WELL	CROWN ZELLERBACH #32-26
COMPANY	REICHHOLD ENERGY CORP.
AREA	PITTSBURG-MIST
LOCATION	1428.52'S & 1885.86'W OF NE CRN, SEC.26;T5N;R4W, WB&
COUNTY, STATE	COLUMBIA, OREGON

- WEGE -
WESTERN GEO-ENGINEERS

"A SERVICE TO THE OIL AND GAS INDUSTRY"

LITHOLOGY SYMBOLS

⊡	☐	⊟	⊟	◎	▣	V	X	⌋	⊡	A	☐
Sand	Clay and Shale	Siltst.	Sandy Siltst.	Congl-omerate	Lignite or Coal	Vol-canic	Intru-sive	Salt	Limest.	Chert	

REMARKS

WELL ELEV.	GL. 886.16' KB. 897.56'
SALINITY IN	PPM CL⁻
FILTRATE IN	CC/30 MIN.
GAS TRAP	AGITATOR TYPE
MUD	LIGNOSULFANATE (BARIOD)

TAYLOR DRILLING RIG #4

LEGEND

MUD DATA

- W WEIGHT
- V VISCOSITY
- F FILTRATE
- FC FILTER CAKE
- SD SAND IN %
- S SALINITY
- R RESISTIVITY
- RF FILTRATE RESISTIVITY

BIT DATA

- NB NEW BIT
- RRB RERUN BIT
- CB CORE BIT
- WLCB WIRE LINE CB

OTHER DATA

- TG TRIP GAS
- CG CONNECTION GAS
- C CARBIDE GAS
- CR CIRCULATE RETURNS
- NR NO RETURN
- DST DRILL STEM TEST
- [DST INTERVAL
-] CORE INTERVAL

CASING

9 5/8"	TO	746'
	TO	
	TO	

DATE 3/27/82 TO 4/16/82 DEPTH 34' TO 6500' ENGINEERS CONVERSE, BUTLER

- WEGE -
WESTERN GEO-ENGINEERS

Drilling Rate In FT/HR

Bit Data

DEPTH

SAMPLE LITHOLOGY

OIL IN MUD or CUTTINGS Tr x Fair xx Good xxx V/Gd xxxx

MUD ANALYSIS

TOTAL DITCH GAS ________

PET. VAP. – – – BLENDER GAS . .

CUTTING ANALYSIS

TOTAL GAS ____

PET. VAP. – –

REMARKS

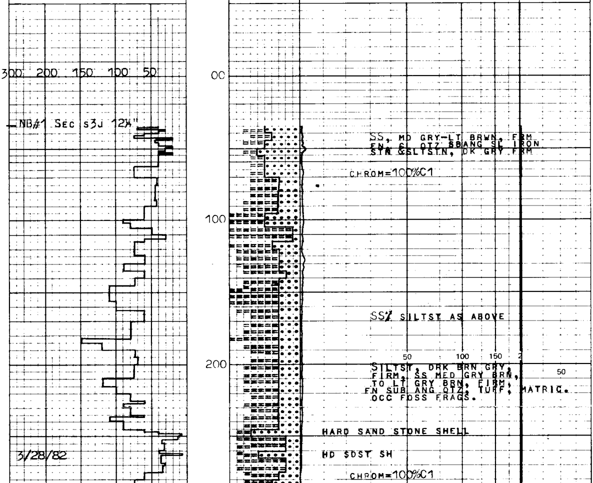
Mud Data

Formation Tests

Core Analysis

Surveys

E Logs



SS, MD GRY-LT BRWN, FRM FN, GL QTZ SBANG SL IRON STN & SLTSTN, DK GRY FRM

CHROM=100%C1

SS/ SILTST AS ABOVE

SILTST, DRK BRN GRY, FIRM, SS MED GRY BRN, TO LT GRY BRN, FIRM, FN SUB ANG QTZ, TUFF, MATRIC. OCC FOSS FRAGS.

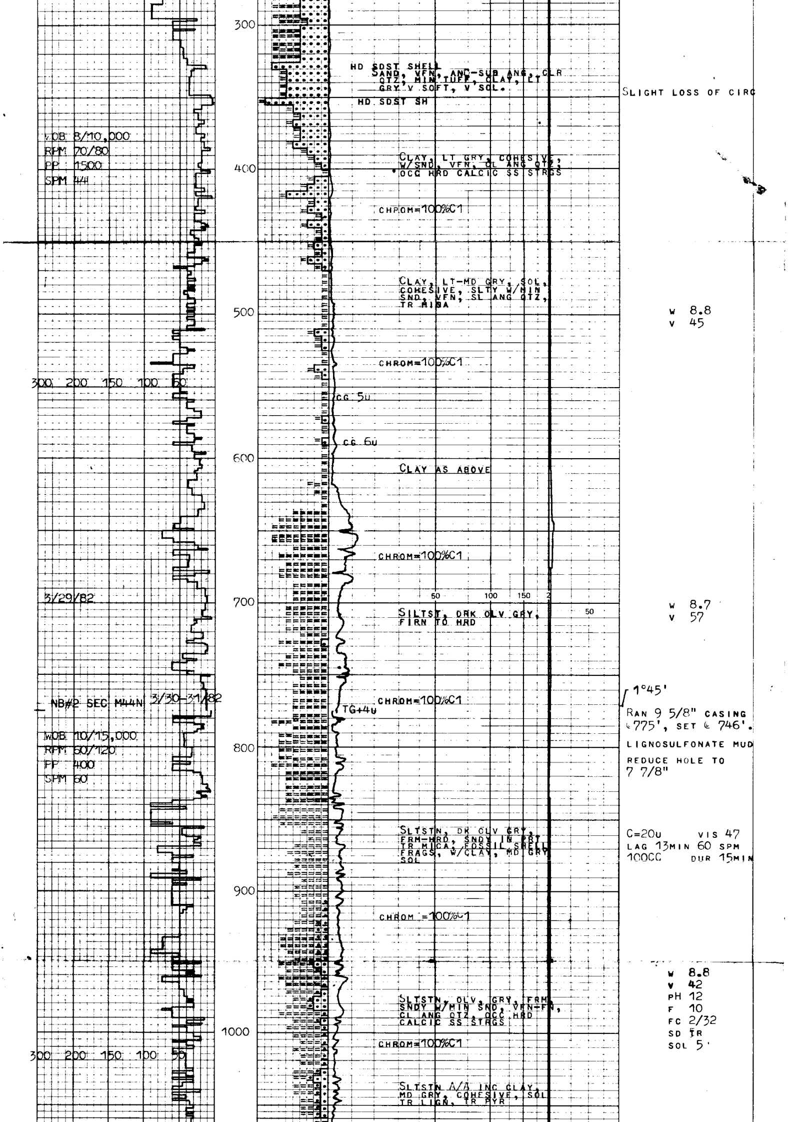
HARD SAND STONE SHELL

HD SDST SH

CHROM=100%C1

SPUDDED W/ GEL-WATER

W 87
V 42
pH 12.5



HD SDST SHELL
SAND, VFN, ANG-SUB ANG, CLR QTZ; MIN TUFF, CLAY, LT GRY V SOFT, V SOL.

SLIGHT LOSS OF CIRC

HD SDST SH

WOB 8/10,000
RPM 70/80
PP 1500
SPM 44

CLAY, LT GRY, COHESIVE, W/SND, VFN, CL ANG QTZ; OCC HRD CALCIC SS STRGS

CHROM=100%C1

CLAY, LT-MD GRY, SOL, COHESIVE, SLTY W/MIN SND, VFN, SL ANG QTZ, TR MICA

w 8.8
v 45

CHROM=100%C1

CLAY AS ABOVE

CHROM=100%C1

3/29/82

SILTST, DRK OLV GRY, FIRN TO HRD

w 8.7
v 57

1°45'

NB#2 SEC M44N 3/30-31/82

CHROM=100%C1

RAN 9 5/8" CASING ◌775', SET ◌ 746'.

LIGNOSULFONATE MUD

REDUCE HOLE TO 7 7/8"

WOB 10/15,000
RPM 60/120
PP 400
SPM 60

SLTSTN, DK OLV GRY, FRM-HRD, SNDY IN PRT, TR MICA, FOSSIL SHELL FRAGS, W/CLAY, MD GRY SOL

C=20u VIS 47
LAG 13MIN 60 SPM
100CC DUR 15MIN

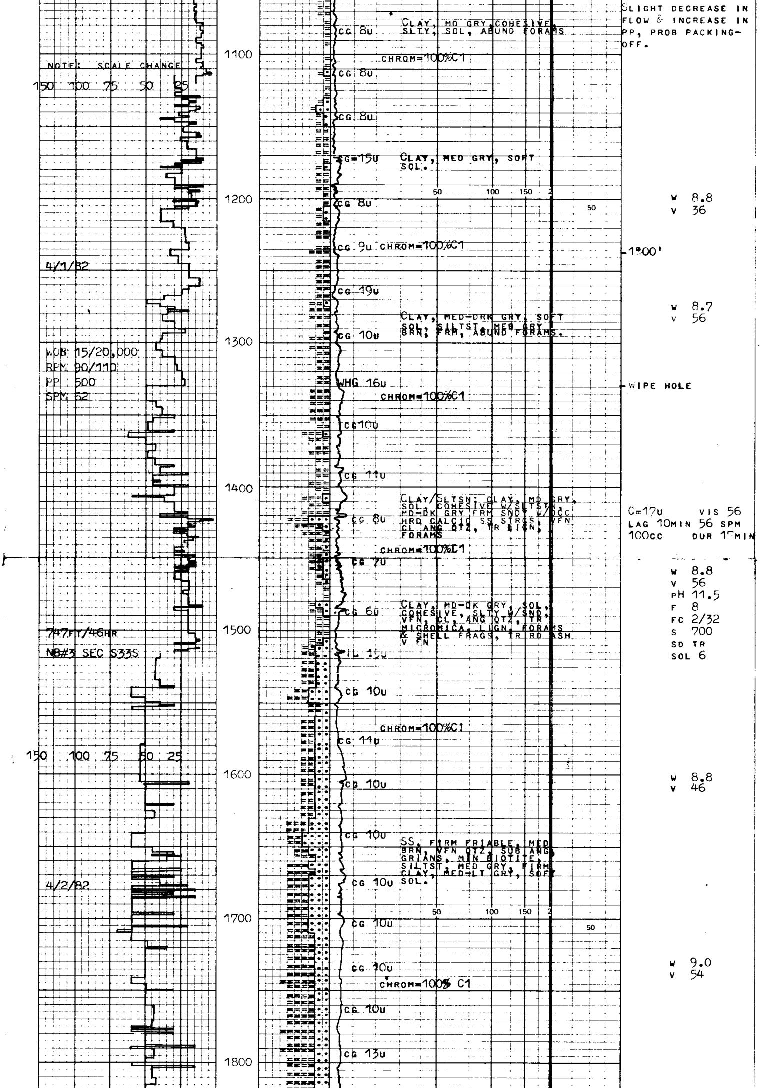
CHROM =100%C1

w 8.8
v 42
pH 12
F 10
FC 2/32
SD TR
SOL 5

SLTSTN, OLV, GRY, FRM, SNDY W/MIN SND, VFN-FN, CL ANG QTZ, OCC HRD CALCIC SS STRGS

CHROM=100%C1

SLTSTN A/A INC CLAY, MD GRY, COHESIVE, SOL TR LIGN, TR PYR



SLIGHT DECREASE IN FLOW & INCREASE IN PP, PROB PACKING-OFF.

CG 8u

CLAY, MD GRY, COHESIVE, SLTY; SOL, ABUND FORAMS

CHROM=100%C1

CG 8u

CG 8u

CG=15u

CLAY, MED GRY, SOFT SOL.

CG 8u

W 8.8
V 36

CG 9u CHROM=100%C1

1°00'

4/1/82

CG 19u

W 8.7
V 56

CLAY, MED-DRK GRY, SOFT SOL; SILTST, MED GRY, BRN; FRM, ABUND FORAMS.

CG 10u

WOB 15/20,000
RPM 90/110
PP 500
SPM 62

WHG 16u

WIPE HOLE

CHROM=100%C1

CG10u

CG 11u

CLAY/SLTSN: CLAY, MD GRY, SOL, COHESIVE W/SLTSTN, MD-DK GRY FRM SNDY W/OCC HRD CALCIC SS STRGS, VFN CL ANG QTZ, TR LIGN, FORAMS

CG 8u

C=17u VIS 56
LAG 10MIN 56 SPM
100cc DUR 1?MIN

CHROM=100%C1

CG 7u

W 8.8
V 56
pH 11.5
F 8
FC 2/32
S 700
SD TR
SOL 6

CLAY, MD-DK GRY, SOL, COHESIVE, SLTY W/SND, VFN, CL, ANG QTZ, TR MICROMICA, LIGN, FORAMS & SHELL FRAGS, TR RD ASH V FN

CG 6u

747FT/46HR
NB#3 SEC S33S

TL 1?u

CG 10u

CHROM=100%C1

CG 11u

CG 10u

W 8.8
V 46

CG 10u

SS, FIRM FRIABLE, MED BRN, VFN QTZ, SUB ANG GRIANS, MIN BIOTITE, SILTST, MED GRY, FIRM CLAY, MED-LT GRY, SOFT SOL.

4/2/82

CG 10u

CG 10u

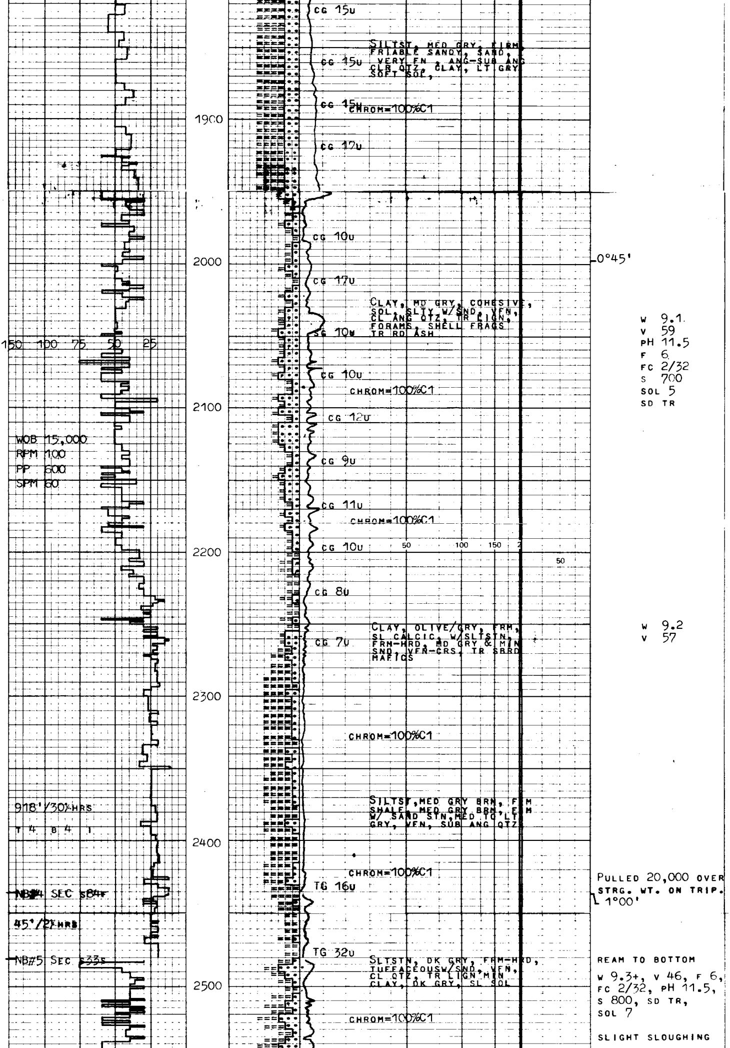
CG 10u

W 9.0
V 54

CHROM=100% C1

CG 10u

CG 13u



SILTST, MED GRY, FIRM, FRIABLE SANDY, SAND, VERY FN, ANG-SUB ANG CLR QTZ, CLAY, LT GRY SOFT SOL,

CLAY, MD GRY, COHESIVE, SOL, SLTY W/SND, VFN, CL ANG QTZ, TR LIGN, FORAMS, SHELL FRAGS TR RD ASH

W 9.1
V 59
pH 11.5
F 6
FC 2/32
S 700
SOL 5
SD TR

WOB 15,000
RPM 100
PP 600
SPM 60

W 9.2
V 57

CLAY, OLIVE/GRY, FRM, SL CALCIC, W/SLTSTN, FRM-HRD, MD GRY & MIN SND, VFN-CRS, TR SBRD MAFICS

918'/30¼HRS

T 4 B 4 1

SILTST, MED GRY BRN, FRM SHALE, MED GRY BRN, FRM W/ SAND STN, MED TO LT GRY, VFN, SUB ANG QTZ

NB#4 SEC s84F

PULLED 20,000 OVER STRG. WT. ON TRIP.

1°00'

45'/2¾HRS

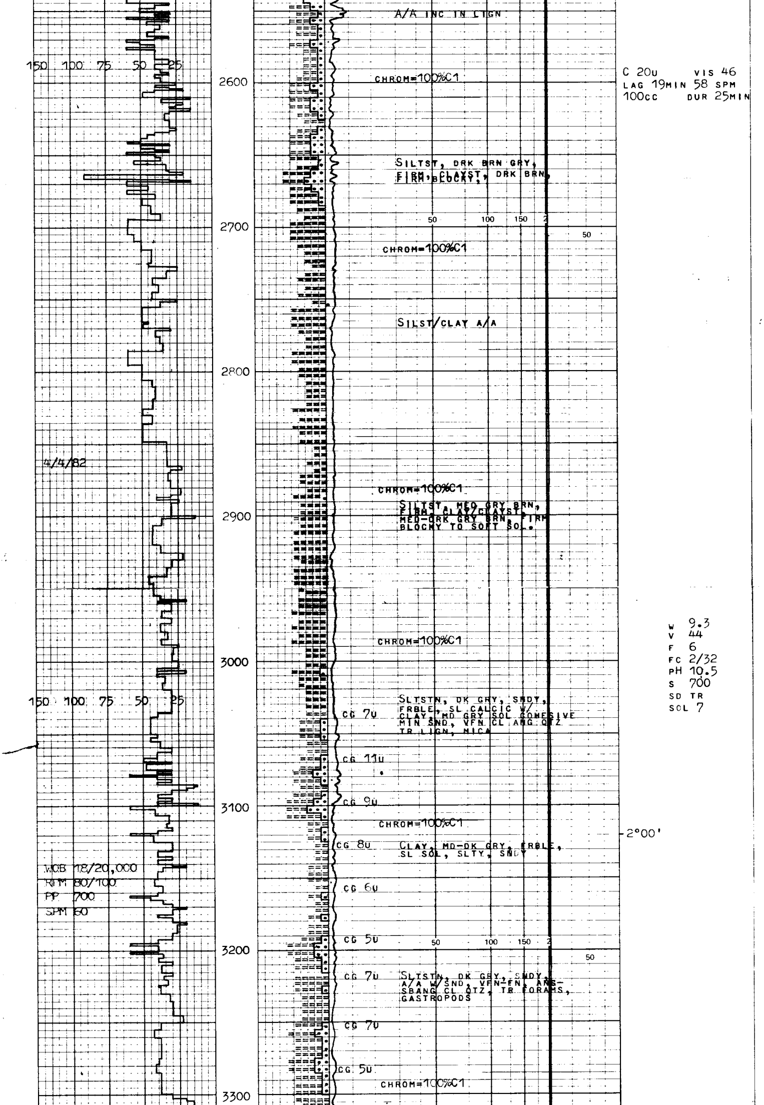
NB#5 SEC s33s

REAM TO BOTTOM

SLTSTN, DK GRY, FRM-HRD, TUFFACEOUSW/SND, VFN, CL QTZ, TR LIGN MIN CLAY, DK GRY, SL SOL

W 9.3+, V 46, F 6, FC 2/32, pH 11.5, S 800, SD TR, SOL 7

SLIGHT SLOUGHING



A/A INC IN LIGN

C 20u VIS 46
LAG 19MIN 58 SPM
100cc DUR 25MIN

CHROM=100%C1

SILTST, DRK BRN GRY, FIRM, CLAYST, DRK BRN, FIRM, BLOCKY,

CHROM=100%C1

SILST/CLAY A/A

CHROM=100%C1

SILTST, MED GRY BRN, FIRM, CLAY/CLAYST, MED-DRK GRY BRN, FIRM BLOCKY TO SOFT SOL.

CHROM=100%C1

W 9.3
V 44
F 6
FC 2/32
pH 10.5
S 700
SD TR
SOL 7

SLTSTN, DK GRY, SNDY, FRBLE, SL CALCIC W/ CLAY, MD GRY SOL COHESIVE MIN SND, VFN CL ANG QTZ TR LIGN, MICA

CG 7u

CG 11u

CG 9u

CHROM=100%C1

CG 8u

CLAY, MD-DK GRY, FRBLE, SL SOL, SLTY, SNDY

WOB 18/20,000
RPM 80/100
PP 700
SPM 60

CG 6u

CG 5u

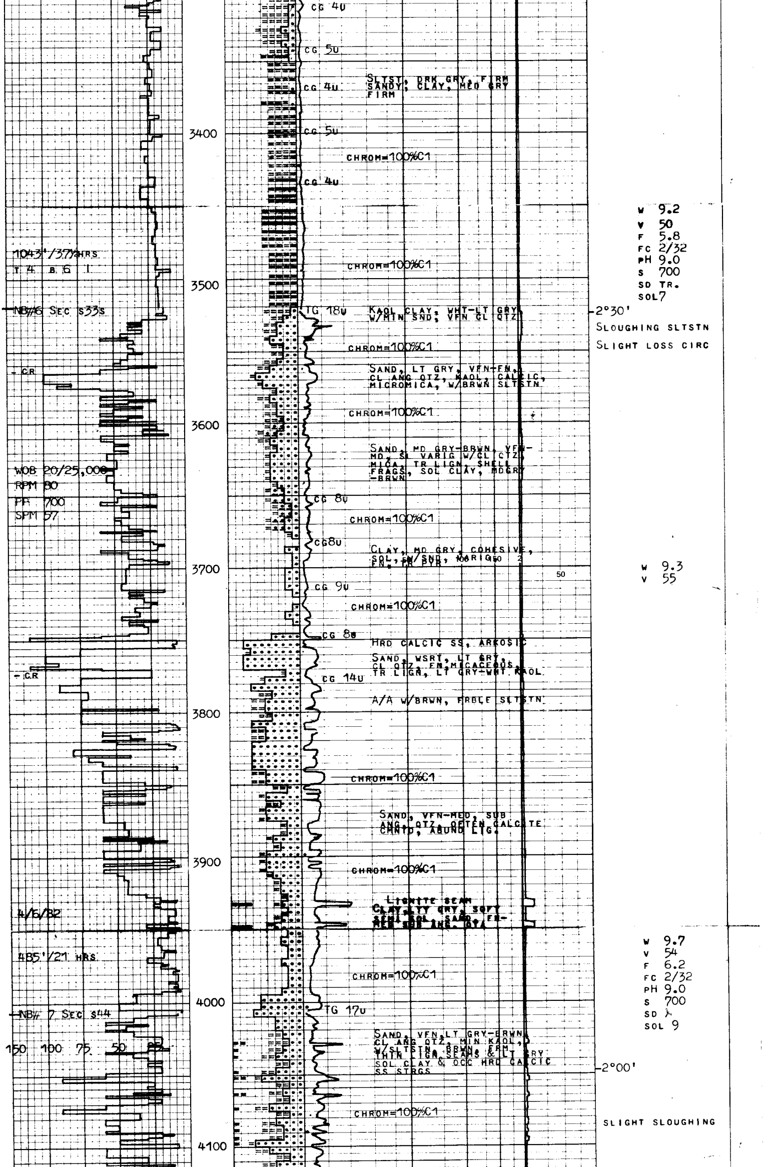
CG 7u

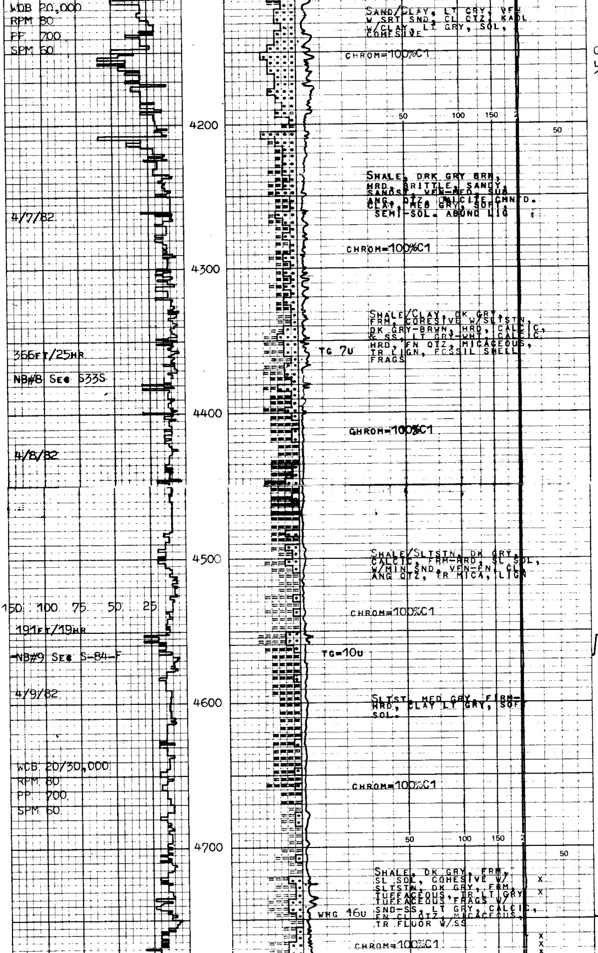
SLTSTN, DK GRY, SNDY, A/A W/SND, VFN-FN, ANG-SBANG CL QTZ, TR FORAMS, GASTROPODS

CG 7u

CG 5u

CHROM=100%C1





WOB 20,000
RPM 80
PP 700
SPM 60

SAND/CLAY, LT GRY, VFN W SRT SND, CL QTZ, KAOL W/CLAY, LT GRY, SOL, COHESIVE

w 9.7
v 50

CHROM=100%C1

C 18u VIS 50
LAG 27MIN 60 SPM
100cc DUR 15MIN

SHALE, DRK GRY BRN, HRD, BRITTLE, SANDY, SANDST, VFN-MED, SUB ANG, QTZ, CALCITE CMNTD. CLAY, MED GRY, SOFT, SEMI-SOL. ABUND LIG

w 9.6
v 47
F 6.0
FC 2/32
pH 10.0
S 700
SD ⅄
SOL 9

4/7/82

CHROM=100%C1

SHALE/CLAY, DK GRY, FRM, COHESIVE W/SLTSTN, DK GRY-BRWN, HRD, CALCIC, & SS, LT GRY-WHT, CALCIC HRD, FN QTZ, MICACEOUS, TR LIGN, FOSSIL SHELL FRAGS

TG 7U

366FT/25HR

NB#8 SEC S33S

w 9.6
v 51

CHROM=100%C1

4/8/82

w 9.6
v 52
F 5.2
FC 2/32
pH 9.5
S 700
SD ⅄
SOL 9

SHALE/SLTSTN, DK GRY, CALCTIC, FRM-HRD, SL SOL, W/MIN SND, VFN-FN, CL, ANG QTZ, TR MICA, LIGN

C 16u VIS 52
LAG 35MIN 60 SPM
100cc DUR 25MIN

CHROM=100%C1

191FT/19HR

2°45'

REAM TO BOTTOM AFTER TRIP

NB#9 SEC S-84-F

TG=10u

4/9/82

SLTST, MED GRY, FIRM-HRD, CLAY LT GRY, SOFT SOL.

w 9.7
v 47
F 5.1
FC 2/32
pH 9.5
S 700
SD ⅄
SOL 9

WOB 20/30,000
RPM 80
PP 700
SPM 60

CHROM=100%C1

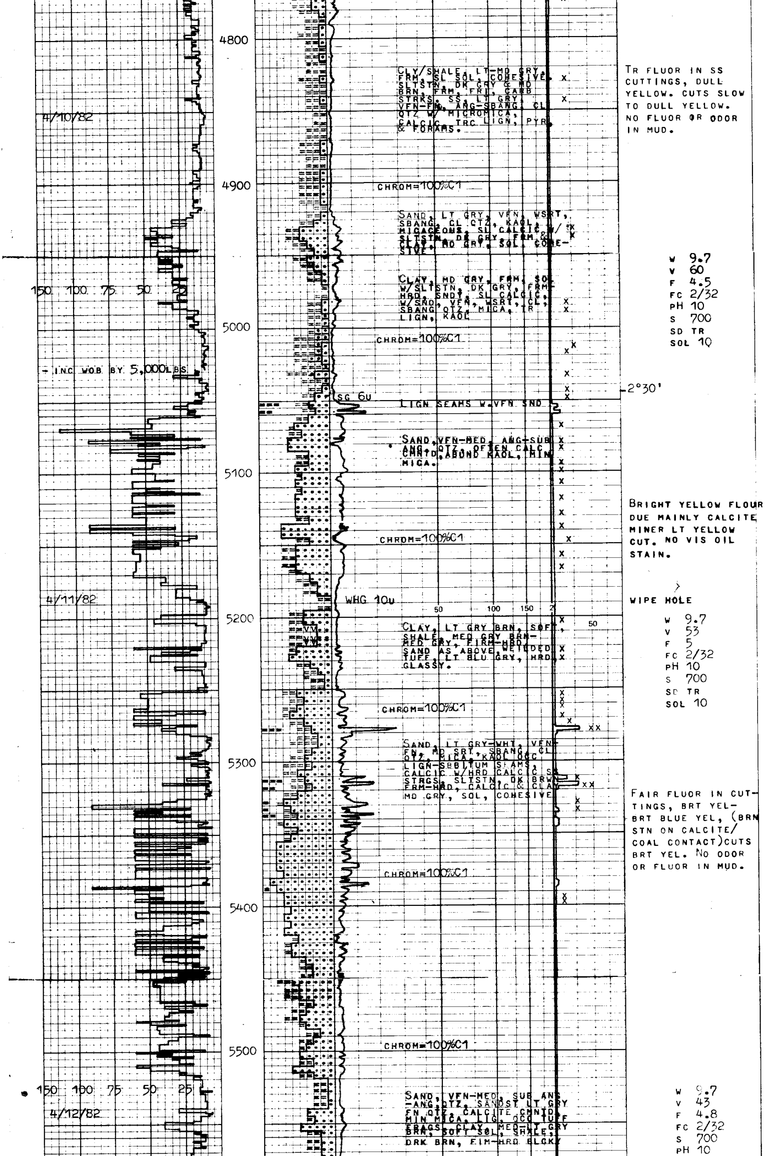
TR FLUOR IN CUTTINGS DULL-YEL-BRT BLUE, CUTS, SLOW FAINT YEL. NO ODOR OR FLUOR IN MUD.

SHALE, DK GRY, FRM, SL SOL, COHESIVE W/ SLTSTN, DK GRY, FRM, TUFFACEOUS, TR LT GRY TUFFACEOUS FRAGS W/ SND-SS, LT GRY, CALCIC, FN CL QTZ, MICACEOUS, TR FLUOR W/SS

WHG 46u

WIPE HOLE

CHROM=100%C1



4/10/82

CLY/SHALE, LT-MD GRY, FRM, SL SOL, COHESIVE. SLTSTN, DK GRY & MD BRN, FRM, FRI, CARB STRKS. SS, LT GRY, VFN-FN, ANG-SBANG, CL QTZ W/ MICROMICA, CALCIC, TRC LIGN, PYR & FORAMS.

TR FLUOR IN SS CUTTINGS, DULL YELLOW. CUTS SLOW TO DULL YELLOW. NO FLUOR OR ODOR IN MUD.

CHROM=100%C1

SAND, LT GRY, VFN, WSRT, SBANG, CL QTZ, KAOL, MICACEOUS, SL CALCIC W/ SLTSTN, DK GRY, FRM & CLAY, MD GRY, SOL, COHESIVE

W 9.7
V 60
F 4.5
FC 2/32
pH 10
S 700
SD TR
SOL 10

CLAY, MD GRY, FRM, SOL W/SLTSTN, DK GRY, FRM-HRD, SNDY, SL CALCIC, W/SND, VFN, WSRT, CL, SBANG QTZ, MICA, TR LIGN, KAOL

CHROM=100%C1

INC WOB BY 5,000LBS

LIGN SEAMS W.VFN SND

SAND, VFN-MED, ANG-SUB ANG, QTZ, OFTEN CALC CMNTD, ABUND KAOL, MIN MICA.

BRIGHT YELLOW FLOUR DUE MAINLY CALCITE MINER LT YELLOW CUT. NO VIS OIL STAIN.

CHROM=100%C1

4/11/82

WIPE HOLE

CLAY, LT GRY BRN, SOFT, SHALE, MED GRY BRN-MED GRY, FIRM-HRD, SAND AS ABOVE, WELDED TUFF, LT BLU GRY, HRD, GLASSY.

W 9.7
V 53
F 5
FC 2/32
pH 10
S 700
SD TR
SOL 10

CHROM=100%C1

SAND, LT GRY-WHT, VFN-FN, MD SRT, SBANG, CL QTZ, MICA, KAOL OCC LIGN-SBBITUM SEAMS, CALCIC W/HRD CALCIC SS STRGS, SLTSTN, DK BRWN FRM-HRD, CALCIC & CLAY MD GRY, SOL, COHESIVE

FAIR FLUOR IN CUTTINGS, BRT YEL-BRT BLUE YEL, (BRN STN ON CALCITE/COAL CONTACT)CUTS BRT YEL. NO ODOR OR FLUOR IN MUD.

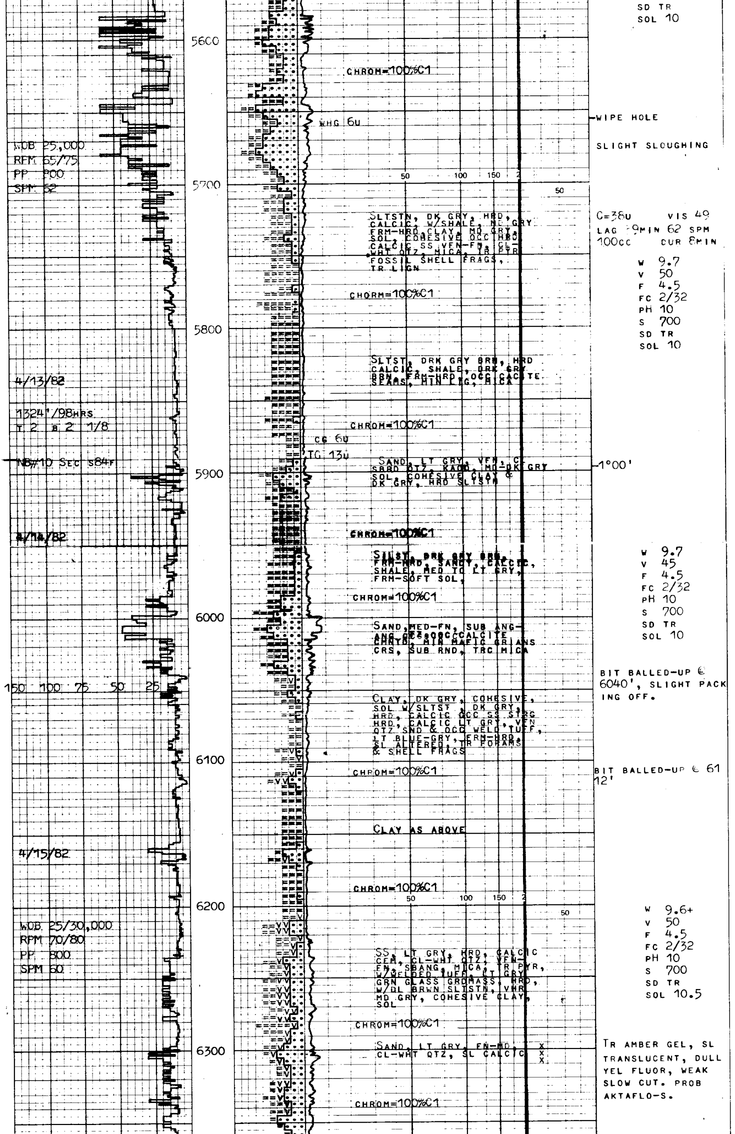
CHROM=100%C1

CHROM=100%C1

4/12/82

SAND, VFN-MED, SUB ANG-ANG, QTZ, SANDST LT GRY FN QTZ, CALCITE CMNTD, MIN MICA, LIG, OCC TUFF FRAGS, CLAY, MED-LT GRY BRN, SOFT SOL, SHALE, DRK BRN, FIM-HRD BLCKY

W 9.7
V 43
F 4.8
FC 2/32
S 700
pH 10



SD TR
SOL 10

CHROM=100%C1

-WIPE HOLE

SLIGHT SLOUGHING

WOB 25,000
RPM 65/75
PP 800
SPM 62

SLTSTN, DK GRY, HRD, CALCIC, W/SHALE, MD GRY FRM-HRD, CLAY, MD GRY, SOL, COHESIVE OCC HRD CALCIC SS VFN-FN, CL-WHT QTZ, MICA, TR PYR FOSSIL SHELL FRAGS, TR LIGN

C=38u VIS 49
LAG 29MIN 62 SPM
100cc CUR 8MIN

W 9.7
V 50
F 4.5
FC 2/32
pH 10
S 700
SD TR
SOL 10

CHORM=100%C1

SLTST, DRK GRY BRN, HRD CALCIC, SHALE, DRK GRY BRN, FRM-HRD, OCC CACITE SEAMS, MIN LIG, MICA

4/13/82

1324'/98HRS
T 2 B 2 1/8

CHROM=100%C1

NB#10 SEC S84F

SAND, LT GRY, VFN, CL SBRD QTZ, KAOL, MD-DK GRY SOL, COHESIVE CLAY & DK GRY, HRD SLTSTN

4/14/82

CHROM=100%C1

SILST, DRK GRY BRN, FRM-HRD, SANDY, CALCIC, SHALE, MED TO LT GRY, FRM-SOFT SOL,

W 9.7
V 45
F 4.5
FC 2/32
pH 10
S 700
SD TR
SOL 10

CHROM=100%C1

SAND, MED-FN, SUB ANG-ANG QTZ, OCC CALCITE CMNTD, MIN MAFIC GRIANS CRS, SUB RND, TRC MICA

BIT BALLED-UP @ 6040', SLIGHT PACKING OFF.

CLAY, DK GRY, COHESIVE, SOL W/SLTST, DK GRY, HRD, CALCIC OCC SS STRG HRD, CALCIC LT GRY, VFN QTZ SND & OCC WELD TUFF, LT BLUE-GRY, FRM-HRD, SL ALTERED, TR FORAMS & SHELL FRAGS

CHROM=100%C1

BIT BALLED-UP @ 61
12'

CLAY AS ABOVE

4/15/82

CHROM=100%C1

W 9.6+
V 50
F 4.5
FC 2/32
pH 10
S 700
SD TR
SOL 10.5

WOB 25/30,000
RPM 70/80
PP 800
SPM 60

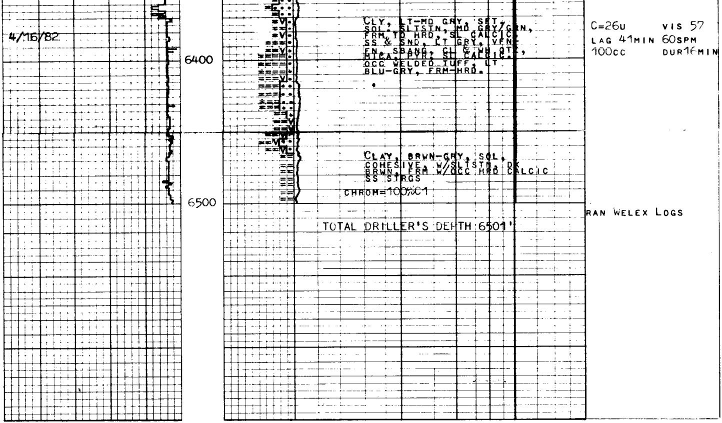
SS, LT GRY, HRD, CALCIC CEM, CL-WHT QTZ, VFN-FN, SBANG, MICA, TR PYR, W/WELDED TUFF, LT GRY GRN GLASS GRDMASS, HRD, W/DL BRWN SLTSTN, VHR MD GRY, COHESIVE CLAY, SOL

CHROM=100%C1

SAND, LT GRY, FN-MD, CL-WHT QTZ, SL CALCIC

TR AMBER GEL, SL TRANSLUCENT, DULL YEL FLUOR, WEAK SLOW CUT. PROB AKTAFLO-S.

CHROM=100%C1



4/16/82

CLY, LT-MD GRY, SFT, SOL; SLTSTN, MD GRY/GRN, FRM TO HRD, SL CALCIC, SS & SND, LT GRY, VFN-FN, SBANG, CL & WH QTZ, MICA, PYR; SL CALCIC. OCC WELDED TUFF, LT BLU-GRY, FRM-HRD.

C=26u VIS 57
LAG 41MIN 60SPM
100cc DUR16MIN

CLAY, BRWN-GRY, SOL, COHESIVE, W/SLTSTN, DK BRWN, FRM W/OCC HRD CALCIC SS STRGS

CHROM=100%C1

RAN WELEX LOGS

TOTAL DRILLER'S DEPTH 6501'

REICHHOLD ENERGY CORP. CROWN ZELLERBACH #32-26 MIST-PITTSBURG 26;T5N;R4W COLUMBIA CO., ORE.