

REPORT NO.
113880

PAGE NO. 1

STARTM

A Schlumberger Transient Analysis Report

Schlumberger

TEST DATE

14-NOV-198

A Schlumberger Drillstem Test

DEC 11 1989



00047097

Company: CHANDLER & ASSOC.

Well: S.W. RANGLEY FEDERAL 12-846 COMM.

TEST IDENTIFICATION

Test Type OH-DST
Test No. 1
Formation MANCOS "B"
Test Interval (ft) ... 4305 - 4565
Reference Depth KELLY BUSHING

WELL LOCATION

Field S.W. RANGLEY
County RIO BLANCO
State COLORADO
Sec/Twn/Rng S34T1NR103W
Elevation (ft) 5713

HOLE CONDITIONS

Total Depth (MD/TUD)(ft) . 4565
Hole Size (in) 7 7/8
Casing/Liner I.D. (in) ...
Perf'd Interv./Nt Pay(ft). -- / 75
Shot Density/Diameter(in).

MUD PROPERTIES

Mud Type LSND
Mud Weight (lb/gal) 9.4
Mud Resistivity (ohm.m) .. 0.5 @ 60 DEG. F.
Filtrate Resistiv.(ohm.m). 0.45 @ 60 DEG. F.
Filtrate Chlorides (ppm) . 15000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi). 2212
Gas Cushion Type NONE
Surface Pressure (psi) ... --
Liquid Cushion Type NONE
Cushion Length (ft) --

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D.(in). 4111 / 3.34
Collar Length ft/I.D.(in). 155 / 2.25
Packer Depths (ft) 4305
Bottomhole Choke Size(in). 1
Gauge Depth (ft)/Type 4311 / MECHANICAL

NET PIPE RECOVERY

Volume	Fluid Type	Properties
31 FT.	DRLG. MUD	RW = 0.5 @ 60 DEG. F 15000 PPM CL.

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.25 SCF	GAS	
TRACE	MUD	
Press. 20	GOR:	GLR:

VALIDATION RESULTS

Model of Behavior
Fluid Type Used
Reservoir Pressure (psi) .
Transmissivity (md.ft/cp)
Permeability (md)
Skin Factor/Damage Ratio .
Storativity Ratio
Interporosity Flow Coeff..
Distance to Anomaly (ft).
Investigation Radius (ft).
Potentiometric Surf. (ft).

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API) ...
Basic Solids (%)
Gas Gravity
Water Cut (%)
Viscosity (cp)
Tot. Compress. (1/psi) ...
Porosity (%) 14
Reservoir Temperature (F). 118
Form.Vol.Factor (bbl/STB).

PRODUCTION RATE DURING TEST: -

COMMENTS:

REPORT NO.

113880

PAGE NO. 2

SEQUENCE OF EVENTS

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EVENT NO.	DATE	TIME (HR:MIN)	DESCRIPTION	ELAPSED TIME (MIN)	BHP (PSIA)	BLOW (IN. -H ₂ O)
1	11/14	0102	SET PACKERS	-0.39	2212	
2		0104	OPENED TOOL-1/4" CHOKE	0.00	100	2" BLOW
		0114				8" BLOW
		0124				5" BLOW
3		0134	CLOSED FOR INITIAL SHUTIN	30.00	91	3" BLOW
		0146				BLOW DIED
4		0234	FINISHED SHUT-IN	90.00	152	0
5		0235	RE-OPENED TOOL	91.11	85	1" BLOW
		0245				1.5" BLOW
		0255				1" BLOW
		0305				1" BLOW
		0315				1/2" BLOW
		0345				1/4" BLOW
		0355				SURF. BLOW
6		0405	CLOSED FOR FINAL SHUT-IN	181.05	90	SURF. BLOW
		0407				BLOW DIED
7		0657	FINISHED SHUT-IN	355.00	171	0
8		0658	PULLED PACKERS LOOSE	359.11	2169	
			NOTE: LOST 70 FT. MUD			
			DURING TEST. NO GAS TO			
			SURFACE DURING TEST.			

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113880

COMPANY : CHANDLER & ASSOCIATES INC.

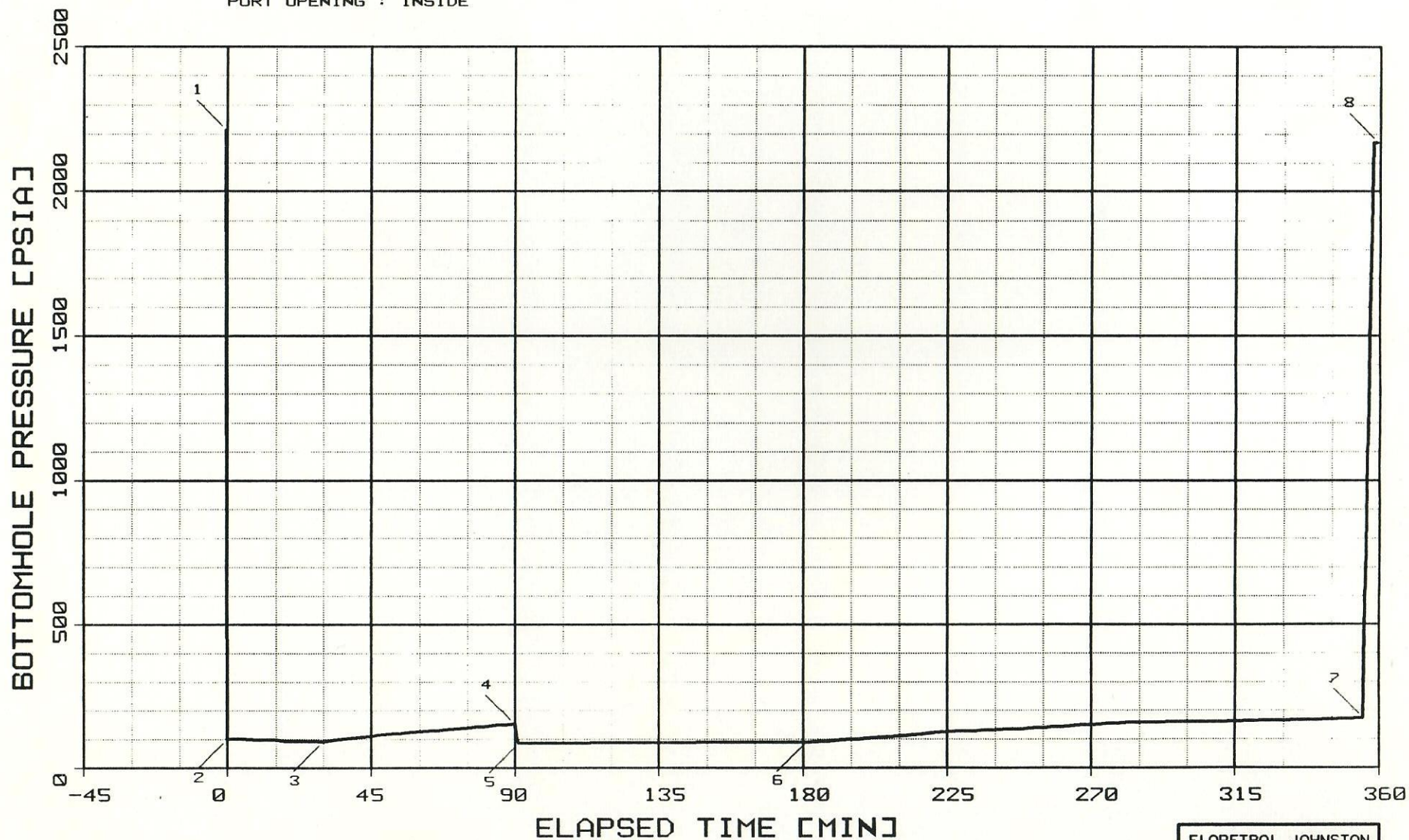
INSTRUMENT NO. 012

WELL : S.W. RANGLEY FED #12-34

DEPTH : 4311 FT

CAPACITY : 6400 PSI

PORT OPENING : INSIDE



FLOPETROL JOHNSTON

Schlumberger

 * WELL TEST DATA PRINTOUT *

FIELD REPORT # : 113880

COMPANY : CHANDLER & ASSOCIATES INC.
 WELL : S.W. RANGLEY FED #12-34

INSTRUMENT # : 012
 CAPACITY [PSI] : 6400.
 DEPTH [FT] : 4311.0
 PORT OPENING : INSIDE
 TEMPERATURE [DEG F] : 118.0

LABEL POINT INFORMATION

#	TIME OF DAY	DATE	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
***	*****	*****	*****	*****	*****
1	1: 3:37	14-NO	HYDROSTATIC MUD	-0.39	2212
2	1: 4: 0	14-NO	START FLOW	0.00	100
3	1:34: 0	14-NO	END FLOW & START SHUT-IN	30.00	91
4	2:34: 0	14-NO	END SHUT-IN	90.00	152
5	2:35: 7	14-NO	START FLOW	91.11	85
6	4: 5: 3	14-NO	END FLOW & START SHUT-IN	181.05	90
7	6:59: 0	14-NO	END SHUT-IN	355.00	171
8	7: 3: 7	14-NO	HYDROSTATIC MUD	359.11	2169

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
*****	*****	*****	*****	*****	*****
1	0.00	30.00	30.00	100	91
2	91.11	181.05	89.94	85	90

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
*****	*****	*****	*****	*****	*****	*****	*****
1	30.00	90.00	60.00	91	152	91	30.00
2	181.05	355.00	173.95	90	171	90	119.94

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA
1: 4: 0	14-NO	0.00	0.00	100
1: 9: 0	14-NO	5.00	5.00	100
1:14: 0	14-NO	10.00	10.00	97
1:19: 0	14-NO	15.00	15.00	97
1:24: 0	14-NO	20.00	20.00	93
1:29: 0	14-NO	25.00	25.00	93
1:34: 0	14-NO	30.00	30.00	91

TEST PHASE : SHUTIN PERIOD # 1

FINAL FLOW PRESSURE [PSIA] = 91

PRODUCING TIME [MIN] = 30.00

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
1:34: 0	14-NO	30.00	0.00	91	0	
1:35: 0	14-NO	31.00	1.00	93	2	1.491
1:36: 0	14-NO	32.00	2.00	94	4	1.204
1:37: 0	14-NO	33.00	3.00	96	5	1.041
1:38: 0	14-NO	34.00	4.00	97	7	0.929
1:39: 0	14-NO	35.00	5.00	99	8	0.845
1:40: 0	14-NO	36.00	6.00	100	9	0.778
1:41: 0	14-NO	37.00	7.00	101	10	0.723
1:42: 0	14-NO	38.00	8.00	102	11	0.677
1:43: 0	14-NO	39.00	9.00	103	13	0.637
1:44: 0	14-NO	40.00	10.00	105	14	0.602
1:46: 0	14-NO	42.00	12.00	107	17	0.544
1:48: 0	14-NO	44.00	14.00	109	19	0.497
1:50: 0	14-NO	46.00	16.00	112	21	0.459
1:52: 0	14-NO	48.00	18.00	114	24	0.426
1:54: 0	14-NO	50.00	20.00	116	25	0.398
1:56: 0	14-NO	52.00	22.00	118	28	0.374
1:58: 0	14-NO	54.00	24.00	120	29	0.352
2: 0: 0	14-NO	56.00	26.00	122	31	0.333
2: 2: 0	14-NO	58.00	28.00	124	33	0.316
2: 4: 0	14-NO	60.00	30.00	125	35	0.301
2: 9: 0	14-NO	65.00	35.00	129	39	0.269
2:14: 0	14-NO	70.00	40.00	134	43	0.243
2:19: 0	14-NO	75.00	45.00	139	48	0.222
2:24: 0	14-NO	80.00	50.00	143	52	0.204
2:29: 0	14-NO	85.00	55.00	148	57	0.189
2:34: 0	14-NO	90.00	60.00	152	61	0.176

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY	DATE	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
HH:MM:SS	DD-MM	*****	*****	*****

2:35: 7	14-NO	91.11	0.00	85
2:40: 7	14-NO	96.11	5.00	85
2:45: 7	14-NO	101.11	10.00	85
2:50: 7	14-NO	106.11	15.00	86
2:55: 7	14-NO	111.11	20.00	86
3: 0: 7	14-NO	116.11	25.00	87
3: 5: 7	14-NO	121.11	30.00	87
3:10: 7	14-NO	126.11	35.00	88
3:15: 7	14-NO	131.11	40.00	88
3:20: 7	14-NO	136.11	45.00	88
3:25: 7	14-NO	141.11	50.00	88
3:30: 7	14-NO	146.11	55.00	88
3:35: 7	14-NO	151.11	60.00	90
3:40: 7	14-NO	156.11	65.00	90
3:45: 7	14-NO	161.11	70.00	90
3:50: 7	14-NO	166.11	75.00	90
3:55: 7	14-NO	171.11	80.00	90
4: 0: 7	14-NO	176.11	85.00	90
4: 5: 3	14-NO	181.05	89.94	90

TEST PHASE : SHUTIN PERIOD # 2

FINAL FLOW PRESSURE [PSIA] = 90

PRODUCING TIME [MIN] = 119.94

TIME OF DAY	DATE	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****

4: 5: 3	14-NO	181.05	0.00	90	0	
4: 6: 3	14-NO	182.05	1.00	90	0	2.083
4: 7: 3	14-NO	183.05	2.00	90	1	1.785
4: 8: 3	14-NO	184.05	3.00	91	1	1.613
4: 9: 3	14-NO	185.05	4.00	91	2	1.491
4:10: 3	14-NO	186.05	5.00	92	2	1.398
4:11: 3	14-NO	187.05	6.00	92	2	1.322
4:12: 3	14-NO	188.05	7.00	92	3	1.259
4:13: 3	14-NO	189.05	8.00	94	4	1.204
4:14: 3	14-NO	190.05	9.00	95	5	1.156
4:15: 3	14-NO	191.05	10.00	96	6	1.114
4:17: 3	14-NO	193.05	12.00	98	8	1.041
4:19: 3	14-NO	195.05	14.00	99	9	0.981
4:21: 3	14-NO	197.05	16.00	100	10	0.929
4:23: 3	14-NO	199.05	18.00	101	12	0.884
4:25: 3	14-NO	201.05	20.00	103	13	0.845
4:27: 3	14-NO	203.05	22.00	105	15	0.810
4:29: 3	14-NO	205.05	24.00	106	16	0.778
4:31: 3	14-NO	207.05	26.00	108	18	0.749

TEST PHASE : SHUTIN PERIOD # 2
 FINAL FLOW PRESSURE [PSIA] = 90
 PRODUCING TIME [MIN] = 119.94

TIME OF DAY	DATE	ELAPSED TIME, MIN	DELTA TIME, MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
HH:MM:SS	DD-MM	*****	*****	*****	*****	*****
4:33: 3	14-NO	209.05	28.00	109	19	0.723
4:35: 3	14-NO	211.05	30.00	111	21	0.699
4:40: 3	14-NO	216.05	35.00	115	26	0.646
4:45: 3	14-NO	221.05	40.00	121	31	0.602
4:50: 3	14-NO	226.05	45.00	125	35	0.564
4:55: 3	14-NO	231.05	50.00	127	37	0.531
5: 0: 3	14-NO	236.05	55.00	130	40	0.503
5: 5: 3	14-NO	241.05	60.00	133	43	0.477
5:10: 3	14-NO	246.05	65.00	133	44	0.454
5:15: 3	14-NO	251.05	70.00	137	48	0.434
5:20: 3	14-NO	256.05	75.00	140	50	0.415
5:25: 3	14-NO	261.05	80.00	143	53	0.398
5:30: 3	14-NO	266.05	85.00	147	57	0.382
5:35: 3	14-NO	271.05	90.00	150	60	0.368
5:40: 3	14-NO	276.05	95.00	154	64	0.355
5:45: 3	14-NO	281.05	100.00	156	67	0.342
5:50: 3	14-NO	286.05	105.00	157	67	0.331
5:55: 3	14-NO	291.05	110.00	157	67	0.320
6: 0: 3	14-NO	296.05	115.00	158	68	0.310
6: 5: 3	14-NO	301.05	120.00	159	69	0.301
6:10: 3	14-NO	306.05	125.00	159	69	0.292
6:15: 3	14-NO	311.05	130.00	159	70	0.284
6:20: 3	14-NO	316.05	135.00	161	71	0.276
6:25: 3	14-NO	321.05	140.00	163	73	0.269
6:30: 3	14-NO	326.05	145.00	164	74	0.262
6:35: 3	14-NO	331.05	150.00	164	75	0.255
6:40: 3	14-NO	336.05	155.00	166	76	0.249
6:45: 3	14-NO	341.05	160.00	167	77	0.243
6:50: 3	14-NO	346.05	165.00	168	79	0.237
6:55: 3	14-NO	351.05	170.00	170	80	0.232
6:59: 0	14-NO	355.00	173.95	171	82	0.228