#504

DUAL INDUCTION / SP GAMMA RAY / SONIC TVD 2" LOG

Schlumberger

COUNTY	COLUMBIA
FIELD	MIST GAS STORAGE
LOCATION	N 03-03-15 E 2280.65' & S 86-56-45 E
WELL	IW 23a-22-65
COMPANY	NORTHWEST NATURAL GAS

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WELL IW 23a-22-65

FIELD MIST GAS STORAGE

COUNTY COLUMBIA **STATE** OREGON

LOCATION N 03-03-15 E 2280.65' & S 86-56-45 E
1923.76' FROM THE SW COR. OF SEC 22

API SERIAL NO.	SECT.	TWP.	RANGE
36-009-00304	22	T1 6N	R6 5W

Other Services: SONIC, INDUCTION, FMS, DENSITY, NEUTRON, GAMMA RAY

Permanent Datum	GROUND LEVEL	Elev. 580.5 F		Elev.: K.B. 596.5 F
Log Measured From	KELLY BUSHING	16.0 F	above Perm. Datum	D.F.
Drilling Measured From	KELLY BUSHING			G.L. 580.5 F

Date	27-SEPT-1997			03-OCT-1997		
Run No.	ONE			TWO		
Depth Driller	1402.0 F			2299.0 F		
Depth Logger (Schl.)	1399.0 F			2292.0 F		
Btm. Log Interval	1389.0 F			2282.0 F		
Top Log Interval	0.0 F			1350.0 F		
Casing-Driller	13 3/8" @ 359.0 F		8 5/8" @ 1395.0 F		@	
Casing-Logger	355.0 F		1394.0 F			
Bit Size	@		@		@	
Type Fluid in Hole	GEL/CYPAN			KCL/XCD		
Dens. / Visc.	9.50 LB/G	60.0 S		8.60 LB/G	36.0 S	
pH / Fld. Loss	8.0			9.0		
Source of Sample	FLOWLINE					
Rm @ Meas. Temp.	2.310 OHMM @ 69.0 DEGF			.328 OHMM @ 72.0 DEGF		
Rmf @ Meas. Temp.	3.720 OHMM @ 66.0 DEGF			.382 OHMM @ 69.0 DEGF		
Rmc @ Meas. Temp.	3.550 OHMM @ 66.0 DEGF			.662 OHMM @ 69.0 DEGF		
Source: Rmf / Rmc	CELL	CELL				
Rm @ BHT	1.611 OHMM @ 102. DEGF			.247 OHMM @ 98.0 DEGF		
TIME Circulation Ended	08:30 9-27-97			19:30 10-3-97		
TIME Logger on Bottom	SEE LOG					
Max. Rec. Temp.	102. DEGF			98.0 DEGF		
Equip. / Location	8303	BAKERSFIELD				
Recorded By	GREG PERRY					
Witnessed By	MR. MEYER / MR. THOMAS					

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

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 wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Run No.	ONE	TWO
Service Order No.		
Drilling Fluid Level	0.0 F	
Salinity		
Rmf @ BHT	2.491 OHMM @ 102. DEGF	.276 OHMM @ 98.0 DEGF
Rmc @ BHT	2.378 OHMM @ 102. DEGF	.479 OHMM @ 98.0 DEGF
Logging Speed	1800.0 F/HR	
EQUIPMENT DATA		
Tool Number 1	DIS 151	
Tool Number 2	DIC 159	
Tool Number 3	SLS WA	
Tool Number 4	SLC UA	
Tool Number 5	SGCSA 483	
Tool Number 6	TCCB 1289	
Tool Number 7		
Tool Number 8		
Tool Number 9		
Tool Number 10		
Tool Number 11		
Tool Number 12		

REMARKS:

RAN INDUCTION AND SONIC IN COMBO. RAN FMS LDT CNL IN COMBO.
CENTRALIZERS RAN ON INDUCTION TOOL AND SONIC TOOL.
RAN REPEAT AT CASING DEPTH DUE TO PULLING TIGHT AT BOTTOM. RAN REPEAT BOTTOM AT CLIENTS REQUEST.

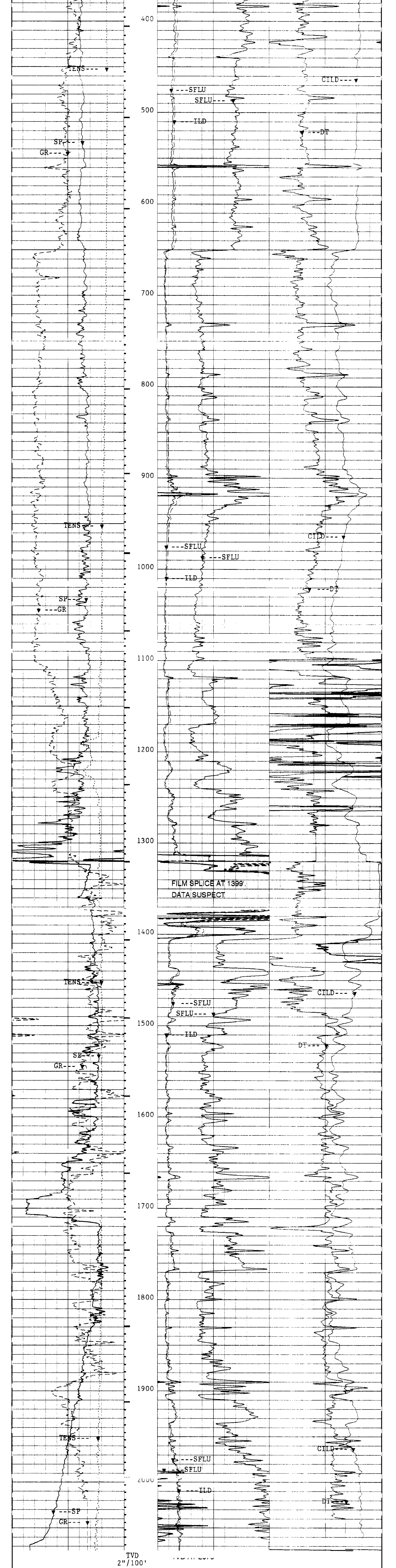
CREW: DAN LEE.
THANKS FOR USING SCHLUMBERGER!!!!!!!!

TENS(LBF)		SFLU(OHMM)	
10000. — 0.0		0.0 — 30.000	
SP(MV)		SFLU(OHMM)	CILD(MM/M)
-20.00 — 80.000		0.0 — 6.0000	1000.0 — 0.0
GR(GAPI)		ILD(OHMM)	DT(US/F)
0.0 — 150.00		0.0 — 30.000	175.00 — 75.000

CP 44.2 FILE 1 05-OCT-1997 11:03

INPUT FILE(S) CREATION DATE
58 04-OCT-1997 10:21
65 05-OCT-1997 08:42

2"/100'
TVD



TVD
2"/100'

CP 44.2 FILE 1 05-OCT-1997 10:40

INPUT FILE(S) CREATION DATE
58 04-OCT-1997 10:21
65 05-OCT-1997 08:42

TENS(LBF)		SFLU(OHMM)	
10000. — 0.0		0.0 — 30.000	
SP(MV)		SFLU(OHMM)	CILD(MM/M)
-20.00 — 80.000		0.0 — 6.0000	1000.0 — 0.0
GR(GAPI)		ILD(OHMM)	DT(US/F)
0.0 — 150.00		0.0 — 30.000	175.00 — 75.000

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
SMB	DISA		VDLR	2IN	
TOCA	DISA		RATE	15	HZ
DG	AUTO		DETE	E2	
NMSG	180	US	CBLG	35	US
AMPL	2		CBL	2	
WFM	1		SS	FAST	
TCD	DISA		SLC	UA	
DTF	189.000	US/F	DTM	56.0000	US/F
CDTS	100.000		SPFS	R-H	
PP	NORM		DO	0.0	F
DO2	0.0	F	WMUD	8.60000	LB/G
TD	2292.00	F	IFRS	20	KHZ
SBR	1.00000	OHMM	MXE2	30.2658	MM/M
DXE2	121.315	MM/M	MRE2	17.4291	MM/M
DRE2	13.9156	MM/M	MPH2	-.893001	DEG
DPH2	.0599204	DEG	MGF2	1.02163	
DGF2	.993476		DESP	DISA	
SFLE	ALLO		DCAS	-50000.0	F
ITEN	ALLO		DEVI	32.0000	DEG
DSES	H412		IPRO	STAN	
IPHA	NORM		DWCO	512	
DSIN	5	US	DDEL	200	US
NCJT	GSRY		GTSE	TEMP	
SHT	75.0000	DEGF	BHT	98.0000	DEGF
SPAE	DISA		SPVD	2074.00	F
SINT	10.0000	M	BS	7.87500	IN
BHS	OPEN				

COMPANY	NORTHWEST NATURAL GAS			SCHL. FR	2282.0 F
				SCHL. TD	2292.0 F
WELL	IW 23a-22-65			DRLR. TD	2299.0 F
				Elev: KB	596.5 F
FIELD	MIST GAS STORAGE			DF	
COUNTY	COLUMBIA	STATE	OREGON	GL	580.5 F

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