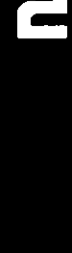


Schlumberger

WELL SEISMIC SERVICE



COMPANY: ARCO EXPLORATION AND PRODUCTION COMPANY
WELL: CROWN ZELLERBACH 23-15

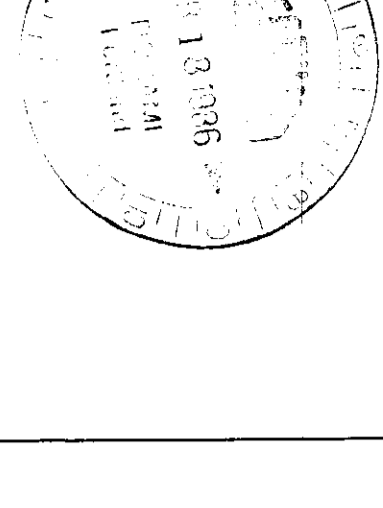
FIELD: PITTSBURG
COUNTY: COLUMBIA
STATE: OREGON

LOCATION: 841.09'S & 1799.72'E
SEC: 15 TWP: 5N RGE: 5M

PERMANENT DATUM: GL
ELEV. OF PERM. DATUM: 720.9 F
LOG MEASURED FROM: KB
20.0 F ABOVE PERM. DATUM
DLG. MEASURED FROM: KB
ELEVATIONS -
TAP: 28.2A
SERV: 28.2A
DF: 720.9 F
ORDER NO: 272164

DATE: 9 DEC 85
RUN NO: 1

DEPTH-DRILLER: 2720.0 F
DEPTH-LOGGER: 2634.0 F
BHM. LOG INTERVAL: 2634.0 F
TOP LOG INTERVAL: 500.0 F
CASING-DRILLER: 2755.0 F
CASING-LOGGER:
WEIGHT: 5.5
BIT SIZE:
DEPTH: 2720.0 F



OTHER SERVICES -
CBL
CET

TYPE FLUID IN HOLE: FRESH WATER
DENSITY:
VISCOSITY:
PH:
FLUID LOSS:
SOURCE OF SAMPLE:
RM: AT
RMF: AT
RMC: AT
SOURCE RMF/RMC: /
RM AT BHT: AT
RMF AT BHT: AT
RMC AT BHT: AT
TIME CIRC. STOPPED:
TIME LOGGER ON BTM.: 0930 12-8
MAX. REC. TEMP:
LOGGING UNIT NO: 5898
LOGGING UNIT LOC: BAKERSFIELD
RECORDED BY: REINIG
WITNESSED BY: TEMPLER

SEISMIC DATA:
SRD TO GROUND LEVEL: GUN DEPTH BELOW GL:
SRD TO ROTARY TABLE: HYDRO DEPTH BELOW GL:
MAX HOLE DEVIATION: 20 DEG SOURCE OFFSET DISTANCE: 272 F
AZIMUTH OF HOLE DEV: SOURCE OFFSET AZIMUTH: 244 DEG
DOWNHOLE GEOPHONE TYPE: HS-1 GEOSPACE
SURFACE SENSOR TYPE: HS-1 GEOSPACE
PLATFORM TYPE:
JOB TYPE: CHECK SHOT SOURCE TYPE: DYNAMITE
RIG TYPE: EXPLOSIVE WIEGHT: 3/4 LB.

REMARKS:

EQUIPMENT NUMBERS-
WSC-A 908 WSA-AB 898 HPS-AB 907 CAC-A 912
WSM-AB 999 WDM-AA 555

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.

CP 28.2A FILE 11 09-DEC-85 10:39
DATA ACQUIRED NH

SEISMIC QUICKLOOK

GEOMETRY PARAMETERS LIST

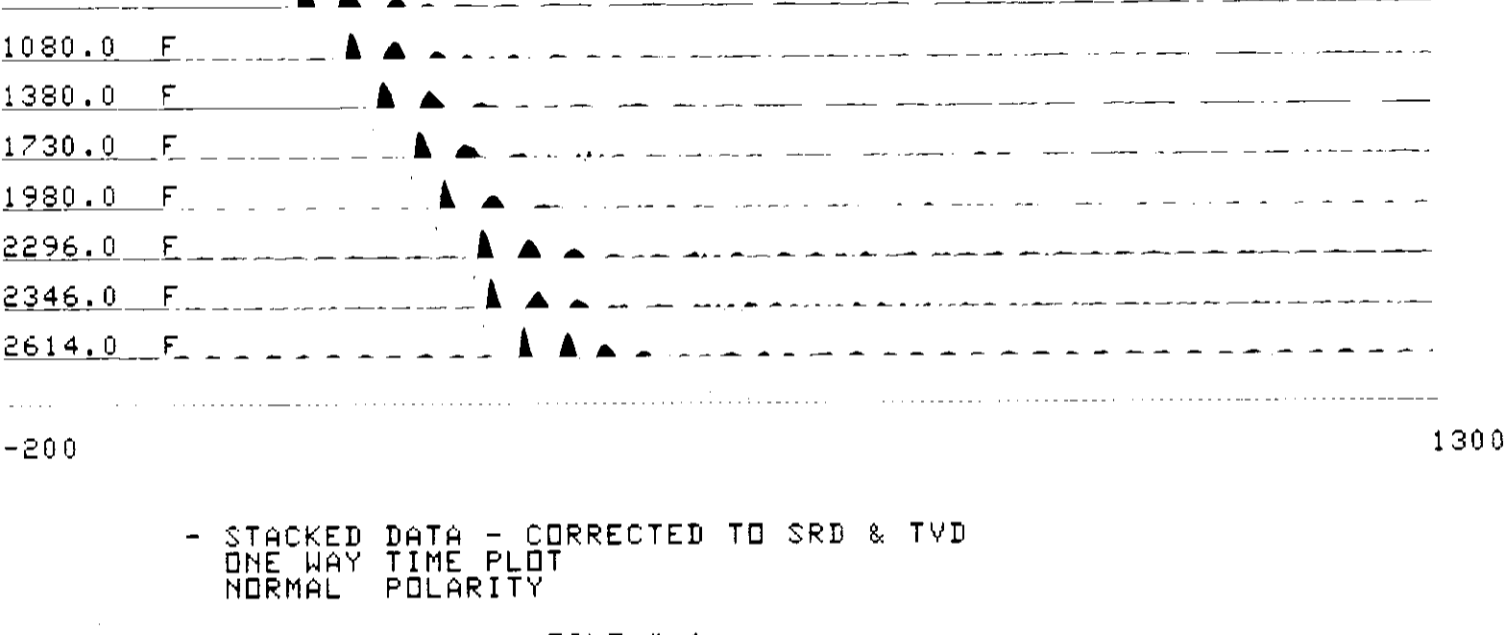
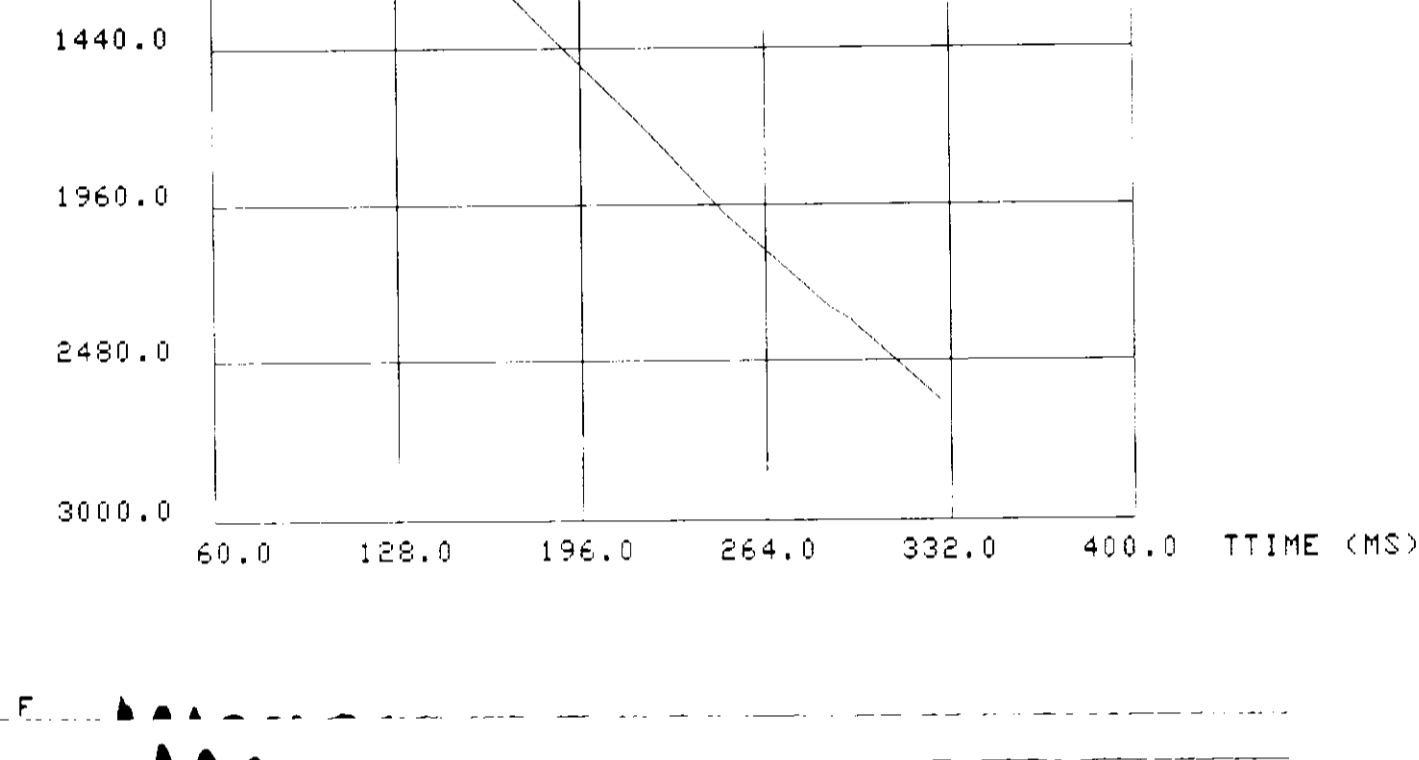
SURFACE VELOCITY : 6000.0 FT/S
SRD DEPTH FROM SCHLUMBERGER ZERO : 20.0 F
HYDRO DEPTH FROM SCHLUMBERGER ZERO : 40.0 F
GUN DEPTH FROM SCHLUMBERGER ZERO : 40.0 F
GUN OFFSET : 272.0 F
GUN AZIMUTH : 244.0 DEG

DATA NOT CORRECTED FOR HOLE DEVIATION

WST DEPTH VS TTIME SUMMARY

STACK NBR	MEASURED DEPTH (F)	MEASURED TTIME (MS)	TVD (F)	CORRECTED TTIME (MS)	INTERVAL VEL (F/S)
*	500.00	70	480.00	64	7929.5
*	800.00	102	780.00	102	6115.4
*	1100.0	151	1080.0	151	9131.8
*	1400.0	184	1380.0	184	8926.3
*	1750.0	236	1730.0	236	9731.8
*	2000.0	263	1980.0	263	8243.1
*	2346.0	332	244.0	332	8175.8
*	2614.0	399	26.0	399	0.0

TVD VS CORRECTED TTIME CURVE



- STACKED DATA - CORRECTED TO SRD & TVD
ONE WAY TIME PLOT
NORMAL POLARITY

FILE # 1

STACK # 0 @ 500.0 F 12 / 9 / 85 10 : 17 TT = 70.4 MS
GEOPHONE .00294 CM/SEC @ 108.5 MS
SHOTS STACKED : 13
FILTER : OFF - OFF

FILE # 9

STACK # 0 @ 800.0 F 12 / 9 / 85 10 : 15 TT = 104.6 MS
GEOPHONE .004915 CM/SEC @ 145.3 MS
SHOTS STACKED : 12
FILTER : OFF - OFF

FILE # 8

STACK # 7 @ 1100.0 F 12 / 9 / 85 10 : 10 TT = 152.3 MS
GEOPHONE .002449 CM/SEC @ 186.0 MS
SHOTS STACKED : 11
FILTER : OFF - OFF

FILE # 7

STACK # 8 @ 1400.0 F 12 / 9 / 85 10 : 7 TT = 184.0 MS
GEOPHONE .002666 CM/SEC @ 218.8 MS
SHOTS STACKED : 10
FILTER : OFF - OFF

FILE # 6

STACK # 5 @ 1750.0 F 12 / 9 / 85 10 : 4 TT = 222.4 MS
GEOPHONE .002666 CM/SEC @ 256.3 MS
SHOTS STACKED : 9
FILTER : OFF - OFF

FILE # 5

STACK # 4 @ 2000.0 F 12 / 9 / 85 9 : 58 TT = 247.6 MS
GEOPHONE .001981 CM/SEC @ 284.7 MS
SHOTS STACKED : 7
FILTER : OFF - OFF

FILE # 4

STACK # 3 @ 2316.0 F 12 / 9 / 85 9 : 55 TT = 285.8 MS
GEOPHONE .001297 CM/SEC @ 323.7 MS
SHOTS STACKED : 6
FILTER : OFF - OFF

FILE # 3

STACK # 2 @ 2366.0 F 12 / 9 / 85 9 : 48 TT = 294.7 MS
GEOPHONE .000601 CM/SEC @ 332.5 MS
SHOTS STACKED : 3
FILTER : OFF - OFF

FILE # 2

STACK # 1 @ 2634.0 F 12 / 9 / 85 9 : 44 TT = 327.3 MS
GEOPHONE .000417 CM/SEC @ 366.1 MS
SHOTS STACKED : 2
FILTER : OFF - OFF

FILE # 1