GEARHART

DUAL INDUCTION
LATERLOG / GAMMA RAY

FILE/CAS NO.

COMPANY T. & B. Natural Resources Management Corp.

WELL W.N.P. 1-20 2nd of 5

FIELD WILMINGTON

COUNTY LOS ANGELES STATE CALIFORNIA

SEC. 19 TWP. 4 S RGE. 13 W

LOCATION: 1 MILE NORTH OF LAKEWOOD BOULEVARD ON SEAL BEACH BOULEVARD

LAMBERT COORDINATES
E: 4 204 784
N: 1 [illegible]

Other Services: NONE

Permanent Datum: GL
Log Measured from: KB
Drilling Measured from: KB

Elev.: K.B. 60'
G.L. 38'
D.F. [illegible]

Date: 3-12-84
Run No.: ONE
Depth-Driller: 5060'
Depth-Logger: 5058'
Bottom Log Interval: 5058'
Top Log Interval: 4950'
Casing-Driller: 9 5/8" @ 5022'
Casing-Logger: 9 5/8" @ 5022'
Bit Size: 8 1/2"
Type Fluid in Hole: DIL-CA KENT.
Dens.: 9.4 Visc.: 44
pH: 10.0 Fluid Loss: [illegible] cc
Source of Sample: FLOWLINE
Rm @ Meas. Temp.: 0.206 @ 73 °F
Rmf @ Meas. Temp.: 0.1506 @ 73 °F
Rmc @ Meas. Temp.: 0.1165 @ 73 °F
Source Rmf/Rmc: MEASURED
Rm @ BHT: 0.206 @ 73 °F
Rmf @ BHT: 0.1506 @ 73 °F
Rmc @ BHT: 0.1165 @ 73 °F
Time Logger on Bottom: 03:30-12-84
Max. Rec. Temp.: 73 °F
Equipment No.: 3-1-3 L.B. 4
Location: 4-5-6-0 L.B. 4
Recorded By: MR. M. MEJIA
Witnessed By: MR. [illegible]

FIELD NOTES

Changes in Mud Type or Additional Samples			Scale Changes			
Date	Sample No.	Type Log	Depth	Scale Up Hole	Scale Down Hole	

EQUIPMENT DATA

	DUAL INDUCTION				GAMMA RAY	
Run No.	Tool No.	Tool Type	Tool Position	S.O.	Tool No.	Tool Type	Tool Position
ONE	5424	DIL-CA KENT.		14"	5185	MARK I KENT.	

CALIBRATION DATA

Run No.	LL 2-Ohm/m	LL 500-ohm/m	ILD Loop Cal.	ILD Int. Cal.	ILD Tool Zero	ILM Loop Cal.	ILM Int. Cal.	ILM Tool Zero	K	B	GAMMA RAY BKG.	GAMMA RAY STD.
		AS PER DIGITAL PRINT-OUT AT END OF FILE										

REMARKS:
1. EXTREMELY HIGH SALINITY. MUD READING AT 0.1 (RMF/RMC NOT SHOWN ON SCALE)
2. AT GEOLOGISTS REQUEST SP SCALE/CURVE SHOWN REVERSED. GAMMA RAY SCALE EXPANDED FOR MAX RESPONSE. SP CURVE SHOWN WITH MAIN LOG ONLY.
3. FROM (4950') TO (4946') SHAVINGS & STUB FROM PREVIOUS WELL STILL IN HOLE.

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GEARHART INDUSTRIES, INC.

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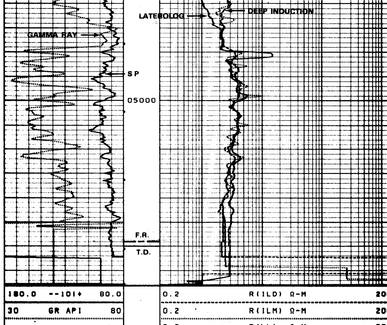
180.0 --101+ 80.0		0.2 R(ILD) Ω-M		2000
30 GR API 80		0.2 R(ILM) Ω-M		2000
		0.2 R(LL) Ω-M		2000



180.0 --101+ 80.0		0.2 R(ILD) Ω-M		2000
30 GR API 80		0.2 R(ILM) Ω-M		2000
		0.2 R(LL) Ω-M		2000

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DUAL INDUCTION SHOP CALIBRATION

DATE PERFORMED: 02-20-84

PRIMARY CALIBRATION DATA

	ZERO(AIR)	LOOP CAL	INT ZERO	INT CAL	UNITS
ILD	-14	624	-7	639	MV
ILM	-7	732	-11	739	MV

REFERENCE DATA

	LOOP STD	INTERNAL ZERO	INTERNAL CAL	CALIBRATED LOW	CALIBRATED HIGH	UNITS
ILD	400	-4.4	401.8	0.0	399.9	MM/M
ILM	494	-6.9	494.7	0.0	493.9	MM/M

ILD SONDE ERROR CORRECTION: 4.3 MM/M • ILD CONVR: 1.99 MV-MM/M

ILM SONDE ERROR CORRECTION: -2.5 MM/M • ILM CONVR: 1.99 MV-MM/M

DUAL INDUCTION BEFORE SURVEY CALIBRATION

RESISTIVITY

	MEASURED LOW	MEASURED HIGH	CALIBRATED LOW	CALIBRATED HIGH	UNITS
ILD	-0.6	406.2	0.0	400.0	MM/M
ILM	-1.2	466.6	0.0	464.0	MM/M
LL	2.0	498.6	2.0	500.0	OHM-M

ILD SONDE ERROR CORRECTION: 4.3 MM/M

ILM SONDE ERROR CORRECTION: -2.5 MM/M

DUAL INDUCTION AFTER SURVEY CALIBRATION

RESISTIVITY

	LOW BEFORE	LOW AFTER	HIGH BEFORE	HIGH AFTER	UNITS
ILD	0.0	1.2	400.0	405.6	MM/M
ILM	0.0	0.0	464.0	470.2	MM/M
LL	2.0	1.4	500.0	539.7	OHM-M

ILD SONDE ERROR CORRECTION: 4.3 MM/M

ILM SONDE ERROR CORRECTION: -2.5 MM/M

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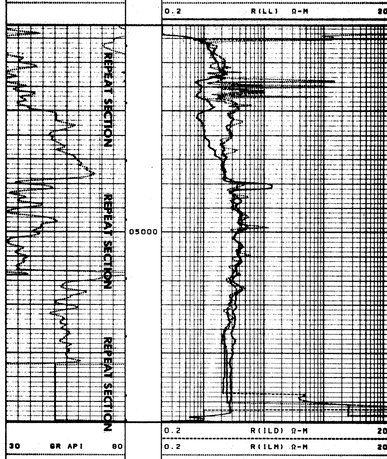
		0.2 R(ILD) Ω-M		2000
30 GR API 80		0.2 R(ILM) Ω-M		2000
		0.2 R(LL) Ω-M		2000



		0.2 R(ILD) Ω-M		2000
30 GR API 80		0.2 R(ILM) Ω-M		2000
		0.2 R(LL) Ω-M		2000

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Company XTRA ENERGY CORPORATION

Well W.N.P. 1-20

Field WILMINGTON

County LOS ANGELES State CALIF.

GO FR 5058'
GO TD 5060'
DRLR TD 5060'
Elev.
KB 60'
DF –
GL 38'