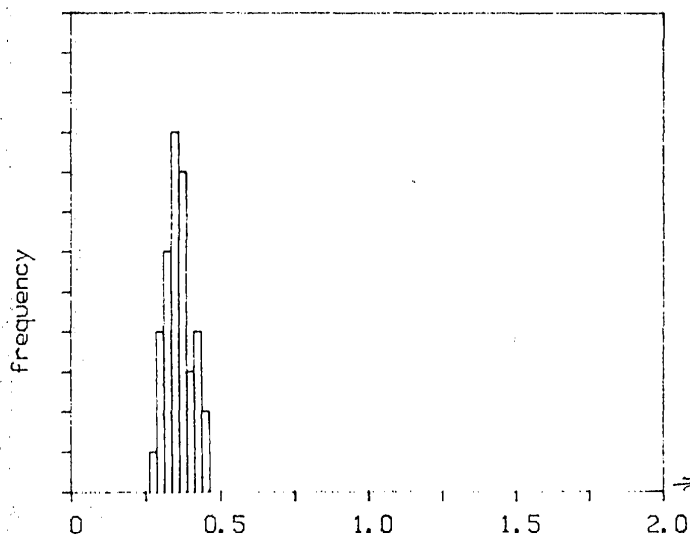
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 4870-5140 ft

PROJECT: COOK INLET

REFLECTANCE VALUES



NO OF MEAS. = 37

AVG. REFL. = .37

STD. DEV. = .04

COMMENTS:

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .28 | .30 | .31 | .32 | .32 | .33 | .33 |
| .33 | .33 | .34 | .34 | .35 | .35 | .35 |
| .36 | .36 | .36 | .36 | .37 | .37 | .38 |
| .38 | .38 | .38 | .38 | .39 | .39 | .39 |
| .40 | .40 | .41 | .43 | .43 | .44 | .44 |
| .45 | .47 | | | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW;

COMMON TO ABUNDANT BRIGHT TO
DARK YELLOW-ORANGE

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94530
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CEEK UNIT #4

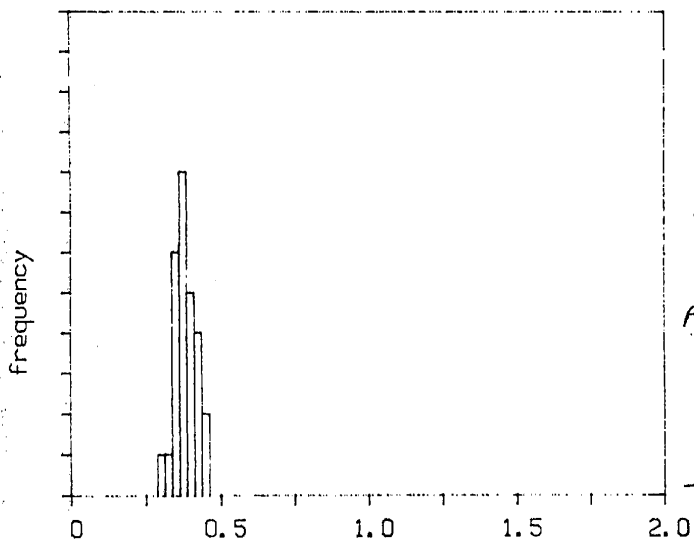
COFRC: ALASKA

DEPTH: 5140-5410 ft

REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .31 | .34 | .35 | .36 | .36 | .37 | .37 |
| .37 | .38 | .38 | .39 | .39 | .39 | .39 |
| .39 | .39 | .40 | .40 | .40 | .40 | .41 |
| .43 | .43 | .44 | .44 | .45 | .47 | |



TAI:

FLUORESCENCE: RARE BRIGHT YELLOW;
COMMON BRIGHT TO DARK ORANGE.

→ 3.13

NO OF MEAS. = 27

AVG. REFL. = .39

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

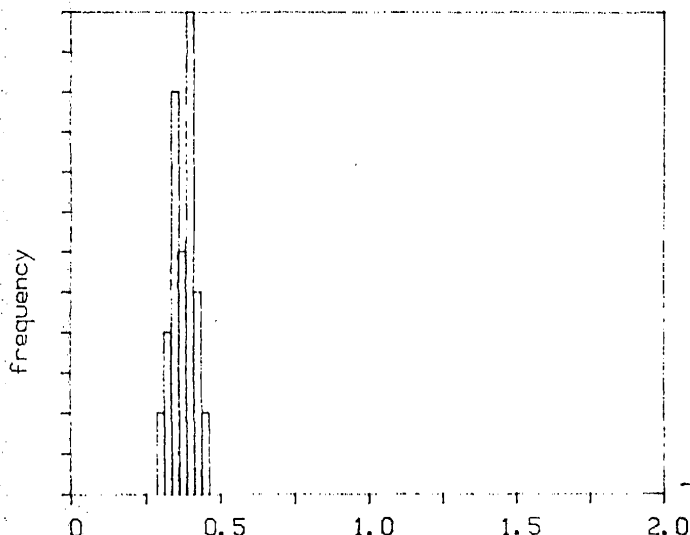
COFRC: ALASKA

DEPTH: 5410-5680 ft

REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .32 | .32 | .33 | .34 | .34 | .34 | .35 |
| .35 | .36 | .36 | .36 | .36 | .36 | .37 |
| .37 | .37 | .38 | .38 | .39 | .39 | .39 |
| .39 | .40 | .40 | .40 | .40 | .40 | .40 |
| .40 | .41 | .41 | .42 | .42 | .42 | .43 |
| .44 | .44 | .44 | .44 | .46 | .47 | |



TAI:

FLUORESCENCE: RARE BRIGHT YELLOW AND
DARK YELLOW-ORANGE; COMMON ORANGE
TO DARK ORANGE

NO OF MEAS. = 41

AVG. REFL. = .39

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

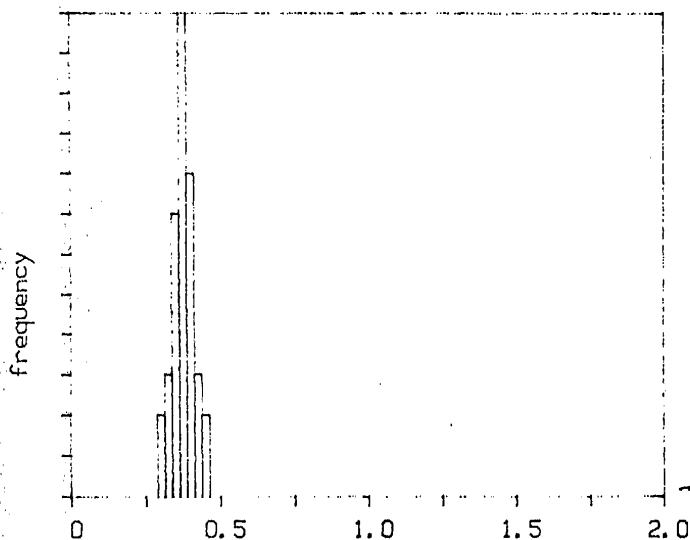
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 5680-6220 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .31 | .32 | .33 | .33 | .34 | .35 | .36 |
| .36 | .36 | .37 | .37 | .37 | .38 | .38 |
| .38 | .38 | .38 | .38 | .38 | .38 | .39 |
| .39 | .39 | .39 | .39 | .40 | .40 | .40 |
| .40 | .40 | .42 | .42 | .42 | .43 | .43 |
| .44 | .45 | .46 | | | | |

TAI:

FLUORESCENCE: RARE TO COMMON ORANGE
TO DARK ORANGE

NO OF MEAS. = 38

AVG. REFL. = .39

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

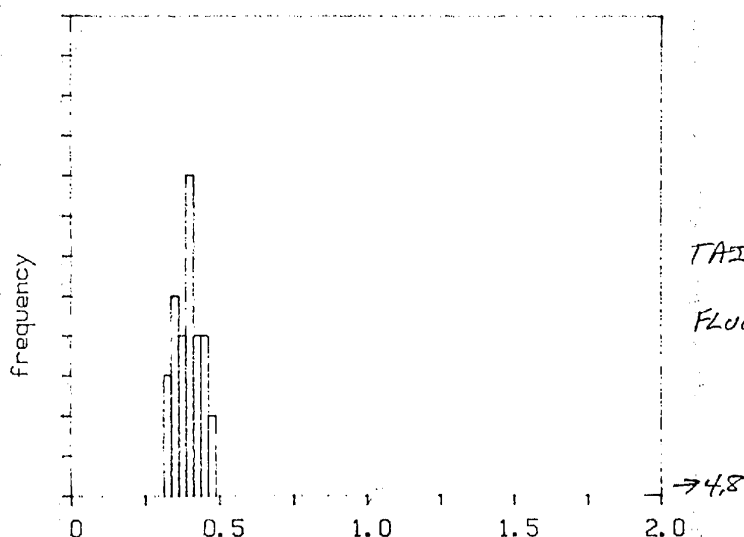
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 6220-6490 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .33 | .34 | .34 | .35 | .36 | .37 | .37 |
| .37 | .38 | .38 | .38 | .39 | .40 | .40 |
| .40 | .41 | .41 | .41 | .41 | .42 | .43 |
| .43 | .43 | .44 | .46 | .46 | .46 | .47 |
| .49 | .49 | | | | | |

TAI:

FLUORESCENCE: RARE DARK YELLOW; RARE TO
COMMON DARK ORANGE TO ORANGE-BROWN

NO OF MEAS. = 30

AVG. REFL. = .41

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-6887

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 6490-6760 ft

PROJECT: COOK INLET

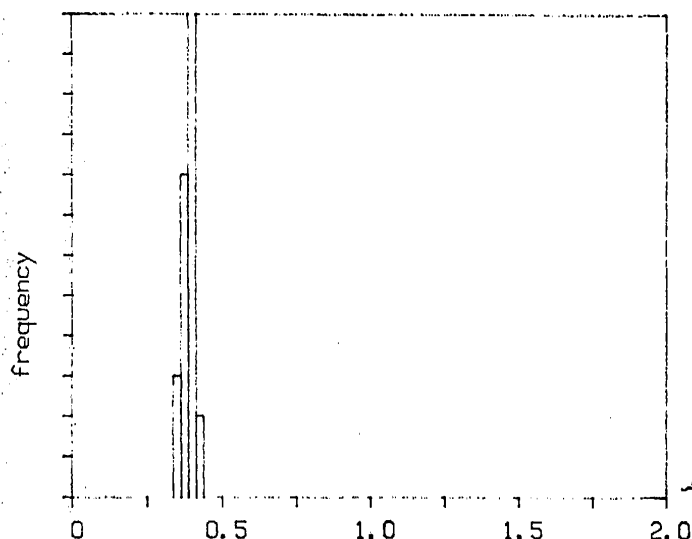
REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .36 | .36 | .37 | .38 | .38 | .38 | .39 |
| .39 | .39 | .39 | .39 | .40 | .40 | .40 |
| .40 | .40 | .41 | .41 | .41 | .41 | .41 |
| .41 | .41 | .42 | .42 | .42 | .42 | .42 |
| .43 | .44 | | | | | |

TAD!

FLUORESCENCE: RARE BRIGHT YELLOW SPHERES
(? OIL DROPLETS); RARE BRIGHT
YELLOW; RARE DARK ORANGE TO
ORANGE-BROWN.

→ 4.75



NO OF MEAS. = 30

AVG. REFL. = .4

STD. DEV. = .02

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 6760-7030 ft

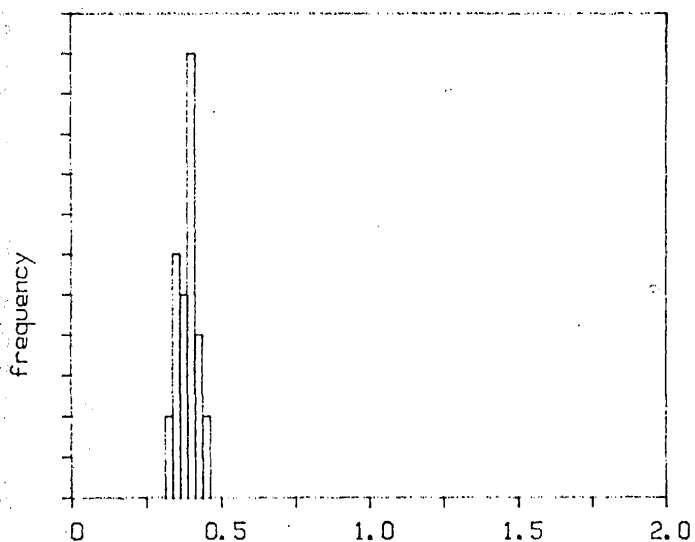
PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .33 | .34 | .35 | .36 | .36 | .37 | .37 |
| .37 | .38 | .38 | .39 | .39 | .39 | .40 |
| .40 | .40 | .40 | .40 | .40 | .40 | .40 |
| .40 | .41 | .42 | .43 | .44 | .44 | .44 |
| .45 | .45 | | | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW;
RARE ORANGE TO DARK ORANGE



NO OF MEAS. = 30

AVG. REFL. = .4

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 7030-7300 ft

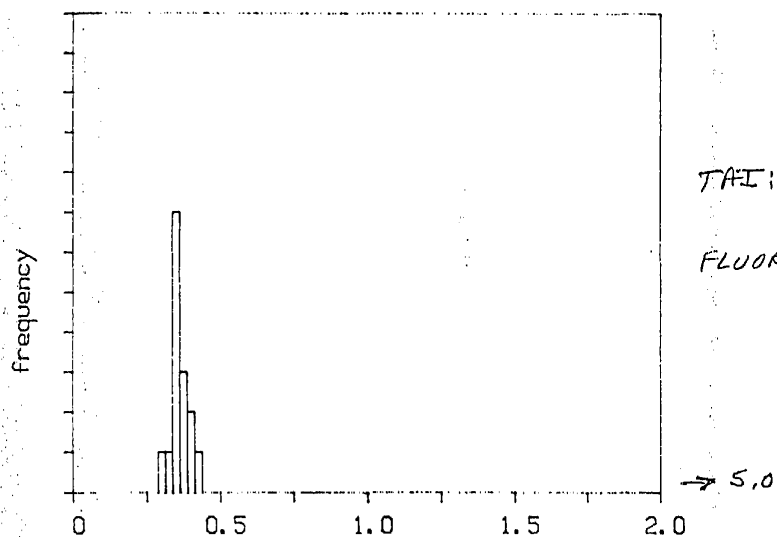
PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .32 | .34 | .35 | .35 | .35 | .36 | .36 |
| .37 | .37 | .39 | .39 | .39 | .40 | .41 |
| .43 | | | | | | |

TAI:

FLUORESCENCE: RARE ORANGE TO DARK ORANGE



NO. OF MEAS. = 15

AVG. REFL. = .37

STD. DEV. = .03

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 7300-7570 ft

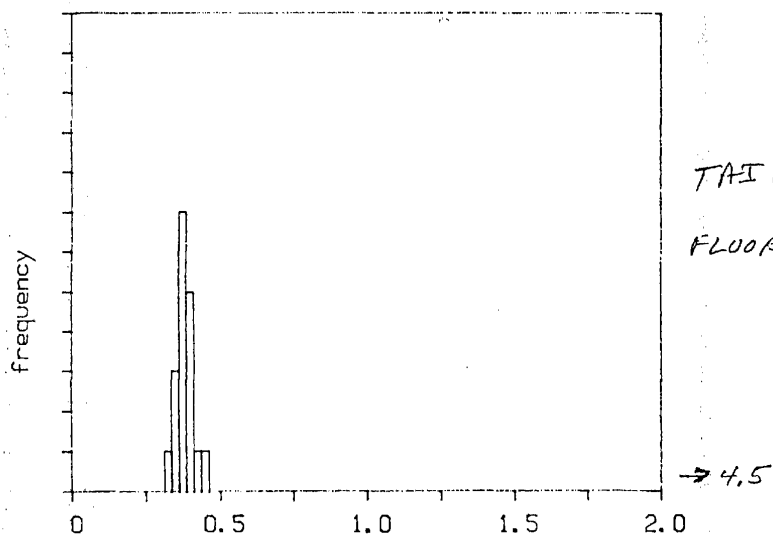
PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .33 | .35 | .37 | .37 | .38 | .38 | .38 |
| .38 | .39 | .39 | .39 | .40 | .40 | .40 |
| .40 | .42 | .43 | .45 | | | |

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW, RARE
DARK ORANGE TO ORANGE-BROWN



NO OF MEAS. = 18
AVG. REFL. = .39
STD. DEV. = .03
COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

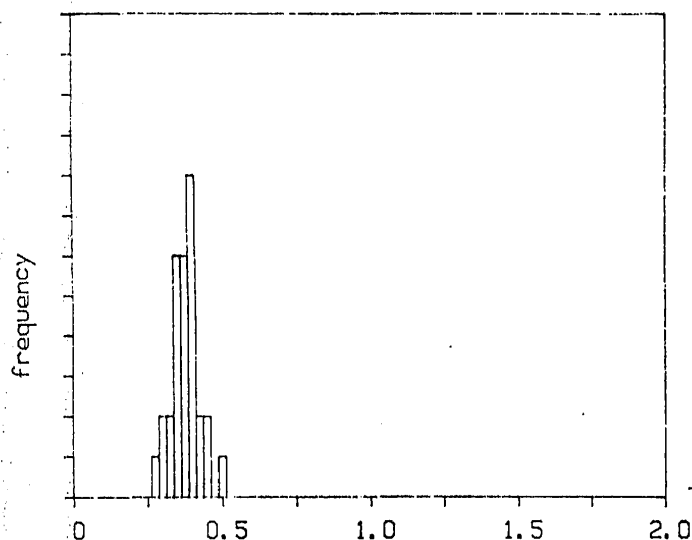
COFRC: ALASKA

DEPTH: 7570-7840 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .29 | .31 | .31 | .34 | .34 | .35 | .35 |
| .35 | .36 | .36 | .37 | .38 | .38 | .38 |
| .39 | .39 | .39 | .40 | .40 | .40 | .41 |
| .41 | .42 | .42 | .42 | .43 | .44 | .45 |
| .46 | .50 | | | | | |



NO OF MEAS. = 30
AVG. REFL. = .39
STD. DEV. = .05
COMMENTS:

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW AND
DARK ORANGE-BROWN

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

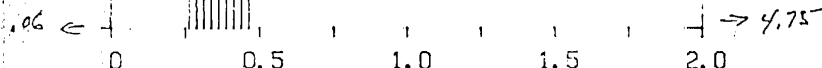
COFRC: ALASKA DEPTH: 7840-8110 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .28 | .29 | .30 | .31 | .32 | .32 | .33 |
| .33 | .34 | .35 | .35 | .35 | .36 | .36 |
| .36 | .37 | .37 | .37 | .38 | .38 | .39 |
| .39 | .39 | .39 | .39 | .39 | .40 | .40 |
| .40 | .41 | .41 | .42 | .42 | .43 | .44 |
| .44 | .44 | .45 | | | | |

frequency



NO OF MEAS. = 38

AVG. REFL. = .37

STD. DEV. = .04

COMMENTS: SOME PARTICLES TURN DARKER WITHIN A FEW SECONDS OF BEING EXPOSED TO THE MICROSCOPE LIGHT BEAM. ASPHALTENES OFTEN REACT IN THIS MANNER.

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW;
RARE ORANGE.

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 8110-8380 ft

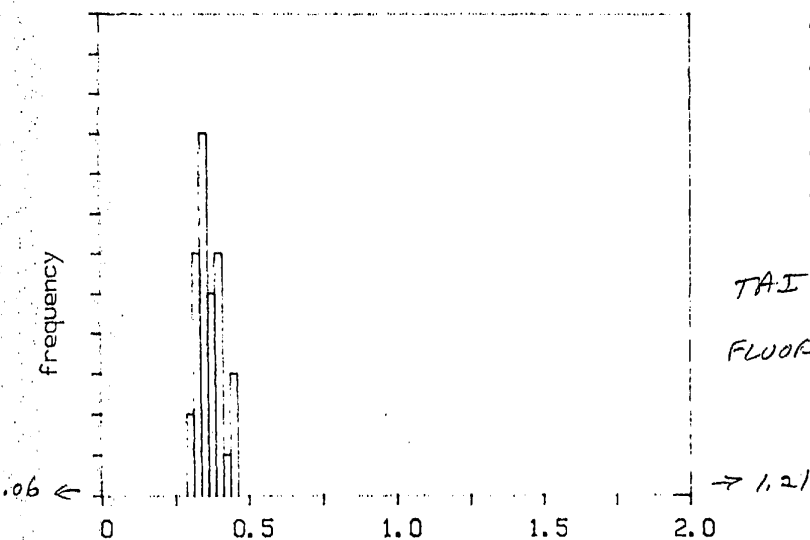
REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .31 | .31 | .33 | .33 | .33 | .33 | .33 |
| .34 | .35 | .35 | .35 | .35 | .35 | .35 |
| .36 | .36 | .37 | .38 | .38 | .39 | .39 |
| .39 | .40 | .40 | .41 | .41 | .41 | .41 |
| .43 | .45 | .45 | .46 | | | |

TAI:

FLUORESCENCE: RARE DARK ORANGE-BROWN



NO OF MEAS. = 32
AVG. REFL. = .37
STD. DEV. = .04
COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-0637

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

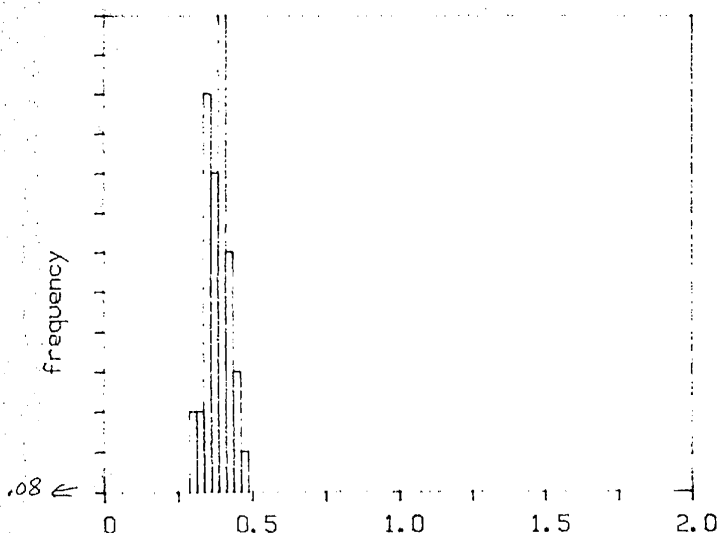
COFRC: ALASKA

DEPTH: 8380-8650 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .30 | .32 | .34 | .34 | .35 | .35 | .36 |
| .36 | .36 | .36 | .36 | .36 | .37 | .37 |
| .38 | .38 | .39 | .39 | .39 | .39 | .39 |
| .39 | .40 | .40 | .40 | .40 | .40 | .40 |
| .40 | .40 | .40 | .40 | .41 | .41 | .41 |
| .42 | .43 | .43 | .43 | .44 | .44 | .44 |
| .45 | .46 | .47 | .48 | | | |



NO OF MEAS. = 46
AVG. REFL. = .39
STD. DEV. = .04
COMMENTS:

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW, ORANGE
AND ORANGE-BROWN (THIS LATTER
MAY BE SOLIDIFIED BITUMEN)

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

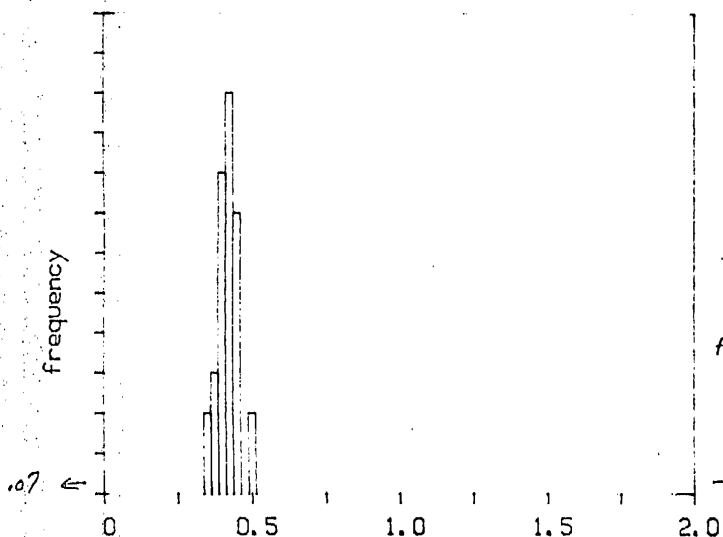
COFRC: ALASKA

DEPTH: 8650-8920 ft

PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .37 | .37 | .39 | .39 | .39 | .40 | .40 |
| .40 | .41 | .41 | .41 | .41 | .41 | .43 |
| .43 | .43 | .43 | .43 | .43 | .43 | .43 |
| .44 | .44 | .45 | .45 | .45 | .45 | .45 |
| .45 | .46 | .50 | .51 | | | |



TAD!

FLUORESCENCE: RARE BRIGHT YELLOW;
COMMON ORANGE-BROWN (?SILICIFIED
BITUMEN)

NO OF MEAS. = 32
AVG. REFL. = .43
STD. DEV. = .03
COMMENTS:

→ 2.56

T. A. EDISON
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VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 8920-9190 ft

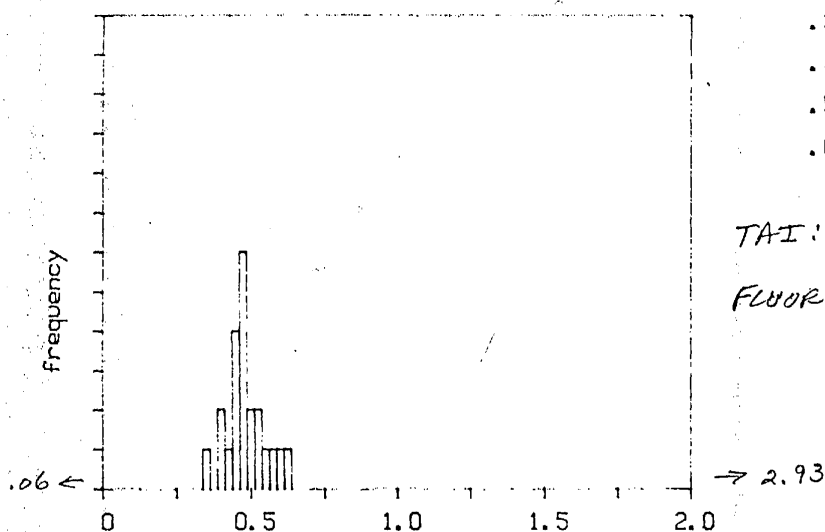
REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .37 | .41 | .42 | .43 | .46 | .46 | .47 |
| .47 | .48 | .48 | .49 | .49 | .49 | .49 |
| .51 | .51 | .53 | .53 | .57 | .58 | .62 |
| .64 | | | | | | |

TAI:

FLUORESCENCE: RARE ORANGE



NO OF MEAS. = 22

AVG. REFL. = .5

STD. DEV. = .06

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 9190-9460 ft

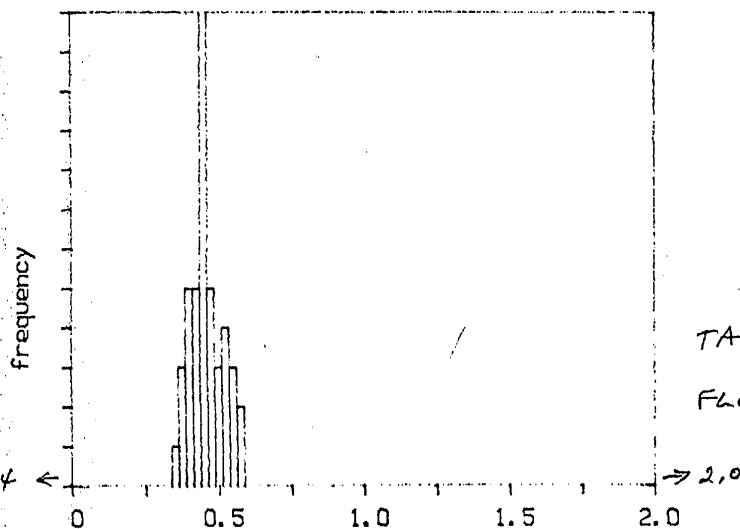
PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .37 | .38 | .39 | .39 | .40 | .41 | .42 |
| .42 | .42 | .43 | .43 | .44 | .44 | .44 |
| .45 | .45 | .45 | .45 | .45 | .45 | .46 |
| .46 | .46 | .46 | .46 | .47 | .47 | .47 |
| .48 | .48 | .48 | .49 | .49 | .50 | .51 |
| .51 | .53 | .53 | .53 | .54 | .56 | .56 |
| .56 | .58 | .58 | | | | |

TAI:

FLUORESCENCE: RARE YELLOW-ORANGE



NO OF MEAS. = 45

AVG. REFL. = .47

STD. DEV. = .05

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 9460-9730 ft

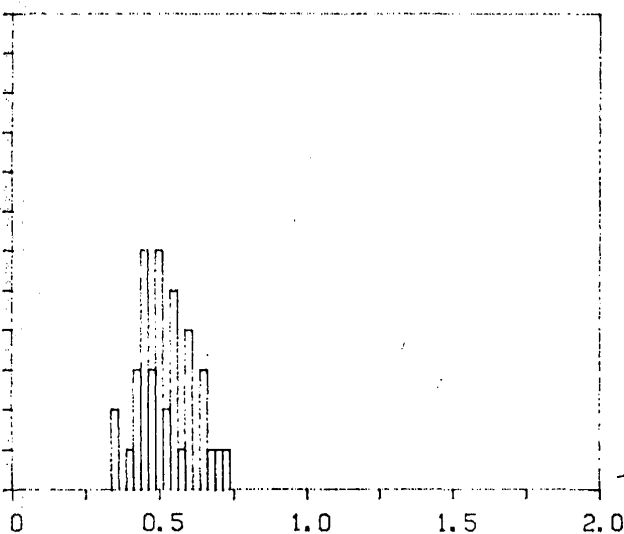
PROJECT: COOK INLET

REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .37 | .37 | .40 | .43 | .44 | .44 | .45 |
| .46 | .46 | .46 | .47 | .47 | .48 | .49 |
| .49 | .51 | .51 | .51 | .52 | .52 | .52 |
| .53 | .53 | .55 | .56 | .57 | .57 | .57 |
| .58 | .60 | .61 | .61 | .62 | .65 | .65 |
| .67 | .69 | .71 | .74 | | | |

frequency

.06 ←



NO OF MEAS. = 39

AVG. REFL. = .53

STD. DEV. = .09

COMMENTS:

TAI:

FLUORESCENCE: RARE BRIGHT YELLOW TO
DARK ORANGE

→ 4.64

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 9730-10000 ft

REFLECTANCE VALUES

PROJECT: COOK INLET

.49 .49 .50 .50 .51 .51 .54
.54

TAI:

FLUORESCENCE: NONE

frequency

.13 ← → 4.8

NO OF MEAS. = 8

AVG. REFL. = .51

STD. DEV. = .02

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

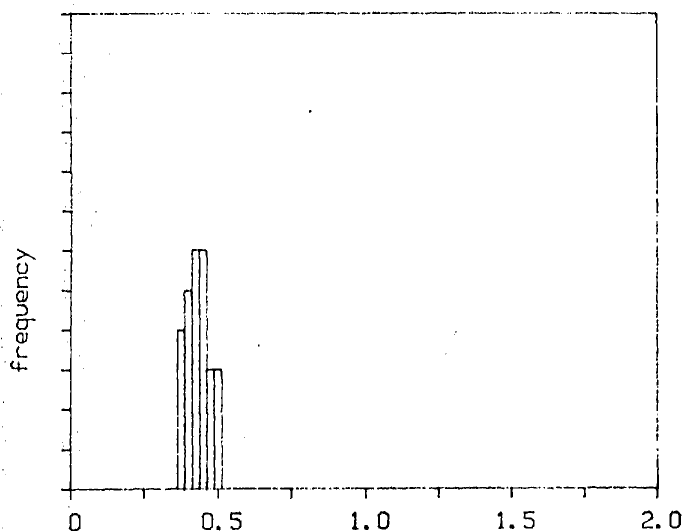
PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4"

COFRC: ALASKA DEPTH: 9730-10000 ft

PROJECT: COOK INLET

REFLECTANCE VALUES



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .38 | .39 | .39 | .39 | .40 | .40 | .41 |
| .41 | .41 | .43 | .43 | .43 | .44 | .44 |
| .44 | .45 | .45 | .46 | .47 | .47 | .47 |
| .48 | .49 | .49 | .50 | .50 | .50 | |

TAI:

FLUORESCENCE!

} see other sheet

NO OF MEAS. = 27

AVG. REFL. = .44 (DESMO COLLINITE)

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 10000-10270 ft

REFLECTANCE VALUES

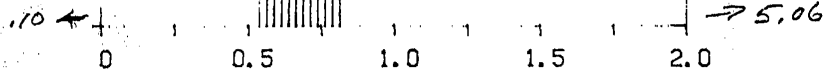
PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .57 | .59 | .60 | .61 | .62 | .63 | .63 |
| .64 | .65 | .67 | .68 | .68 | .69 | .70 |
| .70 | .73 | .75 | .77 | .78 | .82 | |

TAI:

FLUORESCENCE: RARE ORANGE

frequency



NO OF MEAS. = 20

AVG. REFL. = .68

STD. DEV. = .06

COMMENTS:

T. A. EDISON
 335 FLORIDA ST.
 VALLEJO, CA 94590
 (707) 554-8687

PERCENT REFLECTANCE @ 546 nm

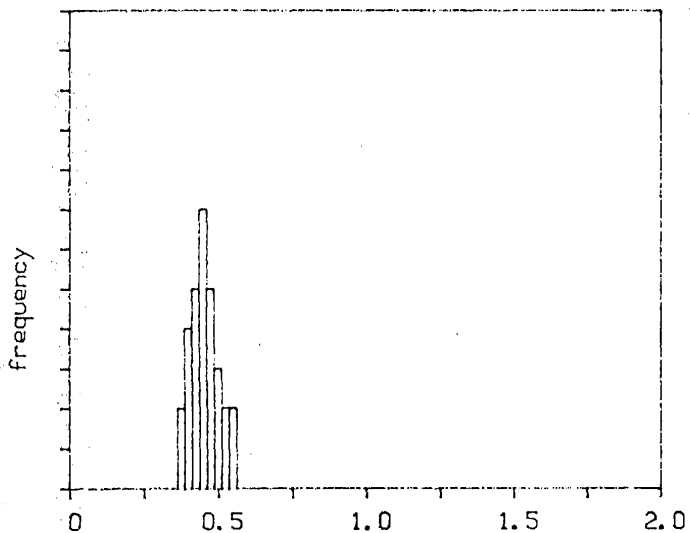
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 10000-10270 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .39 | .39 | .40 | .40 | .41 | .42 | .44 |
| .44 | .44 | .44 | .44 | .45 | .45 | .46 |
| .46 | .46 | .47 | .47 | .48 | .48 | .48 |
| .48 | .49 | .50 | .50 | .50 | .53 | .53 |
| .56 | .56 | | | | | |

TAI:

FLUORESCENCE:

} see other sheet

NO OF MEAS. = 30

AVG. REFL. = .46 (DESMO COLLINITE)

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

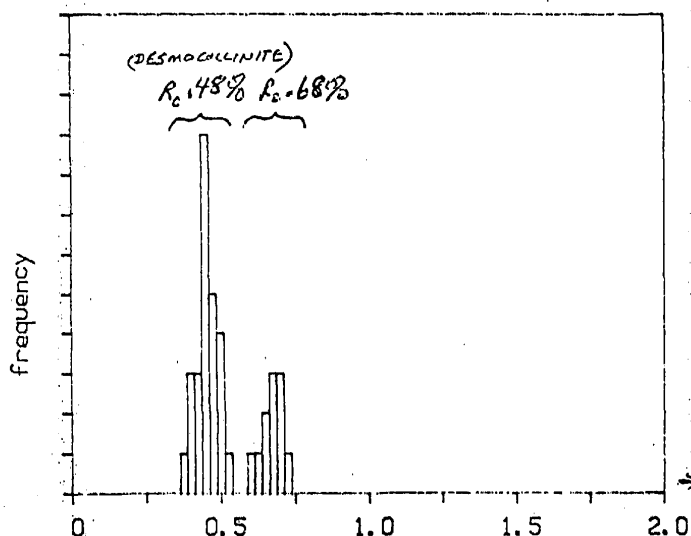
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 10270-10540 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .39 | .40 | .42 | .42 | .43 | .44 | .44 |
| .45 | .45 | .45 | .45 | .46 | .46 | .46 |
| .47 | .47 | .48 | .48 | .48 | .49 | .49 |
| .50 | .51 | .51 | .52 | .54 | .60 | .63 |
| .65 | .66 | .68 | .68 | .69 | .71 | .71 |
| .71 | .74 | | | | | |

TAI;

FLUORESCENCE: RARE YELLOW; RARE TO
COMMON ORANGE TO DARK ORANGE

⇒ 3.77

NO OF MEAS. = 37

AVG. REFL. = ~~.53~~ .68

STD. DEV. = .1

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 10540-10810 ft

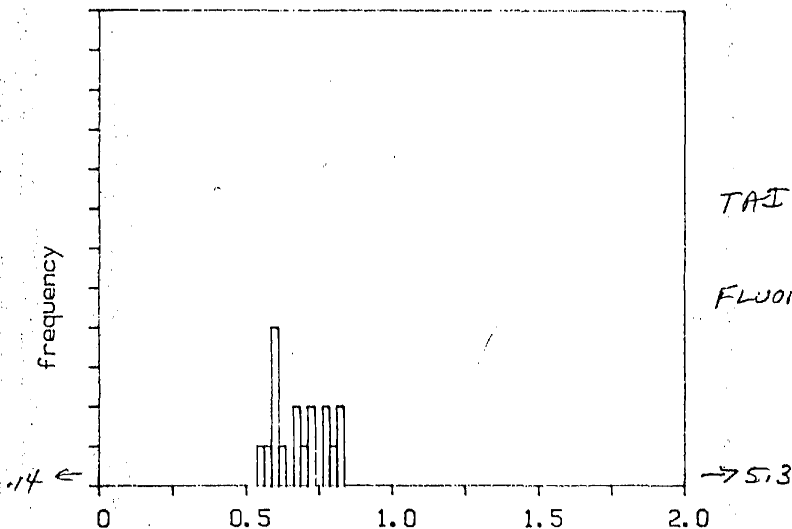
REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .55 | .59 | .60 | .61 | .62 | .62 | .63 |
| .68 | .69 | .72 | .73 | .73 | .79 | .79 |
| .80 | .84 | .84 | | | | |

TAI:

FLUORESCENCE: RARE YELLOW; RARE ORANGE



NO OF MEAS. = 17

AVG. REFL. = .7

STD. DEV. = .09

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

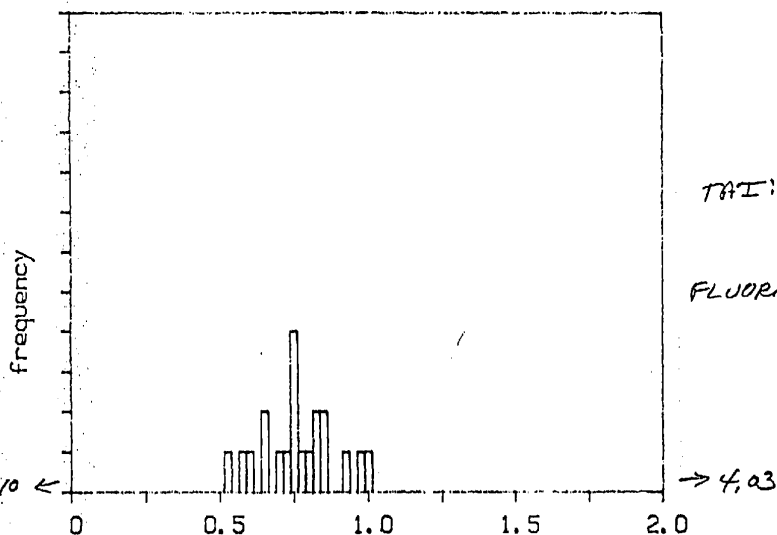
COFRC: ALASKA

DEPTH: 10810-11080 ft

REFLECTANCE VALUES

PROJECT: COOK INLET

| | | | | | | |
|-----|-----|-----|-----|-----|------|-----|
| .53 | .59 | .60 | .66 | .67 | .72 | .74 |
| .75 | .75 | .75 | .76 | .79 | .80 | .83 |
| .83 | .86 | .86 | .93 | .98 | 1.01 | |



NO OF MEAS. = 20
AVG. REFL. = .77
STD. DEV. = .12
COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

NOCOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 11080-11350 ft

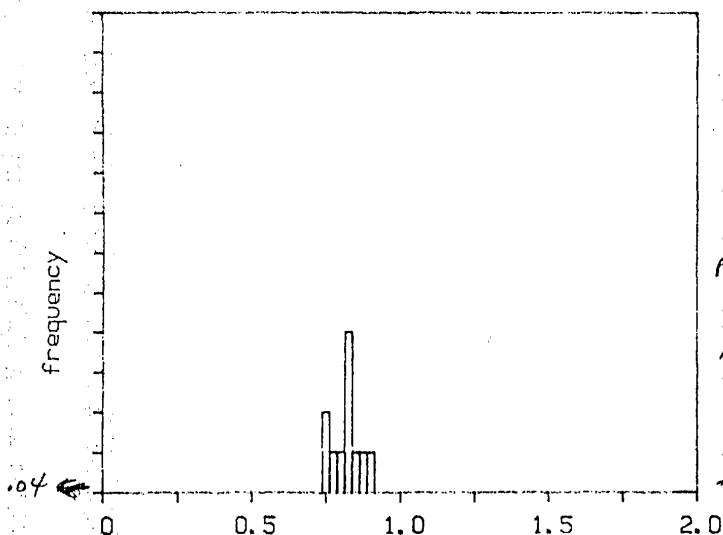
REFLECTANCE VALUES

PROJECT: COOK INLET

.76 .77 .79 .80 .83 .83 .84
.84 .87 .88 .91

TAI:

FLUORESCENCE: ONE LARGE BRIGHT YELLOW
PARTICLE (? SOLIDIFIED BITUMEN); OTHER
RARE BRIGHT YELLOW AND RARE - COMMON
ORANGE TO DARK ORANGE.



NO OF MEAS. = 11

AVG. REFL. = .83

STD. DEV. = .04

COMMENTS:

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8687

PERCENT REFLECTANCE @ 546 nm

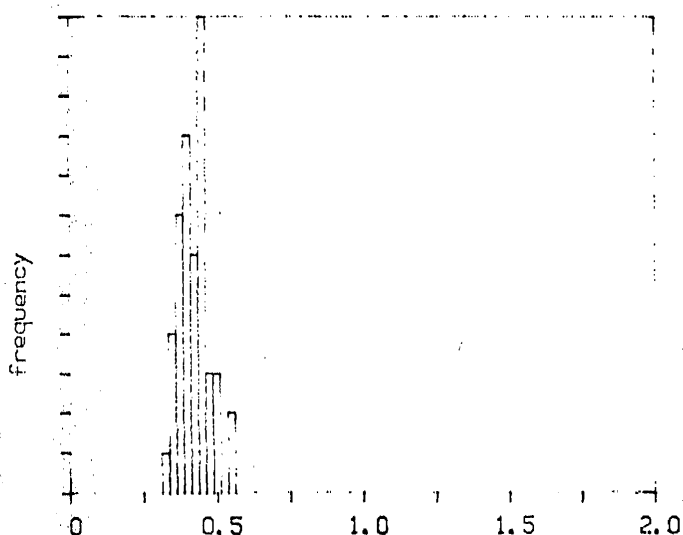
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 11080-11350 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .34 | .35 | .36 | .37 | .37 | .38 | .38 |
| .38 | .38 | .38 | .38 | .39 | .40 | .40 |
| .40 | .40 | .41 | .41 | .42 | .42 | .42 |
| .43 | .43 | .44 | .44 | .44 | .44 | .45 |
| .45 | .45 | .45 | .45 | .45 | .45 | .46 |
| .46 | .46 | .47 | .47 | .48 | .48 | .48 |
| .50 | .51 | .51 | .55 | .55 | | |

NO OF MEAS. = 47

AVG. REFL. = .43

STD. DEV. = .05

COMMENTS:

DESMOCELLINITE.

(APPROX. = TELLOCELLINITE R₀ 0.83%; SEE OTHER HISTOGRAM FOR THIS INTERVAL.)

T. A. EDISON
335 FLORIDA ST.
VALLEJO, CA 94590
(707) 554-8587

PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 11350-11620 ft

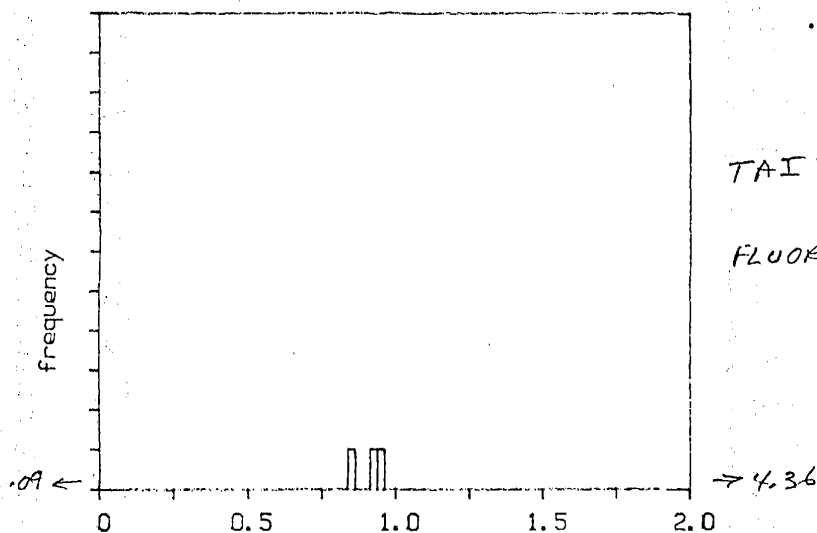
PROJECT: COOK INLET

REFLECTANCE VALUES

.85 .93 1.96

TAI:

FLUORESCENCE: RARE YELLOW; RARE
DARK ORANGE.



NO OF MEAS. = 3

AVG. REFL. = .91

STD. DEV. = .04

COMMENTS:

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PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 11620-11890 ft

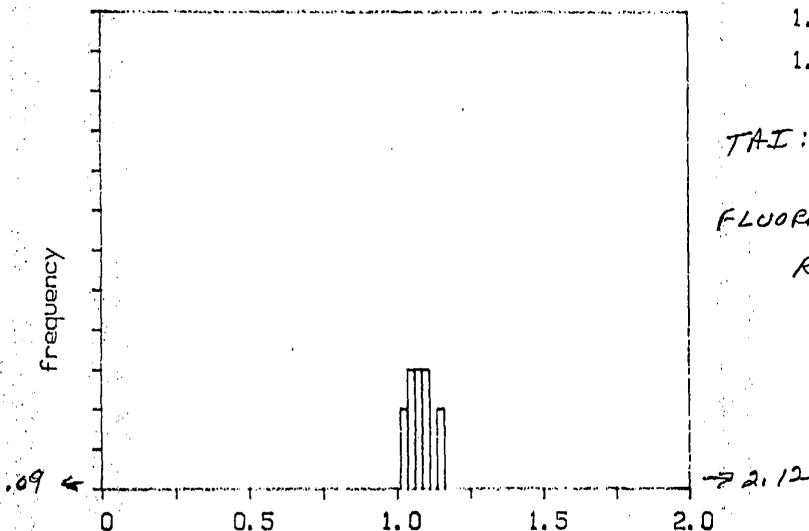
REFLECTANCE VALUES

PROJECT: COOK INLET

1.04 1.04 1.05 1.06 1.07 1.08 1.09
1.09 1.10 1.10 1.11 1.15 1.15

TAI:

FLUORESCENCE: RARE YELLOW; RARE ORANGE;
RARE BROWN SPHERES (? SOLIDIFIED
BITUMEN)



NO OF MEAS. = 13

AVG. REFL. = 1.09

STD. DEV. = .03

COMMENTS:

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PERCENT REFLECTANCE @ 546 nm

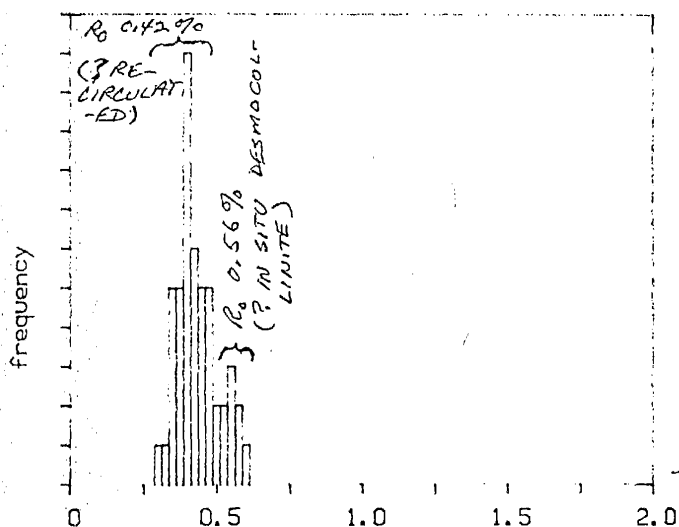
NICOLAI CREEK UNIT #4

COFRC: ALASKA

DEPTH: 11890-12160 ft

REFLECTANCE VALUES

PROJECT: COOK INLET



NO OF MEAS. = 49

AVG. REFL. = .44

STD. DEV. = .07

COMMENTS:

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .32 | .34 | .35 | .35 | .36 | .36 | .37 |
| .38 | .38 | .38 | .38 | .39 | .40 | .40 |
| .41 | .41 | .41 | .41 | .41 | .42 | .42 |
| .42 | .42 | .43 | .43 | .43 | .44 | .44 |
| .44 | .45 | .45 | .46 | .46 | .47 | .48 |
| .48 | .48 | .49 | .49 | .50 | .50 | .53 |
| .54 | .56 | .57 | .57 | .58 | .59 | .61 |

TAI:

FLUORESCENCE: RARE YELLOW; RARE
DARK ORANGE,

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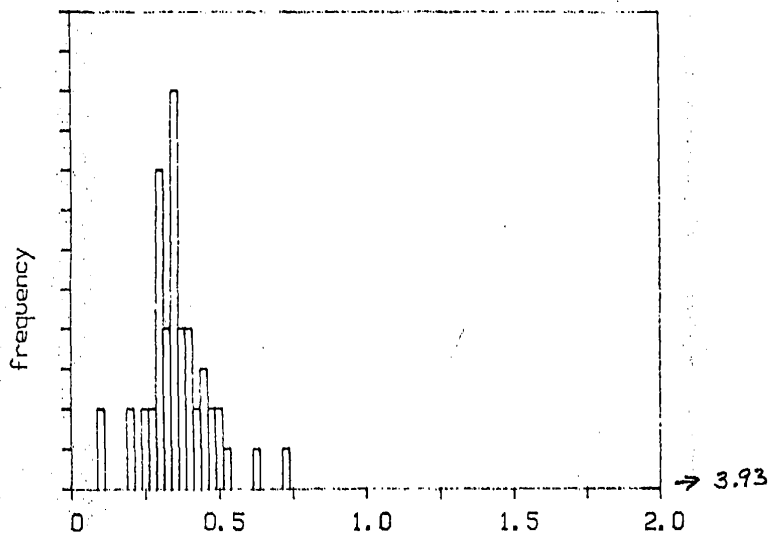
PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 11890-12160 ft

PROJECT: COOK INLET

REFLECTANCE VALUES



| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .11 | .11 | .21 | .21 | .25 | .27 | .28 |
| .29 | .30 | .30 | .31 | .31 | .31 | .32 |
| .32 | .32 | .33 | .33 | .33 | .34 | .35 |
| .36 | .36 | .37 | .37 | .37 | .37 | .37 |
| .37 | .37 | .38 | .38 | .39 | .39 | .40 |
| .41 | .42 | .42 | .43 | .44 | .45 | .45 |
| .46 | .48 | .48 | .50 | .51 | .54 | .63 |
| .73 | | | | | | |

TAI!

FLUORESCENCE: RARE YELLOW; RARE
DARK ORANGE.

NO OF MEAS. = 50

AVG. REFL. = ~~.37~~

STD. DEV. = .11

COMMENTS: REFLECTOGRAM OF FIRST FIFTY MEASUREABLE PARTICLES IN SAMPLE. ONE
PARTICLE IN SAMPLE WITH R_0 1.07%, WHICH MAY BE TELOCOLLINITE,

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PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 12160-12430 ft

PROJECT: COOK INLET

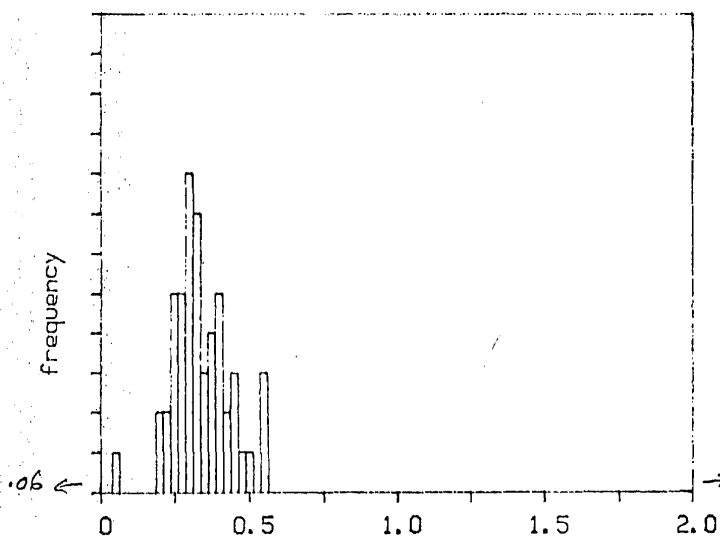
REFLECTANCE VALUES

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| .07 | .21 | .21 | .23 | .23 | .25 | .25 |
| .26 | .27 | .27 | .28 | .29 | .29 | .29 |
| .29 | .30 | .30 | .30 | .31 | .31 | .31 |
| .32 | .32 | .33 | .33 | .33 | .33 | .33 |
| .33 | .34 | .36 | .37 | .37 | .38 | .38 |
| .39 | .39 | .40 | .40 | .40 | .42 | .42 |
| .43 | .44 | .45 | .46 | .47 | .48 | .50 |
| .56 | .56 | .57 | | | | |

TAI:

FLUORESCENCE: RARE ORANGE TO DARK

ORANGE-BROWN



NO OF MEAS. = 52

AVG. REFL. = .35

STD. DEV. = .09

COMMENTS: REFLECTOGRAM OF FIRST FIFTY MEASUREABLE PARTICLES IN SAMPLE.

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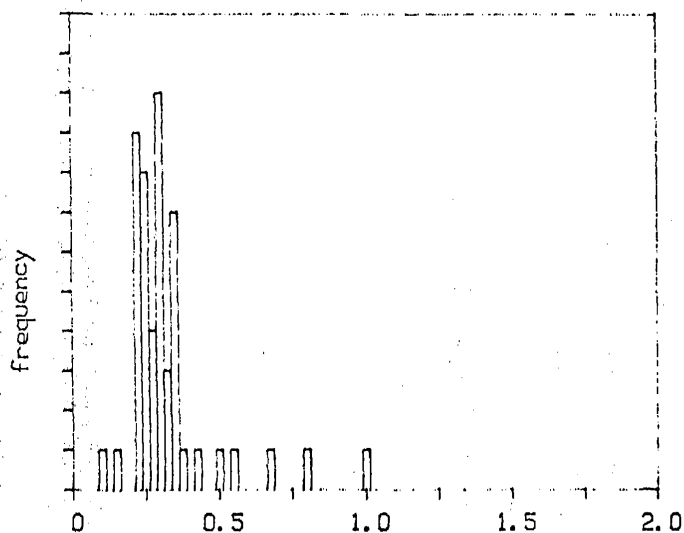
PERCENT REFLECTANCE @ 546 nm

NICOLAI CREEK UNIT #4

COFRC: ALASKA DEPTH: 12430-12744 ft

PROJECT: COOK INLET

REFLECTANCE VALUES



| | | | | | | |
|------|-----|-----|-----|-----|-----|-----|
| .10 | .17 | .23 | .23 | .23 | .23 | .23 |
| .24 | .24 | .24 | .24 | .25 | .25 | .25 |
| .25 | .25 | .26 | .27 | .27 | .28 | .28 |
| .28 | .29 | .30 | .30 | .30 | .30 | .31 |
| .31 | .32 | .32 | .32 | .32 | .33 | .34 |
| .34 | .35 | .35 | .36 | .36 | .37 | .37 |
| .37 | .38 | .43 | .52 | .55 | .69 | .82 |
| 1.00 | | | | | | |

TAI:

FLUORESCENCE: NONE

NO OF MEAS. = 50

AVG. REFL. = ~~.33~~

STD. DEV. = .15

COMMENTS: REFLECTOGRAM OF FIRST FIFTY MEASUREABLE PARTICLES IN SAMPLE.

NICOLAI CREEK UNIT #4, COOK INLET, ALASKA

ORGANIC MATTER THROUGHOUT THIS WELL IS REMARKABLY SIMILAR. INTERGRADATIONAL TYPES OF VITRINITE (OFTEN DESMOCOLLINITE) PREDOMINATE. EXINITE IS A MINOR COMPONENT REPRESENTED PRIMARILY BY SPORINITE (POLLEN) AND SUBERINITE. NO MARINE MICROFOSSILS WERE FOUND. RARE SOLIDIFIED BITUMEN AND OIL DROPLETS MAY BE PRESENT, AS NOTED. A FEW HIGHLY THERMALLY ALTERED ("COKE") PARTICLES WITH REFLECTANCE VALUES OFTEN IN THE 4-5 % RANGE OCCUR IN MOST SAMPLES. OXIDATION RIMS ON ORGANIC MATTER PARTICLES OCCUR RARELY TO ABUNDANTLY IN 37 OF THE 44 SAMPLES STUDIED. THE RIMS VARY FROM BEING BARELY DISCERNIBLE TO HAVING REFLECTANCE VALUES MORE THAN ONE PERCENT ABOVE THAT OF PARTICLE INTERIORS. SOME SAMPLES BELOW 8000 FEET CONTAIN SCLERENCHYMOUS TISSUE (WALNUT SHELL?) DRILLING MUD ADDITIVE, WHICH FLUORESCES AND MAY PRODUCE ERRONEOUSLY HIGH INDICATIONS OF THE PRESENCE OF HYDROGEN.

DETERMINATION OF PERCENT FOR THESE SAMPLES IS COMPLICATED BY:

1. THE PRESENCE OF MINOR AMOUNTS OF TELOCOLLINITE; THE MORE PREVALENT DESMOCOLLINITE CANNOT BE USED BECAUSE OF ITS LOWER REFLECTANCE.
2. THE REJECTION OF PARTICLES WITH OXIDATION RIMS
3. THE POSSIBILITY THAT WITHIN THE 270-FOOT SAMPLE INTERVALS MICROFISSURES MAY SOMETIMES PERMIT HIGHLY LOCALIZED HYDROTHERMAL OVERRIDING OF THE MORE REGIONAL

GEOTHERMAL GRADIENT, RESULTING IN AN IN SITU MIX OF PERCENT VITRINITE REFLECTANCE (AND TAI) VALUES WITHIN AN INTERVAL. THIS MAY ALSO BE THE CAUSE OF THE GENERALLY LOW LEVELS OF FLOORESCENCE NOTED,

DATA PLOTTED IN FIGURE 1 SHOW REFLECTANCE VALUES INCREASING GRADUALLY DOWN TO APPROXIMATELY SAMPLE 2980'-3250'. OXIDATION RIMS TO THIS LEVEL ARE RARE, BUT OCCUR MORE COMMONLY BELOW. JUST ABOVE THIS INTERVAL A SLIGHT INCREASE IN "PSEUDO-GRAPHITE" OCCURS. FROM THIS INTERVAL TO ABOUT SAMPLE 8380'-8650' ESSENTIALLY NO CHANGE IN MATURATION OCCURS. AT THIS LEVEL ANOTHER TEMPORARY INCREASE IN "PSEUDO-GRAPHITE" OCCURS. A RAPID INCREASE IN REFLECTANCE MEASUREMENTS OCCURS BELOW THIS LEVEL.

NICOLAI CREEK UNIT #4, COOK INLET, ALASKA

%R_o .2 .3 .4 .5 .6 .7 .8 .9 1.0 1.1 1.2 1.3

DEPTH
(FT.)

*
OXIDATION
RIMS "PSEU:
GRAPHI:

FIGURE 1

1000

2000

3000

4000

5000

6000

7000

8000

9000

10,000

11,000

12,000

SCLERENCHYMOUS TISSUE
DRILLING MUD ADDITIVE *

R
R
C
R-C
R

C
R
R

R
C-A
A

R
R
R
R
R
R
R-C
R-C
R
C
C
C
C
C
R
R
R
R
C
C
C
C
A
C
C-A
C-A
C-A
C-A
A
C
C
R-C
R
?
?

*
R = RARE
C = COMMON
A = ABUNDANT

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