Schlumberger

FOUR – ARM HIGH RESOLUTION CONTINUOUS DIPMETER (COMPUTED)

COUNTY COLUMBIA
FIELD or LOCATION 11-6N-5W
WELL COLOMBIA COUNTY NO. 43-11 REDRILL NO.1
COMPANY REICHHOLD ENERGY

COMPANY REICHHOLD ENERGY CORP. RECEIVED AUG 12 1980
WELL COLUMBIA COUNTY NO. 43-11 REDRILL #1
FIELD MIST NEHALEM BASIN
COUNTY COLUMBIA STATE OREGON

LOCATION: 460' SOUTH & 835' WEST FROM THE EAST ¼ OF: OF W.B.M.
Sec. 11 Twp. 6N Rge. 5W

Other Services: SONIC, DI-SFL, HDT

Permanent Datum: GL, Elev. 787.34
Log Measured From KB 10.55 Ft. Above Perm. Datum
Drilling Measured From KB

Elev.: K.B. 797.89
D.F. --
G.L. 787.34

Date	6-21-80		
Run No.	ONE		
Depth—Driller	3415		
Depth—Logger	3411		
Btm. Log Interval	3410		
Top Log Interval	410		
Casing—Driller	7" @ 405	@	@
Casing—Logger	406		
Bit Size	6¼"		
Type Fluid in Hole	LIGNOSULFONATE		
Dens. / Visc.	75 / 37		
pH / Fluid Loss	9.5 / 6.1 ml	ml	ml
Source of Sample	CIRCULATION		
R_m @ Meas. Temp.	2.27 @ 70 °F	@ °F	@ °F
R_{mf} @ Meas. Temp.	2.47 @ 59 °F	@ °F	@ °F
R_{mc} @ Meas. Temp.	2.83 @ 60 °F	@ °F	@ °F
Source: R_{mf} / R_{mc}	M / M		
R_m @ BHT	1.58 @ 103°F	@ °F	@ °F
Time Since Circ.	8½ HOURS		
Max. Rec. Temp.	103°F	°F	°F
Equip. / Location	8128 / SAC		
Recorded By	LANGFORD		
Witnessed By	BRUER		

SWS-1854-B

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

Changes in Mud Type or Additional Samples		
Date / Sample No.		
Depth—Driller		
Type Fluid in Hole		
Dens. / Visc.		
ph / Fluid Loss	ml	
Source of Sample		
R_m @ Meas. Temp.	@ °F	@ °F
R_{mf} @ Meas. Temp.	@ °F	@ °F
R_{mc} @ Meas. Temp.	@ °F	@ °F
Source: R_{mf} / R_{mc}		
R_m @ BHT	@ °F	@ °F
R_{mf} @ BHT	@ °F	@ °F
R_{mc} @ BHT	@ °F	@ °F

Run No.	1	2	3	4
Tool Type	HDT-E			
HDM No.	727			
Magnetic Declination	20°			
Analog Panel No.	--			
Digital Panel No.	--			
Correlated By	--			
Computed By	PCDCC			
Plotted By	PCDCC			
Remarks —	SERVICE ORDER NO. 123896			

"Any directional computations made from the dipmeter log must be regarded as approximate only. This is because the dipmeter log indicates the orientation of the instrument itself, rather than the direction and amount of the wall drift. Therefore, we do not and cannot guarantee the accuracy of such directional computations, and we shall not, except in the case of willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained that may result from any such computations."

TABLE OF VERTICAL DISPLACEMENT IN FEET CORRESPONDING TO VARIOUS HORIZONTAL DISTANCES AND ANGLES OF DIP

DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100'	1000'	1 mile (5280')	DIP ANGLES (degrees)	VERTICAL DISPLACEMENT FOR HORIZONTAL DISTANCES OF 100'	1000'	1 mile (5280')
1	1.75	17.5	92.2	19	34.4	344.	1818.
2	3.5	35.	184.	20	36.4	364.	1922.
3	5.2	52.	277.	21	38.4	384.	2027.
4	7.0	70.	369.	22	40.4	404.	2133.
5	8.8	88.	462.	23	42.5	425.	2241.
6	10.5	105.	555.	24	44.5	445.	2351.
7	12.3	123.	648.	25	46.6	466.	2462.
8	14.1	141.	742.	30	57.7	577.	3048.
9	15.8	158.	836.	35	70.0	700.	3697.
10	17.6	176.	931.	40	83.9	839.	4430.
11	19.4	194.	1026.	45	100.0	1000.	5280.
12	21.3	213.	1122.	50	119.2	1192.	6293.
13	23.1	231.	1219.	55	142.8	1428.	7540.
14	24.9	249.	1316.	60	173.2	1732.	9145.
15	26.8	268.	1415.	65	214.4	2144.	11323.
16	28.7	287.	1514.	70	274.8	2748.	14507.
17	30.6	306.	1614.	75	373.2	3732.	19705.
18	32.5	325.	1716.	80	567.1	5671.	29945.

To obtain vertical displacements corresponding to multiples of hundreds feet, thousands of feet or miles, multiply the number found in the table by the number of hundreds, thousands or miles.

Example: The formation dip is 16 degrees. The vertical displacement occurring at a spot 660 feet away from the well is desired. The table shows 28.7 feet per 100 feet for 16° dip. Therefore 28.7 x 6.60 = 189.42, or 189. feet.

GRAPHIC PRESENTATION

CORRELATION CURVE	DEPTHS	TRUE DIP ANGLE AND DIRECTION (0° 10° 20° 30° 40° 50° 60° 70° 80° 90°)	DRIFT & DIRECTION OF SONDE (0° 10°)

SCHLUMBERGER DIPMETER ARROW PLOT

7-07-80 123896

REICHHOLD ENERGY CORP.
COLUMBIA COUNTY #43-11
MIST-NEHALEM BASIN FIELD
COLUMBIA COUNTY, OREGON
RUN NO. ONE 21-JUN-80
P.C.D.C.
ARROW PLOT FROM CLUSTER PROGRAM

CORRELATION LENGTH 4 FT.
STEP LENGTH 2 FT.
SEARCH ANGLE 30 DEGREES X2
zzHDT-G CSU PDP/11

JOB 4461.00

FOOT DUO-DECIMAL .500 IN. GRID

CORRELATION CURVE | DEPTHS | DIP ANGLE AND DIRECTION (0 10 20 30 40 50 60 70 80 90) | BOREHOLE DRIFT (0 10)

POOLED ARROW PLOT
2 LEVELS POOLED WHEN WITHIN
3.5 DEGREES SOLID ANGLE
BLACK ARROWS ARE POOLED RESULTS

CORRELATION LENGTH 4 FT.
STEP LENGTH 2 FT.
SEARCH ANGLE 30 DEGREES X2
PC01300235183070010 20420

ZONE FROM 422 TO 3380