Long Bell 1

LITH-O-LOG, Inc.
Pasadena, California

LITH-O-LOG

Company General Petroleum Corporation
Date June 29, 1957
Casing 13 3/8"
Well Long Bell № 1
Log Depths 524' - 9,004'
Location Sec. 27, T20S-R10W
Field Wildcat
Elevation 526'
1188' N, 1742' E from SW. Sec. Cr

ABBREVIATIONS

PP = Pump Pressure - psi
PR = Pumping Rate - gpm
RS = Rotary Speed - rpm
DR = Drilling Rate - ft/hr
NR = No Returns
NB = New Bit
CO = Circulate Out
CCB = Conventional Core Bit
WLCB = Wire Line Core Bit
EL = Electric Log

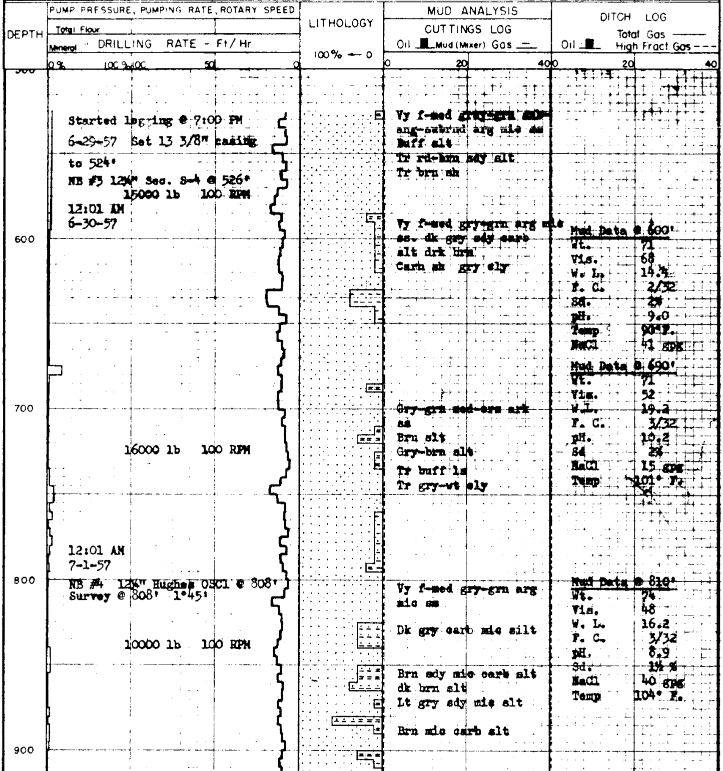
LOGGING ENGINEERS: Williams, Maxson, Barnes, Ashby

	OIL SHOWS	GAS SHOWS
TRACE	▮	0 — 10
STRONG TRACE	■	10 — 20
SHOW	■	20 — 30
GOOD SHOW	■	30 —

LITHOLOGY LEGEND

- Sandstone (sd)
- Shale (sh)
- Conglomerate (cg)
- Siltstone (silt)
- Clay (cl)
- Sandy Siltstone (sdy slt) or Silty Sandstone (slty sd)
- Limestone (ls)
- Dolomite (dol)
- Anhydrite (anh)
- Chert (cht)
- Basalt
- VVV Volcanics

REMARKS:



Started logging @ 7:00 PM
6-29-57 Set 13 3/8" casing
to 524'
NB #3 12¼" Sec. S-4 @ 526'
15000 lb 100 RPM
12:01 AM
6-30-57

16000 lb 100 RPM

12:01 AM
7-1-57
NB #4 12¼" Hughes OSC1 @ 808'
Survey @ 808' 1°45'

10000 lb 100 RPM

Vy f-med gry-grn sdy-
ang-subrnd arg mic ss
Buff slt
Tr rd-brn sdy slt
Tr brn sh

Vy f-med gry-grn arg mic
ss. dk gry sdy carb
slt drk brn
Carb sh gry cly

Gry-grn med-crs ark
ss
Brn slt
Gry-brn slt
Tr buff ls
Tr gry-wt cly

Vy f-med gry-grn arg
mic ss

Dk gry carb mic silt

Brn sdy mic carb slt
dk brn slt
Lt gry sdy mic slt

Brn mic carb slt

Mud Data @ 600'

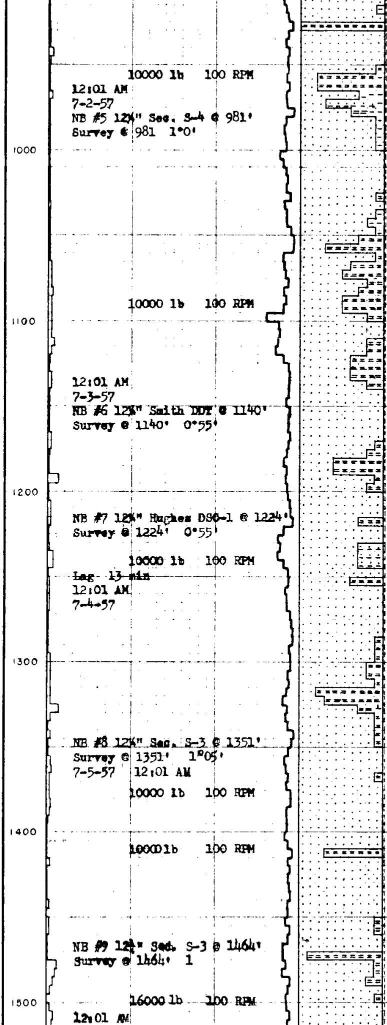
Wt.	71
Vis.	68
W. L.	14.4
F. C.	2/32
Sd.	2%
pH.	9.0
Temp	90° F.
NaCl	41 gpg

Mud Data @ 690'

Wt.	71
Vis.	52
W.L.	19.2
F. C.	3/32
pH.	10.2
Sd	2%
NaCl	15 gpg
Temp	101° F.

Mud Data @ 810'

Wt.	74
Vis.	48
W. L.	16.2
F. C.	3/32
pH.	8.9
Sd.	1½ %
NaCl	40 gpg
Temp	104° F.



10000 lb 100 RPM

12:01 AM
7-2-57
NB #5 12¼" Sec. S-4 @ 981'
Survey @ 981 1°0'

10000 lb 100 RPM

12:01 AM
7-3-57
NB #6 12¼" Smith DDT @ 1140'
Survey @ 1140' 0°55'

NB #7 12¼" Hughes DSC-1 @ 1224'
Survey @ 1224' 0°55'

10000 lb 100 RPM

~~Lag 13 min~~
12:01 AM
7-4-57

NB #8 12¼" Sec. S-3 @ 1351'
Survey @ 1351' 1°05'
7-5-57 12:01 AM

10000 lb 100 RPM

10000 lb 100 RPM

NB #9 12¼" Sec. S-3 @ 1464'
Survey @ 1464' 1

16000 lb 100 RPM

12:01 AM

Brn mic carb slt

Vy f-med gry-grn arg mic ss dk gry carb mic slt dk gry mic sdy slt
Gry-wt cly

Brn slt

Dk gry-brn mic slt

Vy-f-crs gry-grn arg mic ss

Vy f-crs gry-grn arg mic ss

Brn slt gry slt

Med-vy crs gry-grn mic ss

Gry sdy slt
Tr calcite

Vy f-med gry-grn arg mic ss
Brn slt gry slt
Calcite

Gry-grn med-crs mic ss

Tr calcite

Vy f-crs gry-grn arg mic ss

Vy-f-crs gry-grn arg mic ss

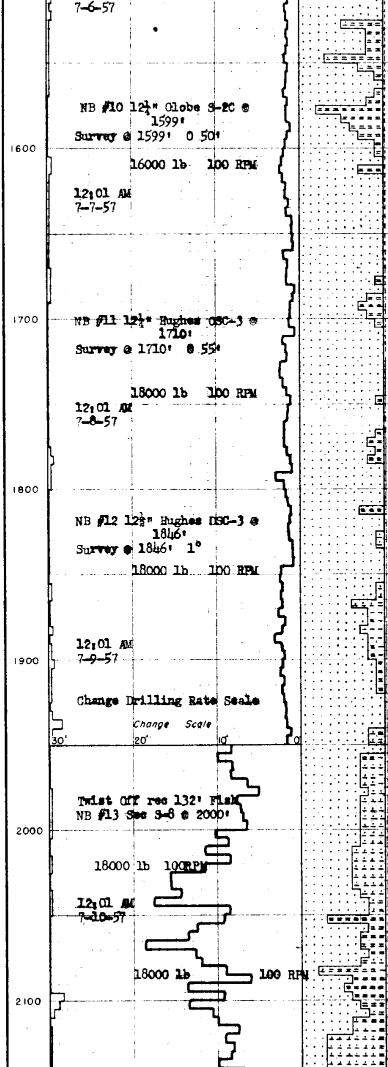
Brn & gry slt
F-crs gry-grn arg mic ss w/some calc cmt

Mud Data @ 1040'	
Wt.	78.5
Vis.	40
W. L.	13.0
F. C.	3/32
pH	9.2
Sd.	3½ %
NaCl	12 gpg
Temp	102° F.

Mud Data @ 1205'	
Wt.	79.5
Vis.	40
W. L.	15.0
F. C.	4/32
pH	9.3
Sd.	1.5%
NaCl	8 gpg
Temp	101° F.

Mud Data @ 1330'	
Wt.	79.5
Vis.	40
W. L.	19.5
F. C.	4/32
pH	9.3
Sd.	1.5 %
NaCl	8.7 gpg
Temp	102° F.

Mud Data @ 1446'	
Wt.	81
Vis.	47
W. L.	13.8
F. C.	3/32
pH	9.0
Sd.	2.5%
NaCl	13 gpg
Temp	100° F.



7-6-57

Dk gry-brn sdy mic slt dk gry-brn mic slt

Mud Data @ 1585'	
Wt.	81.5
Vis.	42
W. L.	15.9
F. C.	3/32
pH	9.0
Sd.	2%
NaCl	22 gpg
Temp	104 F.

Brn slt Tr pyrite

NB #10 12¼" Globe S-2C @ 1599'

Survey @ 1599' 0 50'

16000 lb 100 RPM

Vy f-med gry-grn arg mic ss

12:01 AM
7-7-57

Gry mic carb slt

Mud Data @ 1700'	
Wt.	77
Vis.	39
W. L.	14.9
F. C.	3/32
pH.	9.2
Sd.	3/4 %
NaCl	20 gpg
Temp	100 F.

NB #11 12¼" Hughes OSC-3 @ 1710'

Survey @ 1710' @ 55'

18000 lb 100 RPM

12:01 AM
7-8-57

Vy f-med gry-grn arg mic ss
Gry-grn sdy slt

NB #12 12¼" Hughes DSC-3 @ 1846'

Survey @ 1846' 1°

Mud Data @ 1850'	
Wt.	75
Vis.	37
W. L.	15.3
F. C.	3/32
pH	9.2
Sd.	2 %
NaCl	20 gpg
Temp	95 F.

18000 lb 100 RPM

Vy f-med gry-grn arg mic ss brn-sdy slt
Gry-wt cly

12:01 AM
7-9-57

Change Drilling Rate Scale

Change Scale

Vy f-med gry & grn-gry v arg mic ss w/some occ calc cmt
Gry-wt sdy cly

Twist Off rec 132' Fish
NB #13 Sec S-8 @ 2000'

Mud Data @ 1990'	
Wt.	78
Vis.	60
W. L.	12.6
F. C.	2/32
pH.	10.2
Sd.	3.5%
NaCl	28 gpg
Temp	104 F.

Gry slty ss

18000 lb 100RPM

Brn Slt

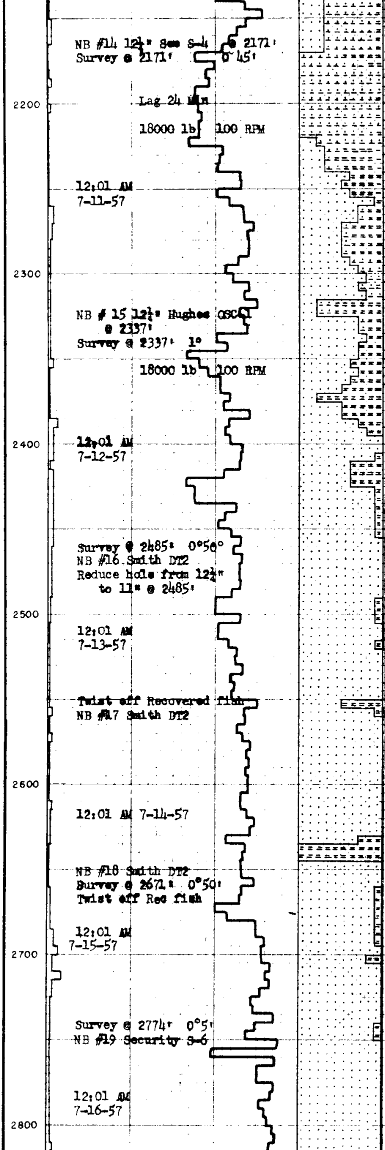
12:01 AM
7-10-57

Gry & gry-grn vy f-med v arg mic ss
Brn mic Slt

18000 lb 100 RPM

Gry calc ss

Gry vy f-med mic ss occ w/some calc cmt
Gry sdy slt slty ss & sdy cly



NB #14 12¼" Sec S-4 @ 2171'
Survey @ 2171' 0°45'

Lag 24 Min

18000 lb 100 RPM

Mud Data @ 2170'	
Wt.	78
Vis.	49
W. L.	12.5
F. C.	2/32
pH	10.0
Sd.	1.5%
NaCl	20 GPG
Temp	106 F.

Gry vy f-f slty mic v arg ss

Gry vy f-med v arg ss
Gry slty ss dk gry-brn slt brn cly

12:01 AM
7-11-57

Mud Data @ 2315'	
Wt.	78.5
Vis.	40
W. L.	11.6
F. C.	3/32
pH	9.5
Sd.	2.5%
NaCl	37 gpg
Temp	102 F.

NB # 15 12¼" Hughes OSC1 @ 2337'
Survey @ 2337' 1°

Gry vy f-f v arg ss
Gry slty ss gry-brn slt tan slt

18000 lb 100 RPM

12:01 AM
7-12-57

Mud Data @ 2460'	
Wt.	78.5
Vis.	47
W. L.	11.6
F. C.	3/32
pH	9.6
Sd.	2.5%
NaCl	24 gpg

Survey @ 2485' 0°50'
NB #16 Smith DT2
Reduce hole from 12¼" to 11" @ 2485'

12:01 AM
7-13-57

Twist off Recovered fish
NB #17 Smith DT2

Mud Data @ 2564'	
Wt.	77.5
Vis.	48
W. L.	12.8
F.C.	3/32
pH	9.4
Sd.	2.5%
NaCl	23 GPG

Gry-gry grn vy f-crs ang-subang mica ss & sd
Tr brn sltst

12:01 AM 7-14-57

NB #18 Smith DT2
Survey @ 2671' 0°50'
Twist off Rec fish

Mud Data @ 2675'	
Wt.	78
Vis.	87
W.L.	14.2
F.C.	3/32
pH	9.8
Sd.	4%
NaCl	19 GPG

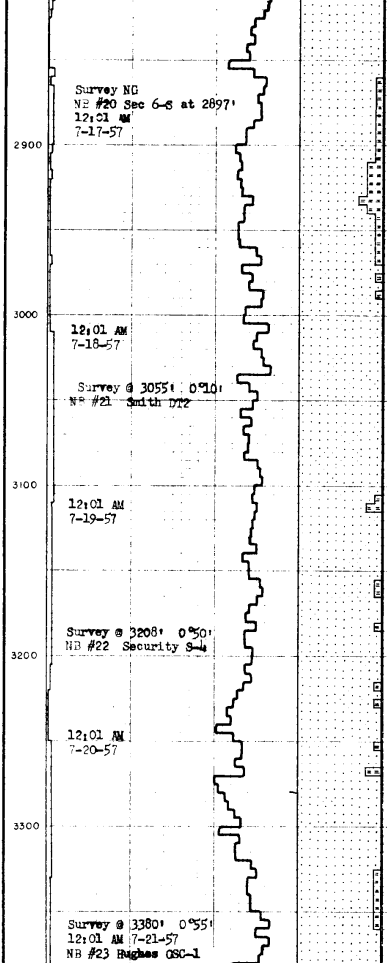
12:01 AM
7-15-57

Gry-gry grn vy f-crs ang-subang mica ss & sd Minor amt of gry-gry brn sltst
Tr pyrite & vol w/ slt tr of carbonaceous matter

Survey @ 2774' 0°5'
NB #19 Security S-6

Mud Data @ 2750'	
Wt.	78.5
Vis.	43
W. L.	10.4
F. C.	3/32
pH	9.6
Sd.	1.5%
NaCl	15 GPG

12:01 AM
7-16-57



Survey NG
NB #20 Sec 6-6 at 2897'
12:01 AM
7-17-57

12:01 AM
7-18-57

Survey @ 3055' 0°10'
NB #21 Smith DT2

12:01 AM
7-19-57

Survey @ 3208' 0°50'
NB #22 Security S-4

12:01 AM
7-20-57

Survey @ 3380' 0°55'
12:01 AM 7-21-57
NB #23 Hughes OSC-1

Lithology as above

Tr of carbonaceous
matter

Lithology as above

Gry-gry grn vy f grn
ang-subang ss & sd
Gry-gry brn sltst
Tr pyrite xls &
carbonaceous matter

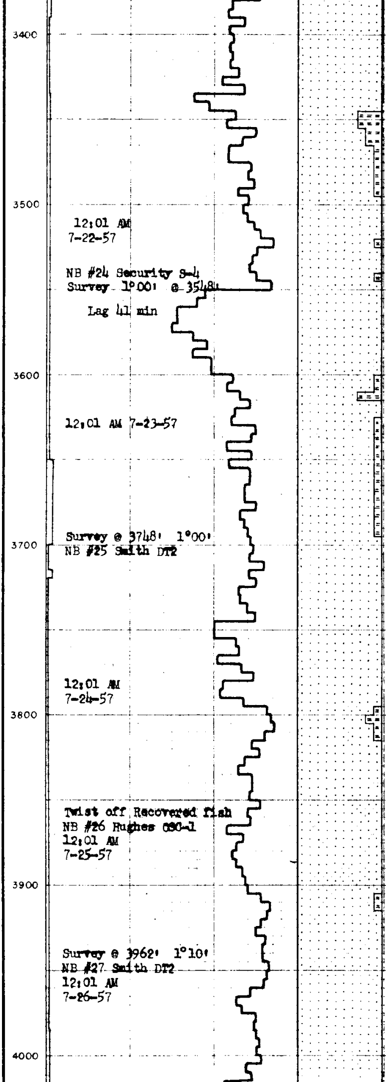
Mud @ 2840'	
Wt.	78
Vis.	44
W.L.	8.6
F.C.	2/32
pH	9
Sd.	2.5%

Mud Data @ 2955'	
Wt.	79.5
Vis.	37
W. L.	8.8
F.C.	3/32
Sd.	3.5%
NaCl	29 gpg

Mud Data @ 3060'	
Wt.	81
Vis.	47
W.L.	8.8
F.C.	3/32
pH	7.8
Sd.	4.5%
NaCl	40 gpg
Temp	105 F.

Mud Data @ 3209'	
Wt.	78.5
Vis.	48
W.L.	8.6
F.C.	3/32
pH	9.2
Sd.	3.5%
NaCl	48 gpg

Mud Data @ 3330'	
Wt.	78
Vis.	61
W.L.	8.2
F.C.	3/32
pH	9.4
Sd.	3.5%
NaCl	47 gpg



Gry-gry grn vy f-crs ang-subang ss & sd

Gry-gry brn sltst Tr pyrite, vols & carbonaceous matter

Mud Data @ 3440'

Wt.	76.5
Vis	42
W.L.	8.0
F. C.	2/32
pH	9.2
Sd.	1.5%
NaCl	43 gpg

12:01 AM
7-22-57

NB #24 Security S-4
Survey 1°00' @ 3548'

Lag 41 min

Mud Data @ 3600'

Wt.	77.5
Vis.	47
W.L.	8.4
F.C.	2/32
pH	9.0
NaCl	43 gpg

12:01 AM 7-23-57

Gry-gry grn f-med ang-subang mica ss & sd w/some dk brn sltst present Tr volc pyrite & carbonaceous matter

Survey @ 3748' 1°00'
NB #25 Smith DT2

Mud Data @ 3748'

Wt.	77.5
Vis.	52
W.L.	8.7
F.C.	2/32
pH	9.0
Sd.	2%
NaCl	43 gpg

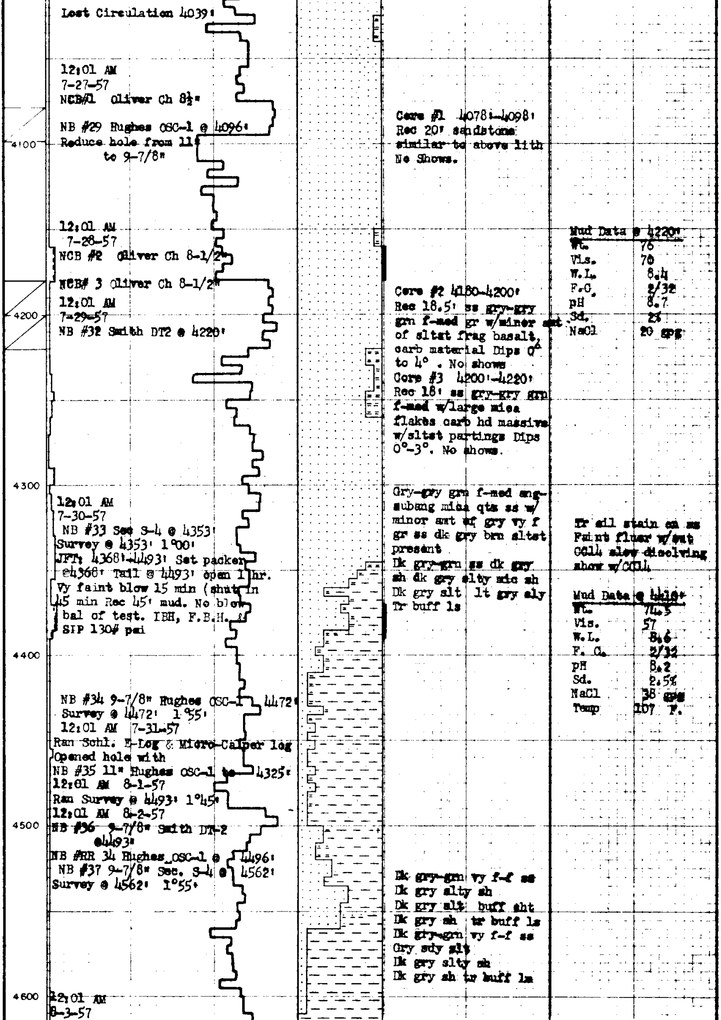
12:01 AM
7-24-57

Twist off Recovered fish
NB #26 Hughes OSC-1
12:01 AM
7-25-57

Mud Data @ 3935'

Wt.	77
Vis.	52
W.L.	8.5
F.C.	2/32
pH	9.0
Sd.	2%
NaCl	47 gpg

Survey @ 3962' 1°10'
NB #27 Smith DT2
12:01 AM
7-26-57



Lost Circulation 4039'

12:01 AM
7-27-57
NCB#1 Oliver Ch 8½"

NB #29 Hughes OSC-1 @ 4096'
~~Reduce hole from 11"~~
to 9-7/8"

12:01 AM
7-28-57
NCB #2 Oliver Ch 8-1/2"

NCB# 3 Oliver Ch 8-1/2"
12:01 AM
7-29-57
NB #32 Smith DT2 @ 4220'

12:01 AM
7-30-57
NB #33 Sec S-4 @ 4353'
Survey @ 4353' 1°00'
JFT: 4368'-4493' Set packer @4368' Tail @ 4493' open 1 hr. Vy faint blow 15 min (shut in 45 min Rec 45' mud. No blow bal of test. IBH, F.B.H. & SIP 130# psi

NB #34 9-7/8" Hughes OSC-1 4472'
Survey @ 4472' 1°55'
12:01 AM 7-31-57
Ran Schl. E-Log & Micro-Caliper log
Opened hole with
NB #35 11" Hughes OSC-1 to 4325'
12:01 AM 8-1-57
Ran Survey @ 4493' 1°45'
12:01 AM 8-2-57
NB #36 9-7/8" Smith DT-2 @4493'
NB #RR 34 Hughes OSC-1 @ 4496'
NB #37 9-7/8" Sec. S-4 @ 4562'
Survey @ 4562' 1°55'

12:01 AM
8-3-57

Core #1 4078'-4098'
Rec 20' sandstone ~~similar to above lith~~
No Shows.

Core #2 4180-4200'
Rec 18.5' ss gry-gry grn f-med gr w/minor amt of sltst frag basalt, carb material Dips 0° to 4°. No shows
Core #3 4200'-4220'
Rec 18' ss gry-gry grn f-med w/large mica flakes carb hd massive w/sltst partings Dips 0°-3°. No shows.

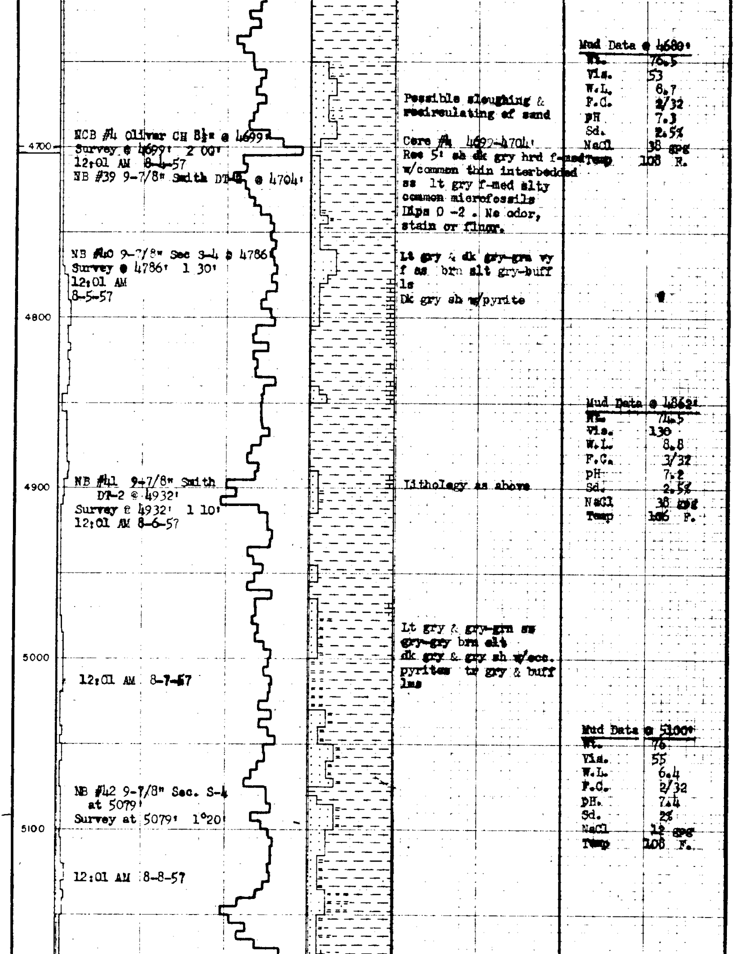
Gry-gry grn f-med ang-subang mica qtz ss w/ minor amt of gry vy f gr ss dk gry brn sltst present
Dk gry-grn ss dk gry sh dk gry slty mic sh
Dk gry slt lt gry sly
Tr buff ls

Dk gry-grn vy f-f ss
Dk gry slty sh
Dk gry slt buff sht
Dk gry sh tr buff ls
Dk gry-grn vy f-f ss
Gry sdy slt
Dk gry slty sh
Dk gry sh tr buff ls

Mud Data @ 4220'	
Wt.	76
Vis.	70
W.L.	8.4
F.C.	2/32
pH	8.7
Sd.	2%
NaCl	20 gpg

Tr oil stain on ss
Faint fluor w/out CCl_4 slow dissolving show w/CCl_4

Mud Data @ 4418'	
Wt.	74.5
Vis.	57
W.L.	8.6
F. C.	2/32
pH	8.2
Sd.	2.5%
NaCl	38 gpg
Temp	107 F.



Mud Data @ 4680'	
Wt.	76.5
Vis.	53
W.L.	6.7
F.C.	2/32
pH	7.3
Sd.	2.5%
NaCl	38 gpg
Temp	108 F.

Possible sloughing & recirculating of sand

NCB #4 Oliver CH 8½" @ 4699'
Survey @ 4699' 2 00'
12:01 AM 8-4-57
NB #39 9-7/8" Smith DT-2 @ 4704'

Core #4 4699-4704'
Rec 5' sh dk gry hrd f-med w/common thin interbedded ss lt gry f-med slty common microfossils Dips 0 -2 . No odor, stain or fluor.

NB #40 9-7/8" Sec S-4 @ 4786'
Survey @ 4786' 1 30'
12:01 AM
8-5-57

Lt gry & dk gry-grn vy f ss brn slt gry-buff ls
Dk gry sh w/pyrite

Mud Data @ 4862'	
Wt.	74.5
Vis.	130
W.L.	8.8
F.C.	3/32
pH	7.2
Sd.	2.5%
NaCl	38 gpg
Temp	106 F.

NB #41 9-7/8" Smith
DT-2 @ 4932'
Survey @ 4932' 1 10'
12:01 AM 8-6-57

Lithology as above

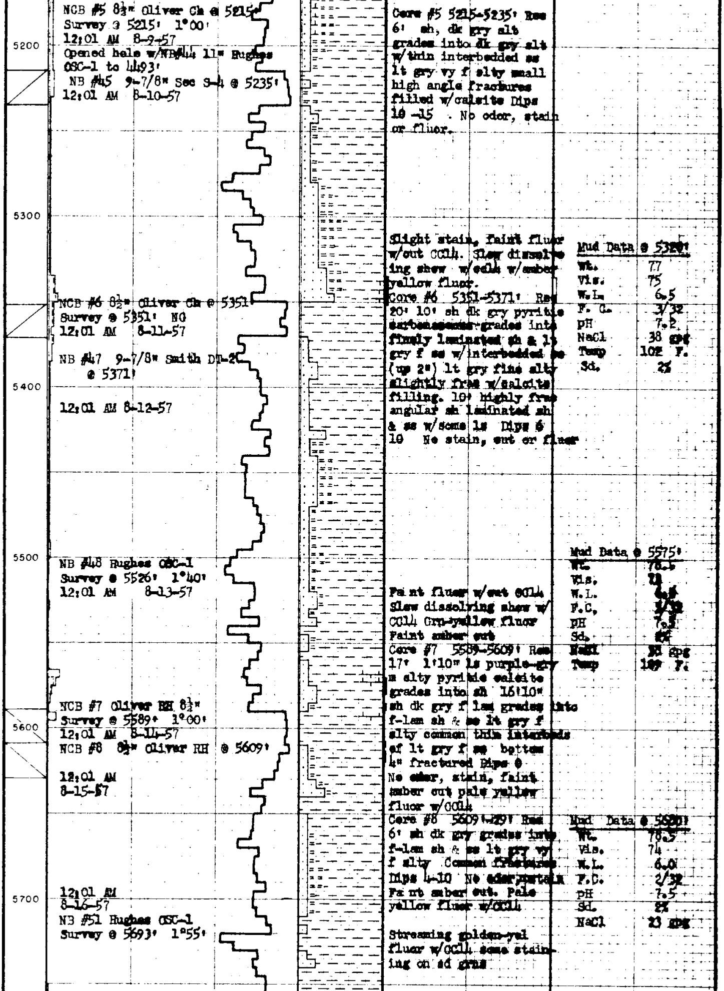
Lt gry & gry-grn ss gry-gry brn slt dk gry & gry sh w/occ. pyrites tr gry & buff lms

12:01 AM 8-7-57

Mud Data @ 5100'	
Wt.	76
Vis.	55
W.L.	6.4
F.C.	2/32
pH.	7.4
Sd.	2%
NaCl	12 gpg
Temp	108 F.

NB #42 9-7/8" Sec. S-4
at 5079'
Survey at 5079' 1°20'

12:01 AM 8-8-57



NCB #5 8½" Oliver Ch @ 5215'
Survey 3 5215' 1°00'
12:01 AM 8-9-57
Opened hole w/NB#44 11" Hughes OSC-1 to 4493'
NB #45 9-7/8" Sec S-4 @ 5235'
12:01 AM 8-10-57

Core #5 5215-5235' Rec 6' sh, dk gry slt grades into dk gry slt w/thin interbedded ss lt gry vy f slty small high angle fractures filled w/calsite Dips 10 -15 . No odor, stain or fluor.

Slight stain, faint fluor w/out CCl4. Slow dissolving show w/ccl4 w/amber yellow fluor.

Mud Data @ 5320'	
Wt.	77
Vis.	75
W.L.	6.5
F. C.	3/32
pH	7.2
NaCl	38 gpg
Temp	102 F.
Sd.	2%

NCB #6 8½" Oliver Ch @ 5351'
Survey @ 5351' NG
12:01 AM 8-11-57

Core #6 5351-5371' Rec 20' 10' sh dk gry pyritic ~~carbonaceous~~ grades into finely laminated sh & lt gry f ss w/interbedded ss (up 2") lt gry fine slty slightly frac w/calcite filling. 10' highly frac angular sh laminated sh & ss w/some ls Dips 6 10 No stain, cut or fluor

NB #47 9-7/8" Smith DT-2 @ 5371'

12:01 AM 8-12-57

NB #48 Hughes OSC-1
Survey @ 5526' 1°40'
12:01 AM 8-13-57

Mud Data @ 5575'	
Wt.	76.5
Vis.	[illegible]
W.L.	[illegible]
F.C.	[illegible]
pH	7.5
Sd.	[illegible]
NaCl	[illegible] gpg
Temp	[illegible] F.

Faint fluor w/out CCl4 Slow dissolving show w/ CCl4 Grn-yellow fluor Faint amber cut

NCB #7 Oliver RH 8½"
Survey @ 5589' 1°00'
12:01 AM 8-14-57

Core #7 5589-5609' Rec 17' 1'10" ls purple-gry m slty pyritic calcite grades into sh 16'10" sh dk gry f lam grades into f-lam sh & ss lt gry f slty common thin interbeds of lt gry f ss bottom 4" fractured Dips 0 No odor, stain, faint amber cut pale yellow fluor w/CCl4

NCB #8 8½" Oliver RH @ 5609'

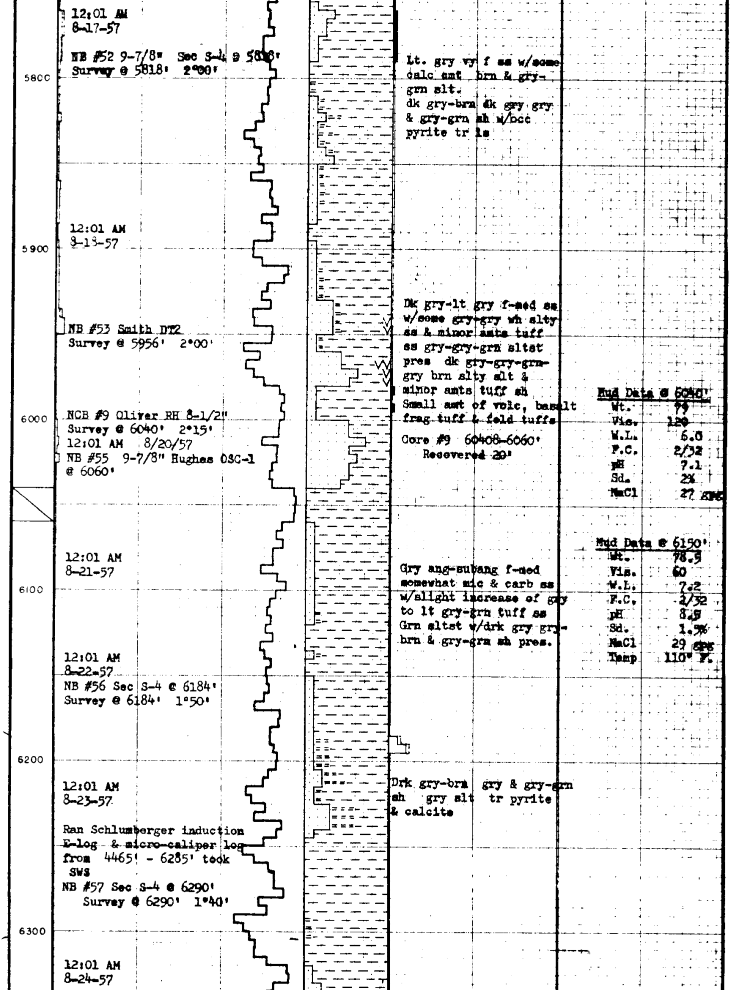
12:01 AM
8-15-57

Core #8 5609'-29' Rec 6' sh dk gry grades into f-lam sh & ss lt gry vy f slty Common fractures Dips 4-10 No odor or stain Faint amber cut. Pale yellow fluor w/CCl4

Mud Data @ 5620'	
Wt.	76.5
Vis.	74
W.L.	6.0
F.C.	2/32
pH	7.5
Sd.	2%
NaCl	23 gpg

12:01 AM
8-16-57
NB #51 Hughes OSC-1
Survey @ 5693' 1°55'

Streaming golden-yel fluor w/CCl4 some staining on sd grns



12:01 AM
8-17-57

NB #52 9-7/8" Sec S-4 @ 5818'
Survey @ 5818' 2°00'

12:01 AM
8-18-57

NB #53 Smith DT2
Survey @ 5956' 2°00'

NCB #9 Oliver RH 8-1/2"
Survey @ 6040' 2°15'
12:01 AM 8/20/57
NB #55 9-7/8" Hughes OSC-1
@ 6060'

12:01 AM
8-21-57

12:01 AM
8-22-57
NB #56 Sec S-4 @ 6184'
Survey @ 6184' 1°50'

12:01 AM
8-23-57

Ran Schlumberger induction
E-log & micro-caliper log
from 4465' - 6285' took
SWS
NB #57 Sec S-4 @ 6290'
Survey @ 6290' 1°40'

12:01 AM
8-24-57

Lt. gry vy f ss w/some
calc cmt brn & gry-
grn slt.
dk gry-brn dk gry gry
& gry-grn sh w/occ
pyrite tr ls

Dk gry-lt gry f-med ss
w/some gry-gry wh slty
ss & minor amts tuff
ss gry-gry-grn sltst
pres dk gry-gry-grn-
gry brn slty slt &
minor amts tuff sh
Small amt of volc, basalt
frag tuff & feld tuffs

Core #9 60408-6060'
Recovered 20'

Mud Data @ 6040'	
Wt.	79
Vis.	120
W.L.	6.0
F.C.	2/32
pH	7.1
Sd.	2%
NaCl	27 gpg

Mud Data @ 6150'	
Wt.	78.5
Vis.	60
W.L.	7.2
F.C.	2/32
pH	8.5
Sd.	1.5%
NaCl	29 gpg
Temp	110° F.

Gry ang-subang f-med
somewhat mic & carb ss
w/slight increase of gry
to lt gry-grn tuff ss
Grn sltst w/drk gry gry-
brn & gry-grn sh pres.

Drk gry-brn gry & gry-grn
sh gry slt tr pyrite
& calcite

NB #58 Hughes OSC-1
Survey @ 6361' 1°00'
12:01 AM
8-25-57

6400

NB #59 Security 8-6
Survey @ 6463' 2°00
12:01 AM
8-26-57

6500

12:01 AM
8-27-57

Survey @ 6576' 1°55'
NB #60 Oliver RH 8-1/2" @6576'
12:01 AM
8-28-57

6600

NB #61 Smith DT2

~~12:01 AM 8-29-57~~

NB #62 Hughes OSC-1
Survey @ 6700' 2°20'

6700

12:01 AM
8-30-57

12:01 AM
8-31-57

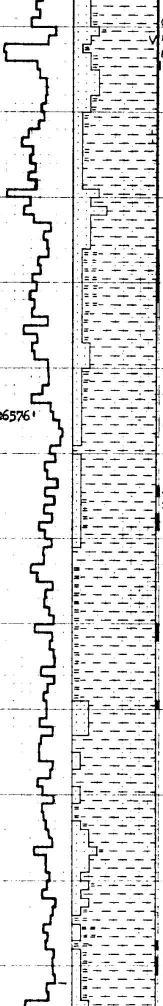
6800

NB #63 Security S-4
Survey @ 6806' 1°30'

12:01 AM
9-1-57

6900

NB #64 Smith DT2
Survey @ 6899' 2°00'
12:01 AM
9-2-57



Gry f-med slightly mic ss drk gry-brn & gry-grn sh gry-brn slt

Slow pale yel cut fluor w/ccl$_4$

Increase 1% gry calc clyst Lith A/A with abund calcite

Core #10 6576' - 6596'
Rec 20'

Slow pale yel cut fluor w/ccl$_4$

Vy slow pale yel cut fluor w/ccl$_4$

Gry f-med slightly mic ss gry-brn slt gry-brn sh

Lithology as above w/ increased lt gry clyst Str tr pyr & calcite Tr tuff ss

Mud Data @ [illegible]	
Wt.	79
Vis.	80
W. L.	4.9
F.C.	2/32
pH	8.7
Sd.	1.5%
NaCl	38 gpg
Temp	112° F.

Mud Data @ 6580'	
Wt.	79
Vis.	81
W.L.	4.8
F.C.	2/32
pH	8.6
Sd.	1.5%
NaCl	26 gpg
Temp	110°F.

Mud Data @ 6710'	
Wt.	78
Vis.	82
W.L.	5.3
F.C.	2/32
pH	8.8
Sd.	1.5%
NaCl	46 gpg
Temp	110° F.

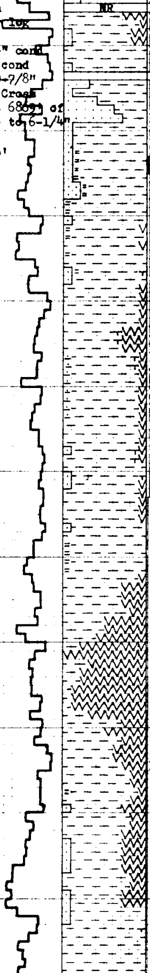
Mud Data @ 6893'	
Wt.	78
Vis.	88
W.L.	5.1
F. C.	2/32
pH	8.8
Sd.	1.5%
NaCl	38 gpg
Temp	116°F.

Mud Data at 6960'

Ran Schlumberger induction
E-Log micro log & caliper log
5:30 PM 9-2-57
NB #65 Security S-4 12-1/4" cond
hole to 4485 - NB #66 11" cond
hole to 4493 - NB #64 RR 9-7/8"
Smith DT-2 - NB #67 Smith Cross
Sec K2P 6-1/4" @ 6930' Set 6869' of
7-5/8" casing-reduced hole to 6-1/4"
7000 12:01 AM 9-7-57 at 6936'
NB #68 Hughs OSC-1 at 6936'
NB #69 Sec. S-6 at 6955'
12:01 AM 9-8-57 at 6965'
NB #70 Sec. S-3 at 6970'
Survey at 6970' 2°00'
NB #71 at 7010' Sec. S-3
Survey at 6983' 1°50'
12:01 AM 9-9-57 at 7024'
Survey at 7044' 1°20'
NB #72 at 7054' Sec. S-3
7100 12:01 AM 9-10-57
NCB #11 Allen RH
NB #74 Hughes OSC
12:01 AM 9-11-57
Survey at 7138' 1°30'
NB #75 Hughes OSC

12:01 AM 9-12-57
NB #76 Hughes OSC
Survey at 7184' 2°05'
7200
NB #77 Sec. S-6
12:01 AM 9-13-57
Survey at 7211' 2°11'
Survey at 7235' 1°55'
NB #78 Sec. S-3
12:01 AM 9-14-57
NB #79 Sec. S-3
Survey at 7280' 1°55'
7300
12:01 AM 9-15-57
NB #80 Sec. S-3
Survey at 7326' 2°00'
Survey at 7362' 2°00'
NCB #12 Allen RH
12:01 AM 9-16-57
NB #82 Hughes OWS at 7377'
7400 12:01 AM 9-17-57
NB #83 Hughes OSC-3
Survey at 7401' 1°40'

NB #84 Hughes OSC-3
Survey 1°30'
12:01 AM 9-18-57



Tar staining w/pale grn-
yel cut w/col4 Drk gry
slty sh Lt grn sdy tuff
Tr. brn sil vy hd ss

Lt grn vy f slty carb
ss Dk gry slty sh w/str
tr of vol Tr pyrite
& coal tar cuts w/CCl4

Lithology as above
w/some lt gry tuff buff
ls

Core #11 Rec. 11'
7095' - 7110'

Dips 5°-10°
No Cut, stain or
fluor

Gry-wh tuff & tuffaceous
ss w/tuff sh present
Dk gry -lt gry sh

Sh dk gry slightly
tuff Minor amt lt gry-
lt grn tuff w/tr of tuff
ss Tr calc pyrite
Tuffs lt gry-lt grn-lt
blue w/some red-brn tuff
present Lt gry-dk gry
tuff sh present Dk gry-
lt gry sh present

Core #12 7362' - 7377'
Recovered 8'

Dips 10-15° poor No
stain odor or fluor

Wt.	79
Vis.	55
W.L.	6.9
F.C.	2/32
Sd.	0.5%
NaCl	18 gpg

Mud Data at 6970'

Wt.	81.5
Vis.	74
W.L.	5.4
F.C.	1.5
pH	9.3
Sd.	1%
NaCl	6 gpg

Mud Data at 7125'

Wt.	83
Vis.	70
W.L.	4.5
F.C.	1.5
pH	9.4
Sd.	Tr.
NaCl	9.7 gpg
Temp	165°F

Mud Data at 7240'

Wt.	82.5
Vis.	55
W.L.	5.0
F.C.	2/32
Sd.	1%
NaCl	Tr.

Mud Data at 7305'

Wt.	84.5
Vis.	55
W.L.	4.8
F.C.	2/32
pH	8.6
Sd.	Tr.
NaCl	Tr.

Mud Data at 7450'

Wt.	83
Vis.	73
W.L.	6.0
F.C.	4/32
pH	8.1
NaCl	Tr.

7500

NB #85 Hughes OSC-3
Survey at 7522' 1°50'

12:01 AM 9-19-57

NB #86 Hughes OSC
Survey NG

7600

12:01 AM 9-20-57
NB #87 Sec. S-4
Survey at 7628' 1°55'

12:01 AM 9-21-57
NB #88 Sec. S-4
Survey at 7660' 2°00'

7700

12:01 AM 9-22-57
NB #89 Sec. S-4
Survey at 7706' 2°10'
NB #90 Hughes OSC
Survey at 7740' 2°00'
12:01 AM 9-23-57

NB #91 Hughes OSC
Survey at 7780' 1°55'
12:01 AM 9-24-57

7800

NB #92 Hughes OSC-3
Survey at 7820' 1°35'

12:01 AM 9-25-57

NCB #13 Allen R2H
Survey at 7874' 1°25'
12:01 AM 9-26-57
NB #94 Hughes OSC-3 at 7881'

7900

NB #95 Hughes OSC-3 at 7934'
Survey at 7934' 1°50'
12:01 AM 9-27-57

NB #96 Hughes at 7988'
Survey at 7988' 1°50'

12:01 AM 9-28-57

8000

NB #97 Hughes OSC-3 at 8045'
Survey at 8045' 1°30'

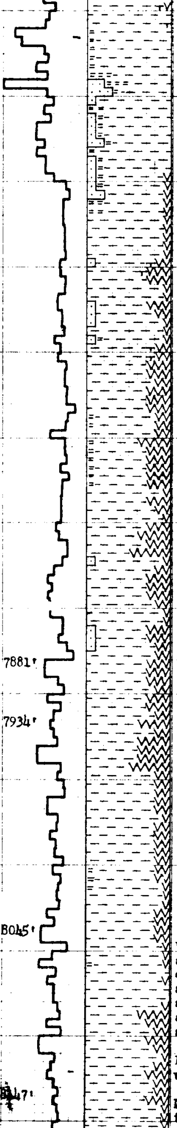
12:01 AM 9-29-57

NB #98 Hughes OSC-3

8100

Survey at 8100' 0°30'

12:01 AM 9-30-57
NB #99 Hughes OSC-3 at 8147'
Survey at 8147' 0°30'



Minor amt vari-col tuff w/some gry siltst present Dk gry-lt gry-choc brn sh w/some tuff sh present Tr ls calc pyrite

Increase in tuff sh

Dk & lt gry tuff sh & sh gry brn & blue tuff buff ls tr gry-wt ss gry silt red-brn tuff & tuff sh

Gry-gry brn sh & tuff sh w/some vari-col tuff

Core #13 7874'-7881'
Recovered 6'
Dips 0°-5° No cut stain or odor

Vari-col tuff choc brn slty & tuff sh w/some dk gry-grn tuff sh & sh Lt gry-grn sil tuff sh Tr pyrite gry-wt altered tuff Dk gry-grn sil tuff sh

Lt gry-grn sil tuff sh w/some altered tuff

Dk gry tuff sh & sh tr grn tuff ss

Mud Data at 7605'

Wt.	83
Vis.	58
W.L.	5.2
F.C.	2/32
pH	8.6
Sd.	Tr.
NaCl	38 gpg

Mud Data at 7650'

Wt.	85
Vis.	95
W.L.	5.1
F.C.	1.5/32
pH	8.8
Sd.	Tr.
NaCl	Tr.

Mud Data at 7725'

Wt.	74.5
Vis.	89
W.L.	3.1
F.C.	2.32
pH	10.2
Sd.	1-1/2%
NaCl	88 gpg
Temp	110°F

Mud Data at 7815'

Wt.	85
Vis.	75
W.L.	3.8
F.C.	2/32
pH	9.6
Sd.	1-1/2%
NaCl	66 gpg

Mud Data at 7875'

Wt.	84
Vis.	83
W.L.	3.6
F.C.	2/32
pH	9.1
Sd.	1%
NaCl	66 gpg
Temp	112 °F

Mud Data at 7910'

Wt.	85
Vis.	105
W.L.	3.7
F.C.	2/32
pH	9.1
NaCl	66 gpg
Temp	110 °F

Mud Data at 8045'

Wt.	85
Vis.	105
W.L.	3.5
F.C.	2/32
pH	8.8
Sd.	2%
NaCl	60 gpg
Temp	106 °F

12:01 AM 10-1-57

8200 NB #101 Hughes OSC-3
Survey NG

12:01 AM 10-2-57
NB #102 6-1/8" Mercury diamond
Survey at 8244' 0°30'
12:01 AM 10-3-57

NB #103 Hughes OWS at 8298'
12:01 AM 10-4-57

8300

12:01 AM 10-5-57
NCB #14 Allen RH
[illegible]102 6-1/8" Mercury diamond
12:01 AM 10-6-57

12:01 AM 10-7-57

8400

12:01 AM 10-8-57

12:01 AM 10-9-57
8500 Ran Schlumberger Induction E-log
Micro-caliper log & took SWS
12:01 AM 10-10-57
NB #106 Hughes OWS
NB #107 Hughes OSC
Survey at 8515'
12:01 AM 10-11-57 1°30'
NB #108 Hughes OSC-3

NCB #15 Allen RH at 8582'
Survey at 8582' 2°00'
8600 12:01 AM 10-12-57
NB #110 Sec. S-4 at 8592'

12:01 AM 10-13-57
Bit #102 Mercury Diamond 6-1/8"

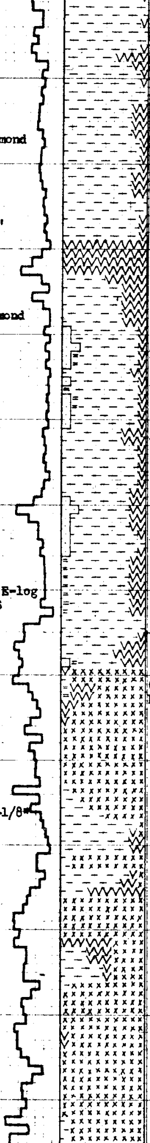
12:01 AM 10-14-57
NB #112 Hughes OSC-3

12:01 AM 10-15-57
NB #113 Sec. S-4 at 8679'
Survey at 8679' 2°00'
8700

NB #114 Sec. S-4 at 8720'
Survey at 8720' 2°00'
12:01 AM 10-16-57

NB #115 Hughes OSC

12:01 AM 10-17-57
NB #116 Hughes OSC
Survey at 8790' 2°10'
8800



Lt gry-grn sil tuff sh
Dk gry red-brn & brn tuff sh Gry-wh tuff

Dk gry-lt gry tuff sh w/some slightly vari-col tuff present

Lithology as above w/some red-brn & brn tuff sh

Lt gry-lt grn tuff w/some minor amt of red-brn tuff w/some altered soft tuff vari-col tuff dk gry lt gry brn tuff sh lt gry-wh pyrite ls

Core #14 8336'-8345'
Recovered 5'

Dips 0° No cut

Vari-col tuff dk gry & brn tuff sh & sh Tr gry vy f ss silt buff ls calc & pyrite

Vari-col tuff gry silt dk gry choc brn red-brn lt gry lt grn tuff sh

Dk blue tuff sh

Core #15 8582'-8592'
Recovered 8'

Basalt dk-grn hd chloritic

Dk gry-lt gry tuff sh w/some choc brn sh
Vari-col tuss present
Dk grn basalt and abnd dk gry tuff sh lt gry altered tuff

Dk & lt grn basalt w/some dk gry [illegible] lt gry altered tuff sh vari-col tuff

Mud Data at 8205'

Wt.	87
Vis.	105
W.L.	2.9
F.C.	2/32
pH	8.7
Sd.	2%
NaCl	87 gpg
Temp	108 °F

Mud Data at 8244'

Wt.	81.5
Vis.	60
W.L.	3.5
F.C.	2/32
pH	8.5
Sd.	1%
NaCl	72 gpg
Temp	111 °F

Mud Data at 8310'

Wt.	84.5
Vis.	66
W.L.	3.2
F.C.	2/32
pH	8.3
Sd.	1-1/2%
NaCl	63 gpg
Temp	100 °F

Mud Data at 8476'

Wt.	84.5
Vis.	117
W.L.	3.4
F.C.	2/32
pH	8.6
Sd.	1%
NaCl	63 gpg
Temp	104 °F

Mud Data at [illegible]

Wt.	83.5
Vis.	112
W.L.	3.4
F.C.	2/32
pH	7.9
Sd.	1%
NaCl	71 gpg
Temp	100 °F

Mud Data at 8645'

Wt.	84
Vis.	75
W.L.	4.0
F.C.	2/32
pH	8.7
Sd.	1.5%
NaCl	48 gpg
Temp	104 °F

Mud Data at 8780'

Wt.	80
Vis.	190
W.L.	4.4
F.C.	2/32
pH	8.5
Sd.	[illegible]
NaCl	56 gpg
Temp	104 °F

NB #117 Hughes OSC
12:01 AM 10-18-57

8900

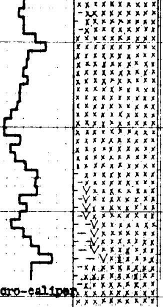
NB #118 Hughes OSC
Survey at 8915' 2°05'

12:01 AM 10-19-57

Survey at 8990' 2°00'
MCB #16 Allen RH
9000
Ran Schlumberger E-log Micro-caliper
SWS

TOTAL DEPTH 9004'

RELEASED AT 6:00 P.M. 10-20-57



Dk & lt grn basalt w/some lt gry altered basalt Vari-col tuff w/some dk gry & brn tuff sh

Core #16 8995'-9009'
Recovered 1'

Mud Data at 8915'

Wt.	80
Vis.	60
W.L.	3.5
F.C.	2/32
pH	8.3
Sd.	1.5%
NaCl	42 gpg
Temp	110 °F

Mud Data at 9000'

Wt.	80
Vis.	96
W.L.	3.2
F.C.	2/32
pH	8.5
Sd.	1.5%
NaCl	85 gpg
Temp	106 °F