#419

GEARHART

DUAL LATEROLOG

FILING NO.	#380630
COMPANY	Shell Western E+P Inc
WELL	Darcell-Western Exploration No. 1-10
FIELD	Rye Grass - Wildcat
COUNTY	Walla Walla
STATE	Washington
LOCATION	1060' FNL + 1740' FSL
Other Services	SLD-SGR-CNL, DIL, SNL-DTL, LLS-GVP, SFD, VSP
TWP	10 N
RGE	33 E
Permanent Datum	G.L.
Elev.	868
Log Measured from	K.B.
Ft. Above Perm. Datum	30
Drilling Measured from	K.B.
Elev.: K.B.	898
D.F.	—
G.L.	868

RECEIVED JAN 25 1988 GEOLOGY AND EARTH RESOURCES

FIELD PRINT

TIGHT HOLE

Date	12-27-87
Run No.	Four
Depth-Driller	8560
Depth-Logger	8560
Bottom Logged Interval	8558
Top Logged Interval	8170
Casing-Driller	13 3/8 @ 8170
Casing-Logger	8170
Bit Size	12 1/4
Type Fluid in Hole	L.S.L.D.
Density / Viscosity	11.8 / 60
pH / Fluid Loss	9.75 / 5.4 cc
Source of Sample	Flowline
Rm @ Meas. Temp.	2.26 @ 108 °F
Rmf @ Meas. Temp.	3.01 @ 56 °F
Rmc @ Meas. Temp.	3.42 @ 54 °F
Source of Rmf / Rmc	Meas / Meas
Rm @ BHT	1.54 @ 158 °F
Time: End Circulation	1900 12-26
Time: Logger on bottom	256 12-27
Max. Rec. Temp. Deg. F.	158 - Broken °F
Equip. No. / Location	7650 / Gillette
Recorded By	Johnston/Slatty/Beck
Witnessed By	Ms. Spencer

FOLD HERE

Changes in Mud Type or Additional Samples				
Date / Sample No.				
Depth-Driller				
Type Fluid in Hole				
Dens. / Visc.				
pH / Fluid Loss		cc		cc
Source of Sample				
Rm @ Meas. Temp.	@	°F	@	°F
Rmf @ Meas. Temp.	@	°F	@	°F
Rmc @ Meas. Temp.	@	°F	@	°F
Source Rmf Rmc				
Rm @ BHT	@	°F	@	°F
Rmf @ BHT	@	°F	@	°F
Rmc @ BHT	@	°F	@	°F

Scale Changes			
Type Log	Depth	Scale Up Hole	Scale Down Hole

EQUIPMENT DATA

DUAL LATEROLOG					GAMMA RAY		OTHER
Run No.	Tool No.	Tool Type	Tool Position	S.O.	Tool No.	Tool Type	Tool No.
ONE	15018	DLL	Cent	Adj	3306	Scint	18011

CALIBRATION DATA

Run No.	LLD High	LLD Low	LLD Gain	LLS High	LLS Low	LLS Gain			GAMMA RAY API Scale	BKG.	STD.
	See Digital Calibrations										

REMARKS: MSFL doesn't seem to be reading the high Resistivities above 30 Ω·m. Checking the tool after the log showed 60 Ω @ 200, 70 Ω @ 2000.

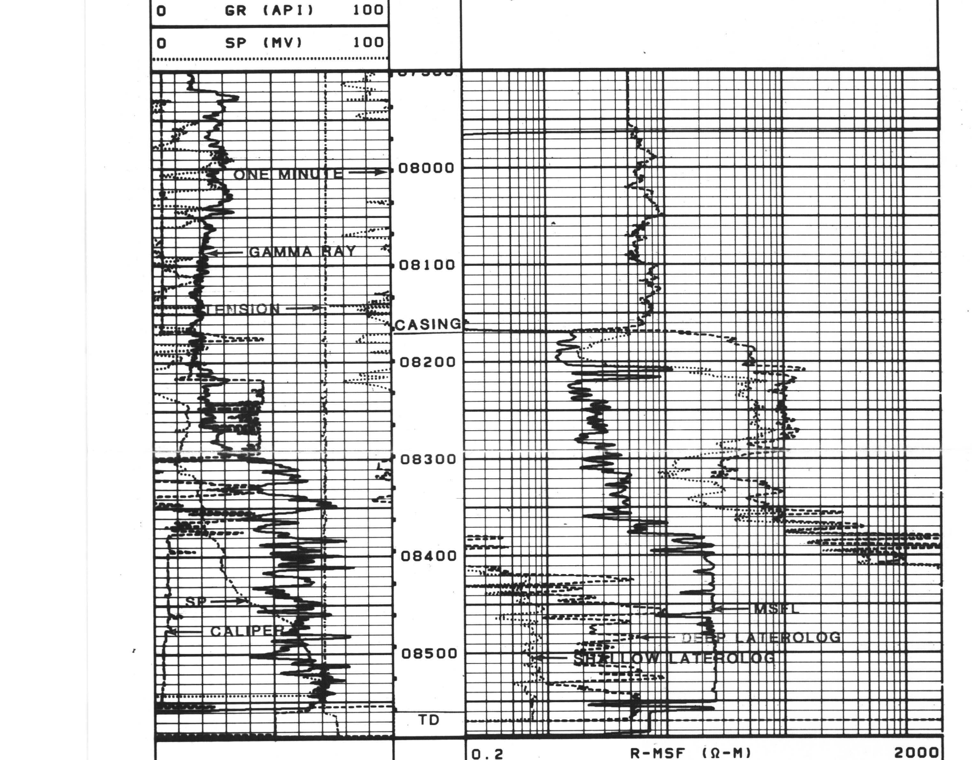
NOTICE: Gearhart Industries, Inc. cannot and does not guarantee the accuracy or correctness of any log data or of any interpretation thereof and shall not be liable or responsible for any loss, cost, damage or expense incurred or sustained by Customer resulting from any log data or interpretation made by Gearhart Industries, Inc. or any of its agents, servants or employees. Neither log data nor interpretation thereof should be relied upon as the sole basis for any drilling, completion, well treatment or production decision or any other procedure. Unless there is presently in effect a master or other specific or general contract intended to extend and apply hereto, this Log is provided in accordance with Gearhart Industries, Inc.'s General Terms and Conditions as set out in its current price schedule.
GEARHART INDUSTRIES, INC.

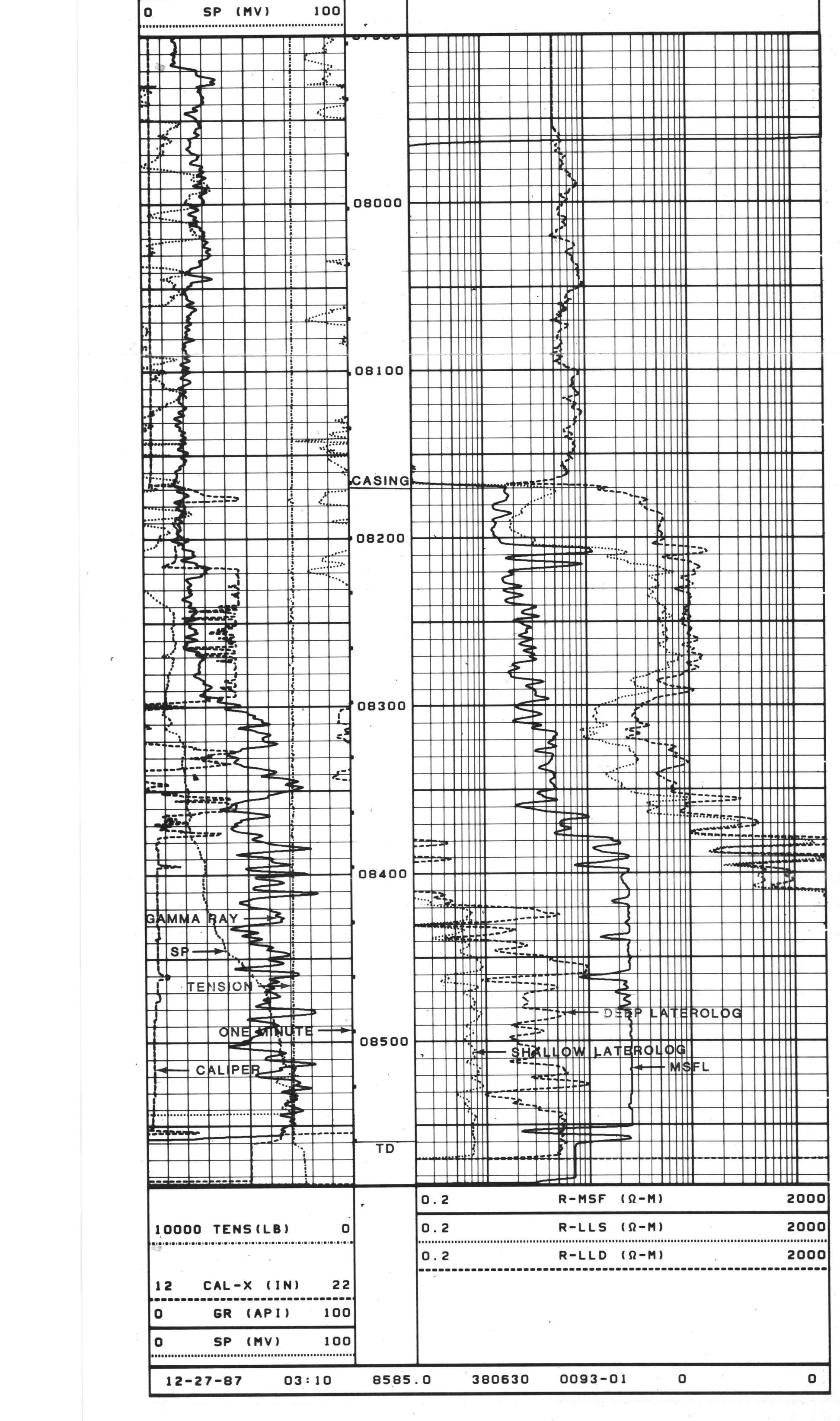
FORM M235-H R 11/82

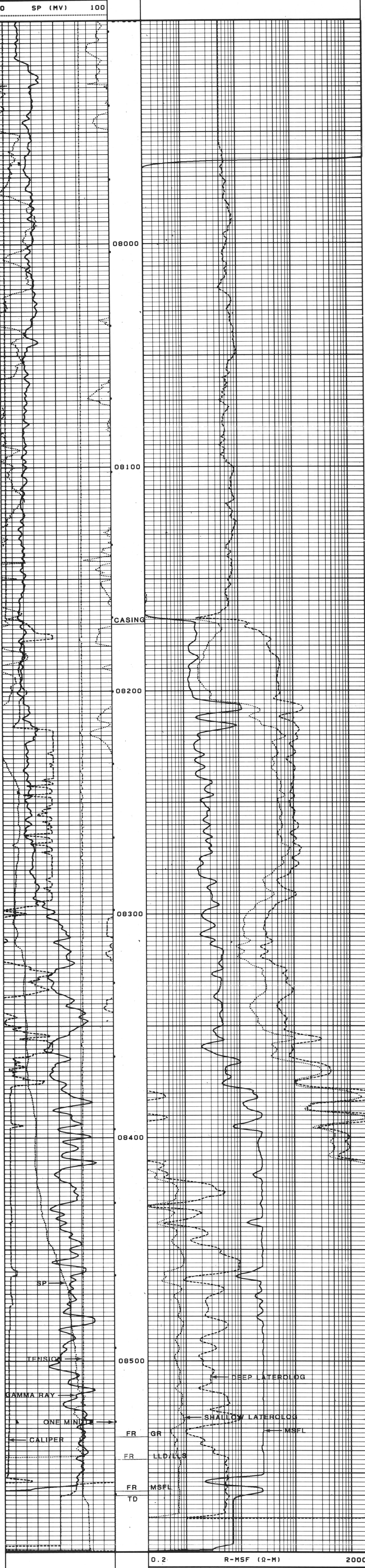
SEISMIC COPY FILM LOG HEADERS

12-27-87	03:29	7900.0	380630	0093-01	0	0

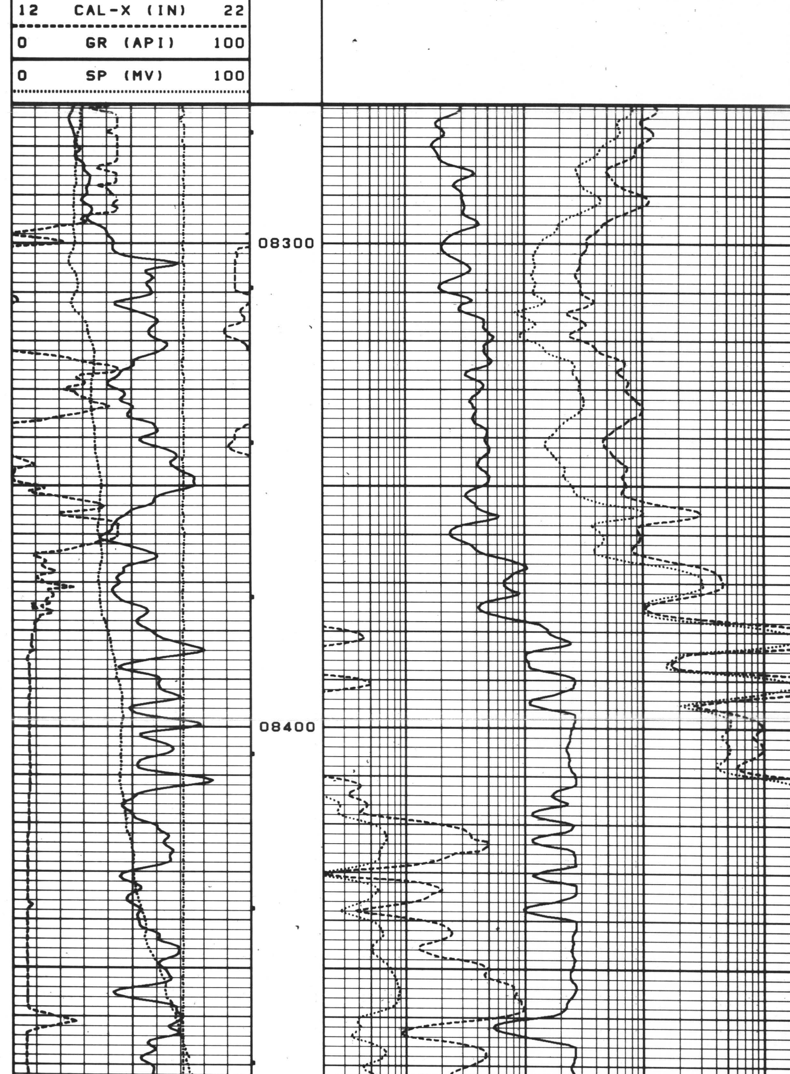
10000 TENS(LB) 0	0.2 R-MSF (Ω-M) 2000
12 CAL-X (IN) 22	0.2 R-LLS (Ω-M) 2000
0 GR (API) 100	0.2 R-LLD (Ω-M) 2000
0 SP (MV) 100	







REPEAT SECTION



12-27-87	02:56	8576.5	380630	0093-01	0	10

REPEAT SECTION

12-27-87	04:06	10.0	380630	0093-01	0	8

MICRO-SPHERICALLY FOCUSED AFTER SURVEY TOOL CHECK

TOOL TYPE: MSF-CA SERIAL NO:18011

	LOW BEFORE	LOW AFTER	HIGH BEFORE	HIGH AFTER	UNITS
MSFL	0.0	0.0	500.0	499.9	MMHO/M

12-27-87	04:05	10.0	380630	0093-01	0	7

DUAL LATEROLOG AFTER SURVEY CALIBRATION

TOOL TYPE: DLL-EA SERIAL NO:15018

100 OHM-METER MEASUREMENT

	BEFORE	AFTER	UNITS
LLD	100	101	OHM-M
LLS	100	100	OHM-M

12-27-87	02:24	8321.5	380630	0093-01	0	4

DUAL LATEROLOG BEFORE SURVEY CALIBRATION

TOOL TYPE: DLL-EA SERIAL NO:15018

100 OHM-METER CAL

	MEASURED	CALIBRATED	UNITS
LLD	118	100	OHM-M
LLS	115	100	OHM-M

12-27-87	02:23	8321.5	380630	0093-01	0	3

MICRO-SPHERICALLY FOCUSED BEFORE SURVEY CALIBRATION

TOOL TYPE: MSF-CA SERIAL NO:18011

	MEASURED LOW	MEASURED HIGH	CALIBRATED LOW	CALIBRATED HIGH	UNITS
MSFL	3.4	507.0	0.0	500.0	MMHO/M

12-26-87	21:00	0.0	380630	0093-01	0	1

GAMMA RAY BEFORE SURVEY CALIBRATION

TOOL TYPE: GRT-HA SERIAL NO:03306

BACKGROUND	CALIBRATOR	STANDARD	UNITS
252.8	719.7	140.0	GAPI

DELTA COUNTS PER SEC: 466.9 CPS/API = 3.335

12-26-87	20:58	0.0	380630	0093-01	0	0

CALIPER BEFORE SURVEY CALIBRATION

TOOL TYPE: MSF-CA SERIAL NO:18011

	MEASURED SMALL	MEASURED LARGE	UNITS	CALIBRATED SMALL	CALIBRATED LARGE	UNITS
CALX	9.28	16.62	IN	7.00	14.00	IN