

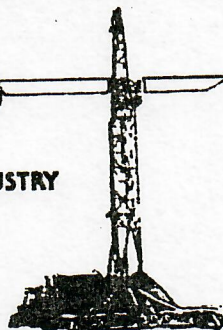


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GGOOLSBY BROTHERS and associates, Inc.

CONSULTING GEOLOGISTS TO THE ENERGY INDUSTRY
Oil & Gas - Coal

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GEOLOGICAL WELLSITE REPORT

HS RESOURCES, INC.
HSR Fulenwider 12-10

NW SW Section 10, T2S, R66W
Adams County, Colorado

RECEIVED

APR 27 1995

COLO. OIL & GAS CONS. COMM

Mathew D. Goolsby
Consulting Geologist

AA

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SUMMARY

After spudding on the 26th of January, Exeter's rig 17 reached total depth in the HSR Fulenwider 12-10 six days later. Drilling ceased in the Skull Creek Shale at a depth of 8486 ft.

This Banner Field test was located as a southwest step out from the field. With J2 Horsetooth as the primary objective, both J1 and J3 (Ft Collins) were designated secondary targets.

Though not as thick as in some field wells, a clean J2 sand was encountered in the Fulenwider 12-10. The sand included the log interval 8337 to 8346. The porosity tool recorded 9% density porosity with 5 ft of neutron cross-over. Resistivity reached 66 ohms in the middle part of the sand and the Minilog also separated for 4 ft at the same depths. The first sample of the J Sandstone contained 20% sand cuttings. These cuttings appeared both clean and permeable, with up to 14% estimated porosity. Based on log responses and area experience, this sand probably represents the upper J2, rather than the normally clay-filled J1 Member.

The J1 Member was logged from 8333 to 8337. Though shalier than the J2 Member, density porosity approached 16% in the zone, with convincing neutron gas response. A 2 ft Minilog reversal also matched up with the peak porosity deflection.

A 6 ft Ft Collins sand was topped on logs at 8366 ft, with the density tool reading 12% porosity. Slight neutron cross-over was also present. Poor to fair shows were described in a clay-filled sand.

Production pipe (4.5") has been set to total depth in the HSR Fulenwider 12-10. A Completion in the J1/J2 reservoir interval will be undertaken.

WELL DATA

OPERATOR: HS Resources, Inc.

WELL NAME: HSR Fulenwider 12-10

LOCATION: 900' FWL, 1920' FSL (NW SW) Section 10, T2S, R66W,
Adams Co., Colorado

FIELD: Banner

ELEVATION: 5186' GL, 5196' KB

ROAD DIRECTIONS: Tower rd past 104th 1/3mi, east into.

DRILLING CONTRACTOR: Exeter Drilling, Rig 17
TOOLPUSHERS: Mike Hamilton

GEOLOGICAL WELLSITE SUPERVISION: Goolsby Brothers & Assoc., Inc.
GEOLOGIST: Mathew D. Goolsby

MUD ENGINEERING: Quality Drilling Fluids
ENGINEER: Mark Griffin
PROGRAM: Chemical-Gel

GEOPHYSICAL LOGGING: Atlas Wireline (Ft. Morgan)
ENGINEER: Dave Fredericks
PROGRAM: DIFL, CDL/CNL, Minilog

HOLE SIZE: 12 1/4" to 1691', 7 7/8" to TD

SURFACE CASING: 39 jts 8 5/8" set @ 1677' KB w/1175 sx.

SPUD DATE: 1/26/95

DATE TD REACHED: 2/01/95, 0730

SAMPLE PROGRAM: 30 ft intervals 5000 to 5500, 7400 to 8150; 5/10 ft intervals
8150 to TD.

TOTAL DEPTH: 8486' Driller, 8485' Logger

BOTTOM HOLE FORMATION: Skull Creek

WELL STATUS: Ran 4.5" for J Sandstone completion.

REMARKS: 2nd log stopped 1966', knocked out w/ open ended drill pipe.

DAILY CHRONOLOGY

<u>DATE</u>	<u>7 AM DEPTH</u>	<u>ROTATING:DAYWORK HOURS</u> <u>PREVIOUS DAY</u>	<u>COMMENTS</u>
1/27/95	1304	10 : 0	
1/28/95	1691	4 1/4: 0	Nipple Up
1/29/95	4991	16 1/2:0	
1/30/95	7400	20 1/2:0	
1/31/95	8287	10 3/4:0	Bit Trip
2/01/95	8480	22 : 0	
2/02/95	8486(TD)	1/2 : 23 1/2	

*TD 0730, 2/01/95, Logged 1400 to 2200.

BIT RECORD

<u>#</u>	<u>MAKE</u>	<u>TYPE</u>	<u>SIZE</u>	<u>OUT</u>	<u>FOOTAGE</u>	<u>HOURS</u>	<u>REMARKS</u>
1	HTC	ATMG 15	12.25	1651	1651	13.25	RT
2	RTC	HP 11	7 7/8	1691	40	.75	RR
3	SEC	1099 AN	7 7/8	8243	6552	47.50	RR
--- Depth Corrected to Strap, 8243 changed to 8276' ---							
4	HTC	J 33S	7 7/8	8486	210	24.25	RB

MUD RECORD

<u>DEPTH</u>	<u>WT</u>	<u>VIS</u>	<u>WL</u>	<u>PV</u>	<u>GEL</u>	<u>YP</u>	<u>PH</u>	<u>CHLOR</u>	<u>SOLIDS %</u>
7681	9.0	38	6.4	12	1/3	4	9.0	320	5.0
8292	9.2	41	6.4	16	2/4	7	8.5	350	6.4

--- LOGGED W/ 56 VIS, 9.4 WT ---

DEVIATION SURVEYS

<u>DEPTH</u>	<u>DRIFT</u>	<u>DEPTH</u>	<u>DRIFT</u>
804	1/4	1691	1 1/2
2245	1	2741	1 1/4
3277	1/4	3741	1
4710	1	5710	1
6714	1/2	8276	3/4
8486	1		

FORMATION TOPS

Elevations calculated using a KB elevation of 5196 feet.

<u>FORMATION</u>	<u>LOG DEPTH</u>	<u>ELEVATION</u>
Base Fox Hills	Cased	---
Sussex	5137	+ 59
Niobrara	7547	-2351
Ft Hays	7898	-2702
Carlile	7922	-2726
X Bentonite	8185	-2989
D Sandstone	8287	-3091
J Silt	8324	-3128
J Sandstone	8333	-3137
J2	8337	-3141
J3	8366	-3170
Total Depth	8485	---

REPRESENTATIVE LOG ANALYSIS

D SANDSTONE

Rw = 0.12, F = .62/ $\phi^{2.15}$, Grain Density = 2.65

<u>Depth</u>	<u>PHI(d)</u>	<u>Rd</u>	<u>Sw%</u>	<u>Remarks</u>
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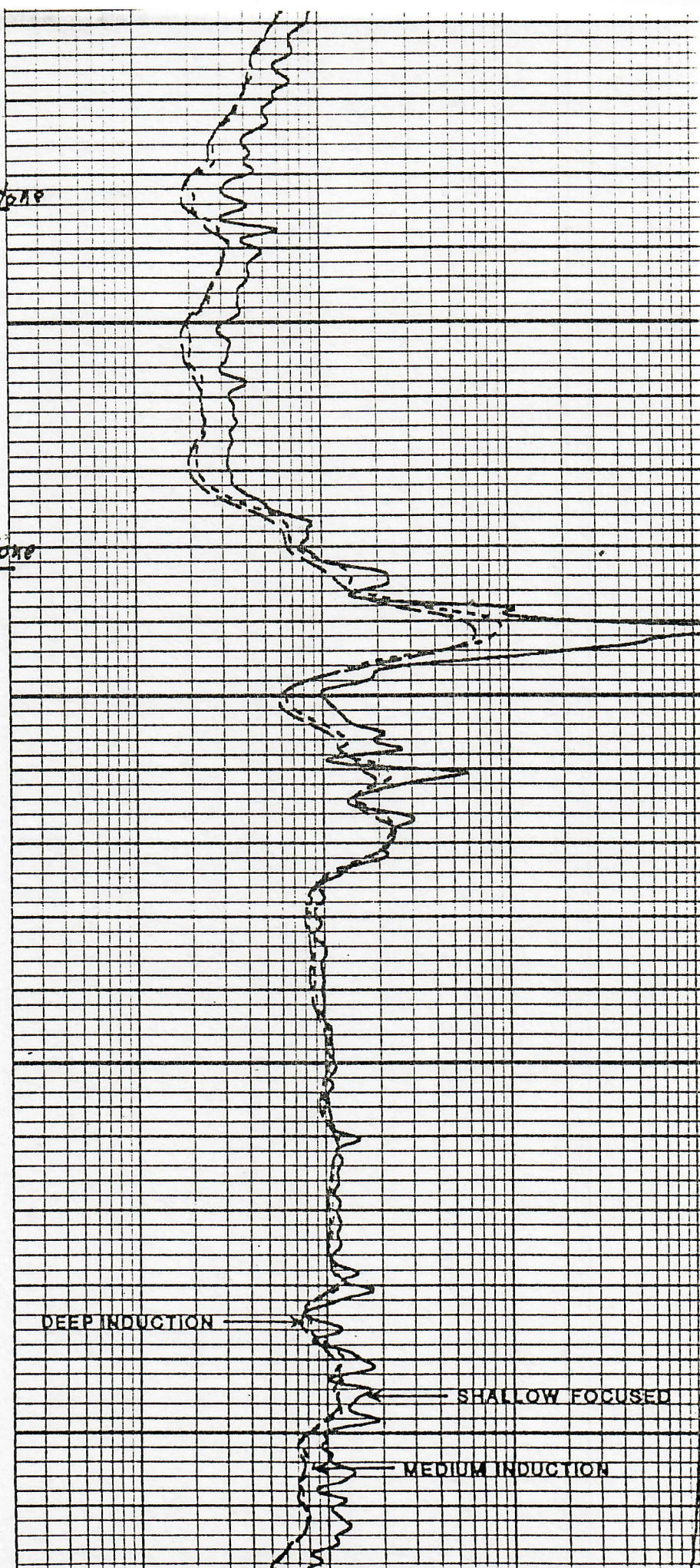
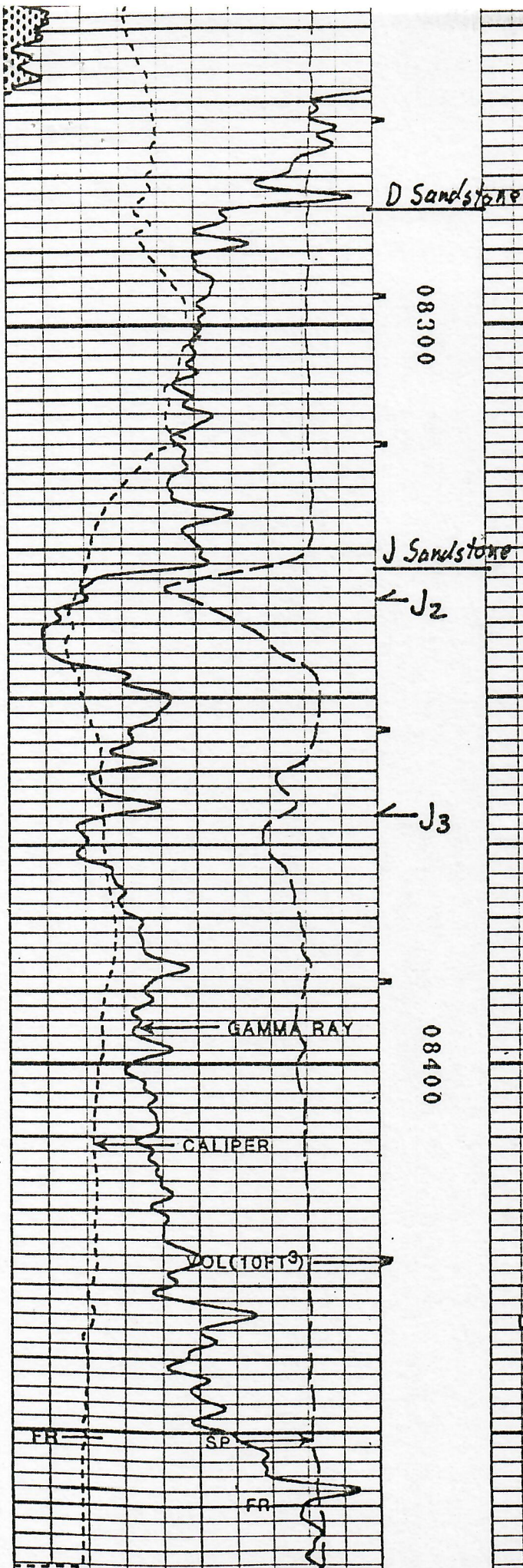
--- D Sand not developed ---

J SANDSTONE

Rw = .12, F = .62/ $\phi^{2.15}$ Grain Density = 2.65

<u>Depth</u>	<u>PHI(d)</u>	<u>Rd</u>	<u>Sw%</u>	<u>*Remarks</u>
J1				
8335	.15	13	58	Cross-over
J2				
8341	.085	66	48	Cross-over
8343	.08	60	53	Cross-over
J3				
8368	.11	24	60	Cross-over

* Minilog separation 8335-8337, 8340-8344. Density readings taken from repeat log.



D Sandstone

08300

J Sandstone

J₂

J₃

08400

GAMMA RAY

IHV 10cu

CALIPER

FR

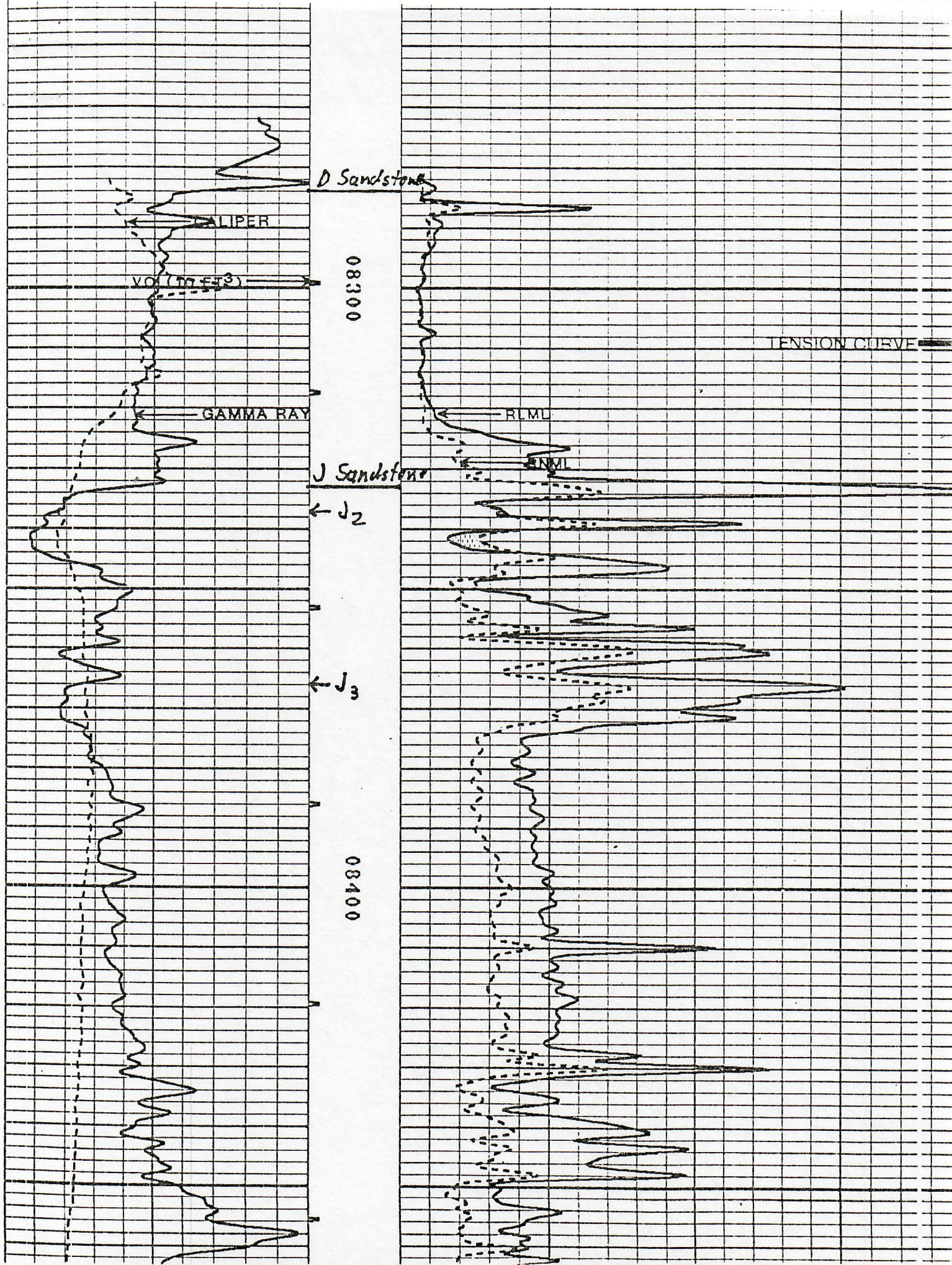
NEUTRON POROSITY

DENSITY POROSITY

TENSION DEVICE

CORRECTION

FR



DRILL CUTTINGS ANALYSIS

Samples described dry except for shows which were described from wet cuttings.

D SAND & J SAND DETAIL

<u>Depth</u> <u>Caught</u>	<u>Lagged</u> <u>Depth</u>	<u>Description</u>
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-- INITIAL SAMPLE LAG = 45 MINUTES --

8290	8284	SH DK/V DK GY, BLKY/SLI SPLTY, CARB IN PT
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D SANDSTONE

8295	8287	SH W/ TR SLTST GY BRN, SDY, SILIC, FIRM, TR DUL YEL FLOR, SLOW MLKY YEL CUTS
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8300	8293	3% SDY SLTST AA, INC SHLY; SH DK GY, SBSPLTY, SLTY
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8305	8297	SH DK GY, SOME V DK GY, SLI SLTY
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8310	8301	SAME
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8315	8306	SH DK/V DK GY, SLTY, SBSPLTY
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8320	8311	SH DK GY, SPLTY/BLKY, SLTY
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8325	8317	SH AA, MINOR SHLY SLTST
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8330	8323	SH MOST V DK GY, SPLTY, SLI CARB & SLTY
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8335	8327	SH AA
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J SILT

8340	8330	SH W/ 2% SLTST DK GY BRN, SILIC, FIRM, TAB/BLKY
------	------	---

8345	8335	1% SLTST AA
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J SANDSTONE

8350	8341	20% SS CLR, VF/FG, PSRTD, SCAT CLY, ANG, SILIC, EST UP TO 14% POR, LOOKS PERM, LT BRN STN, EVN BRI LT YEL FLOR, FAST STRMG WISPY CUTS; NOTE: THIS LOOKS LIKE UPPER J2, NO TYPICAL J1 IN SAMPLE
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8355	8347	10% SS CLR/OFFWH, VF/FG, PSRTD, GEN AA BUT DECR POR (EST 9/12%), SHOWS AA
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8360	8352	10% SS CLR/LT GY, VFG/FG, ANG, V SILIC & FREQ WELDED, EST 8% MAX POR, HD, 75% PATCHY MOD/BRI YEL FLOR, SLOW STRMG WISPY CUTS
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8365	8356	5% SS AA W/ SH DK GY BRN, SDY, SLI SILIC
8370	8362	2% SS AA W/ 5% SS GY BRN, LVF/UVFG, PSRTD, SLTY/SHLY, CLY MIN, CLY FL, EST 12% POR, 80% DULL YEL FLOR, WKLY STRMG YEL CUTS
8375	8366	1% SS AA W/ SH V DK GY, BLKY, FIRM, SLTY
J3		
8380	8372	5% SS LT GY BRN, VFG, M/WSRTD, SBANG, CLY FL, EST 13% POR, SPTTY LT BRN STN, 80% PALE/MOD YEL FLOR, FAST THIN STRMG YEL CUTS
8385	8378	TR SS W/ SH V DK GY, BCMG SPLTY, SBCARB
8390	8383	SH DK/V DK GY, SLI CARB, PYRITIC, SPLTY
8395	8387	SH AA, SCAT FREE PYR
8400	8391	SH DK/OCC V DK GY, SPLTY
8410	8402	SH DK/V DK GY, BLKY/SPLTY
8420	8412	SH AA, INC SPLTY
8430	8422	SH DK/V DK GY, SPLTY/BLKY
--- SHORT TRIP F/ HOLE IN PIPE 8436 ---		
8440	8435	(LAT) SH PRED V DK GY, SPLTY, BRIT
8450	8444	SH W/ MINOR SLTST DK GY, V SHLY
8460	8454	SH DK GY/GY BRN, ERTHY/SLTY
8470	8465	SH DK/V DK GY, SBSPLTY, FREQ PYRITE
8480	8475	SH AA
8485	8479	SH DK GY BRN/V DK GY, SLI CARB

--- DRILLER'S TD @ 8486' ---