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NUMBER 4610

PEL 5 AND PEL 6, NAPPACOONGEE-MURTEREE BLOCK

EROMANGA AND COOPER BASINS

STRZELECKI 10

TEST REPORTS

Submitted by

**Delhi Petroleum Pty Ltd and Santos Ltd
1994**

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MINES AND ENERGY
SOUTH AUSTRALIA



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ENVELOPE 4610

TENEMENT: PEL 5 and PEL 6, Nappacoongee-Murteree Block; Eromanga and Cooper Basins

TENEMENT HOLDER: Delhi Petroleum Pty Ltd (operator), Santos Ltd, Crusader Resources NL, Vamgas Ltd and South Australian Oil and Gas Corp. Pty Ltd

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	Halliburton Services, 1981. Formation testing service report, DST 3 (1/12/82).	4610 R 3 Pgs 21-29	
	Coment Computer Enterprises Ltd, 1982. Log analysis report (Petrophysical consultant's report for SADME, 9/11/82).	4610 R 4 Pgs 30-52	
PLAN			
Encl.	Computerized log interpretation plot (after Pg. 32).	1:240 4610-1	A0
REPORTS:	Druet, P.A., 1983. Unit operator's petroleum engineering interpretation of the results of the gas production flow and buildup test of the Toolachee Formation gas reservoir (Lower) producing interval 6362-6382 feet depth KB, performed over the period 14/2 - 3/3/83 (Santos Ltd Reservoir Engineering Department report no. RE:028/83, 15/3/83).	4610 R 5 Pgs 53-67	
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	Field maintenance contractor's results of the static gradient survey of the Toolachee Lower producing zone, conducted on 3/11/83 (Expertest Pty Ltd).	4610 R 7 Pgs 78-81	
	Boorman, J.C. and Johnson, G.A., 1985. Unit operator's petroleum engineering interpretation of the results of the modified isochronal gas production test of the Toolachee Formation gas reservoir re-perforated (Upper) producing interval 6256-6335 feet depth KB, performed over the period 7-13/4/84 (Santos Ltd Reservoir Engineering Department report no. RE:223/84, April 1985).	4610 R 8 Pgs 82-104	
	Larkin, R., 1986. Field maintenance contractor's results of the flowing bottomhole pressure, reservoir pressure buildup and flowing plus static gradient surveys of the above Toolachee Upper producing zone, conducted over the period 20-23/10/86 (Expertest Pty Ltd).	4610 R 9 Pgs 105-117	
	Campbell, R., 1987. Field maintenance contractor's results of the static gradient survey of the Toolachee Upper producing zone, conducted on 28/8/87 (Expertest Pty Ltd).	4610 R 10 Pgs 118-121	

MESA NO.**REPORTS:**

Larkin, R., 1991. Field maintenance contractor's results of the sequential single rate gas production tests, 96 hour reservoir pressure buildup and static gradient surveys of the separate Toolachee Lower and Upper producing zones, conducted over the period 20/3 - 13/4/91 (Expertest Pty Ltd).

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Pgs 122-147

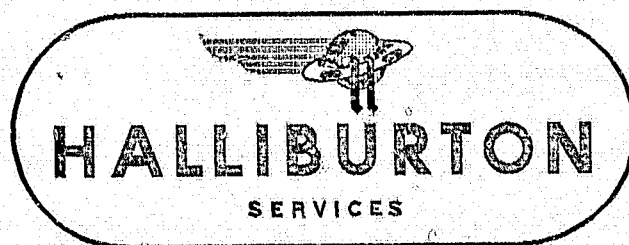
Wood, G.R., 1994. Brief report on palynostratigraphical data from 5 Permian full hole core samples (Santos Ltd, December 1994).

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0003

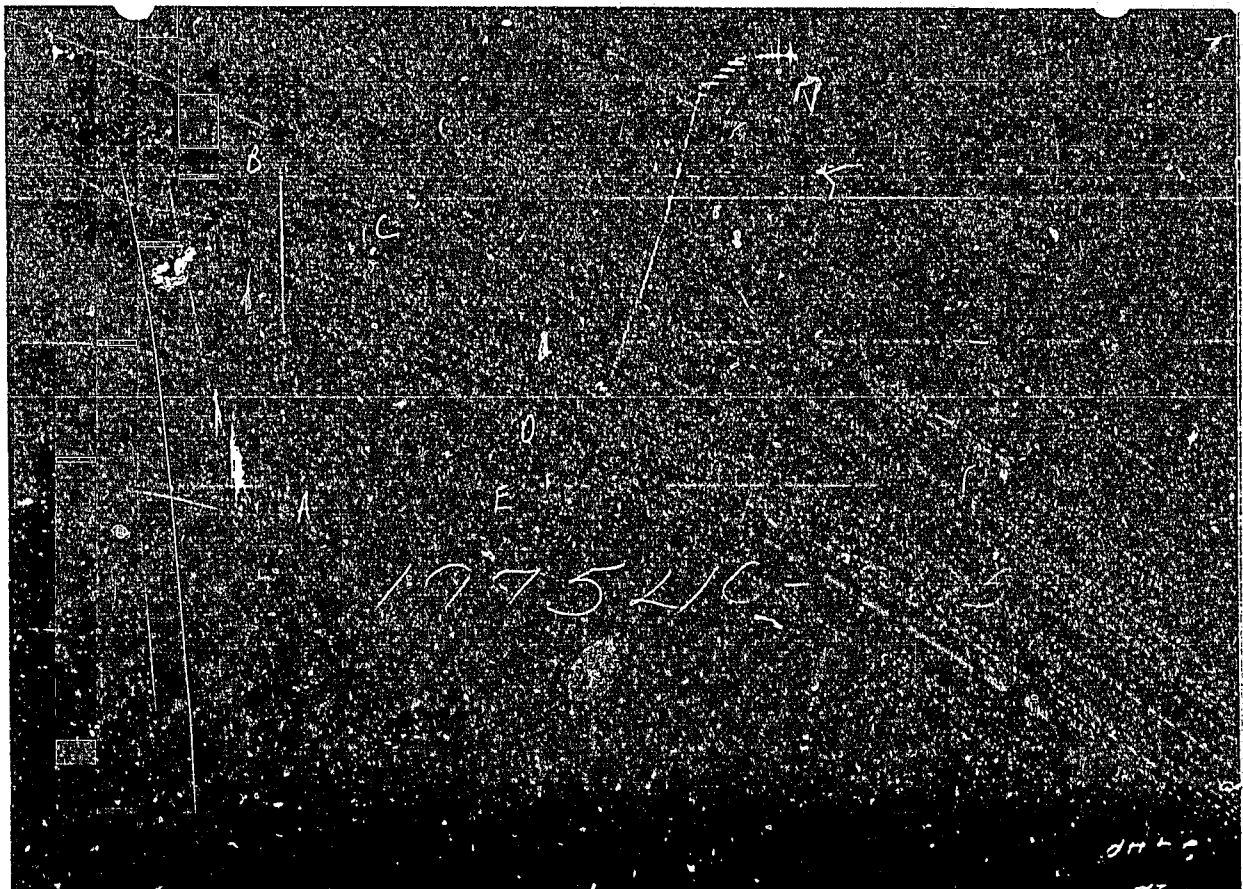


TICKET NO. 19754000
10-AUG-82
ADELAIDE

FORMATION TESTING SERVICE REPORT

LEGAL LOCATION SEC. - TWP. - RNG.	SEE REMARKS	FIELD AREA	TESTED INTERVAL	COUNTRY	STATE
STRELECKI				SOUTH AUSTRALIA	AUSTRALIA SMSM
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/CONTRACT NAME	
	10	1	6232. - 6275.	SANTOS, LIMITED.	

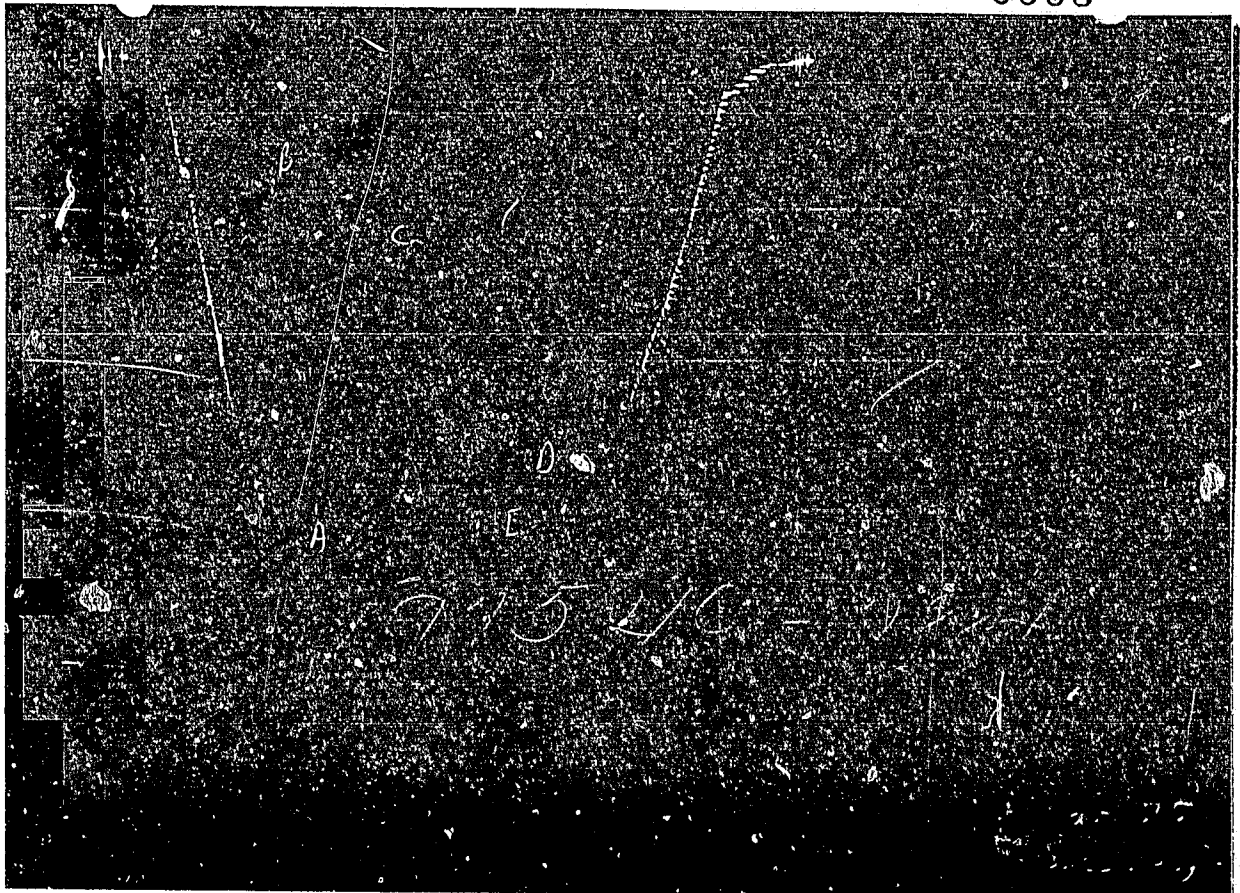
0004



GAUGE NO: 7885 DEPTH: 6212.8 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		3005.5			
B	INITIAL FIRST FLOW		729.5			
C	FINAL FIRST FLOW		1240.3	100.0	103.1	F
C	INITIAL FIRST CLOSED-IN		1240.3			
D	FINAL FIRST CLOSED-IN		2759.8	200.0	196.9	C
E	FINAL HYDROSTATIC		2997.2			

0005

GAUGE NO: 7884 DEPTH: 6270.9 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC		3036.1			
B	INITIAL FIRST FLOW		768.6			
C	FINAL FIRST FLOW		1244.6	100.0	103.1	F
C	INITIAL FIRST CLOSED-IN		1244.6			
D	FINAL FIRST CLOSED-IN		2760.7	200.0	196.9	C
E	FINAL HYDROSTATIC		3014.2			

OTO

0006

EQUIPMENT & HOLE DATA			TICKET NUMBER: 19754000	
FORMATION TESTED: <u>TOOLACHEE</u>			DATE: <u>6-14-82</u> TEST NO: <u>1</u>	
NET PAY (ft): _____			TYPE DST: <u>OPEN HOLE</u>	
GROSS TESTED FOOTAGE: <u>43.4</u>			HALLIBURTON CAMP: <u>ADELAIDE</u>	
AL' DEPTHS MEASURED FROM: <u>R. KELLY BUSHING</u>			TESTER: <u>J.R. POINDEXTER</u>	
CASING PERFS. (ft): _____			WITNESS: <u>???</u>	
HOLE OR CASING SIZE (in): <u>8.500</u>			DRILLING CONTRACTOR: <u>RICHTER RIG #2</u>	
ELEVATION (ft): <u>211</u>				
TOTAL DEPTH (ft): <u>6275.0</u>				
PACKER DEPTH(S) (ft): <u>6232</u>				
FINAL SURFACE CHOKE (in): <u>0.500</u>				
BOTTOM HOLE CHOKE (in): <u>0.750</u>				
MUD WEIGHT (lb/gal): <u>9.50</u>				
MUD VISCOSITY (sec): <u>60</u>				
ESTIMATED HOLE TEMP. (°F): _____				
ACTUAL HOLE TEMP. (°F): <u>250 @ 6270.0 ft</u>				
FLUID PROPERTIES FOR RECOVERED MUD & WATER			SAMPLER DATA	
SOURCE	RESISTIVITY	CHLORIDES	Pslg AT SURFACE: _____	
_____	_____ @ _____ °F	_____ ppm	cu.ft. OF GAS: _____	
_____	_____ @ _____ °F	_____ ppm	cc OF OIL: _____	
_____	_____ @ _____ °F	_____ ppm	cc OF WATER: _____	
_____	_____ @ _____ °F	_____ ppm	cc OF MUD: _____	
_____	_____ @ _____ °F	_____ ppm	TOTAL LIQUID cc: _____	
HYDROCARBON PROPERTIES			CUSHION DATA	
OIL GRAVITY (°API): _____ @ _____ °F			TYPE	AMOUNT WEIGHT
GAS/OIL RATIO (cu.ft. per bbl): _____			_____	_____
GAS GRAVITY: _____			_____	_____
RECOVERED: 336 FEET OF GAS CUT MUD AND TRACE OF DISTILLATE MEASURED FROM TESTER VALVE				
REMARKS: LEGAL LOCATION: LAT. 28 DEGREES, 15', 44.4" S- LONG. 140 DEGREES, 39', 27.0" S.				

110

0007

TYPE & SIZE MEASURING DEVICE: .5" SURFACE MANIFOLD CHOKE					TICKET NO: 19754000
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
6-14-82					
0940					STARTED CLOCKS
0945					MADE UP TOOLS
1025					SHUT DOWN FOR RIG REPAIR.
1052					TOOLS IN HOLE
1415					MADE UP TEST HEAD AND SURFACE
					EQUIPMENT.
1419					SET PACKER
1420	.5				TOOL OPENED WITH STRONG BUBBLES
1422	.5	30			GAS TO THE SURFACE, OPEN FLARE
					LINE.
1423	.5	100			STRONG FLARE
1425	.5	240			STRONG FLARE
1426	.5	300			STRONG FLARE
1428	.5	400			STRONG FLARE
1430	.5	500			STRONG FLARE
1432	.5	550			STRONG FLARE
1434	.5	550			STRONG FLARE
1436	.5	650			STRONG FLARE
1438	.5	675			STRONG FLARE
1440	.5	700			STRONG FLARE
1442	.5	700			STRONG FLARE
1444	.5	725			STRONG FLARE
1446	.5	725			STRONG FLARE
1448	.5	725			STRONG FLARE
1450	.5	750			STRONG FLARE
1455	.5	750			STRONG FLARE
1500	.5	775	4.24		STRONG FLARE
1515	.5	775	4.24		STRONG FLARE
1530	.5	775	4.24		STRONG FLARE
1545	.5	775	4.24		STRONG FLARE
1600	.5	775	4.24		CLOSED TOOL
1920					UNSEATED PACKER
1925					RIGGED DOWN SURFACE
					EQUIPMENT.
1935					PULLED OUT OF HOLE TO TEST
					TOOLS.

ETO

0009

TICKET NO: 19754000

CLOCK NO: 12249 HOUR: 24

HALLIBURTON
SERVICES

GAUGE NO: 7885

DEPTH: 6212.8

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{1 + \Delta t}$	$\log \frac{1 + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{1 + \Delta t}$	$\log \frac{1 + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	729.5								
	2	10.0	955.4	225.8							
	3	20.0	1108.2	152.8							
	4	30.0	1162.9	54.7							
	5	40.0	1182.3	19.4							
	6	50.0	1193.8	11.5							
	7	60.0	1199.0	5.2							
	8	70.0	1203.2	4.2							
	9	80.0	1206.0	2.8							
	10	90.0	1208.7	2.7							
C	11	103.1	1240.3	31.6							
FIRST CLOSED-IN											
C	1	0.0	1240.3								
	2	10.0	2676.8	1436.5	9.1	1.053					
	3	20.0	2698.3	1458.0	18.8	0.789					
	4	30.0	2711.0	1470.7	28.2	0.647					
	5	40.0	2720.0	1479.7	38.8	0.553					
	6	50.0	2726.5	1486.2	48.7	0.486					
	7	60.0	2732.5	1492.2	57.9	0.434					
	8	70.0	2735.8	1495.5	61.7	0.393					
	9	80.0	2739.7	1499.4	65.1	0.360					
	10	90.0	2743.0	1502.7	68.1	0.332					
	11	100.0	2745.8	1505.5	70.8	0.308					
	12	110.0	2748.8	1508.5	73.2	0.287					
	13	120.0	2750.8	1510.5	75.5	0.269					
	14	130.0	2752.2	1511.9	77.5	0.254					
	15	140.0	2753.7	1513.4	79.4	0.240					
	16	150.0	2755.5	1515.2	81.1	0.227					
	17	160.0	2755.8	1515.5	82.7	0.216					
	18	170.0	2757.3	1517.0	84.2	0.206					
	19	180.0	2758.2	1517.9	85.6	0.197					
	20	190.0	2759.2	1518.9	86.9	0.188					
D	21	196.9	2759.8	1519.5	87.7	0.183					

REMARKS:

710
0000

TICKET NO: 19754000
CLOCK NO: 7499 HOUR: 24



GAUGE NO: 7884
DEPTH: 6270.9

REF	MINUTES	PRESSURE	AP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	AP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B 1	0.0	768.6									
2	10.0	951.0	182.3								
3	20.0	1104.5	153.5								
4	30.0	1165.9	61.5								
5	40.0	1187.6	21.7								
6	50.0	1199.0	11.5								
7	60.0	1205.1	6.1								
8	70.0	1208.8	3.7								
9	80.0	1211.9	3.2								
10	90.0	1214.3	2.4								
C 11	103.1	1244.6	30.3								
FIRST CLOSED-IN											
C 1	0.0	1244.6									
2	10.0	2676.1	1431.5	9.1	1.053						
3	20.0	2699.7	1455.1	16.8	0.789						
4	30.0	2712.7	1468.2	23.3	0.647						
5	40.0	2722.1	1477.5	28.8	0.554						
6	50.0	2729.5	1484.9	33.7	0.486						
7	60.0	2734.6	1490.0	37.9	0.435						
8	70.0	2738.9	1494.3	41.7	0.393						
9	80.0	2743.3	1498.7	45.1	0.360						
10	90.0	2745.9	1501.3	48.1	0.332						
11	100.0	2747.8	1503.2	50.8	0.308						
12	110.0	2750.3	1505.7	53.2	0.287						
13	120.0	2752.9	1508.3	55.5	0.269						
14	130.0	2754.3	1509.7	57.5	0.254						
15	140.0	2755.9	1511.3	59.4	0.240						
16	150.0	2757.2	1512.6	61.1	0.227						
17	160.0	2758.3	1513.7	62.7	0.216						
18	170.0	2759.2	1514.6	64.2	0.206						
19	180.0	2759.6	1515.0	65.6	0.197						
20	190.0	2761.0	1516.4	66.9	0.188						
D 21	196.9	2760.7	1516.1	67.7	0.183						

REMARKS:

STO
0011
TICKET NO. 19754000

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	5491.8	
1		DRILL PIPE.....	4.500	3.826	372.6	
3		DRILL COLLARS.....	6.310	2.750	336.3	
50		IMPACT REVERSING SUB.....	6.090	2.250	1.0	6171.9
3		DRILL COLLARS.....	6.310	2.750	28.8	
5		CROSSOVER.....	5.750	2.750	1.0	
12		DUAL CIP VALVE.....	5.000	0.870	4.9	
60		HYDROSPRING TESTER.....	5.000	0.750	5.3	6207.6
80		AP RUNNING CASE.....	5.000	2.250	4.1	6212.9
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.8	
70		OPEN HOLE PACKER.....	7.500	1.530	5.8	6231.6
19		ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.3	
20		FLUSH JOINT ANCHOR.....	5.000	2.750	36.0	
81		BLANKED-OFF RUNNING CASE.....	5.000	3.000	4.1	6270.9
TOTAL DEPTH					6275.0	
EQUIPMENT DATA						

LOT
0012



TICKET NO. 19745800
10-AUG-82
MOOMBA

FORMATION TESTING SERVICE REPORT

STRELECKI	10	6300	6354	SANTOS, LIMITED
LEASE NAME	WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME
LEGAL LOCATION	SEE REMARKS	FIELD AREA	COOPER BASIN	COUNTY SOUTH AUSTRALIA
SEC. - TWP. - RMC.				STATE AUSTRALIA BCSH

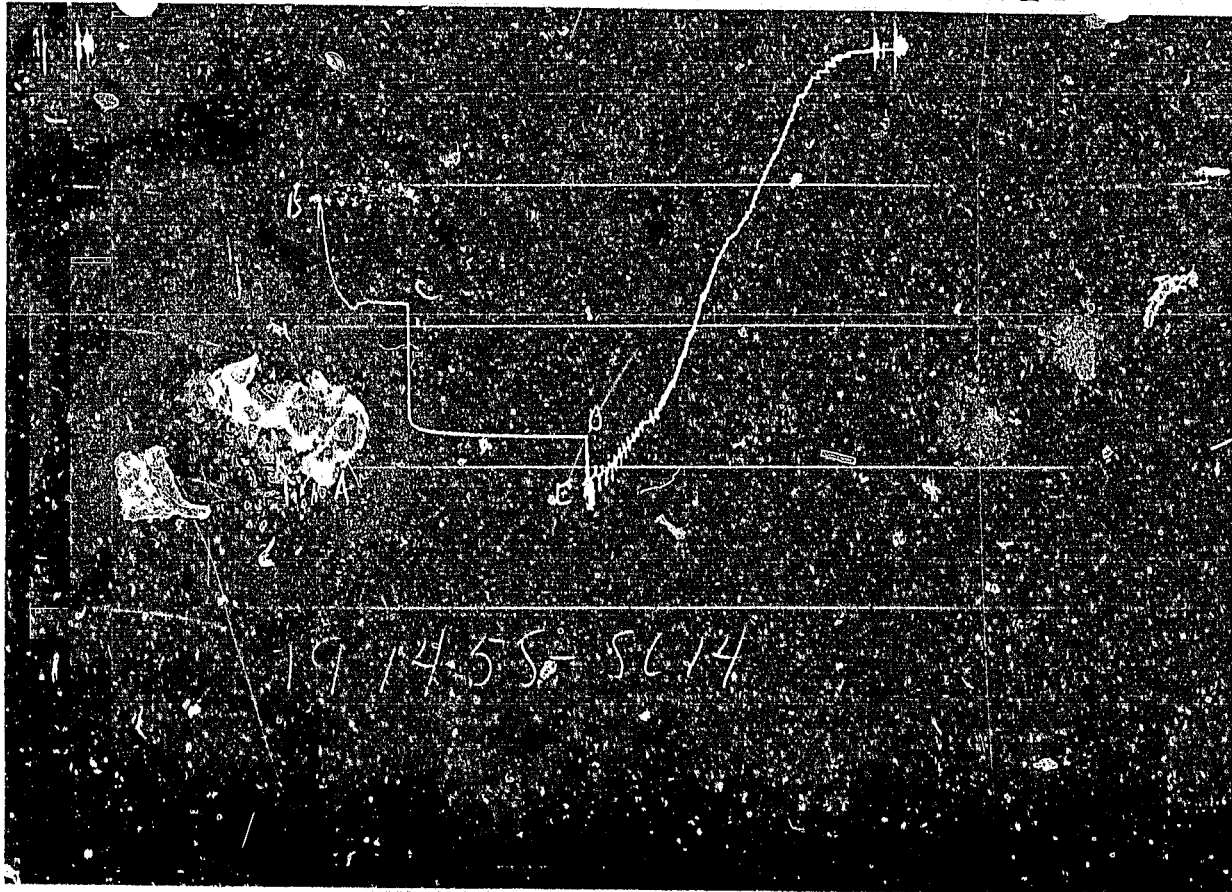
0013

19-1458-8013

GALVE NO: 0012 DEPTH: 0000.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3083.7				
B	INITIAL FIRST FLOW	304.2				
C	FINAL FIRST FLOW			110.0		F
D	INITIAL FIRST CLOSED-IN					
E	FINAL FIRST CLOSED-IN			225.0		C
F	FINAL HYDROSTATIC	3227.1				

C014



19 14.55-5614

DESCRIPTION		PRESSURE		TIME		TYPE
		MEAS. NO.	CALCULATED	MEAS. NO.	CALCULATED	
1. INITIAL PRESSURE			9046.1			
2. INITIAL FLOW			1068.4	110.0	110.5	
3. INITIAL FLOW			111.0			
4. INITIAL FLOW			111.0			
5. FLOW FIRST CLOSED-IN			278.1	221.0	222.4	
6. FLOW HYDROSTATIC			3259.3			

001

0015

EQUIPMENT & HOLE DATA		
FORMATION TESTED: <u>TOOLACHEE</u>		
NET PAY (ft): _____		
GROSS TESTED FOOTAGE: <u>54.0</u>		
ALL DEPTHS MEASURED FROM: <u>KELLY BUSHING</u>		
CASING PERFS. (ft): _____		
HOLE OR CASING SIZE (in): <u>8.500</u>		
ELEVATION (ft): <u>211</u>		
TOTAL DEPTH (ft): <u>6354.0</u>		
PACKER DEPTH(S) (ft): <u>6390</u>		
FINAL SURFACE CHOKE (in): <u>0.500</u>		
BOTTOM HOLE CHOKE (in): <u>0.750</u>		
MUD WEIGHT (lb/gal): <u>9.50</u>		
MUD VISCOSITY (sec): <u>39</u>		
ESTIMATED HOLE TEMP. (°F): _____		
ACTUAL HOLE TEMP. (°F): <u>236 @ 6351.0 ft</u>		
TICKET NUMBER: <u>19745800</u>		
DATE: <u>6-17-82</u> TEST NO: _____		
TYPE DST: <u>OPEN HOLE</u>		
HALLIBURTON CAMP: <u>MOOMBA</u>		
TESTER: <u>S. CLARK</u> <u>W. CASKEY</u>		
WITNESS: <u>A.J. HEKISAN ??</u>		
DRILLING CONTRACTOR: <u>RICHTER RIG #2</u>		
FLUID PROPERTIES FOR RECOVERED MUD & WATER		
SOURCE	RESISTIVITY	CHLORIDES
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
_____	_____ °F	_____ ppm
HYDROCARBON PROPERTIES		
OIL GRAVITY (°API): _____ @ _____ °F		
GAS/OIL RATIO (cu.ft. per bbl): _____		
GAS GRAVITY: _____		
SAMPLER DATA		
Pstg AT SURFACE: _____		
cu.ft. OF GAS: _____		
cc OF OIL: _____		
cc OF WATER: _____		
cc OF MUD: _____		
TOTAL LIQUID cc: _____		
CUSHION DATA		
TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____
RECOVERED:		
80 FEET OF FORMATION WATER WITH SLIGHT TRACE OF CONDENSATE		
REMARKS:		
UNABLE TO READ PRESSURES DURING TEST ON BTH 9013 DUE TO FAINTNESS OF OF CHART.		
DRILL PIPE OD AND ID'S NOT REPORTED.		
LEGAL LOCATION: 28-15M-44.4S-S, 140-39M-27S-S		

MEASURED FROM
TESTER VALVE

T T T

0016

TYPE & SIZE MEASURING DEVICE: 1/2" SURFACE CHOKE					TICKET NO: 19745800
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
6-17-82					
0016					LOADED CLOG INTO BOTTOM BT.
0133					LOADED CLOG INTO TOP BT, RAN
					IN HOLE.
0505					MADE UP TEST & MANIFOLD.
0548					SET PACKER.
0555	1/2				TOOL OPENED WITH STRONG BLOW.
0556	1/2	100			CHOKE OPEN TO FLARE PIT.
0557	1/2	250			GAS TO THE SURFACE.
0558	1/2	320			
0559	1/2	460			
0600	1/2	500			
0602	1/2	650			
0604	1/2	800			
0606	1/2	900			
0608	1/2	980			
0610	1/2	1050			
0612	1/2	1070			
0614	1/2	1100			
0616	1/2	1140			
0618	1/2	1160			
0620	1/2	1180			
0622	1/2	1200			
0624	1/2	1220			
0626	1/2	1240			
0628	1/2	1240			
0630	1/2	1260			
0632	1/2	1280			
0634	1/2	1300			
0640	1/2	1340			
0642	1/2	1320			
0644	1/2	1300			7.06 MMCF/DAY
0715	1/2	1300			
0735	1/2	1300			
0745	1/2	1300			CLOSED TOOL
1128					PULLED OFF BOTTOM, BROKE
					DOWN HEAD & MANIFOLD.

0017

[illegible]

0018

GAUGE NO: 8013
DEPTH: 6283.0

REMARKS: UNABLE TO READ POINTS C AND D DUE TO FAINTNESS OF CHART.

7 1 1

0019

TICKET NO: 19745800

CLOCK NO: 12142 HOUR: 24



GAUGE NO: 8014

DEPTH: 6950.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	1062.5								
	2	10.0	1473.4	410.8							
	3	20.0	1704.9	231.5							
	4	30.0	1801.5	96.6							
	5	40.0	1860.5	59.0							
	6	50.0	1832.0	-28.5							
	7	60.0	1818.3	-13.7							
	8	70.0	1825.1	6.8							
	9	80.0	1831.4	6.3							
	10	90.0	1831.4	0.0							
	11	100.0	1832.5	1.2							
C	12	110.0	1847.5	14.9							
FIRST CLOSED-IN											
C	1	0.0	1847.5								
	2	3.0	2688.7	841.2	2.9	1.575					
	3	6.0	2705.1	857.6	5.7	1.289					
	4	9.0	2716.4	868.9	8.4	1.122					
	5	12.0	2725.8	878.4	10.9	1.008					
	6	15.0	2729.7	882.3	13.2	0.922					
	7	18.0	2734.6	887.2	15.5	0.854					
	8	21.0	2739.5	892.1	17.7	0.796					
	9	24.0	2741.9	894.4	19.7	0.749					
	10	27.0	2744.6	897.1	21.7	0.707					
	11	30.0	2747.0	899.5	23.6	0.671					
	12	33.0	2749.2	901.7	25.4	0.639					
	13	36.0	2750.7	903.2	27.1	0.610					
	14	42.0	2754.1	906.6	30.4	0.561					
	15	48.0	2756.3	908.8	33.5	0.519					
	16	54.0	2759.1	911.7	36.3	0.484					
	17	60.0	2761.5	914.0	38.9	0.454					
	18	90.0	2768.4	921.0	49.6	0.348					
	19	120.0	2773.0	925.5	57.6	0.284					
	20	150.0	2777.0	929.6	63.7	0.240					
	21	180.0	2780.4	932.9	68.5	0.208					
	22	210.0	2782.6	935.1	72.4	0.184					
D	23	222.4	2783.1	935.7	73.9	0.175					

REMARKS:

911
0020
TICKET NO. 19745800

		O.D.	I.D.	LENGTH	DEPTH
1				5957.6	
3				273.5	
50		6.000		1.0	6208.0
3		6.313	2.563	62.9	
5		6.500	2.250	1.0	
12		5.000	0.870	4.9	
60		5.000	0.750	5.3	6278.0
80		5.000	2.250	4.1	6283.0
15		5.000	1.750	5.0	
13		5.000	1.000	2.8	
70		7.750	1.530	5.8	6300.0
19		5.000	1.500	4.3	
5		5.750	2.437	1.0	
3		6.313	2.562	28.8	
5		5.750	2.375	1.0	
21		5.000	2.370	14.0	
61		5.000	2.440	4.1	6350.0
TOTAL DEPTH					6354.0

EQUIPMENT DATA

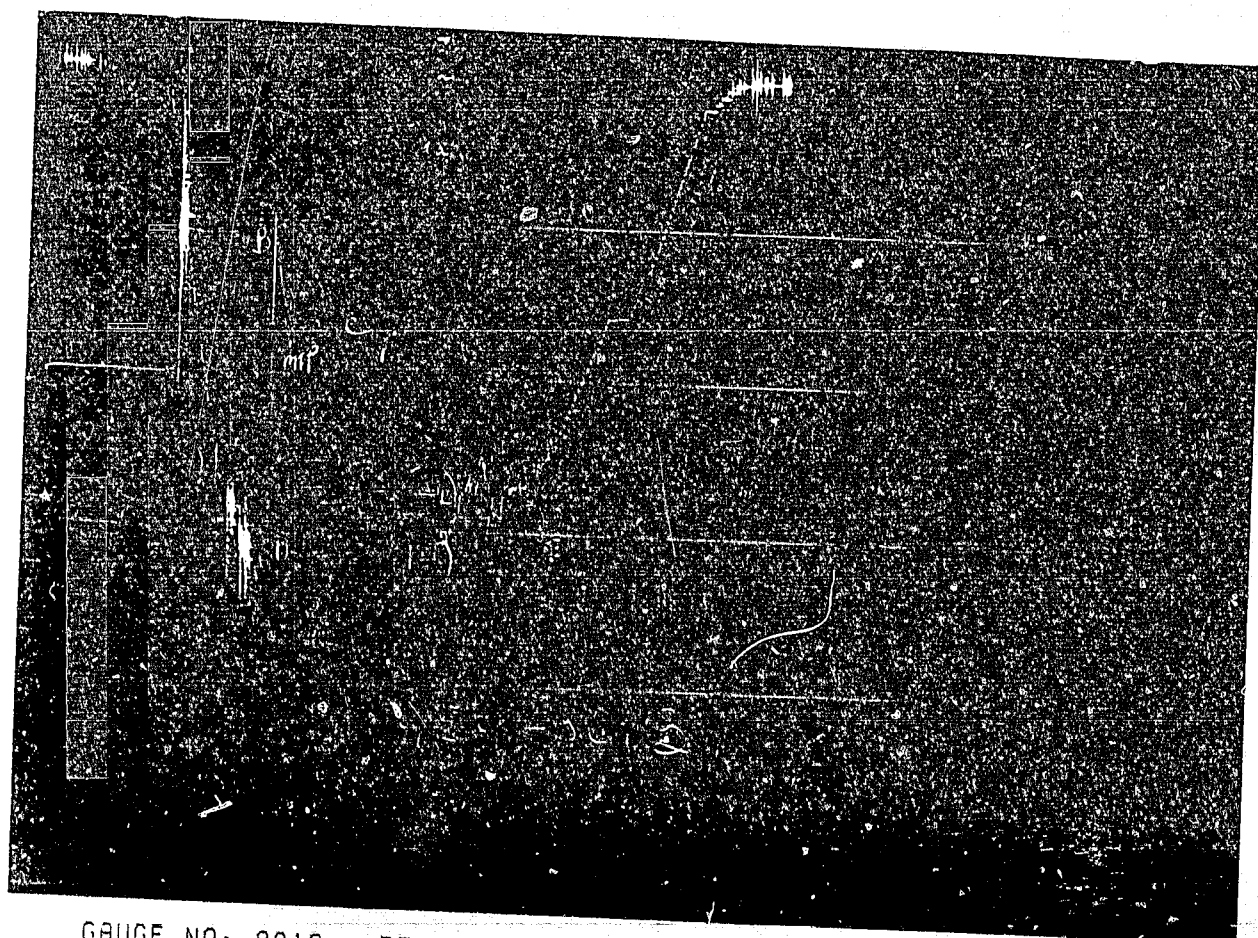
900
0021



TICKET NO. 19745900
01-DEC-82
MOOMBA

FORMATION TESTING SERVICE REPORT

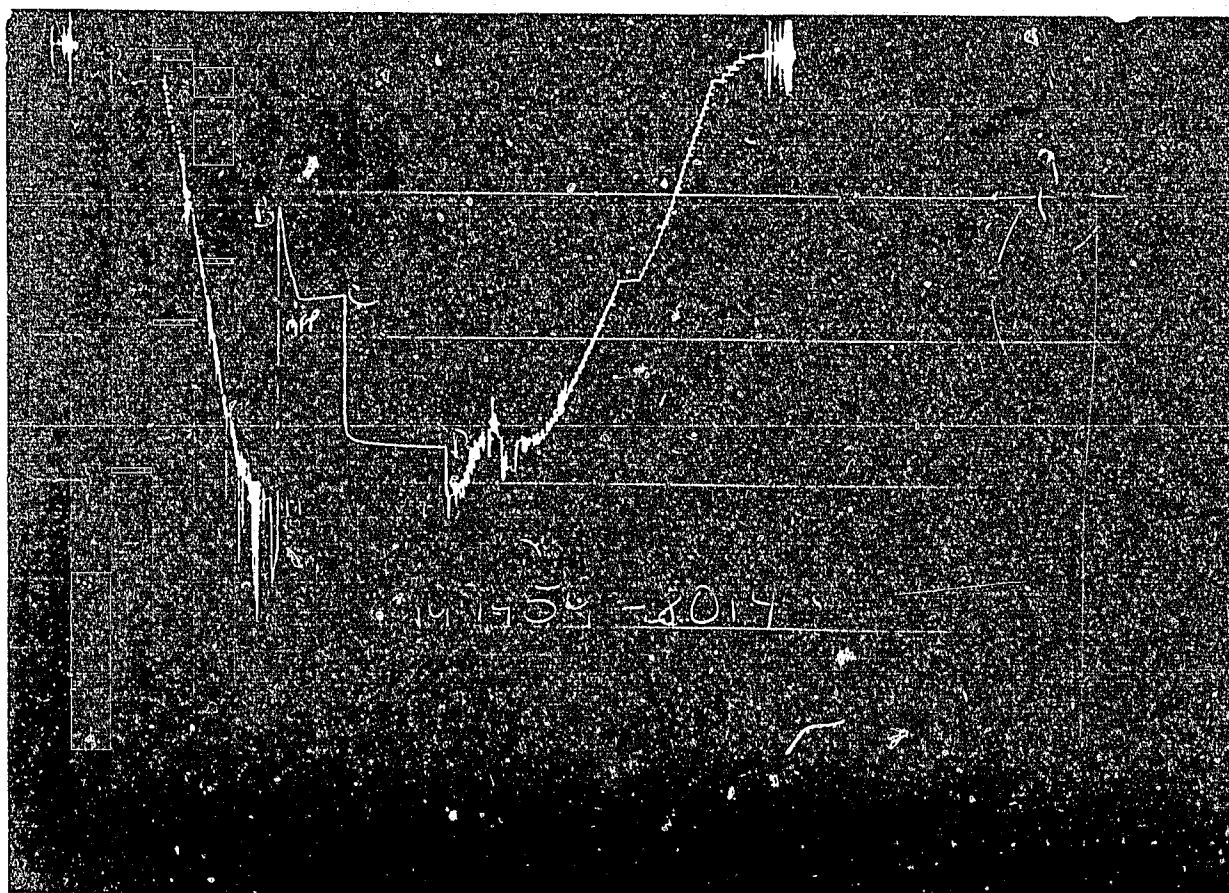
LEASE NAME	SIRZELECKI	WELL NO.	10	TEST NO.	3	TESTED INTERVAL	6354.1 - 6376.1	LEASE OWNER/COMPANY NAME	SANTOS, LIMITED
LEGAL LOCATION SEC. - TWP. - RANG.	SEE REMARKS					FIELD AREA	COOPER BASIN	COUNTY	S. AUSTRALIA
									STATE AUSTRALIA PV/NM



0022

GAUGE NO: 8013 DEPTH: 6337.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
1	INITIAL HYDROSTATIC	3114	3101.9			
2	INITIAL FIRST FLOW	1066	1069.5			
3	FINAL FIRST FLOW	1705	1705.0	84.0	81.5	F
4	INITIAL FIRST CLOSED-IN	1705	1705.0			
5	FINAL FIRST CLOSED-IN	2768	2766.8	121.0	123.5	C
6	FINAL HYDROSTATIC	3085	3077.2			



GAUGE NO: 8014 DEPTH: 6372.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3120	3117.6			
B	INITIAL FIRST FLOW	1109	1105.6			
C	FINAL FIRST FLOW	1719	1719.8	84.0	81.5	F
D	INITIAL FIRST CLOSED-IN	1719	1719.8			
D	FINAL FIRST CLOSED-IN	2762	2760.0	121.0	125.5	C
E	FINAL HYDROSTATIC	3087	3083.9			

0024

EQUIPMENT & HOLE DATA			TICKET NUMBER: 19745900		
FORMATION TESTED: <u>TOOLACHEE</u>			DATE: <u>6-18-82</u> TEST NO: <u>3</u>		
NET PAY (ft): _____			TYPE DST: <u>OPEN HOLE</u>		
GROSS TESTED FOOTAGE: <u>22.0</u>			HALLIBURTON CAMP: <u>MOOMBA</u>		
ALL DEPTHS MEASURED FROM: <u>KELLY BUSHING</u>			TESTER: <u>S. CLARK</u> <u>W. CASKEY</u>		
CASING PERFS. (ft): _____			WITNESS: _____ <u>?</u>		
HOLE OR CASING SIZE (in): <u>8.500</u>			DRILLING CONTRACTOR: <u>RICHTER RIG # 2</u>		
ELEVATION (ft): <u>211</u>					
TOTAL DEPTH (ft): <u>6376.0</u>					
PACKER DEPTH(S) (ft): <u>6354</u>					
FINAL SURFACE CHOKE (in): <u>0.500</u>					
BOTTOM HOLE CHOKE (in): <u>0.750</u>					
MUD WEIGHT (lb/gal): <u>9.50</u>					
MUD VISCOSITY (sec): <u>40</u>					
ESTIMATED HOLE TEMP. (°F): _____					
ACTUAL HOLE TEMP. (°F): <u>234 @ 6372.0</u> ft					
FLUID PROPERTIES FOR RECOVERED MUD & WATER			SAMPLER DATA		
SOURCE	RESISTIVITY	CHLORIDES	Pstg AT SURFACE: _____		
_____	_____ @ _____ °F	_____ ppm	cu.ft. OF GAS: _____		
_____	_____ @ _____ °F	_____ ppm	cc OF OIL: _____		
_____	_____ @ _____ °F	_____ ppm	cc OF WATER: _____		
_____	_____ @ _____ °F	_____ ppm	cc OF MUD: _____		
_____	_____ @ _____ °F	_____ ppm	TOTAL LIQUID cc: _____		
HYDROCARBON PROPERTIES			CUSHION DATA		
OIL GRAVITY (°API): _____ @ _____ °F			TYPE AMOUNT WEIGHT		
GAS/OIL RATIO (cu.ft. per bbl): _____			_____		
GAS GRAVITY: _____			_____		
RECOVERED:			MEASURED FROM TESTER VALVE		
874 FEET OF OIL					
REMARKS:					
LEGAL LOCATION: LAT. 28 DEGREES 15 MINUTES 4.44 SECONDS S LONG. 140 DEGREES 39 MINUTES 27 SECONDS E.					

001

0025

TYPE & SIZE MEASURING DEVICE: CERAMIC CHOKE NIPPLE					TICKET NO: 19745900
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
6-18-82					
0733					TOP CLOCK LOADED INTO B.T.
0736					BOTTOM CLOCK LOADED INTO B.T.
					MAKING UP TEST TOOLS AND RUN
					IN THE HOLE.
1117					MAKING UP TEST HEAD.
1205					SET PACKER.
1212	1/2"				TOOL OPENED WITH A STRONG BLOW.
1213	1/2"	120			OPENED CHOKE TO FLARE PIT.
1214	1/2"	280			GAS TO THE SURFACE.
1215	1/2"	400			
1217	1/2"	560			
1219	1/2"	720			
1220	1/2"	900			
1222	1/2"	880			
1225	1/2"	980			
1230	1/2"	1070			
1231	1/2"				RAT HOLE MUD TO THE SURFACE.
1235	1/2"	1190			MIXTURE OF OIL AND GAS TO THE
					SURFACE.
1240	1/2"	1260			
1250	1/2"	1260			
1315	1/2"	1260			
1336	1/2"				CLOSED TOOL.
1537	1/2"				PULLED FREE.
1629	1/2"				MAKING UP TEST HEAD FOR REVERSE
					CIRCULATION.
1643					DROPPED BAR.
1644					BAR HIT AND BEGAN TO REVERSE
					CIRCULATE. ↶
1705					FINISHED REVERSING - BROKE DOWN
					HEAD AND MANIFOLD. RUN OUT OF
					THE HOLE.
2055					STR TED TO BREAK DOWN TEST TOOLS.
2225					BOTTOM B.T. TURNED OFF.
2230					TOP B.T. TURNED OFF.
2300					COMPLETED BREAKING OUT THE

100

[illegible]

201
0027

TICKET NO: 19745900
CLOCK NO: 7023 HOUR: 24



GAUGE NO: 8013
DEPTH: 6337.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	1069.5								
	2	5.0	1189.5	120.1							
	3	10.0	1420.4	230.9							
	4	15.0	1542.6	122.2							
	5	20.0	1633.8	91.2							
	6	25.0	1725.5	91.7							
☒	7	26.0	1737.3	11.9							
	8	30.0	1736.2	-1.1							
	9	35.0	1734.1	-2.1							
	10	40.0	1729.3	-4.8							
	11	45.0	1725.2	-4.2							
	12	50.0	1721.3	-3.8							
	13	55.0	1720.4	-1.0							
	14	60.0	1716.8	-3.5							
	15	65.0	1714.6	-2.2							
	16	70.0	1712.5	-2.1							
	17	75.0	1709.9	-2.6							
	18	80.0	1706.1	-3.8							
C	19	81.5	1705.0	-1.1							
FIRST CLOSED-IN											
C	1	0.0	1705.0								
	2	5.0	2691.3	986.4	4.7	1.235					
	3	10.0	2712.3	1007.4	8.9	0.960					
	4	15.0	2725.3	1020.4	12.7	0.806					
	5	20.0	2731.9	1026.9	16.0	0.706					
	6	25.0	2737.2	1032.2	19.1	0.629					
	7	30.0	2741.7	1036.7	21	0.570					
	8	35.0	2745.5	1040.5	24.5	0.522					
	9	40.0	2747.6	1042.6	26.8	0.483					
	10	45.0	2750.3	1045.4	29.0	0.449					
	11	50.0	2752.6	1047.6	31.0	0.420					
	12	55.0	2754.8	1049.8	32.8	0.395					
	13	60.0	2756.4	1051.4	34.6	0.373					
	14	65.0	2757.4	1052.4	36.2	0.353					
	15	70.0	2758.3	1053.4	37.6	0.335					
	16	75.0	2760.4	1055.4	39.1	0.319					
	17	80.0	2761.2	1056.3	40.4	0.305					
	18	85.0	2761.1	1056.1	41.6	0.292					
	19	90.0	2762.5	1057.5	42.8	0.280					
	20	95.0	2763.6	1058.7	43.9	0.269					
	21	100.0	2763.9	1059.0	44.9	0.259					
	22	105.0	2765.1	1060.1	45.9	0.249					
	23	110.0	2765.5	1060.6	46.8	0.241					
	24	115.0	2766.0	1061.1	47.7	0.233					
	25	120.0	2766.3	1061.4	48.5	0.225					
D	26	123.5	2766.8	1061.9	49.1	0.220					

LEGEND:
☒ MAXIMUM FLOW PRESSURE

REMARKS:

0028

TICKET NO: 19745900

CLOCK NO: 12142 HOUR: 24



GAUGE NO: 8014

DEPTH: 6372.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	1105.6								
	2	5.0	1191.5	85.9							
	3	10.0	1422.0	230.5							
	4	15.0	1553.9	131.9							
	5	20.0	1638.1	84.2							
	6	25.0	1737.6	99.5							
☒	7	26.0	1745.1	7.5							
	8	30.0	1745.1	0.0							
	9	35.0	1743.9	-1.2							
	10	40.0	1741.7	-2.2							
	11	45.0	1738.6	-3.1							
	12	50.0	1735.1	-3.6							
	13	55.0	1732.4	-2.7							
	14	60.0	1731.5	-0.8							
	15	65.0	1728.5	-3.1							
	16	70.0	1725.8	-2.7							
	17	75.0	1723.2	-2.5							
	18	80.0	1720.2	-3.1							
C	19	61.5	1719.8	-0.3							
FIRST CLOSED-IN											
C	1	0.0	1719.8								
	2	5.0	2686.3	966.5	4.7	1.235					
	3	10.0	2708.8	989.0	8.9	0.960					
	4	15.0	2718.8	998.9	12.7	0.809					
	5	20.0	2726.5	1008.7	16.1	0.705					
	6	25.0	2732.4	1012.6	19.1	0.629					
	7	30.0	2736.8	1017.0	21.9	0.570					
	8	35.0	2739.2	1019.4	24.5	0.522					
	9	40.0	2741.0	1021.2	26.8	0.483					
	10	45.0	2744.6	1024.8	29.0	0.449					
	11	50.0	2746.3	1026.5	31.0	0.420					
	12	55.0	2748.0	1028.1	32.8	0.395					
	13	60.0	2749.7	1029.8	34.6	0.372					
	14	65.0	2751.7	1031.9	36.2	0.353					
	15	70.0	2752.7	1032.9	37.6	0.335					
	16	75.0	2753.5	1033.7	39.1	0.319					
	17	80.0	2754.9	1035.1	40.4	0.305					
	18	85.0	2755.6	1035.7	41.6	0.292					
	19	90.0	2756.3	1036.4	42.8	0.280					
	20	95.0	2757.1	1037.3	43.9	0.269					
	21	100.0	2757.3	1037.4	44.9	0.259					
	22	105.0	2757.8	1037.9	45.9	0.249					
	23	110.0	2758.4	1038.6	46.8	0.241					
	24	115.0	2759.5	1039.6	47.7	0.233					
	25	120.0	2759.6	1039.9	48.5	0.225					
D	26	123.5	2760.0	1040.1	49.1	0.220					

LEGEND:

☒ MAXIMUM FLOW PRESSURE

REMARKS:

701
0029
TICKET NO. 19745900

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.000	3.250	5989.1	
3		DRILL COLLARS.....	6.250	2.813	336.3	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	6296.0
3		DRILL COLLARS.....	6.250	2.813	28.8	
5		CROSSOVER.....	6.500	2.250	1.0	
12		DUAL CIP VALVE.....	5.000	0.870	4.9	
60		HYDROSPRING TESTER.....	5.000	0.750	5.3	6332.0
80		AP RUNNING CASE.....	5.000	2.250	4.1	6337.0
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.8	
70		OPEN HOLE PACKER.....	7.750	1.530	5.8	6354.0
19		ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.3	
21		PERFORATED TAIL PIPE.....	5.000	2.370	13.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.1	6372.0
TOTAL DEPTH					6376.0	
EQUIPMENT DATA						

Coment
Computer
Enterprises Ltd.

1020-444 5th Ave. S.W.,
Calgary, Alberta,
T2P 2T8
09/11/82 261-5012

LOG ANALYSIS REPORT
FOR

STRZELECKI NO. 10
28-15-44.4S/140-39-27E

Env. 4610

Coment Ltd.

LOG ANALYSIS Parameters

Sandstone Analysis Program (SANDAN)

Explanation of the parameter names and their values.

A - Formation Factor Coefficient

M - Formation Factor Cementation Exponent

N - Saturation exponent in formation factor equation.

R_w - Formation water resistivity at formation temperature (TEMP)

TEMP - Formation temperature at Top of analysis interval. This value and R_w are corrected for depth using the formation temperature gradient (GRAD).

GRAD - The geothermal gradient in degrees/ 100 feet (Imperial) or degrees/ metre (S. I.)

GMAX - The Maximum Gamma Ray. The gamma ray reading at the point where the lithology changes from grain supported to mud supported rock (The shale boundary)

GMIN - The Minimum Gamma Ray. The lowest gamma ray in a clean sand section. May also be projected from cross-plots.

R_{sh} - The resistivity of the shales, using the deep resistivity log.

Corr C C I - Log Correction codes: (1 = used, 2 = not used)

C - Caliper correction. Bore hole effects on the density and gamma-ray logs are corrected.

G - Gas correction. Corrections applied to the neutron and density logs for gas effects and rough hole effects.

1=Prime log is Neutron

2=Prime log is density

3=No gas corrections.

I - Invasion Corrections applied to the Deep resistivity.

RhoG - Grain Density

RhoS - Shale Density (derived from the cross-plots)

PhiS - Neutron shale porosity (derived from the cross-plots)

PhiC - Neutron clay porosity (usually 24 but may be changed)

LOG ANALYSIS Parameters

General Log Analysis program (CARBAN)

Explanation of the parameter names and their values.

A - Formation Factor Coefficient

M - Formation Factor Cementation Exponent

N - Saturation exponent in formation factor equation.

Rw - Formation water resistivity at formation temperature (TEMP)

TEMP - Formation temperature at Top of analysis interval. This value and Rw are corrected for depth using the formation temperature gradient (GRAD).

GRAD - The geothermal gradient in degrees per 100 feet (Imperial) or degrees per meter (S.I.)

GMAX - The Maximum Gamma ray. The gamma ray reading at the point where all of the rock is considered to be shale.

GMIN - The Minimum Gamma ray. This value is biased upwards from the 'minimum' to include all 'clean' carbonate rocks. That is all points below this value are considered clean.

Rsh - The resistivity of the shales, using the deep resistivity log.

Corr C Q I - Log Correction codes: (1 = used, 2 = not used)

C - Caliper correction. Bore hole effects on the density and gamma-ray logs are corrected.

Q - Gas corrections. This allows for correction of gas effect on the neutron and density logs.

I - Invasion correction applied to the Deep resistivity.

PTYP - Porosity type used in the analysis:

1=Acoustic log

2=Neutron log

3=Density log

4=Neutron/density cross-plot

5=Acoustic/neutron cross-plot

6=NN Porosity

7=Core porosity

MAT - Matrix value used in single log porosity calculation.

FLD - Fluid value used in single log porosity calculation. (Ptyp 1 to 3)

RhoS - Shale density.

PhiS - Neutron Shale porosity

DTSH - Acoustic transit time of Shale

Well name = STRZELECKI NO. 10

Location = 28-15-44.4S/140-39-27E

Page 1

Zone Name = T-3

Top = 6170.00 Base = 6307.50 Date = 09/11/82

Caliper Cutoff = ***** Permeability Cutoff = 0.00
Gross Shale Cutoff = 50.00 Shale Cutoff = 30.00

Porosity*Sw cutoff = 0.0 Porosity cutoff = 10.0 Saturation cutoff = 50.0

Gross Thickness = 31.50 Sand Thickness = 14.00 Sand > por. Cutoff = 13.50

Average Porosity = 15.62 Average water saturation = 34.72 Net thickness = 11.50

0033

Well name = STRZELECKI NO. 10

Location = 28-15-44.4S/140-39-27E

Page 2

Zone Name = T-2

Top = 6308.00 Base = 6423.50 Date = 09/11/82

Caliper Cutoff = ***** Permeability Cutoff = 0.00
Gross Shale Cutoff = 50.00 Shale Cutoff = 30.00

Porosity*Sw cutoff = 0.0 Porosity cutoff = 10.0 Saturation cutoff = 50.0

Gross Thickness = 69.00 Sand Thickness = 42.50 Sand > por. Cutoff = 42.50

Average Porosity = 17.07 Average water saturation = 38.38 Net thickness = 27.50

0034

Well name = STRZELECKI NO. 10

Location = 28-15-44.4S/140-39-27E

Page 3

Zone Name = T-1

Top = 6424.00 Base = 6462.00 Date = 09/11/82

Caliper Cutoff = ***** Permeability Cutoff = 0.00
Gross Shale Cutoff = 50.00 Shale Cutoff = 30.00

Porosity*Sw cutoff = 0.0 Porosity cutoff = 10.0 Saturation cutoff = 50.0

Gross Thickness = 4.00 Sand Thickness = 2.50 Sand > por. Cutoff = 2.50

Average Porosity = 0.00 Average water saturation = 0.00 Net thickness = 0.00

0035

Well name = STRZELECKI NO. 10

Location = 28-15-44.4S/140-39-27E

Page No 1

Porosity cutoff = 10.0 Saturation cutoff = 50.0 Caliper cutoff = bit size +***** Shale Cutoff = 30.
Permeability cutoff = 0.000
TOP BASE A M N RW TEMP GRAD GMAX GMIN RSH COR C G I RHOG RHOS PHIS PHIC
6100.00 6500.00 1.00 2.00 2.00 0.500 223.0 2.340 154.00 36.00 33.50 2 2 2 2.650 2.650 16.5 24.
Porosity derived from Neutron/Density Cross-Plot

0036

Well name = STRZELECKI NO. 10

Location = 28-15-44. 45/140-39-27E

Page No 2

DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6100.00	80.70	39.56	0.00	7.88	2.74	100.00	274.10			
6100.50	82.35	40.37	0.00	7.86	2.62	100.00	262.12			
6101.00	86.02	42.17	0.00	7.63	2.15	100.00	214.97			
6101.50	89.38	43.81	0.00	7.43	1.74	100.00	173.82			
6102.00	89.95	44.10	0.00	7.82	2.10	100.00	209.82			
6102.50	83.66	41.01	0.00	8.79	3.46	95.41	330.37			
6103.00	73.47	36.02	0.00	9.49	4.81	97.45	468.64			
6103.50	69.75	34.19	0.00	9.50	5.06	100.00	505.72			
6104.00	78.20	38.33	0.00	8.31	3.33	100.00	333.46			
6104.50	93.45	45.81	0.00	7.23	1.28	100.00	127.94			
6105.00	100.00	52.35	0.01	6.39	0.00	100.00	0.00			
6105.50	100.00	57.16	0.01	6.08	0.00	100.00	0.00			
6106.00	100.00	57.61	0.01	6.02	0.00	100.00	0.00			
6106.50	100.00	55.70	0.01	5.68	0.00	100.00	0.00			
6107.00	100.00	54.19	0.01	5.45	0.00	100.00	0.00			
6107.50	100.00	52.11	0.01	5.40	0.00	100.00	0.00			
6108.00	100.00	50.04	0.01	5.36	0.00	100.00	0.00			
6108.50	100.00	52.24	0.01	5.87	0.00	100.00	0.00			
6109.00	100.00	54.80	0.01	6.23	0.00	100.00	0.00			
6109.50	100.00	59.22	0.01	5.90	0.00	100.00	0.00			
6110.00	100.00	62.29	0.01	5.46	0.00	100.00	0.00			
6110.50	100.00	63.61	0.01	5.07	0.00	100.00	0.00			
6111.00	100.00	59.90	0.01	5.49	0.00	100.00	0.00			
6111.50	100.00	55.68	0.01	5.98	0.00	100.00	0.00			
6112.00	100.00	49.31	0.01	7.04	0.00	100.00	0.00			
6112.50	97.59	47.84	0.00	7.15	0.93	79.79	74.42			
6113.00	100.00	49.14	0.01	6.98	0.00	100.00	0.00			
6113.50	100.00	50.45	0.01	6.82	0.00	100.00	0.00			
6114.00	99.87	48.96	0.01	7.39	1.03	35.64	36.86			
6114.50	91.62	44.92	0.00	8.32	2.48	86.10	213.96			
6115.00	83.46	40.91	0.00	9.03	3.71	89.55	332.63			
6115.50	77.38	37.93	0.00	9.27	4.34	92.69	402.23			
6116.00	75.08	36.81	0.00	8.90	4.12	94.29	388.79			
6116.50	75.64	37.08	0.00	8.17	3.35	98.61	330.55			
6117.00	76.21	37.36	0.00	7.43	2.58	100.00	258.07			
6117.50	80.38	39.41	0.00	7.29	2.17	100.00	217.03			
6118.00	80.73	39.58	0.00	7.86	2.72	100.00	271.93			
6118.50	79.23	38.84	0.00	8.61	3.57	97.49	347.71			
6119.00	71.29	34.95	0.00	8.88	4.35	100.00	434.53			
6119.50	65.25	31.99	0.00	8.91	4.76	100.00	475.64			
6120.00	68.72	33.69	0.00	8.32	3.95	100.00	394.90			
6120.50	73.82	36.19	0.00	7.79	3.09	100.00	309.02			
6121.00	82.74	40.56	0.00	7.21	1.95	99.89	194.39			
6121.50	93.99	46.07	0.00	6.34	0.35	96.86	34.36			
6122.00	100.00	49.97	0.01	5.89	0.00	100.00	0.00			
6122.50	100.00	53.62	0.01	5.47	0.00	100.00	0.00			
6123.00	100.00	54.78	0.01	5.67	0.00	100.00	0.00			
6123.50	100.00	53.93	0.01	6.26	0.00	100.00	0.00			
6124.00	100.00	52.40	0.01	6.80	0.00	100.00	0.00			
6124.50	100.00	54.07	0.01	6.49	0.00	100.00	0.00			

0037

Well name = STRZELECKI NO.10

Location = 28-15-44.45/140-39-27E

Page No 3

DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6125.00	100.00	55.38	0.01	5.77	0.00	100.00	0.00			
6125.50	100.00	55.52	0.01	5.31	0.00	100.00	0.00			
6126.00	100.00	56.01	0.01	5.82	0.00	100.00	0.00			
6126.50	100.00	57.99	0.01	6.53	0.00	100.00	0.00			
6127.00	100.00	59.69	0.01	6.79	0.00	100.00	0.00			
6127.50	100.00	59.21	0.01	6.50	0.00	100.00	0.00			
6128.00	100.00	58.63	0.01	6.23	0.00	100.00	0.00			
6128.50	100.00	55.98	0.01	6.52	0.00	100.00	0.00			
6129.00	100.00	51.86	0.01	7.20	0.00	100.00	0.00			
6129.50	97.90	47.99	0.00	7.74	1.51	74.60	112.51			
6130.00	96.48	47.30	0.00	7.37	1.23	87.53	107.57			
6130.50	96.81	47.46	0.00	6.83	0.67	96.61	64.39			
6131.00	100.00	49.68	0.01	6.08	0.00	100.00	0.00			
6131.50	100.00	52.42	0.01	5.19	0.00	100.00	0.00			
6132.00	100.00	55.13	0.01	4.32	0.00	100.00	0.00			
6132.50	100.00	58.73	0.01	3.56	0.00	100.00	0.00			
6133.00	100.00	59.22	0.01	3.81	0.00	100.00	0.00			
6133.50	100.00	55.91	0.01	5.07	0.00	100.00	0.00			
6134.00	100.00	49.56	0.01	7.09	0.00	100.00	0.00			
6134.50	100.00	50.51	0.01	7.16	0.00	100.00	0.00			
6135.00	100.00	53.87	0.01	6.50	0.00	100.00	0.00			
6135.50	100.00	56.19	0.01	5.70	0.00	100.00	0.00			
6136.00	100.00	59.46	0.01	4.64	0.00	100.00	0.00			
6136.50	100.00	60.15	0.01	4.28	0.00	100.00	0.00			
6137.00	100.00	57.21	0.01	4.98	0.00	100.00	0.00			
6137.50	100.00	56.97	0.01	5.85	0.00	100.00	0.00			
6138.00	100.00	56.54	0.01	6.63	0.00	100.00	0.00			
6138.50	100.00	54.51	0.01	7.64	0.00	100.00	0.00			
6139.00	100.00	51.83	0.01	8.22	0.00	100.00	0.00			
6139.50	98.31	48.19	0.02	8.53	2.28	49.08	111.68			
6140.00	93.37	45.77	0.01	8.52	2.58	69.05	178.09			
6140.50	96.19	47.16	0.00	7.86	1.74	70.51	122.52			
6141.00	100.00	50.29	0.01	6.86	0.00	100.00	0.00			
6141.50	100.00	53.35	0.01	5.88	0.00	100.00	0.00			
6142.00	100.00	55.37	0.01	5.38	0.00	100.00	0.00			
6142.50	100.00	55.34	0.01	5.55	0.00	100.00	0.00			
6143.00	100.00	51.22	0.01	6.80	0.00	100.00	0.00			
6143.50	94.50	46.32	0.00	7.90	1.89	75.66	142.82			
6144.00	84.84	41.59	0.00	8.77	3.37	79.57	268.39			
6144.50	83.86	41.11	0.00	8.52	3.18	84.26	267.68			
6145.00	84.71	41.53	0.00	7.93	2.54	89.05	225.76			
6145.50	90.33	44.28	0.00	7.30	1.54	89.07	137.60			
6146.00	97.97	48.02	0.00	6.79	0.55	81.43	45.18			
6146.50	100.00	49.39	0.01	6.48	0.00	100.00	0.00			
6147.00	96.51	47.31	0.00	7.00	0.86	75.80	64.82			
6147.50	93.30	45.74	0.00	7.38	1.44	73.06	105.51			
6148.00	93.26	45.72	0.00	7.36	1.42	74.73	106.25			
6148.50	93.63	45.90	0.00	7.28	1.32	76.69	101.12			
6149.00	92.12	45.16	0.00	7.44	1.58	77.58	122.58			
6149.50	89.70	43.97	0.00	7.74	2.03	77.76	158.18			

0038

Well name = STRZELECKI NO. 10

Location = 28-15-44.45/140-39-27E

Page No 4

DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6150.00	86.62	42.46	0.00	8.14	2.63	77.48	203.45			
6150.50	89.08	43.67	0.00	7.91	2.24	78.52	175.95			
6151.00	93.22	45.70	0.00	7.54	1.61	79.29	127.47			
6151.50	96.89	47.50	0.00	7.24	1.07	78.35	83.62			
6152.00	98.07	48.08	0.00	7.26	1.01	73.84	74.70			
6152.50	98.40	48.24	0.00	7.70	1.43	61.32	87.73			
6153.00	96.86	47.48	0.01	8.38	2.21	58.75	129.95			
6153.50	98.90	48.48	0.04	8.44	2.15	42.62	91.43			
6154.00	100.00	49.12	0.01	8.55	0.00	100.00	0.00			
6154.50	100.00	49.17	0.01	8.69	0.00	100.00	0.00			
6155.00	98.53	48.30	0.06	8.71	2.44	42.66	103.89			
6155.50	96.75	47.43	0.03	8.73	2.57	53.22	136.73			
6156.00	94.97	46.55	0.02	8.75	2.70	58.36	157.75			
6156.50	95.58	46.85	0.03	8.92	2.84	53.95	153.07			
6157.00	96.64	47.38	0.07	9.11	2.96	47.82	141.52			
6157.50	98.89	48.48	0.23	9.12	2.82	33.35	94.13			
6158.00	99.95	49.00	2.09	9.05	2.69	8.72	23.42			
6158.50	100.00	49.62	0.01	8.50	0.00	100.00	0.00			
6159.00	100.00	51.43	0.01	7.64	0.00	100.00	0.00			
6159.50	100.00	53.53	0.01	6.62	0.00	100.00	0.00			
6160.00	100.00	56.62	0.01	5.31	0.00	100.00	0.00			
6160.50	100.00	56.41	0.01	4.87	0.00	100.00	0.00			
6161.00	100.00	52.61	0.01	5.56	0.00	100.00	0.00			
6161.50	100.00	49.35	0.01	6.49	0.00	100.00	0.00			
6162.00	93.41	45.79	0.00	7.57	1.62	73.29	118.86			
6162.50	92.44	45.31	0.00	8.03	2.15	68.09	146.34			
6163.00	100.00	49.92	0.01	7.15	0.00	100.00	0.00			
6163.50	100.00	54.95	0.01	6.16	0.00	100.00	0.00			
6164.00	100.00	60.05	0.01	5.22	0.00	100.00	0.00			
6164.50	100.00	62.98	0.01	4.86	0.00	100.00	0.00			
6165.00	100.00	62.04	0.01	5.41	0.00	100.00	0.00			
6165.50	100.00	60.49	0.01	5.91	0.00	100.00	0.00			
6166.00	100.00	58.76	0.01	6.45	0.00	100.00	0.00			
6166.50	100.00	56.90	0.01	6.90	0.00	100.00	0.00			
6167.00	100.00	55.38	0.01	7.18	0.00	100.00	0.00			
6167.50	100.00	54.01	0.01	7.43	0.00	100.00	0.00			
6168.00	100.00	52.83	0.01	7.62	0.00	100.00	0.00			
6168.50	100.00	55.64	0.01	7.07	0.00	100.00	0.00			
6169.00	100.00	58.31	0.01	6.71	0.00	100.00	0.00			
6169.50	100.00	60.61	0.01	6.44	0.00	100.00	0.00			
6170.00	100.00	59.58	0.01	6.99	0.00	100.00	0.00			
6170.50	100.00	56.91	0.01	7.88	0.00	100.00	0.00			
6171.00	100.00	50.79	0.01	9.51	0.00	100.00	0.00			
6171.50	91.78	44.99	0.60	10.89	5.04	43.65	220.20			
6172.00	92.32	45.26	0.14	9.75	3.87	49.55	191.67			
6172.50	96.15	47.14	0.01	8.32	2.20	54.04	119.03			
6173.00	100.00	49.36	0.01	6.95	0.00	100.00	0.00			
6173.50	100.00	52.60	0.01	6.33	0.00	100.00	0.00			
6174.00	100.00	56.73	0.01	6.27	0.00	100.00	0.00			
6174.50	100.00	59.88	0.01	6.53	0.00	100.00	0.00			

0039

Well name = STRZELECKI NO. 10

Location = 28-15-44. 45/140-39-27E

Page No 5

DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6175.00	100.00	62.57	0.01	6.91	0.00	100.00	0.00			
6175.50	100.00	64.42	0.01	7.27	0.00	100.00	0.00			
6176.00	100.00	63.78	0.01	7.30	0.00	100.00	0.00			
6176.50	100.00	61.85	0.01	7.42	0.00	100.00	0.00			
6177.00	100.00	59.83	0.01	7.56	0.00	100.00	0.00			
6177.50	100.00	57.80	0.01	7.70	0.00	100.00	0.00			
6178.00	100.00	56.64	0.01	7.61	0.00	100.00	0.00			
6178.50	100.00	56.55	0.01	7.48	0.00	100.00	0.00			
6179.00	100.00	56.47	0.01	7.35	0.00	100.00	0.00			
6179.50	100.00	56.67	0.01	7.15	0.00	100.00	0.00			
6180.00	100.00	57.21	0.01	6.85	0.00	100.00	0.00			
6180.50	100.00	58.52	0.01	6.66	0.00	100.00	0.00			
6181.00	100.00	59.76	0.01	6.82	0.00	100.00	0.00			
6181.50	100.00	58.50	0.01	8.29	0.00	100.00	0.00			
6182.00	100.00	59.85	0.01	10.05	0.00	100.00	0.00			
6182.50	100.00	61.43	0.01	12.02	0.00	100.00	0.00			
6183.00	100.00	60.93	0.01	14.58	0.00	100.00	0.00			
6183.50	100.00	56.72	0.01	19.06	0.00	100.00	0.00			
6184.00	100.00	66.68	0.01	13.68	0.00	100.00	0.00			
6184.50	100.00	61.13	0.01	12.96	0.00	100.00	0.00			
6185.00	100.00	55.22	0.01	12.20	0.00	100.00	0.00			
6185.50	74.91	36.72	14.79	16.12	11.35	38.52	437.15			
6186.00	68.23	33.45	0.48	10.61	6.26	53.54	335.22			
6186.50	73.60	36.08	1.15	9.89	5.20	37.94	197.44			
6187.00	100.00	49.97	0.01	11.51	0.00	100.00	0.00			
6187.50	64.67	31.70	21.52	11.08	6.96	17.60	122.55			
6188.00	52.44	25.71	13.32	12.71	9.37	16.04	150.33			
6188.50	C O A L		C O A L		C O A L		C O A L			
6189.00	34.14	16.74	24.09	15.15	12.98	25.48	330.68			
6189.50	44.70	21.91	12.09	13.74	10.90	30.47	332.07			
6190.00	53.86	26.40	5.73	12.52	9.09	40.69	369.99			
6190.50	60.68	29.75	1.62	11.61	7.75	48.29	374.19			
6191.00	62.26	30.52	1.07	11.40	7.44	51.18	380.76			
6191.50	51.77	25.38	2.23	12.80	9.51	52.08	495.07			
6192.00	43.25	21.20	2.42	13.21	10.45	54.51	569.85			
6192.50	45.71	22.41	3.20	13.61	10.70	52.42	560.90			
6193.00	55.57	27.24	1.43	12.29	8.76	53.80	471.14			
6193.50	65.33	32.03	0.57	10.99	6.83	54.85	374.73			
6194.00	72.86	35.72	0.23	9.99	5.35	55.75	298.16			
6194.50	75.86	37.19	5.29	13.39	8.56	39.41	337.24			
6195.00	100.00	51.13	0.01	11.66	0.00	100.00	0.00			
6195.50	100.00	51.46	0.01	11.71	0.00	100.00	0.00			
6196.00	100.00	51.40	0.01	11.70	0.00	100.00	0.00			
6196.50	100.00	50.05	0.01	11.52	0.00	100.00	0.00			
6197.00	74.36	36.45	0.49	9.79	5.05	45.79	231.40			
6197.50	72.23	35.41	0.54	10.07	5.47	47.55	260.24			
6198.00	68.19	33.43	39.30	19.59	15.25	26.83	409.30			
6198.50	58.24	28.55	20.57	17.70	13.99	34.28	479.46			
6199.00	47.50	23.28	3.26	13.37	10.35	51.06	528.30			
6199.50	47.82	23.44	2.73	13.33	10.29	52.68	541.85			

0040

Well name = STRZELECKI NO.10

Location = 28-15-44.45/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6200.00	48.13	23.60	2.38	13.29	10.22	53.91	551.07			
6200.50	47.06	23.07	2.30	13.43	10.43	54.99	573.78			
6201.00	41.65	20.42	2.90	14.15	11.50	55.94	643.26			
6201.50	33.87	16.61	2.30	14.40	12.25	60.58	742.03			
6202.00	25.03	12.27	1.02	13.69	12.10	68.63	830.13			
6202.50	23.61	11.58	1.03	13.35	11.84	67.76	802.48			
6203.00	28.42	13.93	1.84	13.29	11.48	60.64	696.43			
6203.50	53.91	26.43	7.50	14.08	10.65	43.37	461.76			
6204.00	80.79	39.61	15.11	16.22	11.08	25.47	282.07			
6204.50	78.52	38.49	16.46	16.39	11.39	25.27	287.84			
6205.00	99.81	48.93	20.50	11.38	5.02	6.75	33.91			
6205.50	71.27	34.94	0.73	10.20	5.66	45.59	258.12			
6206.00	71.29	34.95	2.99	11.99	7.45	40.55	302.25			
6206.50	71.68	35.14	3.70	12.50	7.94	40.53	321.83			
6207.00	66.24	32.47	10.62	14.53	10.31	38.63	398.26			
6207.50	56.22	27.56	6.95	14.25	10.67	44.25	472.28			
6208.00	52.36	25.67	3.00	13.21	9.88	50.30	496.88			
6208.50	50.25	24.63	1.65	12.31	9.11	53.73	489.30			
6209.00	51.45	25.22	1.20	11.65	8.37	54.13	453.23			
6209.50	60.26	29.54	1.37	11.47	7.64	49.49	378.06			
6210.00	64.26	31.50	1.24	11.18	7.09	47.99	340.44			
6210.50	68.25	33.46	1.21	11.02	6.68	46.17	308.35			
6211.00	72.49	35.53	1.02	10.83	6.21	45.45	282.44			
6211.50	78.88	38.67	0.66	10.36	5.33	44.64	238.11			
6212.00	90.64	44.43	0.85	10.37	4.60	36.85	169.52			
6212.50	94.30	46.23	4.02	11.63	5.63	27.69	155.94			
6213.00	90.05	44.15	17.40	14.08	8.34	26.12	217.92			
6213.50	87.35	42.82	15.55	16.49	10.92	23.64	258.25			
6214.00	85.24	41.79	37.17	19.07	13.64	19.44	265.27			
6214.50	100.00	54.00	0.01	12.04	0.00	100.00	0.00			
6215.00	100.00	54.26	0.01	12.07	0.00	100.00	0.00			
6215.50	100.00	54.46	0.01	12.10	0.00	100.00	0.00			
6216.00	100.00	52.80	0.01	11.88	0.00	100.00	0.00			
6216.50	100.00	51.13	0.01	11.66	0.00	100.00	0.00			
6217.00	100.00	49.46	0.01	11.45	0.00	100.00	0.00			
6217.50	72.69	35.63	1.07	10.01	5.38	39.92	214.86			
6218.00	67.83	33.25	1.59	10.66	6.34	41.46	262.84			
6218.50	65.66	32.19	1.69	10.95	6.77	43.15	292.03			
6219.00	65.84	32.28	1.38	10.92	6.73	45.02	303.08			
6219.50	71.27	34.94	11.16	15.31	10.78	31.95	344.29			
6220.00	77.84	38.16	7.12	13.26	8.30	35.26	292.82			
6220.50	80.49	39.46	2.33	11.86	6.74	39.63	267.08			
6221.00	84.11	41.23	1.01	10.96	5.61	41.93	235.22			
6221.50	87.73	43.01	0.41	10.07	4.48	43.54	195.07			
6222.00	93.68	45.92	0.13	9.09	3.12	42.96	134.21			
6222.50	100.00	50.00	0.01	7.94	0.00	100.00	0.00			
6223.00	100.00	52.92	0.01	7.10	0.00	100.00	0.00			
6223.50	100.00	52.78	0.01	7.07	0.00	100.00	0.00			
6224.00	100.00	51.45	0.01	7.76	0.00	100.00	0.00			
6224.50	100.00	51.26	0.01	9.32	0.00	100.00	0.00			

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Well name = STRZELECKI NO. 10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
62225.00	100.00	50.12	0.01	11.06	0.00	100.00	0.00			
62225.50	100.00	50.42	0.01	12.21	0.00	100.00	0.00			
62226.00	100.00	50.73	0.01	13.36	0.00	100.00	0.00			
62226.50	100.00	51.83	0.01	14.61	0.00	100.00	0.00			
62227.00	100.00	53.08	0.01	15.88	0.00	100.00	0.00			
62227.50	100.00	51.72	0.01	17.47	0.00	100.00	0.00			
62228.00	100.00	49.09	0.01	19.26	0.00	100.00	0.00			
62228.50	100.00	62.85	0.01	13.19	0.00	100.00	0.00			
62229.00	100.00	64.26	0.01	13.37	0.00	100.00	0.00			
62229.50	100.00	65.68	0.01	13.55	0.00	100.00	0.00			
62230.00	100.00	50.26	0.01	21.13	0.00	100.00	0.00			
62230.50	100.00	67.14	0.01	13.74	0.00	100.00	0.00			
62231.00	100.00	65.44	0.01	13.52	0.00	100.00	0.00			
62231.50	100.00	62.87	0.01	13.19	0.00	100.00	0.00			
62232.00	90.63	44.43	12.70	15.59	9.82	21.34	209.67			
62232.50	92.97	45.58	27.10	14.30	8.38	21.65	181.36			
62233.00	94.09	46.12	18.74	13.57	7.58	22.01	166.88			
62233.50	94.00	46.08	14.26	13.21	7.22	23.17	167.38			
62234.00	93.74	45.95	17.44	13.58	7.61	22.88	174.07			
62234.50	95.15	46.64	36.58	14.56	8.51	19.05	162.07			
62235.00	94.23	46.19	13.89	15.79	9.79	18.26	178.69			
62235.50	97.40	47.75	14.80	15.65	9.45	13.35	126.25			
62236.00	96.37	47.24	10.88	14.83	8.69	16.54	143.75			
62236.50	94.70	46.43	24.73	13.96	7.93	20.69	164.10			
62237.00	93.04	45.61	12.04	13.09	7.17	24.68	176.96			
62237.50	99.58	48.81	40.46	12.76	6.42	8.22	52.80			
62238.00	100.00	50.77	0.01	12.42	0.00	100.00	0.00			
62238.50	100.00	52.18	0.01	12.01	0.00	100.00	0.00			
62239.00	100.00	52.76	0.01	11.48	0.00	100.00	0.00			
62239.50	100.00	51.65	0.01	11.08	0.00	100.00	0.00			
62240.00	99.55	48.80	11.24	11.14	4.81	11.46	55.07			
62240.50	95.10	46.62	2.93	11.32	5.27	28.64	150.87			
62241.00	88.30	43.29	3.99	12.33	6.70	33.83	226.81			
62241.50	85.63	41.98	7.87	13.41	7.96	32.73	260.46			
62242.00	86.77	42.53	18.98	14.69	9.17	28.50	261.31			
62242.50	100.00	57.25	0.01	12.46	0.00	100.00	0.00			
62243.00	100.00	57.53	0.01	12.50	0.00	100.00	0.00			
62243.50	100.00	57.81	0.01	12.53	0.00	100.00	0.00			
62244.00	100.00	54.92	0.01	12.16	0.00	100.00	0.00			
62244.50	100.00	51.13	0.01	11.66	0.00	100.00	0.00			
62245.00	62.87	30.82	7.68	11.32	7.32	30.07	220.07			
62245.50	60.81	29.81	7.63	11.60	7.72	32.02	247.34			
62246.00	66.72	32.71	3.29	10.81	6.56	35.07	230.06			
62246.50	72.63	35.60	1.16	10.02	5.39	39.17	211.30			
62247.00	100.00	50.91	0.01	11.64	0.00	100.00	0.00			
62247.50	100.00	53.74	0.01	12.00	0.00	100.00	0.00			
62248.00	87.45	42.87	8.73	12.76	7.19	28.13	202.28			
62248.50	92.40	45.30	9.10	12.41	6.53	24.32	158.68			
62249.00	92.06	45.13	8.07	12.20	6.34	24.54	155.48			
62249.50	84.60	41.47	4.94	11.79	6.40	30.00	192.02			

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Well name = STRZELECKI NO.10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6250.00	79.00	38.73	4.00	11.50	6.47	32.56	210.59			
6250.50	77.07	37.78	4.33	11.45	6.54	32.12	210.03			
6251.00	100.00	49.67	0.01	11.48	0.00	100.00	0.00			
6251.50	73.64	36.10	1.63	9.88	5.20	34.26	177.99			
6252.00	71.38	34.99	2.50	10.18	5.64	32.71	184.50			
6252.50	69.13	33.89	3.51	10.49	6.09	31.79	193.47			
6253.00	66.87	32.78	4.83	10.79	6.53	30.93	201.94			
6253.50	65.30	32.01	8.28	11.54	7.38	29.57	218.20			
6254.00	64.31	31.52	6.57	11.28	7.18	31.05	223.05			
6254.50	57.88	28.37	7.97	11.73	8.04	32.96	264.99			
6255.00	57.70	28.28	5.28	11.22	7.54	35.02	264.11			
6255.50	60.71	29.76	2.30	10.22	6.35	37.73	239.67			
6256.00	63.32	31.04	0.89	9.27	5.24	40.93	214.54			
6256.50	66.37	32.54	0.46	8.78	4.56	42.82	195.23			
6257.00	60.30	29.56	0.88	9.52	5.68	43.86	249.20			
6257.50	48.64	23.84	2.39	10.86	7.76	44.29	343.73			
6258.00	39.05	19.14	5.06	12.08	9.59	43.85	420.62			
6258.50	42.75	20.96	16.23	13.75	11.03	36.57	403.47			
6259.00	46.65	22.87	16.52	13.49	10.52	34.72	365.06			
6259.50	49.13	24.09	15.83	13.15	10.02	33.50	335.83			
6260.00	47.96	23.51	18.54	13.31	10.26	32.64	334.78			
6260.50	46.57	22.83	18.61	13.50	10.53	33.53	353.06			
6261.00	39.88	19.55	12.13	14.26	11.72	35.29	413.78			
6261.50	32.65	16.01	11.14	14.16	12.08	39.32	474.90			
6262.00	24.95	12.23	10.18	14.13	12.54	43.75	548.50	0.06	0.04	0.50
6262.50	18.97	9.30	9.90	14.21	13.00	47.44	616.68	0.13	0.07	1.00
6263.00	16.59	8.13	10.37	14.54	13.48	48.22	650.01	0.20	0.10	1.50
6263.50	16.76	8.22	11.50	15.04	13.97	46.85	654.52	0.26	0.14	2.00
6264.00	16.93	8.30	13.47	15.58	14.50	45.46	659.10	0.34	0.18	2.50
6264.50	17.16	8.41	12.98	15.49	14.40	45.87	660.38	0.41	0.22	3.00
6265.00	16.74	8.21	11.56	15.16	14.10	47.22	665.57	0.48	0.26	3.50
6265.50	14.84	7.27	11.16	15.06	14.12	48.05	678.25	0.55	0.29	4.00
6266.00	12.12	5.94	7.14	14.05	13.28	51.59	685.05			
6266.50	19.97	9.79	6.38	12.88	11.61	48.07	558.04	0.61	0.32	4.50
6267.00	28.24	13.85	10.37	11.77	9.97	37.71	376.01			
6267.50	37.13	18.20	12.08	10.88	8.52	30.63	260.82			
6268.00	50.71	24.86	23.51	11.41	8.18	22.30	182.40			
6268.50	52.76	25.87	12.39	12.67	9.31	17.82	165.89			
6269.00	60.66	29.74	39.99	11.62	7.75	14.89	115.47			
6269.50	64.30	31.52	28.44	11.13	7.04	15.06	105.99			
6270.00	54.66	26.79	11.49	12.42	8.94	16.96	151.53			
6270.50	25.99	12.74	45.92	16.24	14.59	20.24	295.25	0.68	0.38	5.00
6271.00	8.72	4.27	101.36	18.55	17.99	21.95	394.98	0.77	0.45	5.50
6271.50	11.02	5.40	85.79	18.24	17.54	22.83	400.38	0.86	0.52	6.00
6272.00	24.84	12.18	39.89	16.39	14.81	24.35	360.76	0.93	0.58	6.50
6272.50	42.34	20.76	13.73	14.06	11.36	29.92	340.00			
6273.00	97.75	47.92	40.78	18.52	12.30	8.33	102.41			
6273.50	77.22	37.85	19.84	14.85	9.93	30.83	306.22			
6274.00	78.29	38.38	8.98	13.69	8.70	34.47	299.92			
6274.50	80.47	39.45	5.33	12.77	7.64	35.40	270.59			

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Well name = STRZELECKI NO. 10

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6275.00	85.08	41.71	3.71	12.02	6.60	34.08	225.04			
6275.50	91.87	45.04	3.26	11.37	5.52	29.16	160.95			
6276.00	100.00	49.08	0.01	10.53	0.00	100.00	0.00			
6276.50	100.00	49.46	0.01	10.66	0.00	100.00	0.00			
6277.00	94.88	46.51	6.02	11.67	5.63	23.46	132.06			
6277.50	94.19	46.17	10.81	12.52	6.53	22.52	146.97			
6278.00	98.80	48.43	37.44	13.21	6.92	11.61	80.31			
6278.50	100.00	52.00	0.01	13.18	0.00	100.00	0.00			
6279.00	100.00	55.99	0.01	12.87	0.00	100.00	0.00			
6279.50	100.00	58.85	0.01	11.63	0.00	100.00	0.00			
6280.00	100.00	61.86	0.01	10.38	0.00	100.00	0.00			
6280.50	100.00	64.71	0.01	9.28	0.00	100.00	0.00			
6281.00	100.00	64.97	0.01	8.94	0.00	100.00	0.00			
6281.50	100.00	62.04	0.01	11.46	0.00	100.00	0.00			
6282.00	100.00	58.12	0.01	12.57	0.00	100.00	0.00			
6282.50	100.00	52.17	0.01	11.80	0.00	100.00	0.00			
6283.00	69.21	33.93	38.47	10.47	6.07	6.76	41.00			
6283.50	47.89	23.48	22.90	13.32	10.27	7.32	75.14			
6284.00	37.76	18.51	41.84	14.67	12.27	7.47	91.60			
6284.50	C O A L		C O A L		C O A L		C O A L			
6285.00	49.72	24.37	14.38	13.07	9.91	18.22	180.53			
6285.50	55.42	27.17	19.23	12.31	8.79	26.87	236.07			
6286.00	60.37	29.60	5.14	11.65	7.81	36.51	285.16			
6286.50	63.94	31.34	2.15	11.18	7.11	42.29	300.59			
6287.00	81.88	40.14	4.63	12.18	6.97	33.63	234.29			
6287.50	79.86	39.15	1.86	11.20	6.12	38.57	235.89			
6288.00	74.35	36.45	1.83	11.18	6.45	40.60	261.82			
6288.50	69.43	34.04	1.00	10.45	6.02	44.55	268.40			
6289.00	70.23	34.43	1.00	10.34	5.87	43.62	255.96			
6289.50	72.12	35.36	0.86	10.09	5.49	42.92	235.78			
6290.00	100.00	49.78	0.01	11.49	0.00	100.00	0.00			
6290.50	100.00	52.31	0.01	11.82	0.00	100.00	0.00			
6291.00	100.00	55.05	0.01	12.17	0.00	100.00	0.00			
6291.50	100.00	66.02	0.01	13.60	0.00	100.00	0.00			
6292.00	100.00	77.50	0.01	15.09	0.00	100.00	0.00			
6292.50	100.00	80.89	0.01	15.53	0.00	100.00	0.00			
6293.00	100.00	81.81	0.01	15.65	0.00	100.00	0.00			
6293.50	100.00	67.80	0.01	13.83	0.00	100.00	0.00			
6294.00	100.00	52.98	0.01	11.90	0.00	100.00	0.00			
6294.50	61.79	30.29	1.45	11.46	7.53	48.41	364.56			
6295.00	52.22	25.60	3.49	12.74	9.42	47.07	443.17			
6295.50	42.86	21.01	7.97	13.99	11.26	44.70	503.36			
6296.00	41.94	20.56	9.94	14.11	11.44	42.95	491.48			
6296.50	41.03	20.11	12.29	14.24	11.62	41.28	479.86			
6297.00	40.11	19.66	10.67	14.36	11.80	39.04	460.82			
6297.50	39.20	19.22	12.24	14.48	11.98	36.45	436.78			
6298.00	38.93	19.08	13.63	14.51	12.04	34.02	409.47			
6298.50	38.67	18.96	12.86	14.49	12.03	35.47	426.69			
6299.00	38.33	18.79	12.26	14.60	12.16	37.31	453.50			
6299.50	35.67	17.48	12.73	14.95	12.68	39.00	494.45			

0044

Well name = STRZELECKI NO.10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6300.00	32.61	15.98	13.35	15.36	13.28	40.69	540.41			
6300.50	28.75	14.09	15.30	15.87	14.04	40.95	575.09	1.00	0.62	7.00
6301.00	24.62	12.07	17.82	16.42	14.86	41.06	610.03	1.08	0.66	7.50
6301.50	20.52	10.06	21.55	16.97	15.66	40.41	632.97	1.16	0.71	8.00
6302.00	17.18	8.42	25.34	17.42	16.32	39.80	649.68	1.24	0.76	8.50
6302.50	11.83	5.80	32.73	18.13	17.38	38.98	677.36	1.32	0.81	9.00
6303.00	4.79	2.35	49.18	19.07	18.77	36.89	692.25	1.42	0.87	9.50
6303.50	4.76	2.33	66.39	19.07	18.77	32.05	601.69	1.51	0.93	10.00
6304.00	6.31	3.10	92.98	18.87	18.46	25.38	468.55	1.60	1.00	10.50
6304.50	4.13	2.03	231.74	19.16	18.89	12.38	233.95	1.70	1.08	11.00
6305.00	1.61	0.79	317.70	19.49	19.39	9.68	187.78	1.80	1.17	11.50
6305.50	C D A L		C D A L		C D A L		C D A L			
6306.00	C D A L		C D A L		C D A L		C D A L			
6306.50	C D A L		C D A L		C D A L		C D A L			
6307.00	C D A L		C D A L		C D A L		C D A L			
6307.50	44.93	22.03	15.85	13.71	10.85	22.60	245.28			
6308.00	60.74	29.77	9.19	11.60	7.74	30.15	233.30			
6308.50	66.90	32.80	2.44	10.78	6.52	38.00	247.86			
6309.00	91.31	44.76	21.54	13.85	8.03	22.57	181.29			
6309.50	85.62	41.97	6.89	12.73	7.28	31.00	225.58			
6310.00	80.21	39.32	3.72	12.06	6.96	35.86	249.56			
6310.50	81.81	40.10	4.16	12.10	6.89	34.38	236.98			
6311.00	79.97	39.20	6.34	12.49	7.40	32.47	240.39			
6311.50	73.11	35.84	7.16	12.57	7.91	33.52	265.30			
6312.00	68.08	33.37	1.72	10.63	6.29	40.39	254.09			
6312.50	61.64	30.22	3.15	11.48	7.56	40.48	306.03			
6313.00	50.84	24.92	5.91	12.92	9.69	42.57	412.46			
6313.50	42.15	20.66	7.35	14.09	11.40	45.98	524.25			
6314.00	34.85	17.08	5.71	14.49	12.27	51.15	627.49			
6314.50	30.14	14.77	1.41	13.14	11.22	62.59	702.43			
6315.00	30.60	15.00	0.65	12.27	10.32	67.71	698.87			
6315.50	32.96	16.16	0.51	11.63	9.53	67.51	643.48			
6316.00	35.78	17.54	0.44	11.13	8.85	66.52	588.62			
6316.50	40.06	19.64	0.86	11.53	8.98	59.96	538.62			
6317.00	42.82	20.99	4.41	13.41	10.68	49.01	523.45			
6317.50	40.66	19.93	8.14	14.28	11.70	45.80	535.66			
6318.00	38.04	18.65	9.94	14.63	12.21	45.22	552.19			
6318.50	39.33	19.28	10.08	14.46	11.96	44.34	530.26			
6319.00	44.22	21.68	8.60	13.81	10.99	43.07	473.52			
6319.50	49.11	24.08	7.18	13.16	10.03	41.76	418.79			
6320.00	18.62	9.13	16.51	16.08	14.89	42.75	636.52	1.87	1.21	12.00
6320.50	11.93	5.85	27.16	17.56	16.80	40.27	676.60	1.95	1.27	12.50
6321.00	8.25	4.04	36.12	18.61	18.08	39.70	717.84	2.04	1.32	13.00
6321.50	5.86	2.87	38.13	18.93	18.55	40.34	748.48	2.14	1.38	13.50
6322.00	3.47	1.70	42.38	19.25	19.02	40.13	763.48	2.23	1.43	14.00
6322.50	3.08	1.51	46.03	19.30	19.10	39.05	745.96	2.33	1.49	14.50
6323.00	3.27	1.60	47.99	19.27	19.06	38.27	729.62	2.42	1.55	15.00
6323.50	3.46	1.70	47.20	19.25	19.03	38.42	730.93	2.52	1.61	15.50
6324.00	3.73	1.83	35.29	18.38	18.14	40.29	731.01	2.61	1.66	16.00
6324.50	4.09	2.00	24.56	17.36	17.10	43.10	737.18	2.69	1.71	16.50

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Well name = STRZELECKI NO.10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6325.00	4.46	2.19	17.39	16.41	16.13	46.17	744.55	2.78	1.75	17.00
6325.50	5.86	2.88	18.18	16.53	16.16	45.43	733.95	2.86	1.80	17.50
6326.00	7.35	3.60	34.83	18.15	17.68	38.95	688.56	2.94	1.85	18.00
6326.50	9.80	4.80	42.61	18.40	17.78	35.84	637.11	3.03	1.91	18.50
6327.00	13.28	6.51	41.96	17.94	17.09	33.54	573.19	3.12	1.97	19.00
6327.50	24.66	12.09	29.24	16.42	14.85	30.89	458.75	3.19	2.02	19.50
6328.00	41.94	20.56	14.55	14.11	11.44	28.86	330.26			
6328.50	56.28	27.59	13.09	12.20	8.62	30.21	260.30			
6329.00	62.70	30.74	6.21	11.34	7.35	32.44	238.48			
6329.50	66.09	32.40	3.49	10.89	6.68	35.13	234.76			
6330.00	65.76	32.24	1.83	10.94	6.75	42.16	284.54			
6330.50	64.74	31.74	1.78	11.07	6.95	43.48	302.14			
6331.00	62.21	30.50	2.07	11.41	7.45	44.33	330.13			
6331.50	59.04	28.94	2.42	11.83	8.07	45.51	367.35			
6332.00	53.65	26.30	2.78	12.55	9.13	48.36	441.79			
6332.50	44.37	21.75	4.62	13.79	10.96	49.44	542.05			
6333.00	32.67	16.01	9.40	15.35	13.27	48.70	646.25			
6333.50	30.61	15.01	10.85	15.62	13.68	47.00	642.73			
6334.00	29.72	14.57	12.01	15.74	13.85	45.44	629.39	3.26	2.05	20.00
6334.50	28.83	14.13	12.06	15.86	14.03	46.03	645.73	3.33	2.09	20.50
6335.00	23.33	11.44	13.91	16.60	15.11	47.03	710.68	3.41	2.13	21.00
6335.50	13.47	6.60	18.66	17.91	17.05	47.84	815.86	3.49	2.18	21.50
6336.00	23.25	11.40	12.10	16.61	15.13	49.90	754.76	3.57	2.22	22.00
6336.50	60.73	29.77	1.05	11.61	7.74	52.74	408.13			
6337.00	72.09	35.34	0.60	10.09	5.50	46.70	256.86			
6337.50	100.00	51.47	0.01	11.71	0.00	100.00	0.00			
6338.00	100.00	53.91	0.01	12.03	0.00	100.00	0.00			
6338.50	100.00	49.87	0.01	11.50	0.00	100.00	0.00			
6339.00	35.25	17.28	29.52	15.01	12.76	19.36	247.04			
6339.50	C O A L		C O A L		C O A L		C O A L			
6340.00	C O A L		C O A L		C O A L		C O A L			
6340.50	C O A L		C O A L		C O A L		C O A L			
6341.00	C O A L		C O A L		C O A L		C O A L			
6341.50	100.00	50.73	0.01	22.83	0.00	100.00	0.00			
6342.00	100.00	62.04	0.01	16.29	0.00	100.00	0.00			
6342.50	88.25	43.26	8.08	12.87	7.25	29.20	211.66			
6343.00	72.43	35.51	0.41	10.04	5.43	50.18	272.64			
6343.50	74.39	36.47	0.33	9.78	5.05	49.99	252.30			
6344.00	100.00	49.94	0.01	11.51	0.00	100.00	0.00			
6344.50	78.13	38.30	2.71	11.87	6.90	38.86	268.04			
6345.00	100.00	52.24	0.01	11.81	0.00	100.00	0.00			
6345.50	100.00	52.90	0.01	11.89	0.00	100.00	0.00			
6346.00	100.00	52.81	0.01	11.88	0.00	100.00	0.00			
6346.50	100.00	51.29	0.01	11.69	0.00	100.00	0.00			
6347.00	100.00	49.14	0.01	11.41	0.00	100.00	0.00			
6347.50	70.29	34.46	0.46	10.33	5.86	51.60	302.17			
6348.00	65.51	32.12	0.66	10.97	6.80	53.11	361.01			
6348.50	58.70	28.77	1.07	11.88	8.14	54.28	441.89			
6349.00	50.81	24.91	1.75	12.93	9.70	55.24	535.62			
6349.50	41.66	20.42	3.01	14.15	11.50	55.57	638.94			

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Well name = STRZELECKI NO. 10

Location = 28-15-44.45/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6350.00	34.71	17.01	4.18	15.08	12.87	56.08	721.64			
6350.50	29.58	14.50	5.02	15.76	13.88	56.79	788.22			
6351.00	29.37	14.40	3.93	15.58	13.71	58.90	807.28			
6351.50	36.12	17.71	3.18	14.89	12.59	58.16	732.26			
6352.00	43.80	21.47	2.22	13.86	11.08	57.43	636.15			
6352.50	50.83	24.92	1.91	12.93	9.69	54.36	526.75			
6353.00	57.86	28.37	1.65	11.99	8.30	50.47	419.15			
6353.50	64.90	31.81	1.35	11.05	6.92	46.20	319.64			
6354.00	70.19	34.41	1.20	10.34	5.88	41.75	245.35			
6354.50	71.83	35.21	1.14	10.12	5.55	40.32	223.85			
6355.00	66.56	32.63	1.56	10.83	6.59	43.00	283.35			
6355.50	53.42	26.19	9.66	12.58	9.18	35.58	326.62			
6356.00	18.46	9.05	41.03	17.25	16.07	29.74	477.87	3.65	2.27	22.50
6356.50	13.62	6.68	77.19	17.89	17.02	22.39	381.11	3.73	2.34	23.00
6357.00	9.74	4.78	112.11	18.41	17.79	19.34	344.08	3.82	2.41	23.50
6357.50	C O A L		C O A L		C O A L		C O A L	O O A L		
6358.00	C O A L		C O A L		C O A L		C O A L	O O A L		
6358.50	29.32	14.37	13.97	15.80	13.93	42.45	591.34	3.89	2.45	24.00
6359.00	94.32	46.24	18.19	16.70	10.69	17.52	187.30			
6359.50	93.31	45.74	3.77	12.46	6.52	33.44	217.88			
6360.00	80.08	39.25	0.12	10.39	5.30	62.00	328.34			
6360.50	60.57	29.69	0.25	11.17	7.31	65.69	480.36			
6361.00	54.53	26.73	1.23	12.72	9.25	57.31	530.03			
6361.50	52.47	25.72	1.55	12.71	9.37	55.35	518.56			
6362.00	57.67	28.27	1.30	12.01	8.34	53.15	443.46			
6362.50	62.93	30.85	1.01	11.31	7.31	51.15	373.67			
6363.00	68.43	33.54	0.60	10.58	6.22	50.93	316.97			
6363.50	73.92	36.24	0.32	9.85	5.14	50.71	260.70			
6364.00	100.00	51.28	0.01	11.68	0.00	100.00	0.00			
6364.50	100.00	53.99	0.01	12.04	0.00	100.00	0.00			
6365.00	99.62	48.84	13.49	11.37	5.02	11.10	55.79			
6365.50	54.66	26.79	1.17	12.42	8.94	56.64	506.12			
6366.00	37.41	18.34	3.95	14.72	12.34	55.19	680.80			
6366.50	32.77	16.07	5.49	15.34	13.25	54.23	718.61			
6367.00	30.14	14.77	6.98	15.69	13.77	53.08	730.88			
6367.50	29.41	14.42	7.90	15.78	13.91	52.15	725.58			
6368.00	29.04	14.24	8.75	15.83	13.99	51.27	717.10			
6368.50	29.67	14.54	9.17	15.75	13.86	50.47	699.66			
6369.00	29.99	14.70	9.81	15.71	13.80	49.61	684.47	3.96	2.48	24.50
6369.50	25.81	12.65	11.93	16.26	14.62	48.45	708.36	4.04	2.52	25.00
6370.00	14.67	7.19	11.19	16.12	15.19	51.67	784.66			
6370.50	10.65	5.22	11.84	16.26	15.58	51.78	806.79			
6371.00	11.66	5.72	21.72	18.15	17.41	46.26	805.33	4.12	2.57	25.50
6371.50	15.29	7.50	19.72	17.67	16.70	45.71	763.12	4.21	2.61	26.00
6372.00	18.80	9.22	18.12	17.20	16.00	44.96	719.55	4.29	2.66	26.50
6372.50	21.54	10.56	17.11	16.84	15.46	44.17	683.10	4.36	2.70	27.00
6373.00	23.77	11.65	15.99	16.54	15.02	43.91	659.61	4.44	2.74	27.50
6373.50	22.45	11.00	12.41	15.70	14.27	46.36	661.75	4.51	2.78	28.00
6374.00	20.48	10.04	18.55	16.98	15.67	43.35	679.35	4.59	2.83	28.50
6374.50	18.49	9.06	20.26	17.24	16.07	43.07	691.88	4.67	2.87	29.00

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Well name = STRZELECKI NO.10

Location = 28-15-44.45/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6375.00	16.49	8.08	22.13	17.51	16.46	42.79	704.31	4.75	2.92	29.50
6375.50	18.38	9.01	20.94	17.26	16.09	42.52	683.96	4.83	2.97	30.00
6376.00	20.41	10.01	19.69	16.99	15.69	42.24	662.61	4.91	3.01	30.50
6376.50	22.08	10.82	19.24	16.76	15.36	41.47	636.83	4.99	3.06	31.00
6377.00	12.35	6.05	29.44	18.06	17.28	40.48	699.23	5.07	3.11	31.50
6377.50	7.61	3.73	37.13	18.69	18.21	39.66	722.10	5.16	3.16	32.00
6378.00	2.86	1.40	48.32	19.33	19.15	38.43	735.68	5.26	3.22	32.50
6378.50	0.00	0.00	65.82	20.00	20.00	36.37	727.60	5.36	3.28	33.00
6379.00	0.00	0.00	72.16	20.16	20.16	35.47	714.96	5.46	3.35	33.50
6379.50	0.00	0.00	70.42	20.12	20.12	35.73	719.02	5.56	3.41	34.00
6380.00	0.00	0.00	65.07	19.94	19.94	36.34	724.53	5.66	3.48	34.50
6380.50	3.73	1.83	52.63	19.21	18.97	36.50	692.54	5.76	3.54	35.00
6381.00	7.84	3.84	45.33	18.66	18.16	36.16	656.87	5.85	3.60	35.50
6381.50	12.86	6.30	37.58	17.99	17.17	35.81	614.94	5.93	3.65	36.00
6382.00	25.72	12.61	222.93	23.75	22.11	25.67	567.55	6.04	3.73	36.50
6382.50	58.30	28.58	5.08	11.93	8.22	38.42	315.78			
6383.00	69.52	34.08	196.12	24.05	19.63	18.23	357.83			
6383.50	100.00	50.26	0.01	11.55	0.00	100.00	0.00			
6384.00	43.04	21.10	133.14	23.12	20.38	27.04	551.04			
6384.50	32.94	16.15	10.86	15.31	13.22	45.14	596.54			
6385.00	28.43	13.94	12.15	15.92	14.11	46.18	651.43	6.11	3.77	37.00
6385.50	35.25	17.28	10.84	15.01	12.76	45.85	585.20			
6386.00	52.40	25.69	4.63	12.72	9.38	43.99	412.66			
6386.50	64.63	31.68	3.04	11.09	6.97	38.03	265.14			
6387.00	70.97	34.79	2.74	10.24	5.72	32.24	184.48			
6387.50	100.00	49.49	0.01	11.45	0.00	100.00	0.00			
6388.00	100.00	51.21	0.01	11.68	0.00	100.00	0.00			
6388.50	72.33	35.46	3.43	10.06	5.45	28.23	153.94			
6389.00	64.26	31.50	2.41	11.14	7.04	40.82	287.57			
6389.50	50.37	24.69	1.05	12.99	9.78	60.86	595.36			
6390.00	28.33	13.89	10.70	17.69	15.88	54.64	867.80			
6390.50	22.54	11.05	3.99	16.80	15.36	62.71	963.52			
6391.00	24.99	12.25	2.94	16.37	14.78	64.57	954.54			
6391.50	31.54	15.46	2.06	15.50	13.49	65.09	878.24			
6392.00	36.02	17.66	1.62	14.90	12.61	65.26	822.96			
6392.50	39.78	19.50	1.34	14.40	11.87	65.09	772.57			
6393.00	39.12	19.18	1.53	14.49	12.00	64.08	768.86			
6393.50	37.14	18.21	1.92	14.75	12.39	62.86	778.74			
6394.00	36.46	17.87	1.99	14.84	12.52	62.83	786.84			
6394.50	40.23	19.72	1.47	14.34	11.78	63.89	752.65			
6395.00	43.99	21.56	0.64	13.84	11.04	70.29	775.98			
6395.50	42.20	20.69	0.24	14.08	11.39	81.50	928.31			
6396.00	37.10	18.19	0.14	14.76	12.40	90.13	1117.37			
6396.50	32.35	15.86	0.16	15.39	13.33	91.40	1218.58			
6397.00	34.08	16.71	0.15	15.16	12.99	91.39	1187.39			
6397.50	44.19	21.66	0.14	13.81	11.00	85.79	943.71			
6398.00	54.74	26.84	0.13	12.40	8.92	79.21	706.56			
6398.50	61.73	30.26	0.15	11.47	7.54	72.21	544.70			
6399.00	60.23	29.53	0.36	11.67	7.84	64.40	504.78			
6399.50	54.74	26.84	1.14	12.40	8.92	56.81	506.78			

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Well name = STRZELECKI NO.10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6400.00	46.08	22.59	3.27	13.56	10.63	51.96	552.26			
6400.50	35.04	17.18	2.07	13.69	11.46	59.31	679.44			
6401.00	33.58	16.46	0.80	12.45	10.31	65.54	675.92			
6401.50	37.07	18.17	0.42	11.60	9.24	68.36	631.82			
6402.00	40.39	19.80	0.49	11.66	9.09	66.27	602.33			
6402.50	42.99	21.08	1.42	12.83	10.09	58.85	593.93			
6403.00	41.22	20.21	2.09	13.22	10.60	56.51	598.78			
6403.50	39.32	19.28	2.06	13.32	10.82	57.37	620.61			
6404.00	38.75	18.99	2.08	13.43	10.96	57.73	632.67			
6404.50	39.24	19.23	1.77	13.59	11.10	59.87	664.31			
6405.00	39.74	19.48	1.76	14.03	11.50	61.15	703.06			
6405.50	33.47	16.41	1.16	14.39	12.26	67.69	829.86			
6406.00	28.63	14.03	0.80	14.84	13.02	73.65	959.00			
6406.50	23.22	11.38	0.59	15.29	13.81	78.87	1089.33			
6407.00	17.13	8.40	0.44	15.72	14.63	83.92	1227.98			
6407.50	12.72	6.23	0.36	16.25	15.44	87.89	1356.90			
6408.00	8.99	4.41	0.33	16.71	16.14	90.35	1457.76			
6408.50	5.46	2.68	0.31	17.18	16.83	92.67	1559.74			
6409.00	3.03	1.48	0.33	17.66	17.47	93.12	1626.87			
6409.50	0.70	0.34	0.33	18.00	17.96	94.02	1688.57			
6410.00	0.00	0.00	0.39	18.52	18.52	93.46	1730.99			
6410.50	0.00	0.00	0.42	18.89	18.89	93.45	1765.28			
6411.00	0.00	0.00	0.49	19.32	19.32	92.51	1786.99			
6411.50	0.11	0.05	0.50	19.50	19.49	92.75	1807.52			
6412.00	0.00	0.00	0.47	19.58	19.58	93.50	1831.00			
6412.50	0.00	0.00	0.39	19.44	19.44	95.10	1848.46			
6413.00	0.00	0.00	0.36	19.34	19.34	95.93	1854.86			
6413.50	0.00	0.00	0.32	19.23	19.23	96.77	1861.27			
6414.00	0.00	0.00	0.32	19.23	19.23	96.93	1864.48			
6414.50	0.00	0.00	0.83	19.87	19.87	88.09	1750.75			
6415.00	0.00	0.00	2.25	20.00	20.00	77.90	1557.90			
6415.50	0.00	0.00	16.67	19.98	19.98	57.19	1142.62			
6416.00	1.04	0.51	48.47	19.57	19.50	39.50	770.44	6.21	3.83	37.50
6416.50	3.39	1.66	159.50	19.26	19.04	19.02	362.10	6.31	3.91	38.00
6417.00	5.78	2.84	181.75	18.94	18.57	14.82	275.27	6.40	3.99	38.50
6417.50	8.58	4.21	170.72	18.56	18.02	13.27	239.08	6.49	4.06	39.00
6418.00	C D A L		C D A L		C D A L			C D A L		
6418.50	C C D D A L		C C D D A L		C C D D A L			C C D D A L		
6419.00	C C D D A L		C C D D A L		C C D D A L			C C D D A L		
6419.50	C C D D A L		C C D D A L		C C D D A L			C C D D A L		
6420.00	C C D D A L		C C D D A L		C C D D A L			C C D D A L		
6420.50	C C D D A L		C C D D A L		C C D D A L			C C D D A L		
6421.00	100.00	69.29	0.01	14.02	0.00	100.00	0.00			
6421.50	100.00	72.54	0.01	14.45	0.00	100.00	0.00			
6422.00	100.00	70.75	0.01	14.21	0.00	100.00	0.00			
6422.50	100.00	65.51	0.01	13.53	0.00	100.00	0.00			
6423.00	51.40	25.20	20.16	12.85	9.58	4.66	44.63			
6423.50	C D A L		C D A L		C D A L			C D A L		
6424.00	46.73	22.91	16.43	13.47	10.50	18.94	198.84			
6424.50	58.80	28.83	107.98	20.84	17.10	16.74	286.21			

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Well name = STRZELECKI NO.10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6425.00	63.63	31.19	19.86	16.43	12.38	26.60	329.19			
6425.50	98.71	48.39	0.95	9.56	3.27	23.82	77.92			
6426.00	96.00	47.06	0.06	9.25	3.13	50.51	158.33			
6426.50	90.34	44.29	0.03	9.32	3.57	62.59	223.31			
6427.00	87.87	43.08	0.03	9.36	3.77	65.22	245.68			
6427.50	85.88	42.10	0.03	9.43	3.97	65.81	261.03			
6428.00	83.88	41.12	0.04	9.51	4.17	66.15	275.56			
6428.50	81.89	40.14	0.04	9.58	4.36	66.36	289.65			
6429.00	80.87	39.65	0.06	9.74	4.59	65.03	298.34			
6429.50	79.28	38.86	0.09	10.04	4.99	63.15	315.16			
6430.00	77.94	38.21	0.14	10.36	5.39	61.26	330.41			
6430.50	78.54	38.50	0.16	10.45	5.45	60.12	327.38			
6431.00	79.55	39.00	0.17	10.48	5.42	59.03	319.89			
6431.50	80.38	39.40	0.19	10.51	5.39	58.16	313.42			
6432.00	80.79	39.60	0.19	10.50	5.36	57.78	309.67			
6432.50	81.49	39.95	0.19	10.46	5.27	57.43	302.76			
6433.00	81.89	40.15	0.17	10.39	5.18	57.50	297.59			
6433.50	80.35	39.39	0.14	10.24	5.13	59.60	305.66			
6434.00	80.97	39.69	0.15	10.29	5.13	58.75	301.64			
6434.50	81.53	39.97	0.21	10.52	5.33	56.65	301.98			
6435.00	81.84	40.12	0.27	10.68	5.47	54.92	300.19			
6435.50	82.43	40.41	0.30	10.70	5.46	53.78	293.39			
6436.00	82.87	40.63	0.32	10.72	5.44	52.82	287.61			
6436.50	81.74	40.07	0.29	10.61	5.41	53.65	290.10			
6437.00	81.40	39.90	0.24	10.40	5.22	54.43	283.89			
6437.50	81.57	39.99	0.21	10.22	5.02	54.64	274.53			
6438.00	83.66	41.01	0.16	9.92	4.59	54.13	248.65			
6438.50	88.12	43.20	0.12	9.50	3.89	51.65	200.86			
6439.00	92.58	45.38	0.08	9.08	3.19	48.06	153.12			
6439.50	95.18	46.66	0.09	8.90	2.84	43.54	123.74			
6440.00	95.18	46.66	0.10	9.16	3.10	45.06	139.72			
6440.50	80.41	39.42	0.05	10.31	5.19	69.68	361.71			
6441.00	55.49	27.20	0.07	12.19	8.66	85.26	738.08			
6441.50	33.14	16.25	0.12	13.74	11.63	89.58	1042.16			
6442.00	14.09	6.90	0.26	15.15	14.25	88.64	1263.19			
6442.50	5.11	2.50	0.90	16.76	16.44	80.63	1325.52			
6443.00	7.64	3.74	4.53	18.69	18.20	67.30	1224.90			
6443.50	12.83	6.29	5.05	18.00	17.18	64.16	1102.22			
6444.00	23.01	11.28	4.65	16.64	15.17	60.70	921.00			
6444.50	34.55	16.94	5.40	15.10	12.90	53.47	689.73			
6445.00	62.46	30.62	1.02	11.38	7.40	51.53	381.30			
6445.50	73.07	35.82	0.43	9.96	5.31	48.90	259.48			
6446.00	100.00	50.52	0.01	11.59	0.00	100.00	0.00			
6446.50	100.00	50.11	0.01	11.53	0.00	100.00	0.00			
6447.00	72.15	35.37	0.56	10.08	5.49	47.32	259.69			
6447.50	67.73	33.20	0.53	10.67	6.36	52.98	336.95			
6448.00	67.11	32.90	0.73	12.85	8.58	60.06	515.35			
6448.50	69.85	34.24	0.20	11.79	7.34	68.26	501.00			
6449.00	72.79	35.68	0.05	10.00	5.36	72.62	389.43			
6449.50	100.00	50.36	0.01	11.57	0.00	100.00	0.00			

0050

Well name = STRZELECKI NO. 10

Location = 28-15-44.45/140-39-27E

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DEPTH	V. Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6450.00	100.00	53.10	0.01	11.92	0.00	100.00	0.00			
6450.50	100.00	55.84	0.01	12.28	0.00	100.00	0.00			
6451.00	100.00	57.56	0.01	12.50	0.00	100.00	0.00			
6451.50	100.00	54.37	0.01	12.09	0.00	100.00	0.00			
6452.00	100.00	49.90	0.01	11.50	0.00	100.00	0.00			
6452.50	63.88	31.32	2.17	15.04	10.97	57.33	629.16			
6453.00	71.66	35.13	0.16	12.30	7.74	72.32	559.73			
6453.50	69.70	34.17	0.06	11.78	7.35	80.11	588.60			
6454.00	66.93	32.81	0.06	11.82	7.56	82.55	624.10			
6454.50	65.93	32.32	0.08	12.11	7.91	80.19	634.68			
6455.00	66.47	32.58	0.16	12.50	8.27	74.71	617.72			
6455.50	71.38	34.99	0.19	12.32	7.78	70.59	548.95			
6456.00	77.17	37.83	0.18	11.87	6.95	67.32	468.24			
6456.50	83.47	40.92	0.13	11.23	5.91	65.50	387.42			
6457.00	85.74	42.03	0.11	11.12	5.66	65.15	368.55			
6457.50	78.71	38.58	0.24	12.21	7.20	65.53	471.78			
6458.00	72.78	35.68	0.45	13.13	8.49	64.80	550.31			
6458.50	69.46	34.05	0.02	10.44	6.02	87.46	526.53			
6459.00	77.32	37.90	0.27	12.34	7.42	65.44	485.32			
6459.50	91.98	45.09	0.11	10.41	4.55	57.41	261.35			
6460.00	100.00	51.31	0.01	8.92	0.00	100.00	0.00			
6460.50	100.00	55.85	0.01	8.14	0.00	100.00	0.00			
6461.00	100.00	54.44	0.01	8.93	0.00	100.00	0.00			
6461.50	100.00	52.71	0.01	9.90	0.00	100.00	0.00			
6462.00	100.00	54.36	0.01	10.23	0.00	100.00	0.00			
6462.50	100.00	57.54	0.01	10.16	0.00	100.00	0.00			
6463.00	100.00	58.71	0.01	10.58	0.00	100.00	0.00			
6463.50	100.00	56.51	0.01	11.52	0.00	100.00	0.00			
6464.00	100.00	53.46	0.01	12.69	0.00	100.00	0.00			
6464.50	100.00	54.35	0.01	12.49	0.00	100.00	0.00			
6465.00	100.00	55.24	0.01	12.16	0.00	100.00	0.00			
6465.50	100.00	56.62	0.01	11.71	0.00	100.00	0.00			
6466.00	100.00	58.60	0.01	11.09	0.00	100.00	0.00			
6466.50	100.00	58.97	0.01	10.91	0.00	100.00	0.00			
6467.00	100.00	59.70	0.01	10.75	0.00	100.00	0.00			
6467.50	100.00	61.65	0.01	10.56	0.00	100.00	0.00			
6468.00	100.00	63.43	0.01	10.40	0.00	100.00	0.00			
6468.50	100.00	64.90	0.01	10.29	0.00	100.00	0.00			
6469.00	100.00	66.69	0.01	9.81	0.00	100.00	0.00			
6469.50	100.00	70.29	0.01	8.79	0.00	100.00	0.00			
6470.00	100.00	74.15	0.01	7.71	0.00	100.00	0.00			
6470.50	100.00	78.36	0.01	8.00	0.00	100.00	0.00			
6471.00	100.00	78.02	0.01	8.61	0.00	100.00	0.00			
6471.50	100.00	74.41	0.01	9.56	0.00	100.00	0.00			
6472.00	100.00	70.87	0.01	10.48	0.00	100.00	0.00			
6472.50	100.00	66.82	0.01	11.32	0.00	100.00	0.00			
6473.00	100.00	61.74	0.01	12.02	0.00	100.00	0.00			
6473.50	100.00	57.80	0.01	12.68	0.00	100.00	0.00			
6474.00	100.00	57.45	0.01	12.94	0.00	100.00	0.00			
6474.50	100.00	58.55	0.01	12.82	0.00	100.00	0.00			

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Well name = STRZELECKI NO.10

Location = 28-15-44.4S/140-39-27E

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DEPTH	V Shale	V clay	Perm.	PhiZ	PhiE	Sw	PhiE*Sw	Cum Phi*H	Cum Hc*H	Cum H
6475.00	100.00	60.72	0.01	12.32	0.00	100.00	0.00			
6475.50	100.00	62.31	0.01	11.74	0.00	100.00	0.00			
6476.00	100.00	63.02	0.01	11.00	0.00	100.00	0.00			
6476.50	100.00	61.78	0.01	10.46	0.00	100.00	0.00			
6477.00	100.00	57.98	0.01	10.59	0.00	100.00	0.00			
6477.50	100.00	55.49	0.01	10.72	0.00	100.00	0.00			
6478.00	100.00	56.15	0.01	11.22	0.00	100.00	0.00			
6478.50	100.00	56.36	0.01	11.66	0.00	100.00	0.00			
6479.00	100.00	57.02	0.01	11.98	0.00	100.00	0.00			
6479.50	100.00	57.93	0.01	12.24	0.00	100.00	0.00			
6480.00	100.00	59.11	0.01	11.85	0.00	100.00	0.00			
6480.50	100.00	59.62	0.01	11.27	0.00	100.00	0.00			
6481.00	100.00	60.78	0.01	10.68	0.00	100.00	0.00			
6481.50	100.00	61.16	0.01	9.91	0.00	100.00	0.00			
6482.00	100.00	60.72	0.01	9.31	0.00	100.00	0.00			
6482.50	100.00	60.05	0.01	8.77	0.00	100.00	0.00			
6483.00	100.00	66.47	0.01	8.24	0.00	100.00	0.00			
6483.50	100.00	80.57	0.01	5.78	0.00	100.00	0.00			
6484.00	100.00	84.69	0.01	5.48	0.00	100.00	0.00			
6484.50	100.00	82.20	0.01	6.09	0.00	100.00	0.00			
6485.00	100.00	76.43	0.01	7.57	0.00	100.00	0.00			
6485.50	100.00	71.22	0.01	8.78	0.00	100.00	0.00			
6486.00	100.00	65.21	0.01	10.14	0.00	100.00	0.00			
6486.50	100.00	66.96	0.01	9.44	0.00	100.00	0.00			
6487.00	100.00	69.28	0.01	8.60	0.00	100.00	0.00			
6487.50	100.00	71.91	0.01	7.79	0.00	100.00	0.00			
6488.00	100.00	68.25	0.01	8.69	0.00	100.00	0.00			
6488.50	100.00	65.72	0.01	9.29	0.00	100.00	0.00			
6489.00	100.00	63.20	0.01	9.88	0.00	100.00	0.00			
6489.50	100.00	61.96	0.01	10.14	0.00	100.00	0.00			
6490.00	100.00	61.67	0.01	10.25	0.00	100.00	0.00			
6490.50	100.00	62.88	0.01	10.05	0.00	100.00	0.00			
6491.00	100.00	64.19	0.01	9.87	0.00	100.00	0.00			
6491.50	100.00	65.50	0.01	9.69	0.00	100.00	0.00			
6492.00	100.00	66.88	0.01	9.52	0.00	100.00	0.00			
6492.50	100.00	69.10	0.01	9.15	0.00	100.00	0.00			
6493.00	100.00	72.99	0.01	8.34	0.00	100.00	0.00			
6493.50	100.00	82.24	0.01	6.11	0.00	100.00	0.00			
6494.00	100.00	89.32	0.01	4.47	0.00	100.00	0.00			
6494.50	100.00	86.93	0.01	4.98	0.00	100.00	0.00			
6495.00	100.00	82.70	0.01	5.96	0.00	100.00	0.00			
6495.50	100.00	77.68	0.01	7.15	0.00	100.00	0.00			
6496.00	100.00	72.34	0.01	8.43	0.00	100.00	0.00			
6496.50	100.00	68.25	0.01	9.37	0.00	100.00	0.00			
6497.00	100.00	67.75	0.01	9.37	0.00	100.00	0.00			
6497.50	100.00	65.90	0.01	9.23	0.00	100.00	0.00			
6498.00	100.00	63.13	0.01	9.45	0.00	100.00	0.00			
6498.50	100.00	64.52	0.01	9.43	0.00	100.00	0.00			
6499.00	100.00	66.16	0.01	9.42	0.00	100.00	0.00			
6499.50	100.00	65.70	0.01	9.86	0.00	100.00	0.00			

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4610-1

COMPUTERIZED
LOG
INTERPRETATION
FOR

STRZELECKI NO.10

28-15-44.4S/140-39-27E

09/11/82

SEAL

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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 WILLFUL 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.

SANDSTONE ANALYSIS

FACTORS USED IN THIS INTERPRETATION

TOP BASE A M N RA TEMP GRAD GHAX GMIN RSH COR C G I RHOG RHOS THIS PHIC

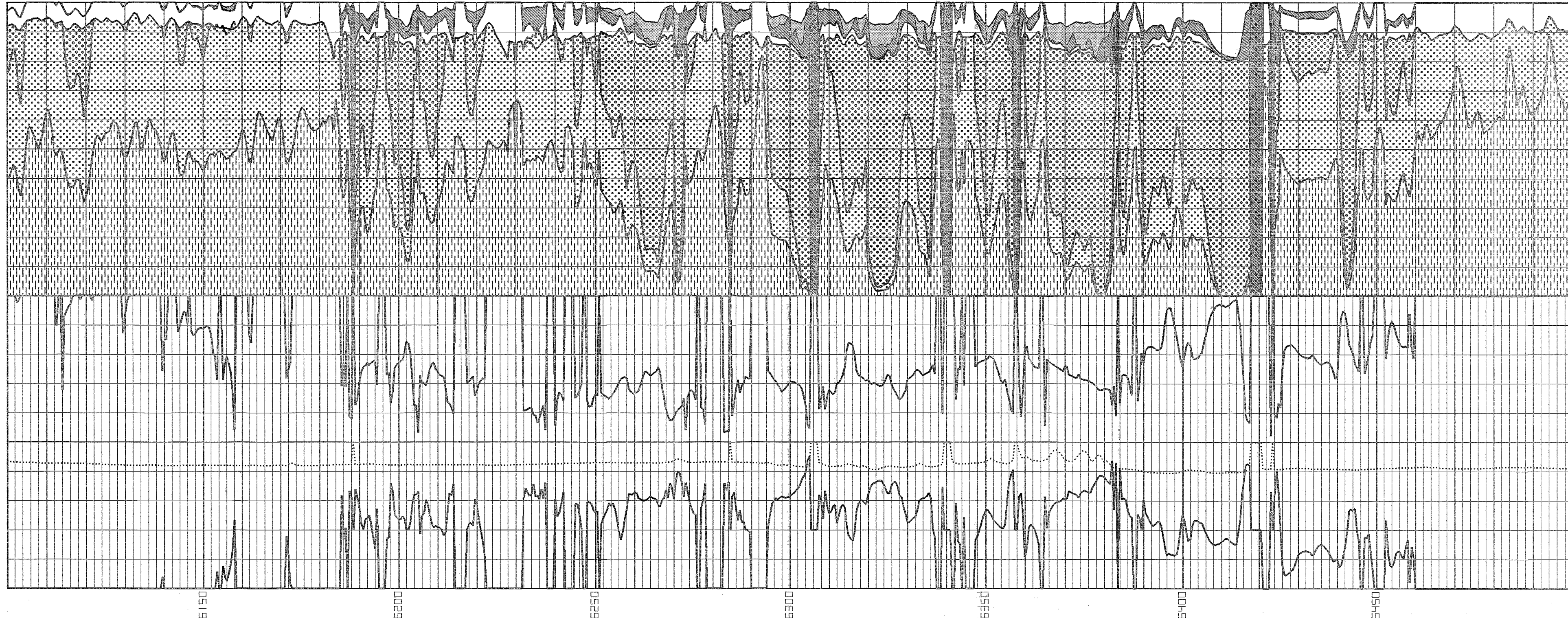
6100.00 5500.00 1.00 2.00 2.00 0.500 223.0 2.34 154.0 36.0 33.5 2 2 2 2.650 2.650 16.5 24.

REMARKS

POROSITY DERIVED FROM NEUTRON/DENSITY PLOT

DATA STORED IN ASTRZEL-10

DEPTH	PERMEABILITY	WATER SATURATION	BULK VOLUME ANALYSIS				
			CLAY	SILT	SAND	ØZ	ØE ØESW
.01	1000 0	100					
	DELTA HOLE						
	-8 -4 +4 +8						



COMENT LTD.

STRZELECKI NO.10

28-15-44.4S/140-39-27E



STRZELECKI #10
FLOW AND BUILDUP TEST
FEB. 14 TO MARCH 3, 1983

Report No. RE:028/83
Date: 15/3/83

Author: P.A. Druet

WP:2745N

C O N T E N T S

INTRODUCTION

RESULTS

CONCLUSIONS

RECOMMENDATIONS

DISCUSSION

FIGURES

Fig. 1	Horner Plot (p^2 vs time function)
Fig. 2	Log ΔP vs Log ΔT Plot
Fig. 3	Horner Plot (p vs time function)
Fig. 4	CNL-FDC and DLL Well Logs

TABLES

Table 1	Horner Data
Table 2	Reservoir and Production Data
Table 3	Flowrates vs Time
Table 4	Material Balance Calculations

APPENDICES

Appendix A	Surface Data
Appendix B	Subsurface Pressure Data

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INTRODUCTION

A flow test was run on Strzelecki #10 between 14th Feb. 1983 and 22nd Feb. 1983. The purpose of the test was to obtain estimates of reservoir performance as well as separator samples of oil and gas analyses. The test well flowed gas at rates decreasing throughout the test from 5 MMSCF/D to about 4.4 MMSCF/D. Oil production also decreased throughout the test from about 200 BOPD to about 139 BOPD. The corresponding GOR increased over the test from 25000 scf/STB to about 32000 scf/STB. The surface flowing pressures decreased over the test from 846 psia to about 719 psia. Approximately 35 MMSCF of gas and 1240 STB of oil was produced over 193 hrs on a 1/2" choke.

A pressure buildup test was then performed over 212 hours. The bottomhole pressures were continuously monitored for subsequent analysis to determine extrapolated reservoir pressure (p^*), flow capacity (kh) and radius of investigation (r_i).

RESULTS

The following results were obtained from reservoir analysis of the test data:

Extrapolated Reservoir Pressure (p^*)	=	2729 psia
Flow Capacity (kh)	=	51.2 md-ft.
Permeability (k)	=	5.1 md
Apparent Skin Factor (S')	=	-2.6
Potential (head)	=	140 ft. ASL
Radius of drainage (r_e)	=	447 ft.

The reservoir parameters used in the calculations are documented on Table 2.

The test was successful despite some mechanical problems which caused the well to be shut-in twice during the flow period for 2 hours and 4 hours respectively. The results of these shut downs produced early time transient effects which can be observed on the pressure/time plots (Figs. 1, 2 and 3). The transient portion of the Horner plot (Fig. 1) appeared unaffected by these early time problems. The oil was produced constantly throughout the test with

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little or no slugging. It was also possible that phase segregation could have added to these early transient effects.

The extrapolated reservoir pressure of 2729 psia indicates reservoir depletion when compared with the DST extrapolated reservoir pressure of 2961 psia, taken 18/6/82. The resulting 232 psi of reservoir depletion corresponds to about .5 Bcf of gas-in-place when a material balance is calculated.

CONCLUSIONS

1. Pressure and production results indicate a very limited reservoir with a gas-in-place of about 0.5 Bcf.
2. The unusually high GOR's of about 30,000 usually imply a gas-condensate reservoir. The produced fluid was oil and samples will be analyzed.

RECOMMENDATIONS

1. A static gradient survey is recommended to prove beyond any reasonable doubt that the reservoir is limited. The survey should be made prior to the next perforation program for the two upper Toolachee zones.
2. Should limited reserves be confirmed it is recommended that the zone be plugged off to allow for production from the two upper Toolachee sands previously tested on DST.

DISCUSSION

Analysis

A typical Horner analysis was used to determine p^* , kh , S and r_e . Since the Horner curve displayed early time anomalies (see Fig. 1), a $\log \Delta p - \log \Delta t$ plot of the pressure data was generated (Fig. 2) to determine the beginning of the semi-log straight line. Although the early-time transient effects were also observed on the log-log plot, the start of the semi-log straight line was determined to occur at about 1 hour. The end of the transient effects occurred at about 8 hours after which a smooth semi-log straight line was observed from the match with Gringarten's (Ref. 1) type curve.

Early Time Transient Anomaly

It is believed that the transient anomalies early in the Horner plot are related to several unplanned shut-ins during the flow period. The first shut-in occurred after 92 hours of flow for 2 hours, and the second shut-in occurred after 122 hours for 4 hours due to mechanical difficulties with setting the pressure bombs. From 122 hours to 212 hours, no interruptions were recorded.

Extrapolated Pressure

It is the opinion of the author that the correct semi-log straight line was chosen in determining the p^* of 2729 psia (Fig. 1). The depletion of 232 psi from the original calculated p^* (DST 3 on July 18, 1982) can be seen on the Horner graph. The lower bomb pressures were used in the analysis since the bomb was located right at the perforation mid point of 6372' KB. Both bombs recorded similar pressures and trends as can be seen from Figure 3 (a Horner plot with p instead of p^2). Surface and subsurface pressure data is attached in the appendices.

Depletion

The following observations all support the contention that depletion has occurred during this well test:

1. The extrapolated static reservoir pressure calculated from this well test is 232 psi lower than the extrapolated static reservoir pressure from the original DST. Both Horner plots appear to show reasonable interpretations.
2. The flowing wellhead pressure dropped continuously from 846 to 719 psia during the test even though the GOR went up from 25000 to 32000 scf/STB over the same test interval.
3. The gas and oil flowrates went down continuously throughout the test (see Table 3).

4. The radius of drainage of the test was calculated to be 447 ft. The estimated radius of a gas reservoir with 0.5 Bcf of gas-in-place (from Material Balance estimates) is about 800 feet. This means that we should not have observed any pseudo-steady state pressure effects on our Horner plot which we did not.
5. The potentiometric head (140 ft. ASL) calculated from the extrapolated buildup following the flow test is significantly less than those calculated from other Toolachee DST's (average of 426 ft. ASL) in Strzelecki gas field.

REFERENCES

1. Gringarten et al. SPEJ, August 1, 1974, p. 347

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TABLE 1

STRZELECKI #10 WELL TEST
GAS EVALUATION
HORNER DATA

T = Cum. Gas Prod/Last Prod. Rate
 = 35.53/4.35 = 8.1 days = 196.0 hrs.

Shut-in Time	$\frac{T + \theta}{\theta}$	Shut-in Pressures El #21364 @ 6372' KB = MPP	
		P(psia)	P ² (10 ⁶ psia ²)
0		1108	1.23
0.17	1153.9	1801	3.24
0.33	594.9	2141	4.58
0.50	393	2211	4.89
0.67	293.5	2236	5.00
0.83	237.1	2253	5.08
1	197.0	2270	5.15
1.25	157.8	2291	5.25
1.5	131.7	2321	5.39
1.75	113.0	2327	5.41
2	99.0	2342	5.48
2.5	79.4	2363	5.58
3	66.3	2327	5.41
3.5	57.0	2329	5.42
4	50.0	2335	5.45
5	40.2	2344	5.49
6	33.7	2354	5.54
8	25.5	2370	5.62
10	20.6	2384	5.68
12	17.3	2396	5.74
16	13.3	2418	5.85
20	10.8	2436	5.93
24	9.2	2452	6.01
32	7.1	2479	6.15
40	5.9	2501	6.26
48	5.1	2520	6.35
60	4.3	2543	6.47
67.27	3.9	2553	6.52
69.68	3.8	2556	6.53
72	3.7	2562	6.56
96	3.0	2585	6.68
120	2.6	2604	6.78
140.07	2.4	2614	6.83
141.2	2.4	2627	6.90
165	2.2	2634	6.94
189	2.0	2641	6.97
212.1	1.9	2645	7.00

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TABLE 2RESERVOIR AND PRODUCTION PARAMETERS

Choke Size	= 2 in.
K.B. elevation	= 211 ft. ASL
Wellbore Radius (rw)	= 0.354 ft.
Surface Temperature	= 614 ⁰ R
Producing Time (tp)	= 196 hr.
Reservoir Temperature (TR)	= 711 ⁰ R
Sand Thickness (h)	= 10 ft. (E. Vegh July '82)
Average Porosity (ϕ)	= 0.167 (" ")
Average Water Saturation (Sw)	= 0.255 (" ")
Gas Relative Density (γ)	= 0.736 (GASPAC)
Gas Deviation Factor (Z)	= 0.914 (")
Viscosity (μ)	= 0.017 cp (GASPAC)
Gas Compressibility (cg)	= $0.53 \times 10^{-3} \text{ psi}^{-1}$ (GASPAC)
Total Compressibility (Ct)	= $0.397 \times 10^{-3} \text{ psi}^{-1}$
Extrapolated Reservoir Pressure (p*)	= 2729 psia
Final Flow Pressure (pwf)	= 1108 psia
Pressure at tp = 1 hr (Pwsi)	= 1975 psia
Horner Slope (m)	= $1.55 \times 10^6 \text{ psia}^2/\text{cycle}$

WP:2745N

TABLE 3FLOWRATES VS. TIME

<u>CUMULATIVE FLOW TIME (HRS)</u>	<u>GAS FLOW RATE (MMCF/D)</u>	<u>OIL FLOW RATE (BOPD)</u>
6	5.2	233
10	5.0	198
26	4.9	150
46	4.7	198
57	4.6	119
69	4.4	178
91 to 93	0	0 (well shut in)
93	4.4	151
121 to 125	0	0 (well shut in)
117	4.4	151
141	4.4	145
165	4.5	153
189	4.4	133
193	4.4	139

PAD/sc
15/3/83

WP:2745N

TABLE 4STRZELECKI #10TOOLACHEE GASMATERIAL BALANCE CALCULATIONS

1. Initial extrapolated pressure from DST 17/6/82 = 2961 psia
2. Extrapolated pressure from Well Test 22/2/83 = 2729 psia
3. Reservoir Depletion = 232 psi
4. Cumulative gas produced = 35.53 MMSCF
5. $OGIP = \frac{(2961 - 15) \times 35.5}{232} = 0.45 \text{ Bcf}$

Note: - Volume of oil produced = 1240 STB
- This would increase total GIP by between 3 to 5% and was neglected in GIP estimate.

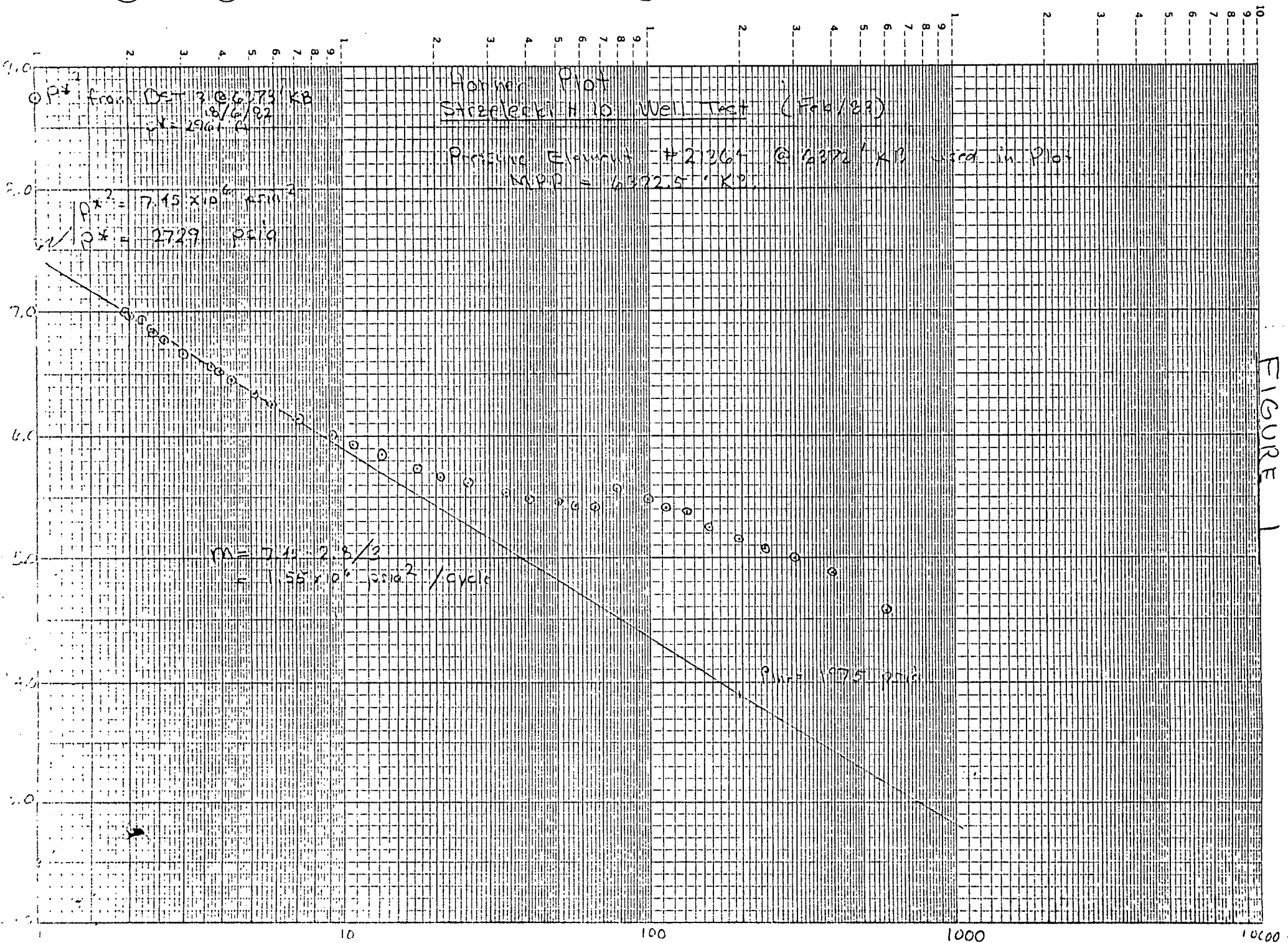


FIGURE 1

Strzelecki #10

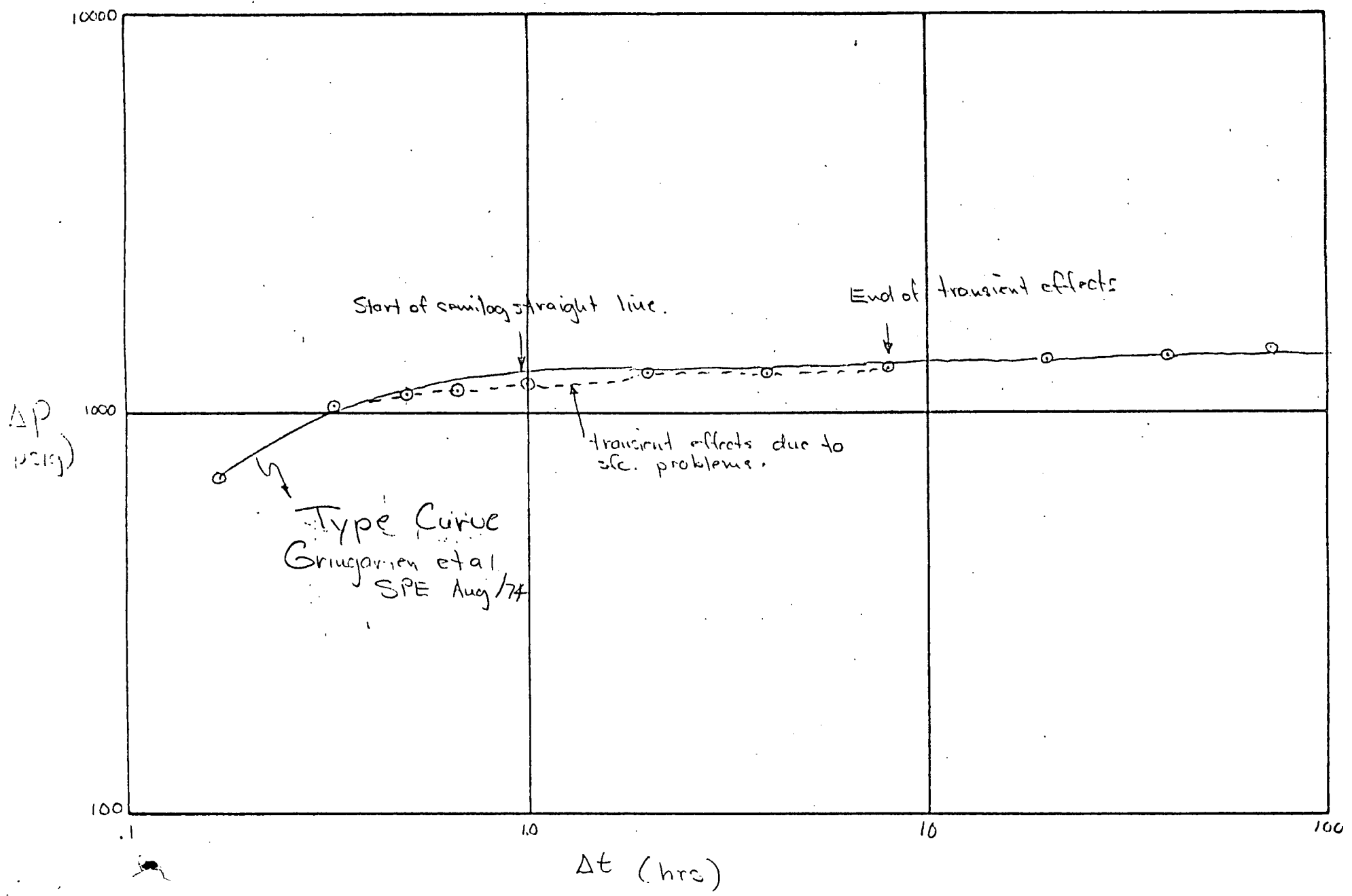


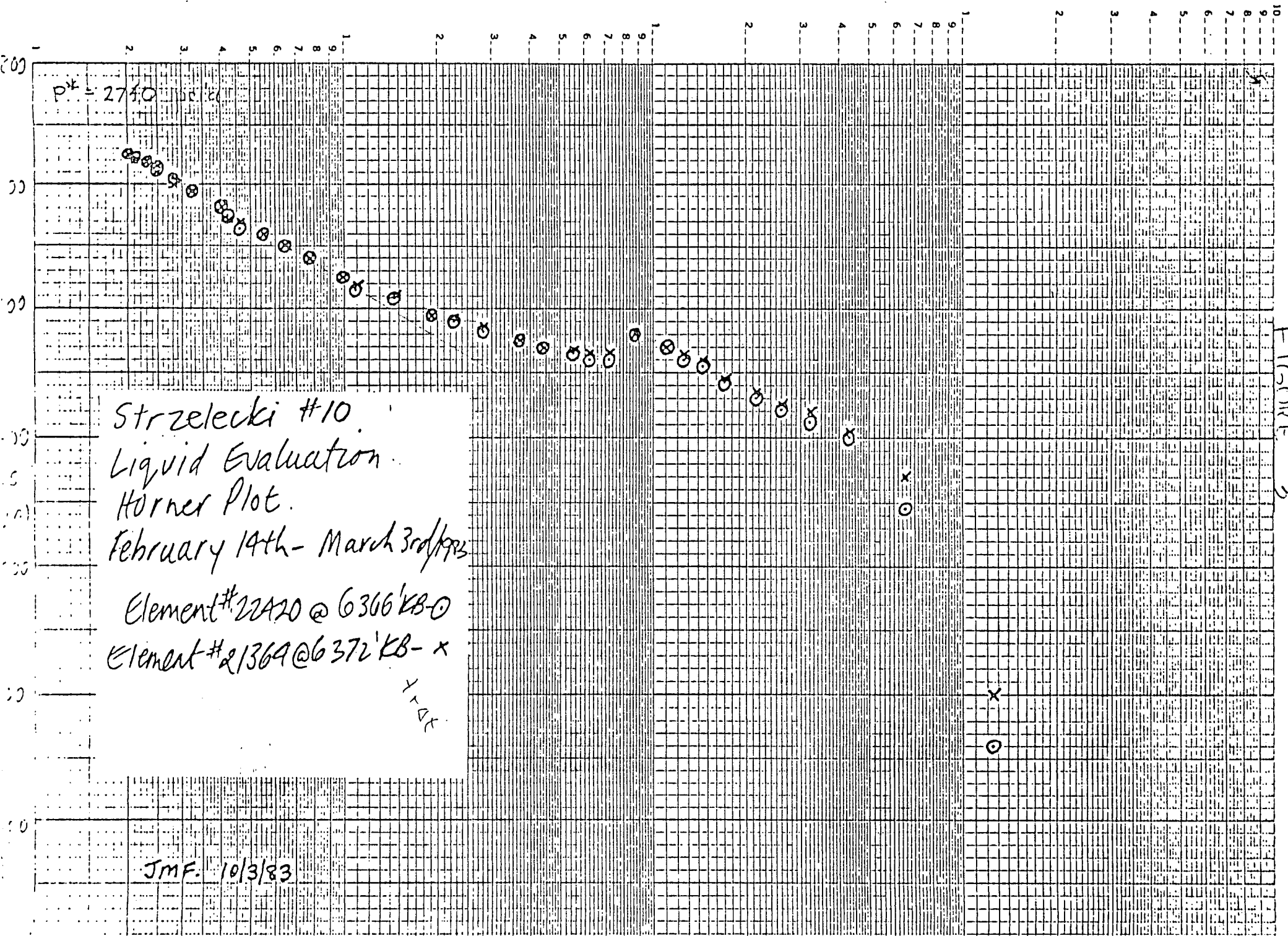
FIGURE 2

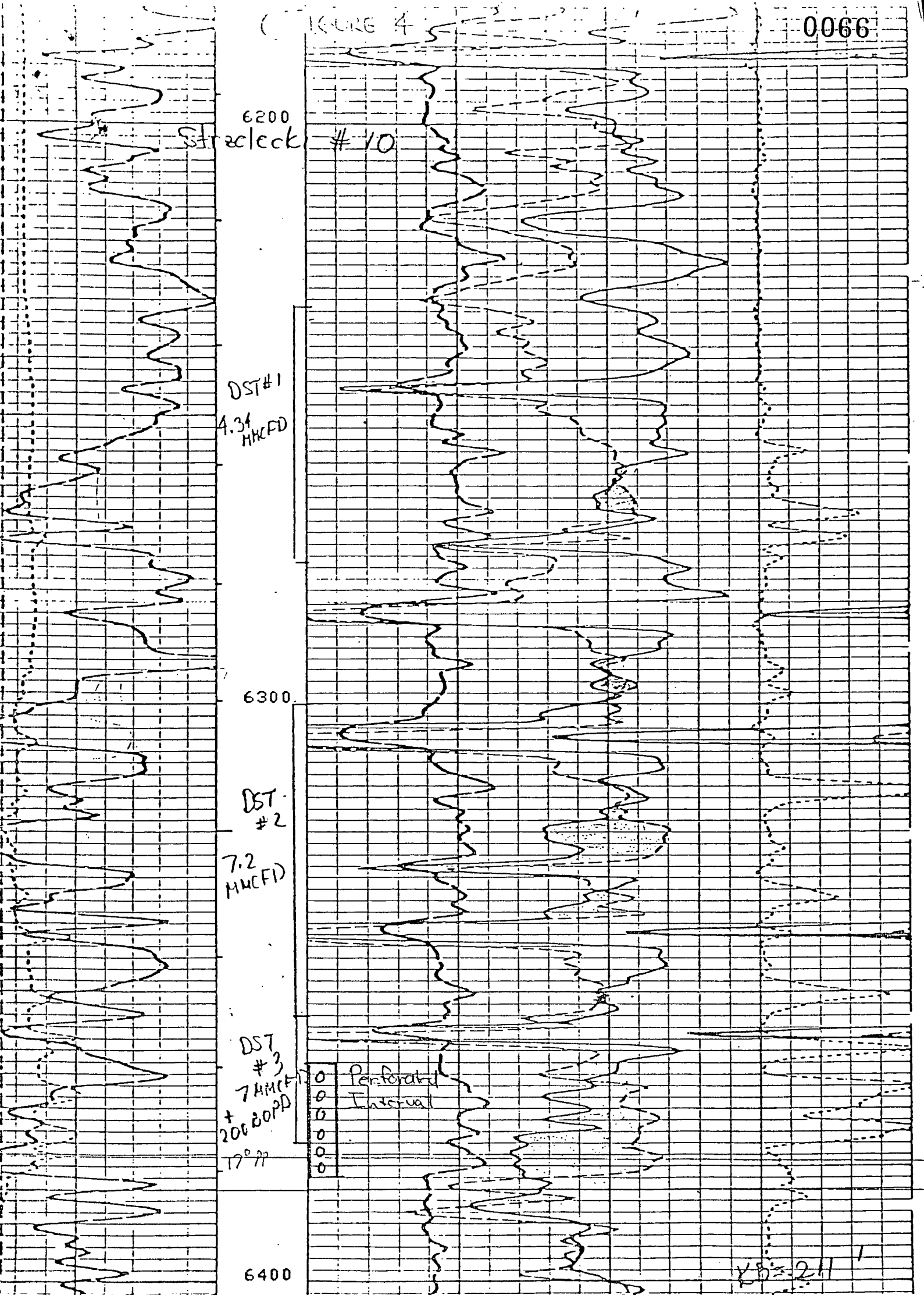
$P^* = 2740$ psia

Strzelecki #10
 Liquid Evaluation
 Horner Plot.
 February 14th - March 3rd/1973
 Element #22A20 @ 6366' KB-O
 Element #21369 @ 6372' KB-X

X-O-X

JMF. 10/3/83





0200

FIGURE 4

0067

Inzelecki #10

6300

0	Perforated
0	Interval
0	
0	
0	

6400

APPENDIX A

SURFACE SEPARATOR AND PRESSURE DATA

OIL WELL TEST RESULTS

WELL NAME: Strzelecki #10
 TESTED BY: GRM/A/B. Tickie/6.12.81
 TEST RUN: 4-026"

TYPE OF TEST Liquid Evaluation Flow Test

DATE: February 1981 - 22nd/1983

WELL DEPTH: 1000'

TIME	CHUCK SIZE INS	WELLHEAD DATA			SUBSURFACE DATA			H.P. SEPARATOR DATA					L.P. SEPARATOR DATA					OIL PROD BPD	CUM OIL BBLs	OGR BBL SEP 884/1111CF	H2O PROD BPD	BS&W %	OIL GRAV API 60°F	REMARKS
		ASIN. PSIA	TBC. PSIA	TEMP OF	ELV	ELV	ELV	P.F. PSIA	H.W. INS H2O	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MCFD	P.F. PSIA	H.W. INS H2O	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MCFD							
11:00	3 1/4"		2355	89																				
11:30			846	93																				Flowed well.
12:00			845	96				405	128	80	2.0													Divert flow through s.
12:30																								By-pass separator ring
13:00			828	102				345	140	84	2.0	5.0												Divert flow to sep.
14:00		1837																						
15:00		2117																						Bleed down casing
17:00		1755	831	116				335	144	98	2.0	5.2						233	38.85	46.6	NEL			
21:00		2154	833	125				355	132	105	"	5.0						198	71.85	39.6	"			
22:00		2190																						Bleed down casing
23:00		1610	829	129				405	116	109	2.0	5.0						198	104.85	39.6	NEL			
01:00		1682	823	131				395	"	113	"	5.0						139	127.96	27.8	"			
04:00		1755	815	134				415	112	116	"	5.0						198	160.00	39.6	"			
12:00		"	813	141				335	136	123	"	4.9						150	185.09	30.6	"	0.03	40	
15:00		1813	805	"				315	140	122	"	4.8						186	216.00	38.8	"			
21:00		1805	801	144				340	129	120	"	"						238	255.62	49.6	"	0.7	39.8	
23:00		"	795	"				345	124	121	"	4.7						79	268.82	16.8	"			39.7
03:00		1761	788	"				350	120	"	"	"						158	294.61	33.6	"	0.5	39.2	
04:00		"	787	133				335	124	122	"	"						198	327.63	42.1	"	0.7	39.7	
13:00		1813	782	144				390	"	129	"	"						158	354.04	33.6	"	0.6	38.5	
17:00		1837	779	"				"	"	"	"	"						"	380.45	"	"	"	39.2	
21:00		1799	774	"				345	120	126	"	4.6						119	400.26	25.9	"	"	39.4	
23:00		1755	770	"				405	102	127	"	"						198	433.20	43	"	"	39.5	
03:00		"	767	"				420	94	126	"	4.5						139	456.67	30.9	"	"	39.4	
04:00		"	777	"				505	72	129	"	4.4	13.06	12.5				178	486.38	40.4	"	0.7		
12:00		"	760	149				345	120	131	"	4.6	13.79	10				158	512.79	34.3	"	0.6		
17:00		1736	753	147				350	102	129	"	4.5	14.16	"				139	535.90	30.9	"	0.4		
21:00		✓ 1683	755	145				425	90	127	"	4.6	11.07	9				178	565.61	38.7	"	0.5		

0069

OIL WELL TEST RESULTS

WELL NAME: Strzelecki #10TESTED BY: CRM-A/B. TickleWELL RUN: 4.026

TYPE OF TEST

Liquid Evaluation Flow TestDATE: February 14th - 22nd / 1983SPECIFIC GRAVITY: H.P. SEP L.P. SEP

PC

I-P

DATE	TIME	CHUCK SIZE INS	WELLHEAD DATA			SUBSURFACE DATA			H.P. SEPARATOR DATA					L.P. SEPARATOR DATA					OIL PROD BPD	CUM OIL BBLs	OGR COR SGF BBE BBE/ WYLF	H ₂ O PROD BPD	BS&W %	OIL GRAV API	REMARKS
			ANN. PSIA	TBC. PSIA	TEMP OF	EL ^o	EL ^o	EL ^o	P.F. PSIA	H.W. INS H ₂ O	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MMCFD	P.F. PSIA	H.W. INS H ₂ O	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MMCFD							
2/15/83	10:00	7/4	1683	820	142				645	54	127	2.0	4.2						139	588.72	33.1	NEL	0.6	39.7	
	0800		"	837	144				675	50	129	"	"						"	611.83	"	"	0.5	"	
	0700																								Adjust back pressure
	0600		1610	744	144				325	114	129	2.0	4.4						151	631.92	34.3	NEL	0.8	41.1	
	1200		"	745	143				315	120	123	"	"						210	666.82	47.7	"	0.3	38.8	
	1700		1545	743	147				320	176	118	"	4.5						147	641.25	32.7	"	0.2	39	
	2100		1570	740	145				315	118	122	"	"						151	716.34	33.6	"	0.2	39.6	
2/30/83	0100		1545	739	"				"	"	"	"	"						158	742.75	35.1	"	0.3	39.8	
	0500		1520	736	143				320	112	120	"	4.4						155	768.50	35.2	"	"	39.4	
	0900		1510	735	"				330	110	"	"	4.4						143	772.21	32.5	"	0.1	39	
	1300		1490	734	149				320	117	129	"	4.5						151	817.36	33.6	"	0.2	38.9	
	1304																								Well shut in to tag IV-11
	1558																								Well back on line
	1130		1573	737	147				315	121	123	"	4.5						186	832.87	41.3	"	0.4	39	
	2100		1573	736	"				"	118	122	"	"						141	856.31	31.3	"	"	38.9	
2/23/83	0100		1573	734	"				"	115	"	"	4.4						156	882.39	35.4	"	0.2	39.3	
	0500		1573	733	"				325	114	"	"	4.5						151	907.46	33.6	"	0.3	39	
	0900		1375	730	149			"	"	113	123	"	"						145	931.56	32.2	"	"	39.1	
	1300		"	729	152				315	117	131	"	4.4						155	969.31	35.2	"	0.2	39	
	1700		1345	"	151				"	118	127	"	4.5						139	982.42	30.9	"	"	39.2	
	2100		1325	727	"				"	113	"	"	4.4						155	1008.17	35.2	"	"	39.1	
2/23/83	0100		1310	728	149				320	111	125	"	"						125	1028.96	28.4	"	0.3	39	
	0500		1285	726	"				330	107	127	"	"						143	1052.73	32.5	"	0.2	39.1	
	0900		1255	725	151				"	108	129	"	4.5						153	1078.15	34	"	"	39	
	1300		1245	729	153				330	111	136	"	4.4						135	1100.60	30.7	"	0.3	39	
	1700		1225	727	152				345	107	132	"	"						"	1123.05	"	"	0.2		
	2100		1195	"	"				352	102	131	"	"						147	1147.48	33.4	"	"		
2/23/83	0100		1175	"	150				330	107	127	"	4.3						141	1170.42	32.8	"	0.3		
	0500		1155	720	149				"	106	125	"	"						143	1194.68	33.3	"	0.2		
	0900		1135	"	"				335	105	127	"	4.4						133	1216.8	30.2	"	"		
	1300	V	1115	719	154				320	112	132	V	"						139	1239.91	31.6	V	"		

0070

APPENDIX B

BOTTOMHOLE PRESSURE DATA

OIL WELL TEST RESULTS

WELL NAME: Strzelecki #10
 TESTED BY: GAMMA 10. Tickle
 WELL R/N: 4.026
 S.I.

TYPE OF TEST Liquid Evaluation Build Up
 SPECIFIC GRAVITY H.P. SEP
PC

DATE: February 22nd - March 3rd / 1983
 TAKEN FROM

DATE	TIME	WELLHEAD DATA			SUBSURFACE DATA			H.P. SEPARATOR DATA					L.P. SEPARATOR DATA					OIL PROD BPD	CUM OIL BBLS	GOR SCF/BBL	H ₂ O PROD BPD	BS&W %	OIL GRAV API	REMARKS
		LINE SIZE (IN)	ANN. PSIA	TBC. PSIA	TEMP OF	ELV	ELV	P.F. PSIA	H.W. INS	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MOFD	P.F. PSIA	H.W. INS	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MOFD							
						22420	21364																	
						6366'06	6372'08																	
2/23				719		701	714																	Hang on lub.
	1206					1100	1108																	Hang bombs
	1306					1100	1108																	Shut well in
	1316	0.17	1125	1815	141	1717	1801																	
	1326	0.33	1075	1900	132	2090	2141																	
	1336	0.5	1015	1919	127	2201	2211																	
	1346	0.67	965	1935	125	2226	2236																	
	1356	0.83	915	1959	123	2244	2253																	
	1406	1	875	1964	122	2262	2270																	
	1417	1.25	815	1982	120	2285	2291																	
	1436	1.5	765	1995	"	2313	2321																	
	1451	1.75	715	2010	"	2322	2327																	
	1506	2	665	2028	116	2337	2342																	Max. Bottom Hole
	1526	2.5	585	2044	114	2359	2363																	Temp = 251°F
	1606	3	515	2000	113	2324	2327																	
	1636	3.5	440	"	"	2324	2329																	
	1706	4	385	2005	114	2330	2335																	
	1806	5	265	2013	113	2339	2344																	
	1906	6	190	2025	109	2349	2354																	
	2106	8	175	2034	96	2365	2370																	
	2306	10	"	2045	89	2380	2384																	
2/23	0106	12	165	2055	87	2393	2396																	
	0806	16	160	2075	82	2414	2418																	
	0906	20	115	2085	93	2432	2436																	
	1306	24	65	2098	106	2449	2452																	
	2006	32	35	2118	99	2477	2479																	
2/23	0506	40	15	2155	82	2500	2501																	
	1306	48	"	2172	99	2519	2520																	
2/23	0106	60	"	2193	89	2532	2543																	
	1052	67.27				2554	2553																	OFF Bottom

0072

OIL WELL TEST RESULTS

WELL NAME: Strzelecki #10 Peterson
 TESTED BY: GRAY/G. Jickel/G. Jickel
 TEST RUN: 4-026
 S.I.

TYPE OF TEST Liquid Evaluation BuildUp.

SPECIFIC GRAVITY: H.P. SEP L.P. SEP

PGF

J-G

DATE: February 22nd - March 3rd/1983

TOOGEN FROM

DATE	TIME	TIME CLOCK TIME (H:M)	WELLHEAD DATA			SUBSURFACE DATA Pressures (PSIA)			H.P. SEPARATOR DATA					L.P. SEPARATOR DATA					OIL PROD BPD	CLM OIL BBL	GOR SCF/ BBL	H ₂ O PROD BPD	BS&W %	OIL ORAV DAPI	REMARKS
			ANN. PSIA	TBC. PSIA	TEMP OF	ELV PSIA	ELV PSIA	ELV PSIA	P.F. PSIA	H.W. INS H ₂ O	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MOFO	P.F. PSIA	H.W. INS H ₂ O	TEMP OF	ORIF SIZE INS	GAS FLOW RATE MOFO							
5/5/83				2180		22420	21364																		Hang in lub.
	1047	69.68				2561	2556																		Hang bombs
	1300	72				2565	2562																		
11/23/83	1306	96	15	2207	100	2591	2585																		
11/23/83	1306	120	"	2229	"	2610	2604																		
11/23/83	0910	14007				2623	2614																		Off bottom
				2231		2229	2227																		Hang in lub.
	1000	74	15	"	98	2220	2227																		Hang in lub
	1018	141.2				2628	2627																		Hang bombs
11/23/83	1006	165	15	2207	100	2636	2694																		
11/23/83	1006	189	"	2258	89	2645	2641																		
11/23/83	0912	212.1				2651	2645																		Off bottom
	1002	215.3		2254		2249	2245																		Hang in lub
	1032	215.5	15	2254	93																				
				21																					
																									Max Bottom Hole
																									Temp = 251°F

0073

STRZELECKI 10 - STATUS SUMMARY

10TH JANUARY, 1984.

FOLLOWING DST NO. 3 WHICH INDICATED A HEAVY FLUID WAS BEING PRODUCED WITH GAS, AN EXTENDED PRODUCTION TEST WAS RUN IN FEBRUARY 1983 FOR APPROXIMATELY 8 DAYS FROM THE 61-2 SAND, AND PRODUCED THE FOLLOWING OVER A FLOW PERIOD OF 197 HRS.

CUM. OIL PRODUCED 1240 STB
CUM. GAS PRODUCED 35.53 MMSCF

RESERVOIR PRESSURE AFTER EXTENDED PRODUCTION TEST:

(A) DRAWDOWN/BUILDUP (FEB. 1983): EXTRAPOLATED PRESSURE 2729 PSIA. (AT DATUM DEPTH 6372' KB). FINAL PRESSURE READING AT 6372' KB = 2651 PSIA COMPARED WITH INITIAL PRESSURE OF 2961 PSIA (DST NO. 3). DUE TO HIGH GOR'S OF ABOUT 30,000 INITIAL MATERIAL BALANCE WORK ASSUMED A CONDENSATE RESERVOIR.

ORIGINAL MATERIAL BALANCE ESTIMATE OGIP = 0.5 BCF
(RE: 028/83 P.A. DRUET 15/3/83).

(B) STATIC SURVEY (APRIL 1983): EXTRAPOLATED PRESSURE 2762 PSIA. (AT DATUM DEPTH 6372' KB). FINAL PRESSURE READING AT 6275' KB = 2740 PSI.

RECENT IN HOUSE REVISION HAS ASSUMED TWO POSSIBLE SCENARIOS:

1. GAS-CAP RESERVOIR
2. GAS-CONDENSATE RESERVOIR

WITH THE FOLLOWING RESULTS.

26/8/83:

B1) MATERIAL BALANCE ASSUMING GAS-CAP RESERVOIR:

GIP = 0.568 BCF
OIP = 320 MBBLs

B2) MATERIAL BALANCE ASSUMING GAS CONDENSATE RESERVOIR: GIP = 0.567 BCF.

(C) STATIC SURVEY (NOV. 1983): EXTRAPOLATED PRESSURE 2782 PSIA. (AT DATUM DEPTH 6372' KB). FINAL PRESSURE READING AT 6372' KB = 2762 PSI.

16/11/83:

C1) MATERIAL BALANCE ASSUMING GAS-CAP RESERVOIR:

GIP = 0.614 MMSCF
OIP = 346 MBBLs

C2) MATERIAL BALANCE ASSUMING GAS-CONDENSATE RESERVOIR:

GIP = 0.630 BCF.

THE LAST PRESSURE READING FROM NOV. STATIC SURVEY WAS RECORDED AT A TIME SUCH THAT $(T + \Delta T) / \Delta T$ approx. = 1 THUS INDICATING FURTHER PRESSURE BUILDUP WILL NOT BE SIGNIFICANT.

DUE TO THE PROBLEMS ASSOCIATED WITH PRODUCTION OF THIS LIMITED 61-2 RESERVOIR WHICH CONTAINS HIGH POUR POINT, WAXY FLUID, IT WAS RECOMMENDED AT THE DEC. UTOC THAT STR2. 10 BE PLUGGED BACK OVER THE 61-2 SAND.

JMF/jfs
18/1/84

STATIC PRESSURE

GRADIENT

Lube Data: In - 2317 PSI
 Out - 2320 PSI
 1 PSI/FT = 22.621 KPA/M

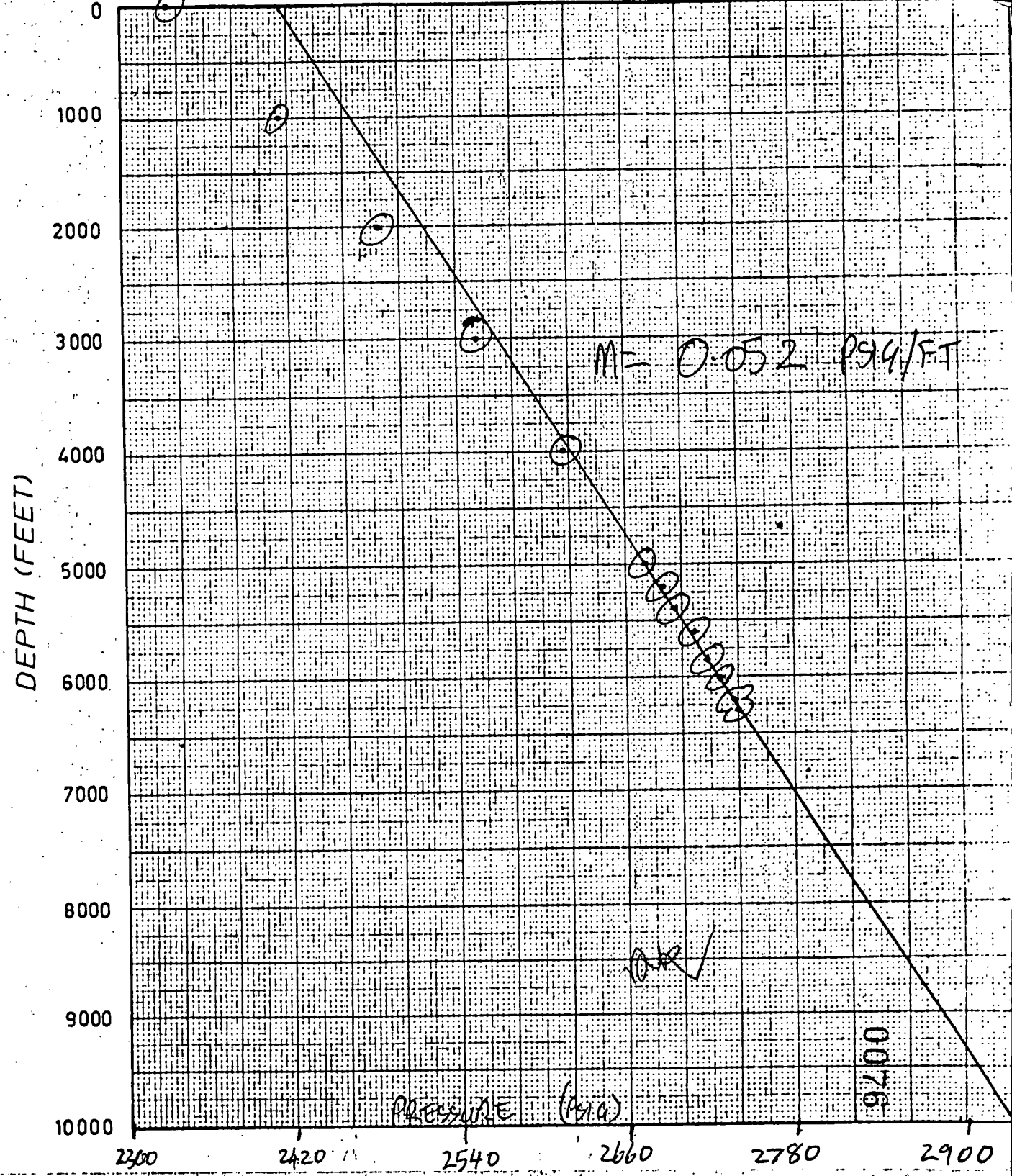
WELL STRZELECKI #10

TEST DATE 19483 (1229 - 1424 HRS)

ELEMENT NO: 22583 (TOP BOMBS)

DEPTH (FEET)	PRESS (PSI)	GRADIENT (PSI/FT)	DEPTH (METRES)	PRESS (KPA)	GRADIENT (KPA/M)
Lube	2332	—	Lube	16079	—
1000	2413	0.081	305	16638	1.832
2000	2484	0.071	610	17127	1.606
3000	2553	0.069	914	17603	1.561
4000	2616	0.063	1219	18037	1.425
5000	2675	0.059	1524	18444	1.335
5200	2687	0.060	1585	18527	1.357
5400	2695	0.040	1646	18582	0.905
5600	2708	0.065	1707	18672	1.470
5800	2718	0.050	1768	18741	1.131
6000	2728	0.050	1829	18810	1.131
6200	2738	0.050	1890	18879	1.131
6275	2740	0.023	1913	18892	0.520
Lube	2334	—	Lube	16093	—

D. HANN 26/4/83



STATIC TEMPERATURE

GRADIENT

WELL STREZLECKI #10

TEST DATE 19-4-83 (1229-1424 HRS)

ELEMENT NO. 16290 (TOP BOMB)

DEPTH (FEET)	TEMP. (°F)	GRADIENT (°/FT)	DEPTH (METRES)	TEMP °C	GRADIENT (°C/M)
Lube	112	—	Lube	44	—
1000	141	0.029	305	61	0.056
2000	170	0.029	610	77	0.053
3000	203	0.033	914	95	0.059
4000	229	0.026	1219	109	0.046
5000	232	0.003	1524	111	0.007
5200	235	0.015	1585	113	0.033
5400	238	0.015	1646	114	0.016
5600	242	0.020	1707	117	0.049
5800	245	0.015	1768	118	0.016
6000	249	0.020	1829	121	0.049
6200	252	0.015	1890	122	0.016
6275	253	0.013	1913	123	0.044
Lube	—	—	Lube	—	—

DEPTH (FEET)

10000

9000

8000

7000

6000

5000

4000

3000

2000

1000

100

120

140

160

180

200

220

240

$$M = 0.017 \text{ } ^\circ\text{C}/\text{FT}$$

TEMPERATURE (°F)

0027

SANTOS LTD
39 GRENFELL ST
ADELAIDE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 01 FIELD STRZELECKI	WELL 10
EFF DEPTH		WELL STAT	TOOL HUNG
CASING	-	CASING PRESS	ON BOTTOM
LINER	-	TUBING PRESS	OFF BOTTOM
DATE	831103	ELEMENT RANGE	0 - 4181
ELEVATION		ZONE	ZERO POINT
MAX TEMP		PICK-UP	SHUT-IN
PERF	-	CAL SER NO.	22308
TUBING	-		MPP
UNITS	ENGLISH	PURPOSE	STATIC PRESSURE GRADIENT

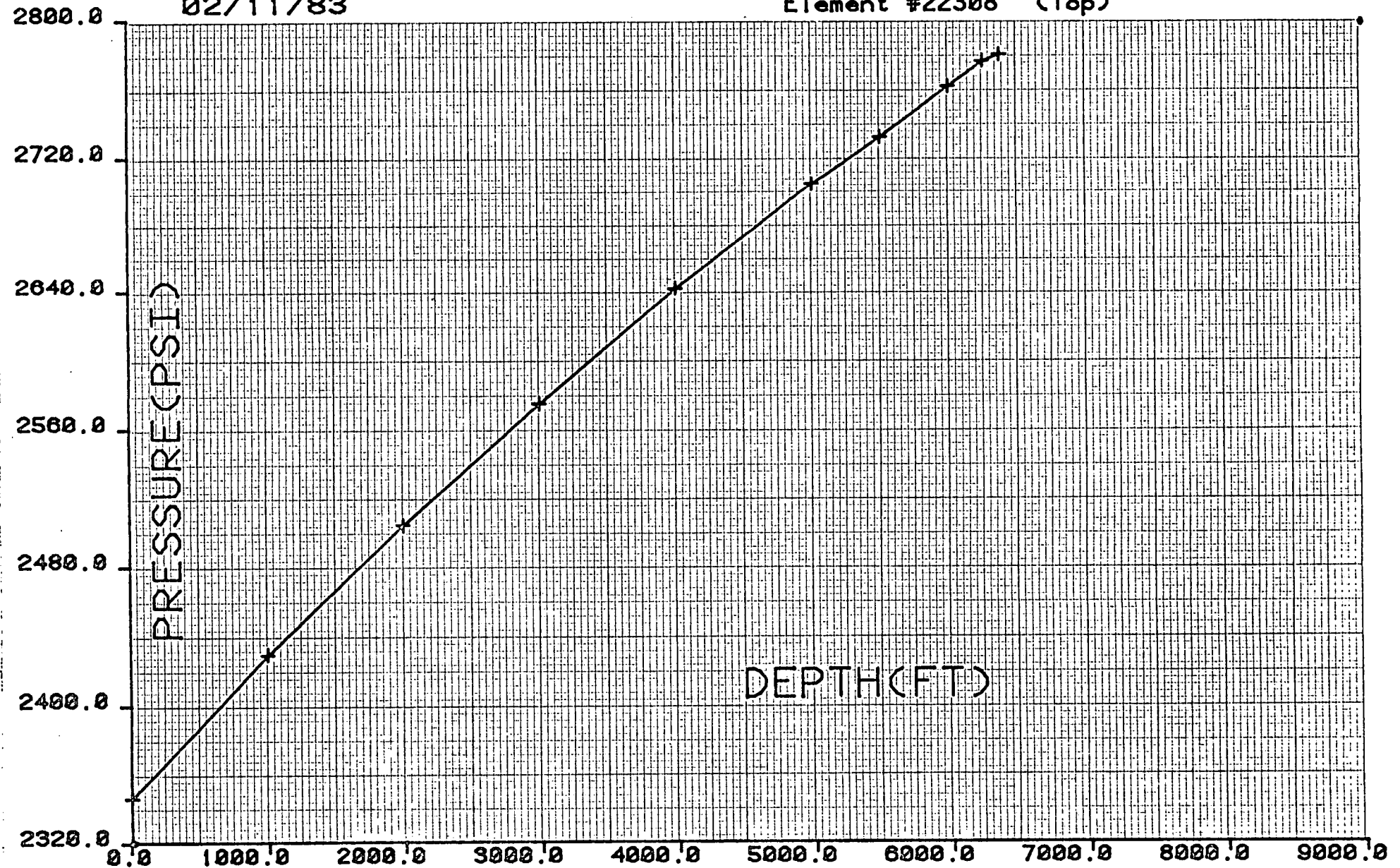
SURVEY DATA

CO. SANTOS				RUN 01 FIELD STRZELECKI		WELL 10	
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
0:06	0	2346.2	0.000	0:55	5000	2704.4	.063
0:16	1000	2429.4	.083	1:02	5500	2732.0	.055
0:26	2000	2504.4	.075	1:10	6000	2761.5	.059
0:37	3000	2574.6	.070	1:17	6250	2776.1	.059
0:46	4000	2641.9	.067	1:35	6372	2780.0	.032
				0:00	0	0.0	0.000

STRZELECKI 10 - STATIC PRESSURE GRADIENT

02/11/83

Element #22308 (Top)



0079

0080

PAGE 1

SANTOS LTD
39 GRENFELL ST
ADELAIDE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 02 FIELD STRZELECKI	WELL 10
EFF DEPTH		WELL STAT	TOOL HUNG
CASING	-	CASING PRESS	ON BOTTOM
LINER	-	TUBING PRESS	OFF BOTTOM
DATE	831103	ELEMENT RANGE	0 - 4159
ELEVATION		ZONE	ZERO POINT
MAX TEMP		PICK-UP	SHUT-IN
PERF	-	CAL SER NO.	22316
TUBING	-		MPP
UNITS	ENGLISH	PURPOSE	STATIC PRESSURE GRADIENT

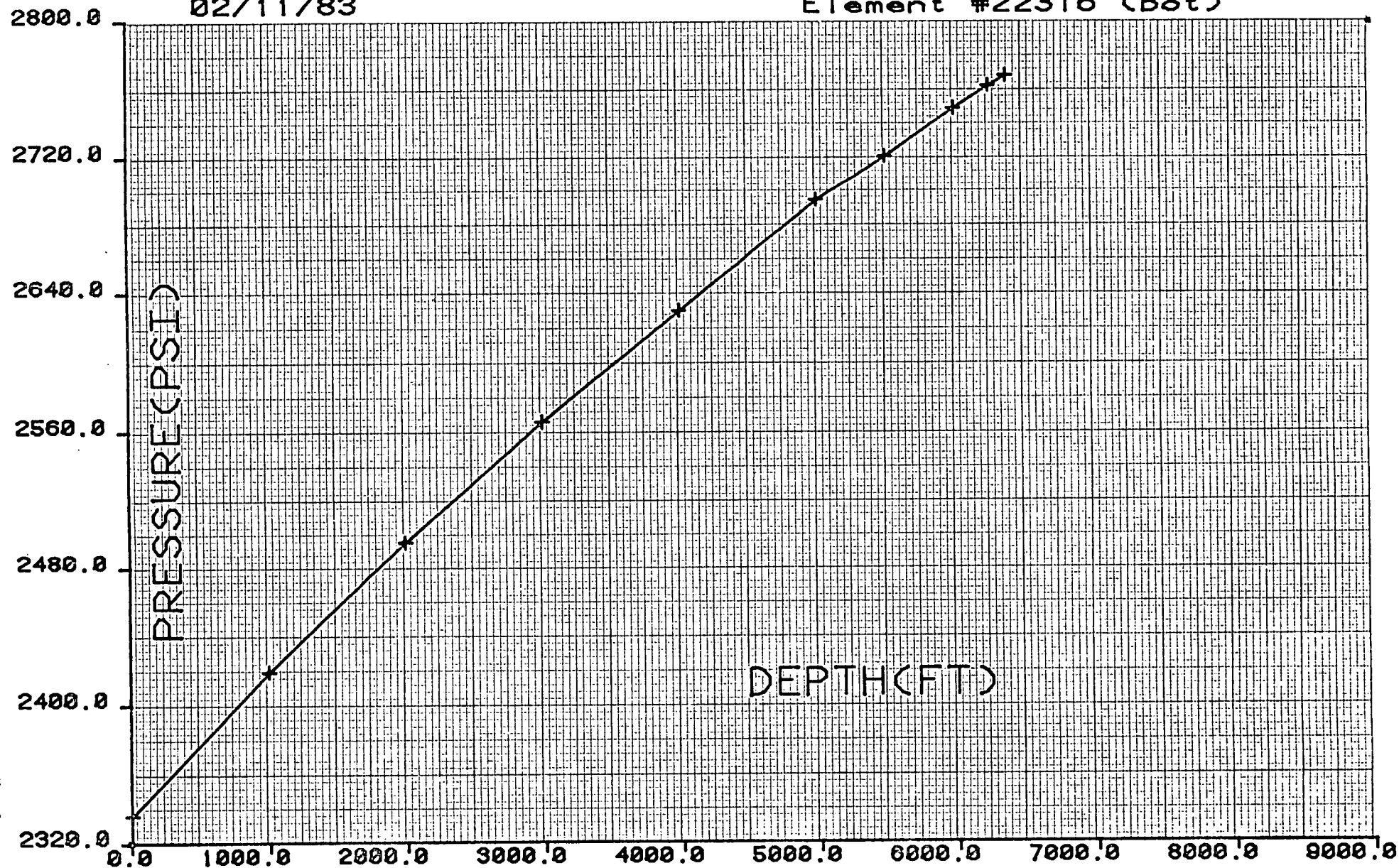
SURVEY DATA

CO. SANTOS			RUN 02 FIELD STRZELECKI		WELL 10		
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD
0:06	0	2336.4	0.000	0:52	5000	2693.6	.064
0:16	1000	2418.8	.082	0:59	5500	2720.1	.053
0:25	2000	2495.1	.076	1:06	6000	2748.5	.057
0:35	3000	2565.7	.071	1:13	6250	2761.7	.053
0:44	4000	2629.7	.064	1:30	6372	2767.4	.046

STRZELECKI 10 - STATIC PRESSURE GRADIENT

02/11/83

Element #22316 (Bot)



0081

SANTOS LIMITED
RESERVOIR ENGINEERING DEPARTMENT
STRZELECKI #10 - TOOLACHEE FORMATION
MODIFIED ISOCHRONAL CONDUCTED - APRIL 7th -13th, 1984
Report No: RE:223/84
Author: J.C. Boorman/G.A. Johnson
Date: April, 1985

STRZELECKI #10 - TOOLACHEE FORMATION
MODIFIED ISOCHRONAL TEST
CONDUCTED APRIL 7TH -13TH, 1984

INTRODUCTION

Strzelecki #10 was drilled in June 1982 as an appraisal well in the Toolachee Formation. The well was completed as an oil producer in the 61-1 sand of the Toolachee Formation on 28/6/82.

In February 1983, a liquids evaluation test showed that the gas rate, oil rate and flowing tubing pressure were all declining. A static gradient survey run in April 1983 confirmed that reservoir depletion did take place during the February flow test, indicating that the 61-1 sand was a limited reservoir. The well was subsequently plugged back and re-perforated across the upper Toolachee sands tested on DST.

This isochronal test was run between April 7th and 13th, 1984, for the purpose of determining reservoir parameters, and to obtain representative fluid samples from the Toolachee formation.

The relevant perforated intervals and associated sands are listed below:

SAND	PERFORATIONS	NET PAY (FEET)	POROSITY
60-4	6256-6268'	6	0.124
60-7	6295-6304'	4	0.161
60-8	6314-6327'	9	<u>0.149</u>
	6333-6335'	—	
		19	wt. avg. = <u>0.144</u>

RESULTS

The pressure data was analysed using the Laminar Inertial Turbulence (LIT) method, which gave the following results:

Reservoir Pressure:	2779 psia @ 6214' KB (6003' SS) Corresponds to 2778 psia @ datum depth 6000' SS
Flow Capacity:	469 md-ft
Permeability:	24.70 md
Apparent Skin:	20.38
Turbulence Coefficient:	0.249 MMCFD ⁻¹
True Skin:	19.42

CONCLUSION

The results indicate the well has reasonable flow capacity, low turbulence coefficient and a high skin value. However, as the well may not have had sufficient time to clean-up, no stimulation is recommended at this stage. Further testing may reveal a figure more indicative of actual damage and appropriate action can then be taken.

DISCUSSION

Production Rates at the time of testing Strzelecki #10:

P _{tf}	= 1647 psia
Orifice Size	= 1.500 ins
Choke	= 24/64 ins
Gas Rate	= 3.889 MMCFD
Condensate Rate	= 33.6 bbls/day
	= 8.64 bbls/MMCF
Water Rate	= 10.2 bbls/day
	= 2.62 bbls/MMCF

GAS WELL DELIVERABILITY TEST
RESULTS OF ISOCHRONAL 'LIT' ANALYSIS

WELL NAME: Strzelecki #10 FORMATION: Toolachee DATE OF TEST 7-15/4/84
DEPTH TESTED: 6214 K.B.

PRESSURE BUILD-UP INFORMATION

EXTRAPOLATED PRESSURE	$P^* = \frac{7720.8}{2778.6}$	$\times 10^3$ psia ²
		psia
	$\psi^* = \frac{507.99}{162.12}$	$\times 10^6$ psia ² /cp
HORNER BUILD-UP SLOPE	$m = \frac{162.12}{9.5}$	$\times 10^3$ psia ² /cycle
	$m(\psi) = 9.5$	$\times 10^6$ psia ² /cp/cycle

WELL AND TEST PARAMETERS

Porosity $\phi = 0.144$ Viscosity $\mu = 0.01870$ cp
 Compressibility $C_t = 0.338 \times 10^{-3}$ well radius $r_w = 0.354$ ft.
 Well drainage $r_e = 500$ thickness $h = 19$ ft.
 Final flow rate $q = 3.889$ MMcfd Temperature $T = 709$ °R
 Sandface press. $P_o = 1992.3$ psia Press 1 hr $P_1 = 2732.1$ psia
 $\psi_o = 276.26 \times 10^6$ psia²/cp $\psi_1 = 493.0 \times 10^6$ psia²/cp

BACK PRESSURE COEFFICIENTS

$$\Delta\psi = a \cdot q + b q^2$$

$$a = \frac{57.22}{10^6} \text{ psia}^2/\text{cp/MMcfd}$$

$$b = \frac{0.5322}{10^6} \text{ psia}^2/\text{cp/MMcfd}$$

FLOW CAPACITY

$$k_h = \frac{1.632 \times 10^6}{m} \quad q_T = \frac{469}{md-ft}$$

PERMEABILITY

$$k = \frac{kh}{b} = \underline{24.70} \text{ mđ}$$

APPARENT SKIN

$$S' = 1.151 \left[\frac{\psi_1 - \psi_0}{m} - \log \left(\frac{k}{\phi \mu C_f r_{wD}^2} \right) + 3.23 \right] = 20.38$$

TURBULENCE COEFFICIENT

$$D = \frac{b \cdot k h}{1.417 \times 10^6 T} = \frac{0.249}{\text{MMcfd}^{-1}}$$

TRUE SKIN

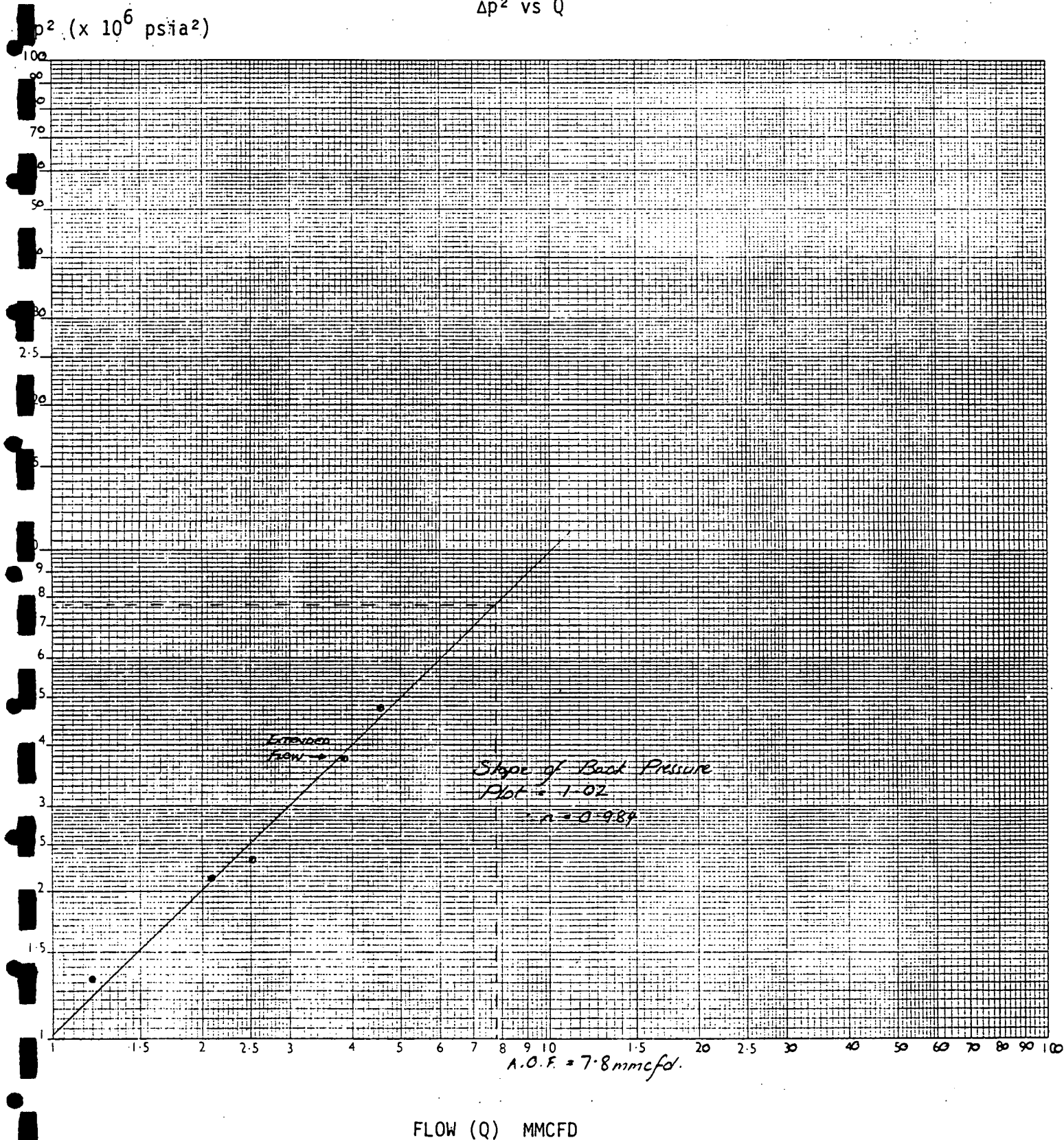
$$S = S' - Dq = 19.42$$

DATE OF TEST: 7 - 15/4/84

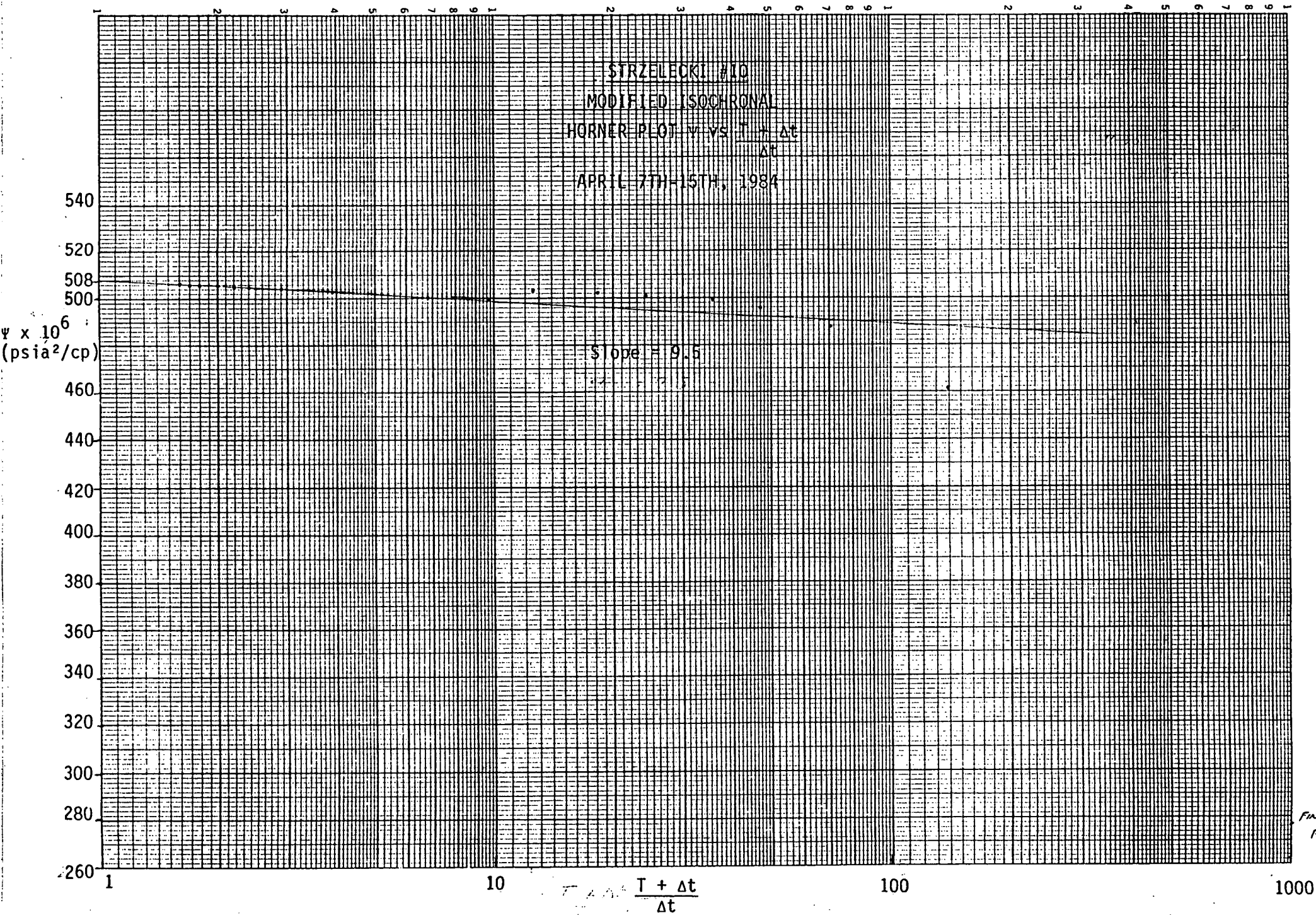
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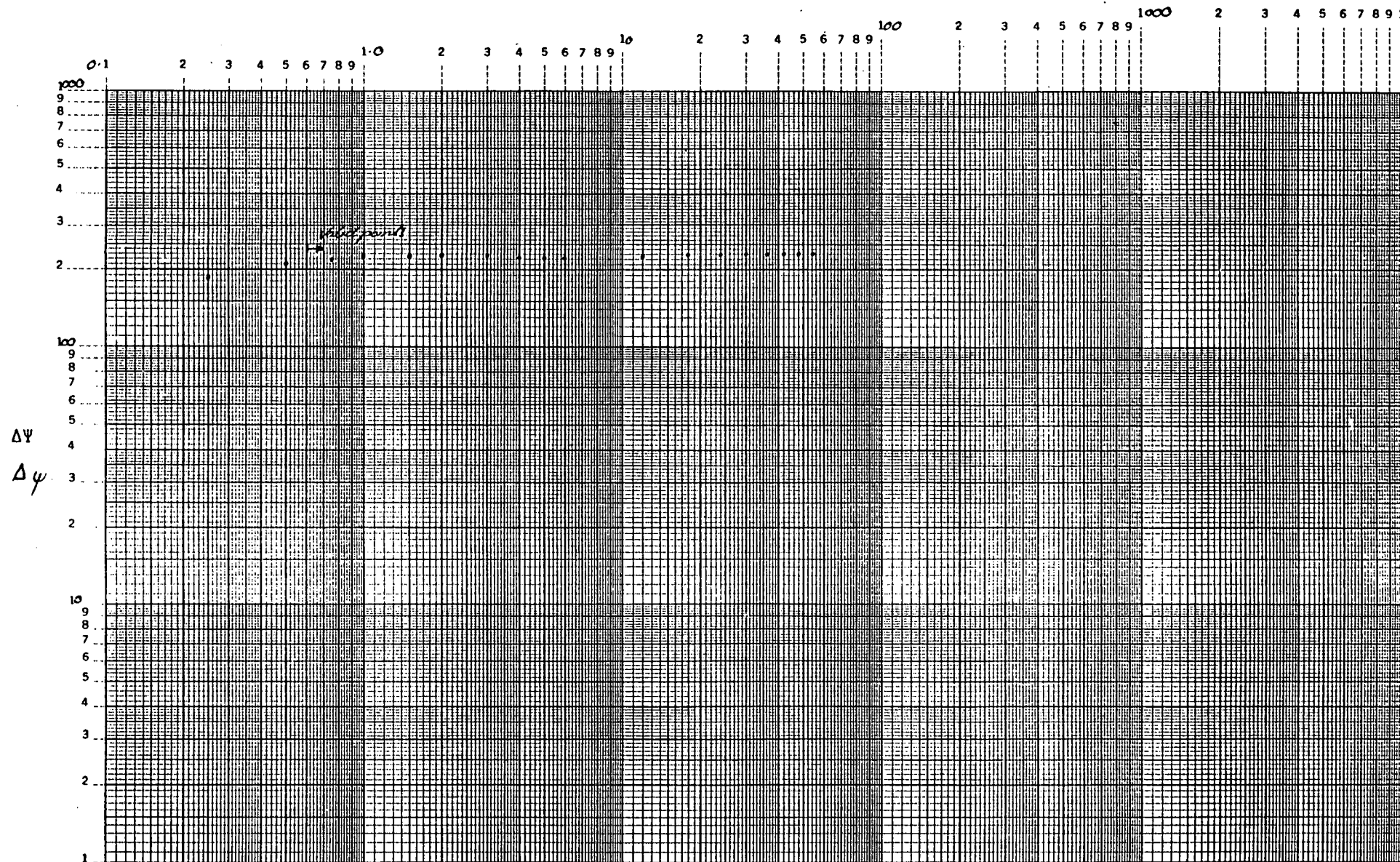
STRZELECKI #10

BACK PRESSURE PLOT

 Δp^2 vs Q

0088

FINAL FLOW
PRESS.



WELL: Strzelecki #10
TESTED BY: R. Yates/N. Hay
CASING SIZE: 7 ins
TUBING SIZE: 2-7/8 ins

Lat.: 28° 15' 44.4" S
LOCATION: Long: 140° 39' 27.0" E
PERFORATIONS: 6256-6335 ft
WEIGHT: 23 lb/ft
WEIGHT: 6.5 lb/ft

DATE: April 7th-15th/1984
PRODUCING THROUGH: tubing
GRADE: J55
GRADE: J55

FIELD Toolachee
Formation

DESCRIPTION OF TEST

INITIAL SHUT IN PERIOD

Time of Observations			Observed Pressures		REMARKS
Date	Time	Shut In Time (Hours)	Tubing psig	Casing psig	
				Temp. °F	
7/4/84	1000	0			Shut well in
9/4/84	0945	47.75	2328.1		Ran Static Gradient
10/4/84	2000	82	2329	100	Opened well on 1st rate

Flow Period

Run No.:	1	Duration of Run:	4	Hours.	Orifice Size:	0.750	ins
Flow Well On:	12/64"	Choke.			Meter Run:	4.026	ins

[illegible]

0090

Time of Observations			Observed Pressures			REMARKS
Date	Time	Shut In Time (Hours)	Tubing psig	Casing psig	Temp. °F	
10/4/84	2400	0	2101	100	84	
11/4/84	0015	0.25	2219	"		
	0030	0.5	2319	"		
	0045	0.75	2321	"		
	0100	1	2322	"		
	0200	2	2323	"		
	0300	3	2324	"		
	0400	4	2325	"		Opened well on 2nd rate

[illegible]

0091

Time of Observations			Observed		Pressures	REMARKS
Date	Time	Shut In Time (Hours)	Tubing psig	Casing psig	Temp. °F	
11/4/84	0800	0	1937	120	91	
	0815	0.25	2292	"		
	0830	0.5	2308	"		
	0845	0.75	2315	"		
	0900	1	2317	"		
	1000	2	2319	110		Opened well in 3rd rate
	1100	3	2320	"		
	1200	4	"	"		

[illegible]

0092

Time of Observations			Observed Pressures			REMARKS
Date	Time	Shut In Time (Hours)	Tubing psig	Casing psig	Temp. °F	
11/4/84	1600	0	1894	140	99	
	1615	0.25	2302	"		
	1630	0.5	2315	"		
	1645	0.75	2322	"		
	1700	1	2325	"		
	1800	2	2326	130		
	1900	3	2327	"		
	2000	4	"	"		Opened well on 4th rate

[illegible]

0093

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WELL TEST SUMMARY

FINAL STABILIZATION FLOW PERIOD

Run No.: 5	Duration of Run: 24	Hours.	Orifice Size: 1.500	ins
Flow Well On:	24/64"	Choke.	Meter Run: 4.026	ins

[illegible]

0094

SANTOS LTD.
WELL TEST SUMMARY
CALCULATION SHEET

Page 8.

CASE 1: FLOW THROUGH METER RUN

Run No.	Hw (inches in water)	Pf (psig)	Size Orifice Plate (inches)	Ft (°F)
1	148	870	0.750	97
2	92	540	1.250	81
3	65	550	1.500	95
4	178	660	1.500	102
5	127	650	1.500	90

Taken from Strzelecki #10
Gaspac -:
Specific Gravity = 0.7199
TC = 387.4 °R
PC = 684.8 psia
CO2 CONTENT = 5.540 mole %

Meter Run = 4.026 ins

FLOW THROUGH METER RUN (Continued)

Run No.	Q (MMscfd)
1	1.203
2	2.090
3	2.530
4	4.568
5	3.889

0097

WELL NAME: Strzelecki #10 DATE: April 7th-15th/
1984 ELEMENT NO: 22418 DEPTH TESTED: 6214' KB
DWT IN: 2334 psig OUT: 2330 psig
LUB IN: 2338.5 psig OUT: 2337.1 psig

	Duration (hours)	Sandface Pressure (psia)	Cal.	Meas.	Δp^2 ($\times 10^6$ psia ²)	Flow Rate (Mmscf/d)	H/Carbon Prod. (BBLs/D)	Water Prod. (BBLs/D)	REMARKS
Initial Shut In	82	2782.9		X	/	/	/	/	$q = C(\bar{p}_R^2 - p_{wf}^2)^n$ slope $n = 0.984$ $\bar{p}_R = 2778.6$ psia $C = \frac{q}{(\bar{p}_R^2 - p_{wf}^2)^n}$ $= 1.32 \times 10^{-6}$ AOF (MMscf/d) $= 7.91$
Flow 1	4	2534.8		X	1.319	1.203	5.2	Nil	
Shut In	4	2776.2		X	/	/	/	/	
Flow 2	4	2361.6		X	2.130	2.090	21.0	Nil	
Shut In	4	2759.9		X	/	/	/	/	
Flow 3	4	2299.4		X	2.330	2.530	34.5	Nil	
Shut In	4	2761.9		X	/	/	/	/	
Flow 4	4	1695.9		X	4.752	4.568	43.4	13.9	
Extended Flow	24	1992.3		X	3.740	3.889	33.6	10.2	
Final Shut In	54.53	2772.6		X	/	/	/	/	

8600

GAS WELL DELIVERABILITY TEST CALCULATIONS
(Base Conditions = 14.65 psia and 60°F)

LTF (ψ) ANALYSIS

	Duration (hours)	Sandface Pressure (psia)	ψ ($\times 10^6$ psia ² /cp)	$\Delta\psi$ ($\times 10^6$ psia ² /cp)	Flow Rate (q) (MMscfd)	$\Delta\psi/q$	q^2	$\Delta\psi - bq^2$
Initial Shut In	82	2782.9	511.156					
Flow 1	.4	2534.8	432.527	78.629	1.203	65.361	1.447	
Shut In	4	2776.2	508.990					
Flow 2	4	2361.6	380.306	128.684	2.090	61.571	4.368	
Shut In	4	2759.9	503.719					
Flow 3	4	2299.4	362.038	141.681	2.530	56.000	6.401	
Shut In	4	2761.9	504.366					
Flow 4	4	1695.9	204.217	300.149	4.568	65.707	20.867	
Total=				649.143	10.391	248.639	33.038	
Extended Flow	24	1992.3	277.231	230.594	3.889	59.294	15.124	
Final Shut In	54.53	2772.6	507.825					

GAS WELL DELIVERABILITY TEST CALCULATIONSL.I.T. (Ψ) ANALYSISDISCARDED POINT NONEN = 4 $\bar{\Psi}_R =$ 508 MMpsia²/cp

$$a, a_t = \frac{\sum \frac{\Delta \Psi}{q} \sum q^2 - \sum q \sum \Delta \Psi}{N \sum q^2 - \sum q \sum q} = \underline{60.78}$$

$$b = \frac{N \sum \Delta \Psi - \sum q \sum \frac{\Delta \Psi}{q}}{N \sum q^2 - \sum q \sum q} = \underline{0.5322}$$

(EXTENDED FLOW)

$$\Delta \Psi = \underline{230.594} \quad q = \underline{3.889} \quad b = \underline{0.5322}$$

$$a = \frac{\Delta \Psi - bq^2}{q} = \underline{57.22}$$

$$\text{A.O.F.} = \underline{8.3} \text{ MMSCFD} \quad n = \underline{0.984}$$

Total Volume of Gas Produced During Test = 5.621 MMSCFCondensate = 50.95 BblsWater = 12.52 Bbls

REMARKS

RESULTSTRANSIENT FLOW: $\bar{\Psi}_R - \Psi_{wf} = a_t q + bq^2$

$$\text{i.e. } \underline{508} - \Psi_{wf} = \underline{60.78} q + \underline{0.5322} q^2$$

STABLIZED FLOW: $\bar{\Psi}_R - \Psi_{wf} = aq + bq^2$

$$\text{i.e. } \underline{508} - \Psi_{wf} = \underline{57.22} q + \underline{0.5322} q^2$$

DELIVERABILITY:

$$q = \frac{1}{2b} [-a + \sqrt{a^2 + 4b (\bar{\Psi}_R - \Psi_{wf})}]$$

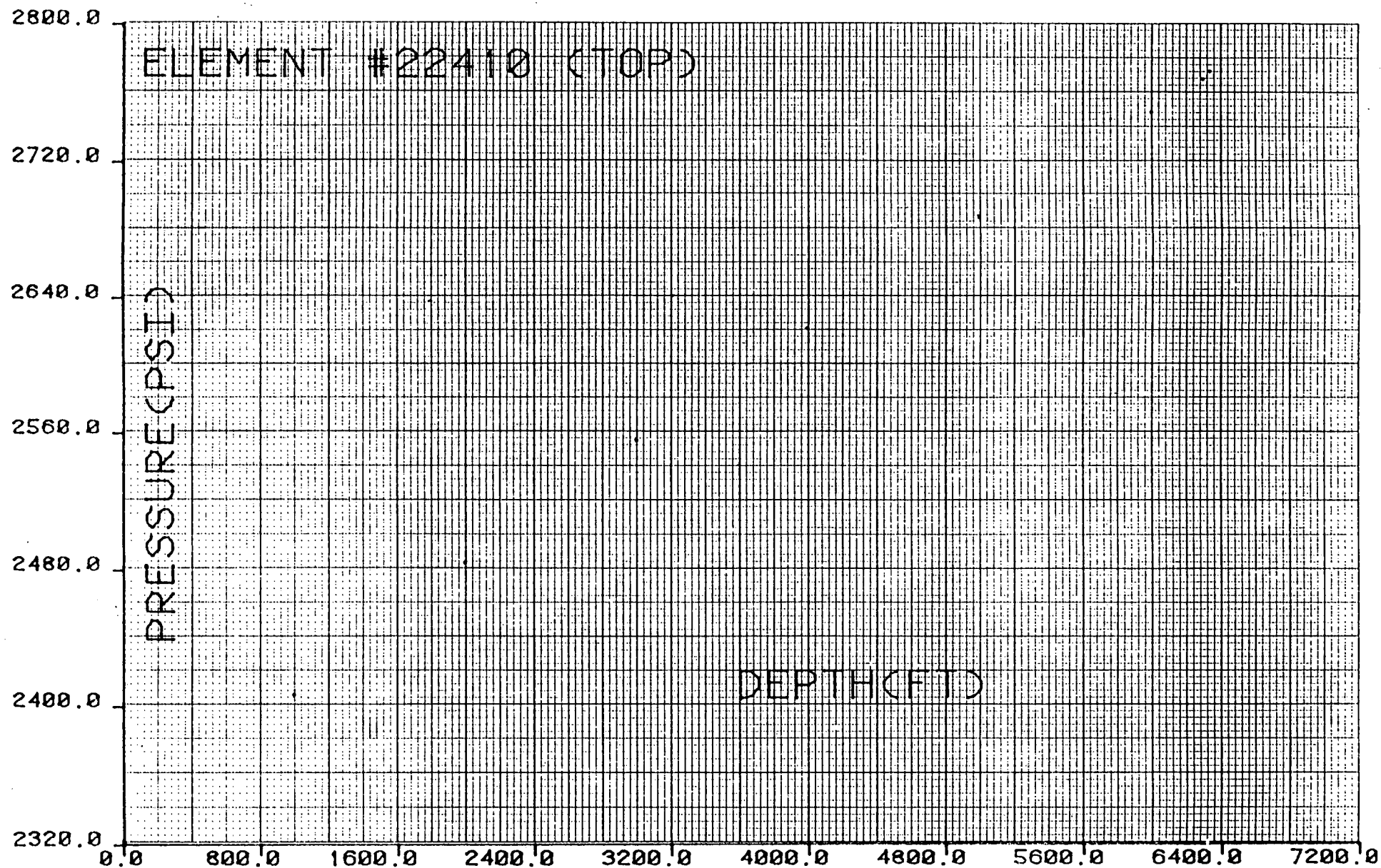
FOR $\Psi_{wf} = 0$, $q = \text{AOF} = \underline{8.25}$ MMscfd

Interpreted by:

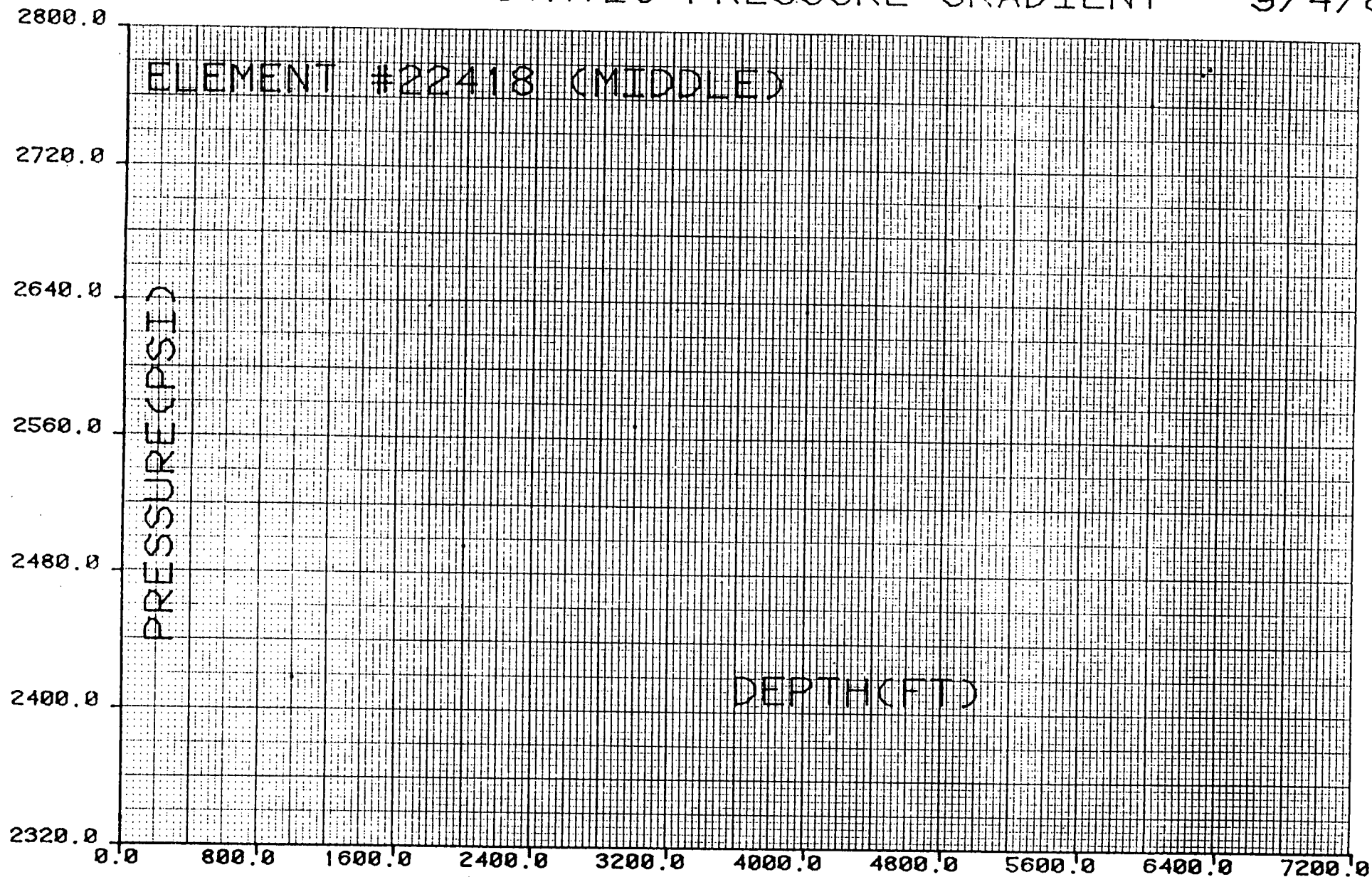
Date:

0100

STRZELECKI #10 - STATIC PRESSURE GRADIENT - 9/4/84



STRZELECKI #10 - STATIC PRESSURE GRADIENT - 9/4/84



0103

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SANTOS LTD
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SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 02 FIELD STRZELECKI	WELL 10
EFF DEPTH		WELL STAT	TOOL HUNG
CASING 7"	-	CASING PRESS	ON BOTTOM 9/4 1006
LINER	-	TUBING PRESS	OFF BOTTOM 9/4 1124
DATE	840409	ELEMENT RANGE 0 - 4033	ZERO POINT
ELEVATION		ZONE TOOLACHEE	SHUT-IN
MAX TEMP		PICK-UP	ON-PROD
PERF	6256'-6335'	CAL SER NO. 22418	MPP 6296'KB
TUBING 2-7/8"	-		
UNITS	ENGLISH	PURPOSE	STATIC PRESSURE GRADIENT

SURVEY DATA

CO. SANTOS				RUN 02 FIELD STRZELECKI				WELL 10			
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD				
9:59	0	2335.2	0.000	10:50	5000	2698.8	.064				
10:10	1000	2418.1	.083	11:01	6000	2760.4	.062				
10:20	2000	2495.9	.078	11:18	6296	2778.2	.060				
10:31	3000	2567.8	.072	11:25	6337	2781.6	.084				
10:40	4000	2635.1	.067	0:00	0	0.0	0.000				

LUB IN DWT = 2331 PSIG / OUT = 2338 PSIG
LUB IN AMERADA = 2335.2 PSIG / OUT = 2337.2 PSIG

EL# 62268 : (BOTTOM) CHART UNREADABLE DUE TO
STYLVS GETTING STUCK.

0104

PAGE 1

SANTOS LTD
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SUB-SURFACE PRESSURE SURVEY

CO. SANTOS		RUN 01 FIELD STRZELECKI	WELL 10
EFF DEPTH		WELL STAT	TOOL HUNG
CASING 7"	-	CASING PRESS	ON BOTTOM 9/4 1006
LINER	-	TUBING PRESS	OFF BOTTOM 9/4 1124
DATE	840409	ELEMENT RANGE 0 - 4141	ZERO POINT
ELEVATION		ZONE TOOLACHEE	SHUT-IN
MAX TEMP		PICK-UP	ON-PROD
PERF	6256' - 6335'	CAL SER NO. 22410	MPP 6296' KB
TUBING 2-7/8"	-		
UNITS	ENGLISH	PURPOSE	STATIC PRESSURE GRADIENT

SURVEY DATA

CO. SANTOS				RUN 01 FIELD STRZELECKI				WELL 10			
TIME	DEPTH	P/T	GRAD	TIME	DEPTH	P/T	GRAD				
9:59	0	2320.6	0.000	10:51	5000	2687.7	.065				
10:10	1000	2407.3	.087	11:01	6000	2749.2	.061				
10:20	2000	2484.7	.077	11:19	6296	2768.5	.065				
10:31	3000	2556.1	.071	11:26	6337	2772.9	.106				
10:40	4000	2622.3	.066	0:00	0	0.0	0.000				

LUB IN DWT = 2331 PSIG / OUT = 2338 PSIG
LUB IN AMERADA = 2320.6 PSIG / OUT = 2334.8 PSIG

EL# 62268 : (BOTTOM) CHART UNREADABLE DUE TO
STYLUS GETTING STUCK.

Build-up data enclosed

WELL : Strzelecki # 10

ORIFICE SIZE : 28.575 ✓ mm 1.125 ✓ "

LINE SIZE : 97.180 ✓ mm 3.826 ✓ "

Pf = 6600 Kpa ✓

T = 65 °C ✓

Diff = 27.5 Kpa ✓

Cumulative Production to end of September = 72.874 $m^3 \times 10^6$

Number of hours online in September = 718

Production in September = 2.088 $m^3 \times 10^6$ $\therefore$ Average flow rate in September = $(2.088 / 718) \times 24 = 0.070 \text{ } m^3 \times 10^6 / d$ Number of days online in October before Shut In 1530 hrs 21 / 10 / 86
= 19.813 days. $\therefore$ Production upto 1530 hrs 21 / 10 / 86 = $0.070 \times 19.813 = 1.387 \text{ } m^3 \times 10^6$ $\Rightarrow$ Total cumulative Production = 72.874 + 1.387= 74.261 $m^3 \times 10^6$

= 2635.815 mmscf ✓

Flow Rate just prior to Shut In = 0.065 $m^3 \times 10^6 / d$ ✓

= 2.321 mmscf / d ✓

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PAGE

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS	RUN 01 FIELD STRZELECKI	WELL 10
EFF DEPTH	WELL STAT	TOOL HUNG 6234'
CASING 7"	CASING PRESS	ON BOTTOM 1115 21/10
LINER	TUBING PRESS	OFF BOTTOM 1104 23/10
DATE 861021	ELEMENT RANGE 0 - 3126	ZERO POINT
ELEVATION	ZONE	SHUT-IN 1530 21/10
MAX TEMP	PICK-UP	ON-PROD
PERF 6256' - 6335'	CAL SER NO. 56431	MPP 6296'
TUBING 2-7/8"		
UNITS ENGLISH	PURPOSE BUILD-UP	

SURVEY DATA

CO. SANTOS				RUN 01 FIELD STRZELECKI				WELL 10			
TIME	D-T	DP-DT	DTIME	TIME	D-T	DP-DT	DTIME	TIME	D-T	DP-DT	DTIME
15:30	1321.5	0.0	0.0	16:44	1973.2	641.7	1.2				
15:31	1409.7	78.2	.0	16:59	1978.3	646.8	1.5				
15:32	1514.2	182.7	.0	17:19	1983.4	651.9	1.8				
15:35	1648.9	317.4	.1	17:47	1991.3	659.8	2.3				
15:40	1799.3	467.8	.2	18:16	1996.6	665.1	2.8				
15:44	1875.6	544.1	.2	18:50	2000.6	669.1	3.3				
15:47	1901.9	570.4	.3	19:38	2003.8	672.2	3.8				
15:50	1916.1	584.6	.3	20:50	2008.6	677.1	5.2				
15:55	1924.3	592.8	.4	22:14	2010.1	678.6	76.7				
16:04	1928.2	596.7	.6	23:59	2010.4	678.9	8.5				
16:07	1928.2	596.7	.6	3:09	2011.4	679.9	11.6				
16:08	1934.9	603.4	.6	7:04	2012.9	681.3	15.6				
16:12	1943.9	612.4	.7	12:09	2015.3	683.8	20.6				
16:15	1949.2	617.7	.8	18:35	2018.4	686.9	27.1				
16:20	1955.6	624.1	.8	3:16	2019.1	687.6	35.8				
16:27	1961.6	630.1	.9	9:59	2021.8	690.3	42.5				
16:35	1966.8	635.3	1.1	11:05	2022.5	691.0	43.6				

LUB IN DWT = 946 PSI / OUT = 1720 PSI

LUB IN AMERADA = 944 PSI / OUT = 1733 PSI

SANTOS LTD
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PAGE 1

SUB-SURFACE PRESSURE SURVEY

CO. SANTOS	RUN 02 FIELD STRZELECKI	WELL 10
EFF DEPTH	WELL STAT	TOOL HUNG 6340
CASING 7"	CASING PRESS	ON BOTTOM 1115 21/10
LINER	TUBING PRESS	OFF BOTTOM 1104 23/10
DATE 861021	ELEMENT RANGE 0 - 3137	ZERO POINT
ELEVATION	ZONE	SHUT-IN 1530 21/10
MAX TEMP	PICK-UP	ON-PROD
PERF 6256' -6335'	CAL SER NO. 56428	MPP 6296'
TUBING 2-7/8"		
UNITS ENGLISH	PURPOSE BUILD-UP	

SURVEY DATA

CO. SANTOS				RUN 02 FIELD STRZELECKI				WELL 10			
TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
15:30	1337.3	0.0	0.0	16:34	1969.2	631.9	1.1				
15:31	1426.2	88.9	.0	16:44	1975.0	637.7	1.2				
15:34	1541.9	204.6	.1	16:58	1981.3	644.0	1.5				
15:38	1694.8	357.5	.1	17:17	1987.1	649.8	1.8				
15:41	1800.5	463.2	.2	17:41	1993.7	656.3	2.2				
15:45	1869.3	532.0	.3	18:08	1998.3	661.0	2.6				
15:50	1909.9	572.6	.3	19:03	2005.4	668.1	3.5				
15:53	1923.5	586.2	.4	20:17	2009.4	672.1	4.8				
15:56	1929.5	592.2	.4	21:11	2013.9	676.6	5.7				
16:02	1933.1	595.7	.5	0:00	2014.0	676.7	8.5				
16:05	1933.0	595.7	.6	4:01	2014.7	677.4	12.5				
16:09	1933.0	595.6	.6	9:32	2017.7	680.4	18.0				
16:11	1940.1	602.8	.7	14:50	2018.9	681.6	23.3				
16:14	1947.9	610.6	.7	21:19	2020.5	683.2	29.8				
16:17	1954.3	617.0	.8	4:08	2021.4	684.1	36.6				
16:23	1960.2	622.8	.9	11:05	2023.1	685.7	43.6				
16:27	1964.5	627.2	.9	0:00	0.0	0.0	0.0				

LUB IN DWT = 946 PSI / OUT = 1720 PSI

LUB IN AMERADA = 951 PSI / OUT = 1735 PSI



0108

WIRELINE REPORT

WELL: STRZELECKI 10 (Goolachee)

DATE: 20/10/86

PROGRAM: B.H.P.

PURPOSE OF WORK: DUMMY RUN TAG BOTTOM.

REPORT OF WORK PERFORMED:

1300 RIG UP WIRELINE unit &
install swab valve.
1430 R.I.H. 1.75' BLIND Box.
1455 Tag BOTTOM at 6323' KB.
P.O.H.
SECURE WELL OVER NIGHT.

WELL FLOWING DOWN LINE

R. Larkin

OPERATOR'S SIGNATURE

WORK PERFORMED BY: R. LARKIN OF EXPERTEST

WELL DATA:

Tubing Size: 2 7/8" FWHP: 965 PSI SIWHP:

Sub Surface S.V./Landing Nipple @ S.S.D. @ 6139'

"X" Nipple @ "N"/"XN" Nipple @ 6193' other

Min I.D. 2.205" @ 6193' Packer @ 6175' - 6180

Perforated Interval: 6256' - 6304'

Forward to: Petroleum Engineering — Adelaide
Production Department — Moomba



**** STRZELECKI 10 ****

FLOWING PRESSURE GRADIENT

TEST DATE: 21/10/86

DEPTH (FT.)	TOP PRESSURE ELEMENT 56431/3000			BOTTOM PRESSURE ELEMENT 56428/3000		
	DEFLECTION (INCHES)	PRESSURE (PSIG)	GRADIENT (PSI/FT)	DEFLECTION (INCHES)	PRESSURE (PSIG)	GRADIENT (PSI/FT)
LUB	0.6040	945.9	----	0.6050	950.8	----
1000	0.6380	999.0	0.0531	0.6410	1007.2	0.0564
2000	0.6750	1056.8	0.0578	0.6720	1055.7	0.0486
3000	0.7110	1113.1	0.0562	0.7120	1118.4	0.0627
4000	0.7450	1166.2	0.0531	0.7460	1171.6	0.0533
4500	0.7620	1192.8	0.0531	0.7640	1199.8	0.0564
5000	0.7810	1222.5	0.0594	0.7820	1228.0	0.0564
5500	0.7990	1250.6	0.0563	0.8000	1256.2	0.0564
6000	0.8170	1278.7	0.0563	0.8160	1281.3	0.0501
6296	0.8300	1299.1	0.0686	0.8300	1303.2	0.0741
LUB	0.6040	945.9	----	0.6040	949.2	----

GENERAL REMARKS:

M B H T 252/F

DWT IN: 945
DWT OUT: 940
MAX BHT: 252/F

ELEMENT 56431/3000 CALIBRATED 12.8.86
ELEMENT 56428/3000 CALIBRATED 12.8.86



**** STRZELECKI 10 ****

STATIC PRESSURE GRADIENT

TEST DATE: 23/10/86

DEPTH (FT.)	TOP PRESSURE ELEMENT 56431/3000			BOTTOM PRESSURE ELEMENT 56428/3000		
	DEFLECTION (INCHES)	PRESSURE (PSIG)	GRADIENT (PSI/FT)	DEFLECTION (INCHES)	PRESSURE (PSIG)	GRADIENT (PSI/FT)
LUB	1.1050	1728.9	----	1.1040	1732.7	----
1000	1.1380	1780.4	0.0516	1.1370	1784.4	0.0518
2000	1.1690	1828.9	0.0484	1.1680	1833.1	0.0486
3000	1.1990	1875.8	0.0469	1.1980	1880.1	0.0471
4000	1.2280	1921.1	0.0453	1.2270	1925.6	0.0455
4500	1.2430	1944.5	0.0469	1.2410	1947.6	0.0439
5000	1.2570	1966.4	0.0437	1.2550	1969.5	0.0439
5500	1.2710	1988.3	0.0437	1.2700	1993.1	0.0471
6000	1.2850	2010.1	0.0437	1.2830	2013.5	0.0408
6296	1.2930	2022.6	0.0422	1.2930	2029.1	0.0530
LUB	1.1090	1735.1	----	1.1070	1737.4	----

GENERAL REMARKS:

M B H T 262/F

DWT IN: 1719
DWT OUT: 1720
MAX BHT: 262/F

ELEMENT 56431/3000 CALIBRATED 12.8.86
ELEMENT 56428/3000 CALIBRATED 12.8.86

WELL NAME: STRZELCZY M 10

STATIC GRADIENT SURVEY

DATE: 23-10-86

BOMB No. 1 DATA

BOMB No. 2 DATA

LUBRICATOR DATA

ELEMENT No. 56431 ELEMENT RANGE: 3000 PSI
RECORDER No. 14929X15 TLS CLOCK DATA: 2489X3 HR
ENGAGE SYLUS: 1257 DISENGAGE: 1503

ELEMENT No. 56428 ELEMENT RANGE: 3000
RECORDER No. 14620 CLOCK DATA: 2578 X3MR
ENGAGE SYLUS: 1257 DISENGAGE: 1503

PRESSURE WITH D.W.T.: 111719 041720
TIME PRESSURED: 1304
TIME DEPRESSURED: 1455

[illegible]

General Comments:

GO10

0113

WELL: STRZELECKI # 10.....
 OPERATOR: R. LARKIN.....



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: 20/10/86.....
 PAGE No: 1.....

DATE TIME	WELLHEAD (Toolachee)						FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
300							RIG UP WIRE LINE UNIT							
430	885	6100	965	6654			R.I.H. 1.75" BLIND BOX. Tag at							
530							SECURE WELL OVER NIGHT.							
21/10/86														
2220							PREPARE RECORDERS FOR FLOWING GRADIENT							
2743							PRES. Lub							
758	7	50	945	6516			R.I.H.							
914							P.O.H.							
925							IN Lub							
940	7	50	940	6481			Dep. Lub. CHARTS GOOD. PREPARE FOR B.H.P.							
000							PRES. Lub.							
100	7	50	946	6523			R.I.H.							

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: ST. RZELECKI⁴ 10.....
 OPERATOR: R. LARKIN.....



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: 21/10/86.....
 PAGE No: 2.....

DATE TIME	WELLHEAD (Toolache)						FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
115							HANG RECORDERS at 6240'				K.B.			
130	7	50	950	6550	145	63	START TEST.							
230	7	50	957	6599	149	65								
330	7	50	962	6634	151	66								
430	7	50	961	6627	151	66								
530	7	50	963	6641	153	67	SHUT IN FOR BUILD UP.							
545	7	50	1522	10839										
600	7	50	1640	11308										
615	7	50	1672	11528										
630	7	50	1688	11639										
645	7	50	1691	11659										
700	7	50	1695	11687										

CONVERSION FACTORS:

• BBL'S. x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: STRZELCKI⁴ 10.....
 OPERATOR: R. LARKIN.....



SANTOS LTD
 WELL TEST DATA
 METRIC SUMMARY SHEET

DATE: 21/10/186.....
 PAGE No: 3.....

DATE TIME	WELLHEAD (Tool Aches)						FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M ³ /D	FLOWRATE H ₂ O BBL'S/D	FLOWRATE H ₂ O M ³ /D	MMSCF/D	Mm ³ /D	G.O.R. Cu/FT BBL	G.O.R. M ³ /M ³
215	7	50	1699	11714										
230	7	50	1702	11735										
245	7	50	1705	11756										
800	7	50	1707	11770										
815	7	50	1709	11784										
830	7	50	1711	11797										
845	7	50	1711	11797										
900	7	50	1712	11804										
915	7	50	1712	11804										
930	7	50	1713	11811										
930	7	50	1712	11839										

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WELL: S.T.RZELECKI # 10...

OPERATOR: R. LARKIN.....



SANTOS LTD
WELL TEST DATA
METRIC SUMMARY SHEET

DATE: 22/10/86.....

PAGE No: 4.....

DATE TIME	WELLHEAD						FLUID PRODUCTION				GAS PRODUCTION			
	CASING PSI	CASING KPA	TUBING PSI	TUBING KPA	TEMP °F	TEMP °C	FLOWRATE OIL-COND BBL'S/D	FLOWRATE OIL-COND M3/D	FLOWRATE H2O BBL'S/D	FLOWRATE H2O M3/D	MMSCF/D	Mm3/D	G.O.R. Cu/FT BBL	G.O.R. M3/M3
2230	7	50	1717	11839										
2630	7	50	1716	11832										
230	7	50	1716	11832										
3-10-86														
900	7	50	1720	11859										
104	OFF BOTTOM WITH PRESSURE RECORDERS													
314	RUN STATIC GRADIENT													
330	TEST COMPLETED HANDOVER WELL TO PRODUCTION													

CONVERSION FACTORS:

• BBL'S x 0.15899 = M³

• MMSCF x 28.174 = 10³ M³

• Cu/FT PER BBL x 0.1773 = M³/M³

• PSI x 6.895 = KPA

• °C x 9 ÷ 5 + 32 = °F

WIRELINE REPORT

CLIENT **SANTOS LTD** WELL **STRZELCKI * 10**

DATE **28/8/87**

PROGRAMME **STATIC GRADIENT SURVEY.**

PURPOSE OF WORK **BLIND BOX RUN 1.75" TO ENSURE TUBING AND PIPES ARE CLEAR OF ANY OBSTRUCTIONS PRIOR TO RUNNING STATIC GRADIENT H.G. GANGES**

REPORT OF WORK PERFORMED **28/8/87**

1345 **ARRIVED ON LOCATION. RIG UP PORTABLE GIN PILE.**
1350 **RIG UP B.O.P'S AND FUNCTION TEST.**
1355 **RIG UP TWO SECTIONS OF LUBRICATOR**
1400 **RIG UP TOOL STRING, ROPE SOCKET, 5' WEIGHT BAR, ANKLE JOINT, STAB JOINT, 3' WEIGHT BAR, 1.75" BLIND BOX**
1415 **STAB LUBRICATOR AND PRESS TEST?**
1430 **R.I. HOLE TO TAG DEPTH OF 6516'KB.**
1452 **RUN OUT OF HOLE.**
1510 **AT SURFACE, PREPARE TOOL STRING TO RUN TANDEM H.P. GANGES.**
1525 **RUN IN HOLE FOR STATIC GRADIENT.**
1627 **ON BOTTOM STOP @ 6,500'KB.**
1650 **RUN OUT OF HOLE.**
1656 **AT SURFACE**
1651 **DEP. LUB.**
1701 **CHUCKERS OK. RIG OUT. RETURN TO MARLBOROUGH.**

[Signature]
Operator's Signature

WORKED PERFORMED BY **R. CAMPBELL** OF **EXPERTEST.**

WELL DATA:

Tubing Size... **2 7/8"** FWHP... **8** SIWHP... **8**
Subsurface S.V./Landing Nipple @... S.S.D. @...
'X' Nipple @... N'/XN' Nipple @... Other... @...
Min. I.D. @... Packer @...
Perforated Interval: **NOT AVAILABLE.**

4610

4 NOV 87



** STREZELECKI #10 **

STATIC PRESSURE GRADIENT

TEST DATE: 26/8/87

DEPTH (FT.)	TOP PRESSURE ELEMENT 28515/3000			BOTTOM PRESSURE ELEMENT 56429/3000		
	DEFLECTION (INCHES)	PRESSURE (PSIG)	GRADIENT (PSI/FT)	DEFLECTION (INCHES)	PRESSURE (PSIG)	GRADIENT (PSI/FT)
LUB	0.0000	-5.0	----	0.0000	-6.3	----
1000	0.0000	-5.0	0.0000	0.0000	-6.3	0.0000
2000	0.0960	143.3	0.1483	0.0920	137.2	0.1434
3000	0.3720	571.6	0.4283	0.3730	574.1	0.4369
4000	0.6440	995.1	0.4235	0.6450	996.1	0.4221
5000	0.9110	1411.2	0.4160	0.9140	1413.6	0.4175
6000	1.1740	1821.1	0.4100	1.1810	1828.6	0.4150
6373	1.2720	1974.0	0.4110	1.2800	1982.6	0.4141
6500	1.3060	2027.1	0.4146	1.3100	2029.3	0.3649
LUB	0.0000	-5.0	----	0.0000	-6.3	----

GENERAL REMARKS:

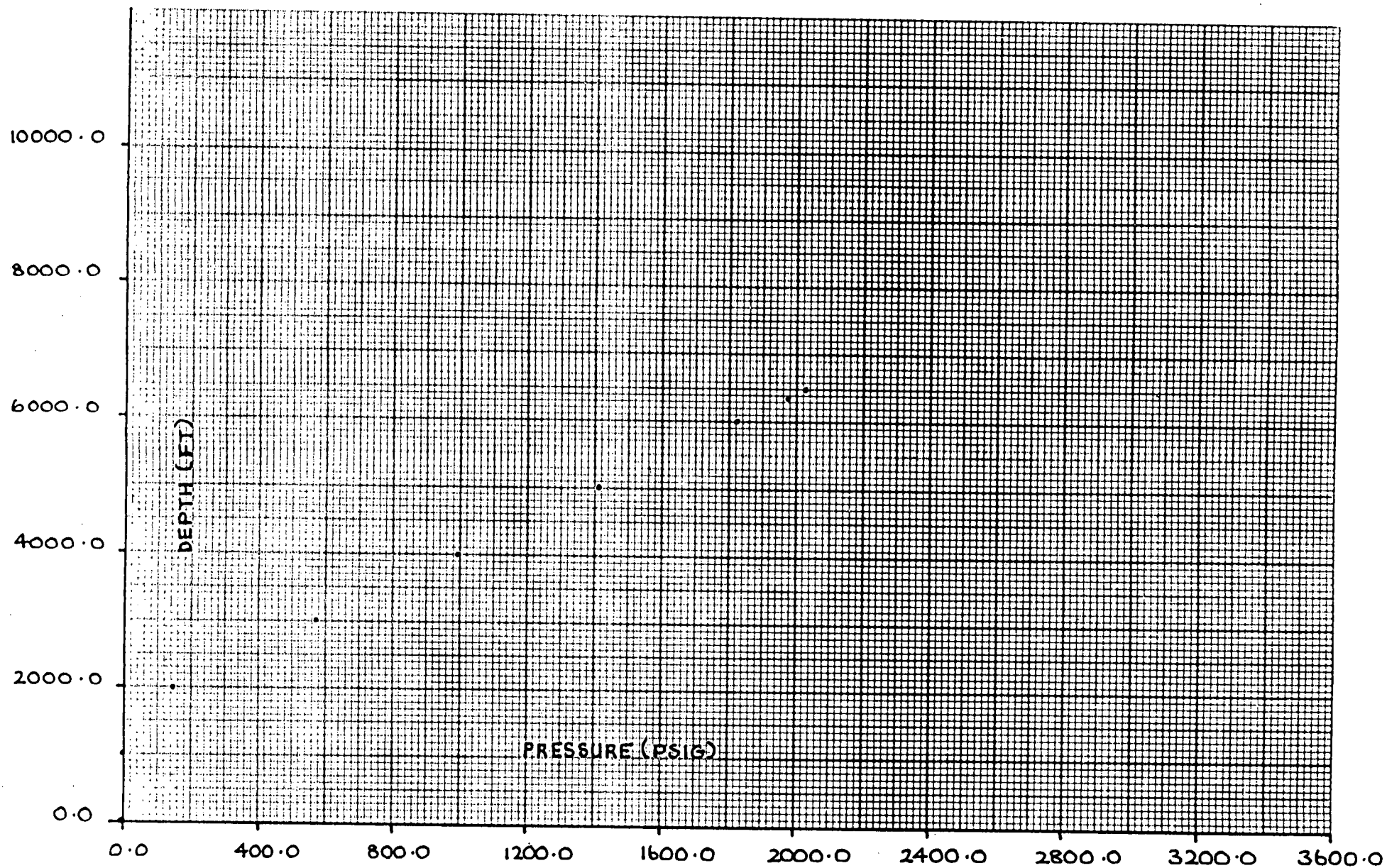
M.B.H.T. 2806F

DWT IN: 0
DWT OUT: 0
MAX BHT: 280F

ELEMENT 28515/3000 CALIBRATED 26-8-87
ELEMENT 56429/3000 CALIBRATED 26-8-87

STRZELECKI # 10 - STATIC PRESSURE GRADIENT - 28/8/87

ELEMENT # 28515/3000 (TOP)





CLIENT SANTOS LTD

WELL STRZELECKI # 10

STATIC GRADIENT SURVEY

OPERATOR R. CAMPBELL

DATE 28/8/87

BOMB No. 1 DATA						BOMB No 2 DATA					DWT IN Ø DWT OUT Ø		
ELEMENT No. <u>28515</u>		ELEMENT RANGE <u>3,000 psi</u>		RECORDER No. <u>13021 x 1515</u>		CLOCK DATA <u>2533 x 8ms</u>		ENGAGE SYLUS <u>1514</u>		DISENGAGE <u>1701</u>		PRESSURE LUBRICATOR <u>1518</u>	
ELEMENT No. <u>58429</u>		ELEMENT RANGE <u>3,000 psi</u>		RECORDER No. <u>14628 x 1515</u>		CLOCK DATA <u>2481 x 3ms</u>		ENGAGE SYLUS <u>1514</u>		DISENGAGE <u>1701</u>		BLEED LUBRICATOR <u>1651</u>	
DATE	TIME	DEPTH'	DEFLEC-TION	PRESSURE TEMP.	GRADIENT psi/ft	DEPTH'	DEFLEC-TION	PRESSURE TEMP.	GRADIENT psi/ft	REMARKS			
<u>28/8/87</u>	<u>1518</u>	<u>LUB</u>				<u>LUB</u>							
	<u>1525</u>	<u>R.I.H</u>				<u>R.I.H</u>							
	<u>1529</u>	<u>1,000</u>				<u>1,000</u>							
	<u>1536</u>	<u>2,000</u>				<u>2,000</u>							
	<u>1544</u>	<u>3,000</u>				<u>3,000</u>							
	<u>1553</u>	<u>4,000</u>				<u>4,000</u>							
	<u>1602</u>	<u>5,000</u>				<u>5,000</u>							
	<u>1611</u>	<u>6,000</u>				<u>6,000</u>							
	<u>1616</u>	<u>6372</u>				<u>6372</u>							
	<u>1627</u>	<u>6,500</u>				<u>6,500</u>							
	<u>1630</u>	<u>P.O.H</u>				<u>P.O.H</u>							
	<u>1646</u>	<u>AT SURFACE</u>											
	<u>1651</u>	<u>LUB</u>				<u>LUB</u>							

GENERAL REMARKS: M.B.H. TEMP. 280°F.

Strzelecki #10
Summary Of Flow & Build-Up Surveys
20th March - 13th April 1991

Flow Test (60-4, 60-7, 60-8, 61-2 Toolachee sands)
 20th - 27th March

21/03/91: Opened well on 16/64" choke @ 1540 hrs
 Began monitoring rates @ 1900 hrs
 Tested well on 16/64" choke for 147 hrs

F.T.H.P. (Final)	=	2579	kPa	
Separator Pressure	=	848	kPa	) averaged over
Separator Temperature	=	28.5	°C	) last 132 hrs
Gas Flow Rate	=	4.380	E3 m ³ /d)	
Condensate Flow Rate	=	0.180	m ³ /d	
Water Flow Rate	=	9.641	m ³ /d	

27/03/91: Shut well in @ 2200 hrs
 Element #56429 @ 6389' KB @ 2200 hrs = 9061 kPa
 Element #56432 @ 6395' KB @ 2200 hrs = 9103 kPa

Buildup (60-4, 60-7, 60-8, 61-2 Toolachee sands)
 27th March - 1st April

27/03/91: Shut well in @ 2200 hrs for 104 hrs
 Element #56429 @ 6389' KB after 104 hrs buildup = 12523 kPa
 Element #56432 @ 6395' KB after 75.2 hrs buildup = 12485 kPa
 Shut in bottomhole temperature = 127°C

01/04/91: P.O.O.H. @ 0600 hrs

Static Gradient Survey (60-4, 60-7, 60-8, 61-2 Toolachee sands)
 Upper Mid Point of Perforations = 6296' KB (60-4, 60-7, 60-8 sands)
 Lower Mid Point of Perforations = 6372' KB (61-2 sand)

01/04/91: Ran static pressure gradient survey
 Element #56429 @ Upper MPP = 12278 kPa
 Element #56429 @ Lower MPP = 12507 kPa
 Element #56432 @ Upper MPP = 12310 kPa
 Element #56432 @ Lower MPP = 12529 kPa
 Maximum shut in bottomhole temperature = 260°F = 127°C

Ran 'PX' plug in Otis landing nipple @ 6352' KB to isolate the 61-2 sand.

Cont...

Flow Test (60-4, 60-7, 60-8 Toolachee sands)
3rd - 7th April

03/04/91: Opened well on 16/64" choke @ 1440 hrs
04/04/91: Began monitoring rates @ 0600 hrs
Tested well on 16/64" choke for 89 hrs

F.T.H.P. (Final)	=	1731	kPa
Separator Pressure	=	736	kPa
Separator Temperature	=	28.6	°C
Gas Flow Rate	=	9.461	E3 m ³ /d
Condensate Flow Rate	=	0.162	m ³ /d
Water Flow Rate	=	1.905	m ³ /d

07/04/91: Shut well in @ 2300 hrs
Element #56432 @ 6290' KB @ 2300 hrs = 5126 kPa
Element #56429 @ 6296' KB @ 2300 hrs = 5137 kPa

Buildup Survey (60-4, 60-7, 60-8 Toolachee sands)
6th - 13th April

07/04/91: Shut well in @ 2300 hrs for 127.20 hrs buildup
Element #56432 @ 6290' KB after 61.3 hrs buildup = 11952 kPa
Element #56429 @ 6296' KB after 106.70 hrs buildup = 11885 kPa
Shut in bottomhole temperature = 122°C

13/04/91: P.O.O.H. @ 0612 hrs

Static Gradient Survey (60-4, 60-7, 60-8 Toolachee sands)
Upper Mid Point of Perforations = 6296' KB

13/04/91: Ran static pressure gradient
Element #56432 @ MPP = 11786 kPa
Element #56429 @ MPP = 11755 kPa
Maximum shut in bottomhole temperature = 122°C

SUB-SURFACE PRESSURE SURVEY

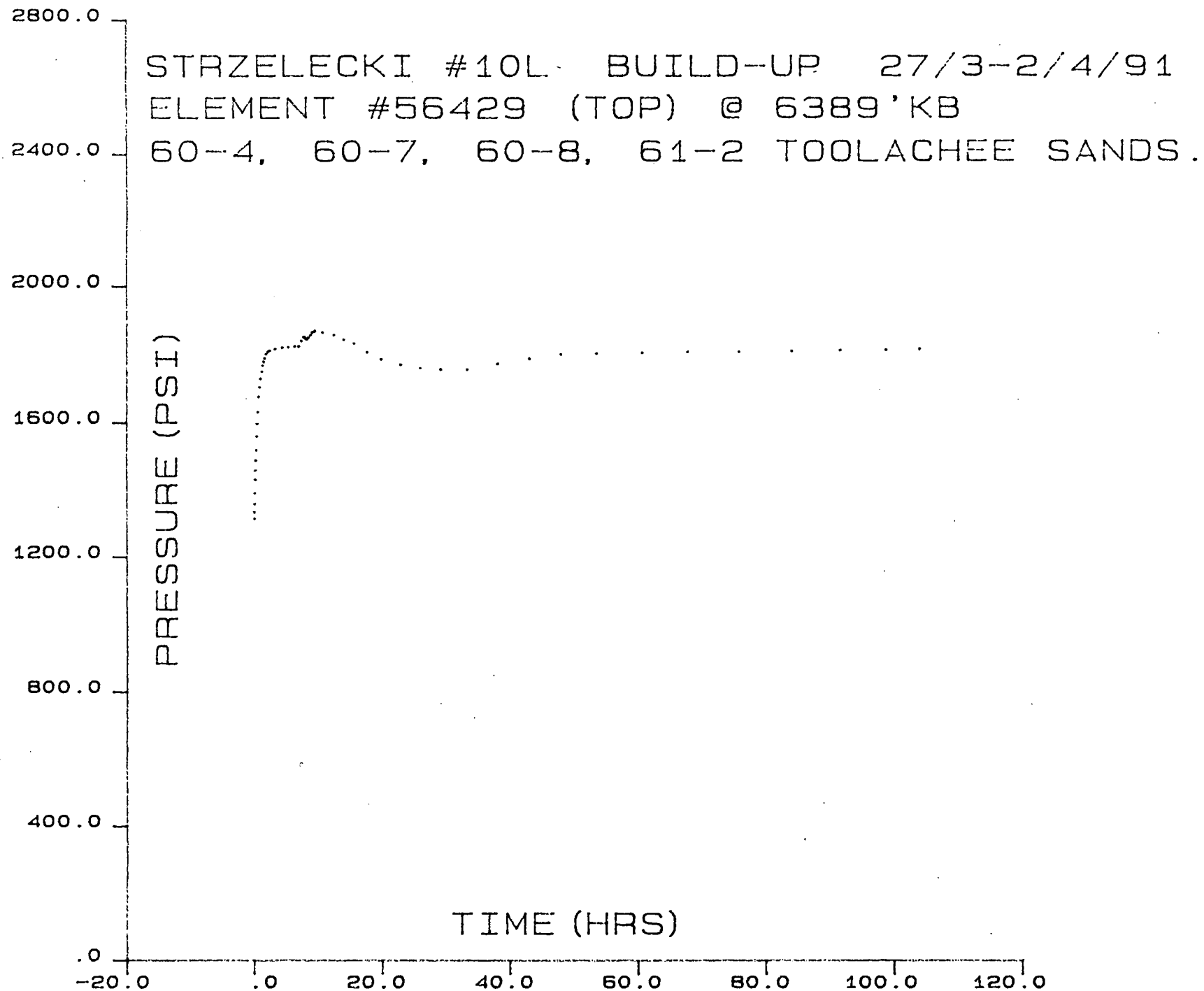
CO.		RUN 01 FIELD STRZELECKI	WELL 10L
EFF DEPTH		WELL STAT	TOOL HUNG 6389'
CASING	-	CASING PRESS	ON BOTTOM 1200 27/3
LINER	-	TUBING PRESS	OFF BOTTOM 0600 01/4
DATE	910401	ELEMENT RANGE 0 - 3101	ZERO POINT
ELEVATION		ZONE	SHUT-IN 2200 27/3
MAX TEMP	260 F	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 56429	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	BUILD-UP

SURVEY DATA

CO.	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	22:00	1314.2	1314.2	.0	5:58	1845.3	1845.3	8.0
	22:01	1332.3	1333.3	.0	6:08	1843.1	1843.1	8.1
	22:02	1357.6	1357.6	.0	6:20	1845.1	1845.1	8.3
	22:04	1390.3	1390.3	.1	6:28	1849.6	1849.6	8.5
	22:08	1430.9	1430.9	.1	6:46	1857.0	1857.0	8.8
	22:11	1457.9	1457.9	.2	7:05	1865.3	1865.3	9.1
	22:14	1483.5	1488.5	.2	7:28	1868.9	1868.9	9.5
	22:18	1518.3	1518.3	.3	8:39	1863.4	1863.4	10.6
	22:23	1559.3	1559.3	.4	10:26	1855.2	1855.2	12.4
	22:27	1596.4	1596.4	.5	11:59	1841.4	1841.4	14.0
	22:34	1630.8	1630.8	.6	13:35	1830.9	1830.9	15.6
	22:41	1676.6	1676.6	.7	15:38	1805.1	1805.1	17.6
	22:48	1703.8	1703.8	.8	17:48	1785.2	1785.2	19.8
	22:57	1729.2	1729.2	.9	20:50	1769.1	1769.1	22.8
	23:09	1750.6	1750.6	1.1	23:59	1759.2	1759.2	26.0
	23:17	1767.9	1767.9	1.3	3:08	1755.4	1755.4	29.1
	23:27	1779.7	1779.7	1.4	7:16	1756.3	1756.3	33.3
	23:37	1788.4	1788.4	1.6	12:03	1773.0	1773.0	38.0
	23:49	1799.5	1799.5	1.8	16:59	1787.4	1787.4	43.0
	0:06	1807.6	1807.6	2.1	21:57	1799.8	1799.8	47.9
	0:25	1811.2	1811.2	2.4	3:30	1802.1	1802.1	53.5
	1:14	1815.9	1815.9	3.2	10:39	1804.8	1804.8	60.7
	2:21	1819.8	1819.8	4.4	17:45	1806.8	1806.8	67.8
	3:16	1821.2	1821.2	5.3	1:48	1808.5	1808.5	75.8
	4:19	1823.1	1823.1	6.3	10:00	1810.4	1810.4	84.0
	4:55	1823.0	1823.0	6.9	17:38	1812.5	1812.5	91.6
	5:21	1839.4	1839.4	7.3	0:47	1813.4	1813.4	98.8
	5:39	1850.8	1850.8	7.7	6:00	1816.2	1816.2	104.0
	5:50	1851.9	1851.9	7.8	0:00	.0	.0	.0

LUB IN DWT = 376 PSI / OUT = 1496 PSI
 LUB IN AMERADA = 368 PSI / OUT = 1496 PSI

0125



SUB-SURFACE PRESSURE SURVEY

CO.		RUN 02 FIELD STRZELECKI	WELL 10L
EFF DEPTH		WELL STAT	TOOL HUNG 6395'
CASING	-	CASING PRESS	ON BOTTOM 1200 27/3
LINER	-	TUBING PRESS	OFF BOTTOM 0600 1/4
DATE	910401	ELEMENT RANGE 0 - 3102	ZERO POINT
ELEVATION		ZONE	SHUT-IN 2200 27/3
MAX TEMP	260 F	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 56432	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	BUILD-UP

SURVEY DATA

CO.	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	22:00	1320.3	1320.3	.0	5:28	1850.1	1850.1	7.5
	22:03	1361.1	1361.1	.0	5:48	1855.3	1855.3	7.8
	22:07	1432.7	1432.7	.1	5:56	1848.5	1848.5	7.9
	22:13	1480.7	1480.7	.2	6:08	1846.3	1846.3	8.1
	22:17	1523.2	1523.2	.3	6:33	1855.8	1855.8	8.5
	22:21	1555.2	1555.2	.4	7:02	1867.7	1867.7	9.0
	22:27	1594.9	1594.9	.4	7:27	1871.6	1871.6	9.4
	22:31	1629.1	1629.1	.5	8:31	1865.4	1865.4	10.5
	22:37	1657.6	1657.6	.6	9:58	1857.3	1857.3	12.0
	22:44	1689.7	1689.7	.7	11:52	1841.5	1841.5	13.9
	22:53	1721.3	1721.3	.9	14:03	1822.6	1822.6	16.1
	23:00	1740.4	1740.4	1.0	15:39	1804.3	1804.3	17.6
	23:07	1755.4	1755.4	1.1	17:59	1784.5	1784.5	20.0
	23:17	1769.6	1769.6	1.3	21:00	1768.4	1768.4	23.0
	23:25	1779.5	1779.5	1.4	0:57	1759.7	1759.7	27.0
	23:32	1787.7	1787.7	1.5	5:18	1758.9	1758.9	31.3
	23:41	1797.7	1797.7	1.7	10:31	1771.4	1771.4	36.5
	23:54	1806.3	1806.3	1.9	15:02	1737.7	1737.7	41.0
	0:08	1812.0	1812.0	2.1	16:54	1790.7	1790.7	42.9
	0:26	1815.8	1815.8	2.4	17:28	1797.2	1797.2	43.5
	1:15	1820.2	1820.2	3.2	20:18	1801.4	1801.4	46.3
	2:04	1823.3	1823.3	4.1	0:43	1805.6	1805.6	50.7
	2:58	1823.1	1823.1	5.0	6:28	1807.4	1807.4	56.5
	3:59	1826.3	1826.3	6.0	13:30	1811.6	1811.6	63.5
	4:45	1827.9	1827.9	6.8	20:44	1811.6	1811.6	70.7
	5:08	1837.8	1837.8	7.1	1:10	1810.8	1810.8	75.2

LUB IN DWT = 376 PSI / OUT = 1496 PSI

LUB IN AMERADA = 366 PSI / OUT = 1493 PSI

PLEASE NOTE; CLOCK FAILED AFTER APPROXIMATELY 75 HOURS.

SUB-SURFACE PRESSURE SURVEY

CO.		RUN 04 FIELD STRZELECKI	WELL 10
EFF DEPTH		WELL STAT	TOOL HUNG 6396'
CASING	-	CASING PRESS	ON BOTTOM 1250 7/4
LINER	-	TUBING PRESS	OFF BOTTOM 0612 13/4
DATE	910413	ELEMENT RANGE 0 - 3101	ZERO POINT
ELEVATION		ZONE	SHUT-IN 2300 7/4
MAX TEMP	122 C	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 56429	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	BUILD-UP

SURVEY DATA

CO.	RUN 04 FIELD STRZELECKI				WELL 10L			
	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	23:00	743.5	743.5	.0	7:23	1965.4	1965.4	8.4
	23:02	772.5	772.5	.0	8:02	1986.5	1986.5	9.0
	23:05	830.2	830.2	.1	8:26	1999.1	1999.1	9.4
	23:08	886.8	886.8	.1	9:05	2001.0	2001.0	10.1
	23:12	950.4	950.4	.2	9:37	2004.0	2004.0	10.6
	23:17	1020.1	1020.1	.3	10:06	1982.5	1982.5	11.1
	23:22	1081.2	1081.2	.4	10:27	1964.7	1964.7	11.5
	23:27	1163.7	1163.7	.5	10:46	1948.1	1948.1	11.8
	23:36	1246.2	1246.2	.6	11:14	1909.3	1909.3	12.2
	23:41	1313.9	1313.9	.7	11:43	1870.8	1870.8	12.7
	23:48	1374.2	1374.2	.8	12:19	1834.3	1834.3	13.3
	23:59	1468.5	1468.5	1.0	13:09	1805.5	1805.5	14.2
	0:09	1534.6	1534.6	1.2	14:15	1784.5	1784.5	15.2
	0:22	1600.9	1600.9	1.4	15:44	1770.3	1770.3	16.7
	0:42	1670.9	1670.9	1.7	17:36	1762.8	1762.8	18.6
	0:56	1711.9	1711.9	1.9	19:51	1757.8	1757.8	20.8
	1:10	1741.0	1741.0	2.2	22:37	1758.0	1758.0	23.6
	1:27	1773.3	1773.3	2.5	2:45	1750.9	1750.9	27.7
	1:44	1797.7	1797.7	2.7	6:15	1751.2	1751.2	31.3
	2:08	1828.1	1828.1	3.1	11:20	1746.8	1746.8	36.3
	2:30	1853.5	1853.5	3.5	16:10	1743.1	1743.1	41.2
	2:55	1872.9	1872.9	3.9	21:40	1741.3	1741.3	46.7
	3:21	1889.6	1889.6	4.3	3:30	1736.8	1736.8	52.5
	3:47	1902.5	1902.5	4.8	8:42	1734.5	1734.5	57.7
	4:17	1910.6	1910.6	5.3	14:13	1734.9	1734.9	63.2
	4:52	1919.5	1919.5	5.9	20:55	1730.7	1730.7	69.9
	5:30	1923.9	1923.9	6.5	3:22	1728.8	1728.8	76.4
	5:57	1929.6	1929.6	7.0	10:12	1729.2	1729.2	83.2
	6:32	1941.9	1941.9	7.5	18:17	1726.2	1726.2	91.3
	6:51	1947.1	1947.1	7.9	2:13	1724.2	1724.2	99.2

SURVEY DATA

CO.	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	9:40	1723.7	1723.7	106.7	0:00	.0	.0	.0

LUB IN DWT = 248 PSI / OUT = 1447 PSI

LUB IN AMERADA = 244 PSI / OUT = 1460 PSI

PLEASE NOTE ; CLOCK RAN OUT $\approx$ 20.5 HOURS BEFORE P.O.O.H.

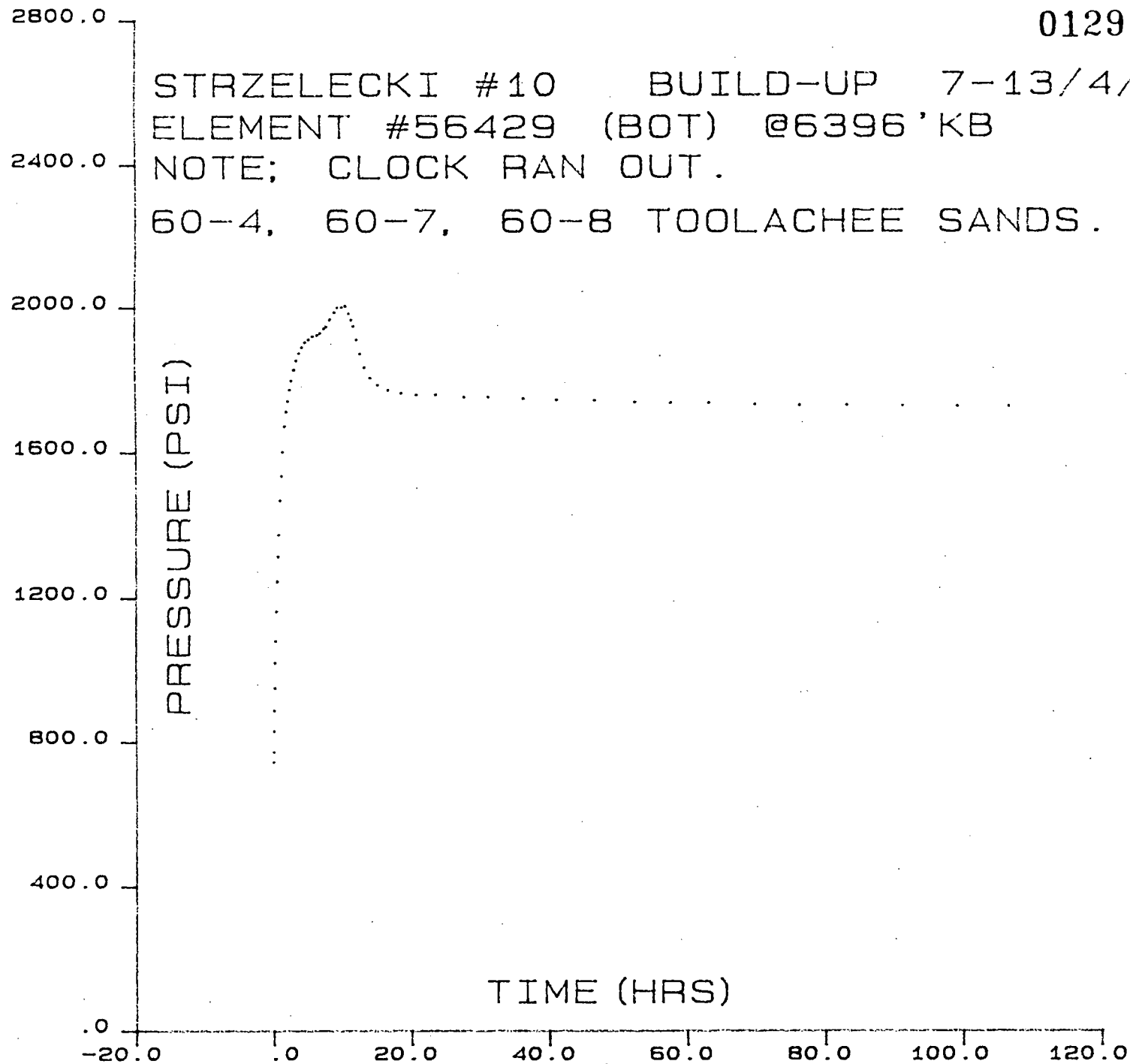
0129

STRZELECKI #10 BUILD-UP 7-13/4/91

ELEMENT #56429 (BOT) @6396'KB

NOTE; CLOCK RAN OUT.

60-4, 60-7, 60-8 TOOLACHEE SANDS.



SUB-SURFACE PRESSURE SURVEY

CO.		RUN 03 FIELD STRZELECKI	WELL 10
EFF DEPTH		WELL STAT	TOOL HUNG 6290'
CASING	-	CASING PRESS	ON BOTTOM 1250 7/4
LINER	-	TUBING PRESS	OFF BOTTOM 0612 13/4
DATE	910413	ELEMENT RANGE 0 - 3102	ZERO POINT
ELEVATION		ZONE	SHUT-IN 2300 7/4
MAX TEMP	122 C	PICK-UP	ON-PROD
PERF	-	CAL SER NO. 56432	MPP
TUBING	-		
UNITS	ENGLISH	PURPOSE	BUILD-UP

SURVEY DATA

CO.	TIME	P-T	DP-DT	DTIME	TIME	P-T	DP-DT	DTIME
	23:00	745.0	745.0	.0	4:15	1912.6	1912.6	5.3
	23:04	776.1	776.1	.1	4:52	1919.5	1919.5	5.9
	23:07	825.5	825.5	.1	5:29	1925.1	1925.1	6.5
	23:08	861.7	861.7	.1	5:39	1925.1	1925.1	6.7
	23:12	912.9	912.9	.2	6:01	1934.7	1934.7	7.0
	23:15	943.4	943.4	.2	6:43	1949.8	1949.8	7.7
	23:17	977.8	977.8	.3	7:20	1971.0	1971.0	8.3
	23:20	1025.3	1025.3	.3	7:54	1991.8	1991.8	8.9
	23:24	1072.6	1072.6	.4	8:09	1996.9	1996.9	9.2
	23:28	1127.6	1127.6	.5	8:47	1996.9	1996.9	9.3
	23:30	1167.8	1167.8	.5	9:12	2001.8	2001.8	10.2
	23:35	1231.5	1231.5	.6	9:45	1979.1	1979.1	10.7
	23:41	1291.7	1291.7	.7	10:26	1942.4	1942.4	11.4
	23:47	1357.5	1357.5	.8	11:10	1880.3	1880.3	12.2
	23:54	1426.8	1426.8	.9	12:02	1829.1	1829.1	13.0
	0:02	1487.3	1487.3	1.0	12:55	1800.1	1800.1	13.9
	0:09	1548.0	1548.0	1.1	14:10	1778.3	1778.3	15.2
	0:18	1597.1	1597.1	1.3	15:23	1768.5	1768.5	16.4
	0:26	1630.0	1630.0	1.4	17:24	1762.1	1762.1	18.4
	0:34	1663.2	1663.2	1.6	19:51	1756.8	1756.8	20.8
	0:48	1705.6	1705.6	1.8	21:53	1754.2	1754.2	22.9
	1:05	1739.0	1739.0	2.1	0:57	1751.6	1751.6	25.9
	1:15	1761.8	1761.8	2.3	4:57	1751.3	1751.3	29.9
	1:30	1784.3	1784.3	2.5	9:41	1746.8	1746.8	34.7
	1:43	1804.6	1804.6	2.7	14:45	1741.2	1741.2	39.8
	1:58	1825.5	1825.5	3.0	20:30	1741.1	1741.1	45.5
	2:15	1844.6	1844.6	3.3	2:48	1737.1	1737.1	51.8
	2:39	1866.6	1866.6	3.6	9:54	1733.4	1733.4	58.9
	2:59	1881.5	1881.5	4.0	12:17	1733.4	1733.4	61.3
	3:36	1900.5	1900.5	4.6	0:00	.0	.0	.0

LUB IN DWT = 248 PSI / OUT = 1447 PSI

LUB IN AMERADA = 244 PSI / OUT = 1450 PSI

PLEASE NOTE; CLOCK FAILED AFTER APPROXIMATELY 61 HOURS
OF BUILD-UP.

EXPERTEST

WIRELINE & WELL TESTING SERVICE

PO BOX 354 COIMBATORE 5632

Tested Monday, 1st April 1991.

PH. (08) 354 0408 TELEX 8897183

FAX (08) 43 7408

130 RICHMOND ROAD MARLETON

SOUTH AUSTRALIA 5032

CLIENT	LOCATION	FORMATION
Santos Ltd.	STRZELECKI #10 L	TOOLACHEE

STATIC PRESSURE GRADIENT REPORT

PRESSURE ELEMENT DATA			
POSITION	SERIAL NO.	RANGE	CALIBRATED
Top	58429	3000	12/ 3/91
Bottom	58432	3000	12/ 3/91

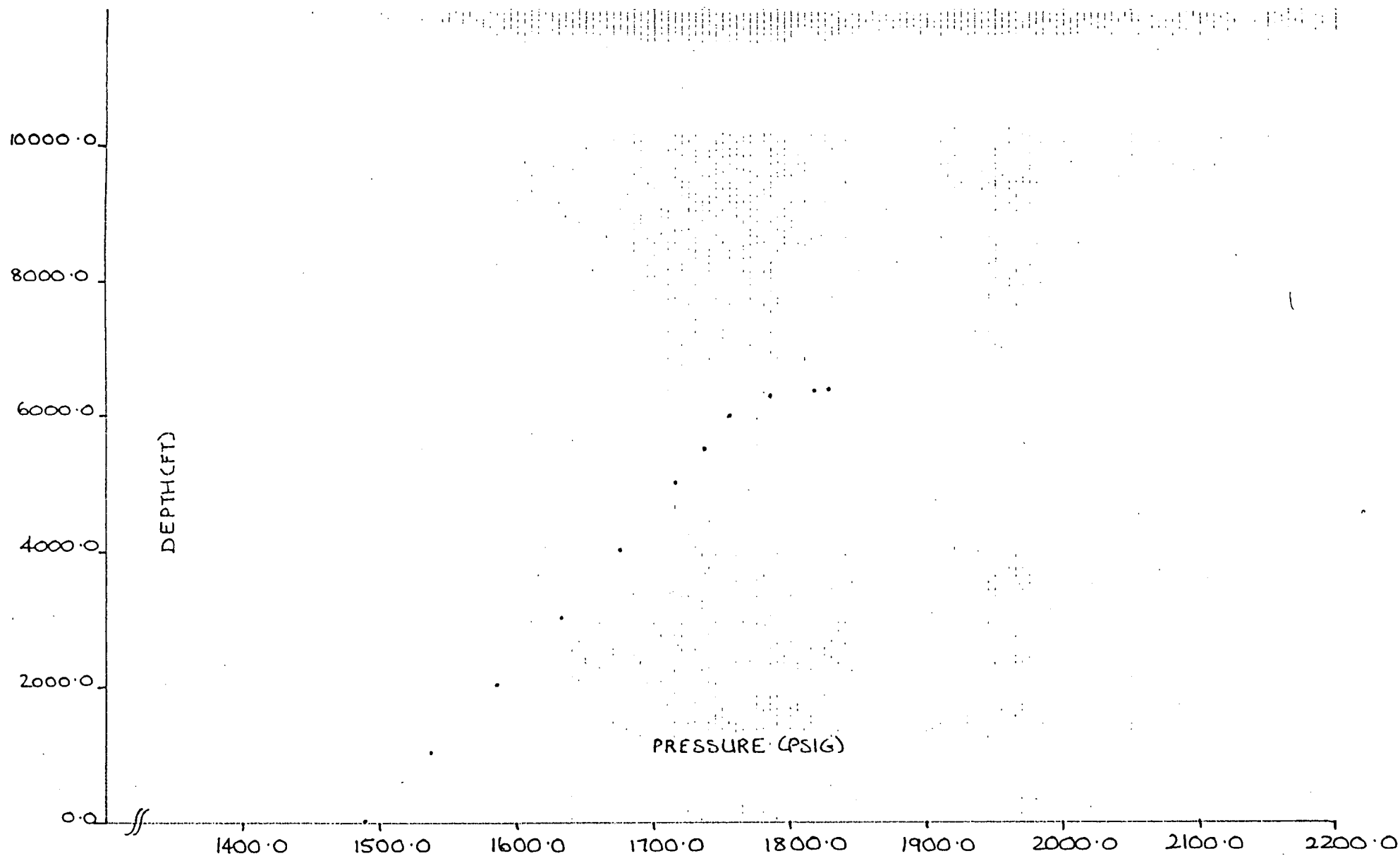
WELL DATA	
PARAMETER	VALUE
DWT In	1488 PSIG
DWT Out	1493 PSIG
Max DWT	250 F

DEPTH FT KB	TOP ELEMENT			BOTTOM ELEMENT		
	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT
LUB.	0.9650	1495.7	-----	0.9640	1489.3	-----
1000	0.9980	1543.7	0.048	0.9950	1537.3	0.048
2000	1.0290	1590.2	0.047	1.0260	1585.3	0.048
3000	1.0550	1635.1	0.045	1.0560	1631.9	0.047
4000	1.0830	1678.4	0.043	1.0840	1675.2	0.043
5000	1.1090	1719.7	0.040	1.1100	1715.6	0.040
5500	1.1220	1738.9	0.040	1.1240	1737.3	0.043
5000	1.1340	1757.5	0.037	1.1360	1755.9	0.037
5295	1.1490	1790.7	0.079	1.1550	1795.3	0.100
5372	1.1705	1914.0	0.438	1.1755	1917.1	0.418
5395	1.1770	1924.1	0.438	1.1820	1927.2	0.438
LUB.	0.9640	1494.2	-----	0.9650	1490.9	-----

GENERAL REMARKS

GRADIENT CONDUCTED AT THE CONCLUSION OF SINGLE RATE FLOW / BUILD UP TEST

STRZELECKI # 10L — STATIC PRESSURE GRADIENT — 1/4/91
ELEMENT # 56432/3000 (BOT)



EXPERTEST

WIRELINE & WELL TESTING SERVICE

PO BOX 354 COWANDILLA 5033

PH. (08) 354 0488 TELEX AAB7183

FAX. (08) 43 7408

138 RICHMOND ROAD MARLESTON
SOUTH AUSTRALIA 5033

Tested Saturday, 13th April 1991.

CLIENT	LOCATION	FORMATION
Santos Ltd.	STRZELECKI 10	TOOLACHEE

STATIC PRESSURE GRADIENT REPORT

PRESSURE ELEMENT DATA			
POSITION	SERIAL NO.	RANGE	CALIBRATED
Top	56432	3000	12/ 3/91
Bottom	56429	3000	12/ 3/91

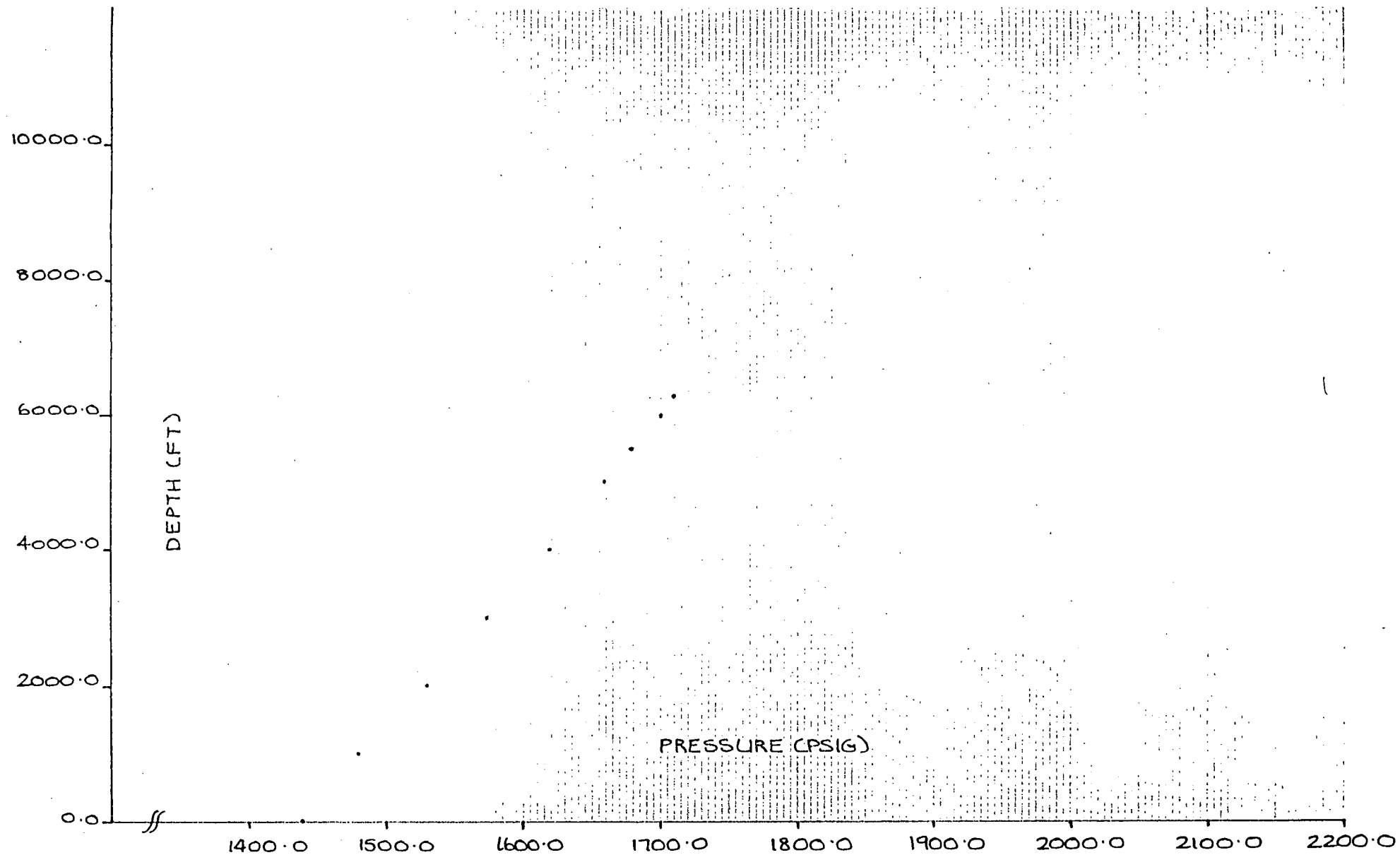
WELL DATA	
PARAMETER	VALUE
DWT In	1439 PSIG
DWT Out	1447 PSIG
Max BHT	122

DEPTH FT KB	TOP ELEMENT			BOTTOM ELEMENT		
	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT	DEFLECTION INCHES	PRESSURE PSIG	GRADIENT PSI/FT
LUB.	0.9310	1438.1	---	0.9300	1441.5	---
1000	0.9580	1480.0	0.042	0.9570	1483.3	0.042
2000	0.9900	1529.6	0.050	0.9870	1529.8	0.046
3000	1.0180	1572.9	0.043	1.0170	1576.2	0.047
4000	1.0470	1617.9	0.045	1.0430	1616.5	0.040
5000	1.0730	1658.2	0.040	1.0680	1655.2	0.039
5500	1.0850	1676.8	0.037	1.0800	1673.8	0.037
6000	1.0990	1698.5	0.043	1.0940	1695.5	0.043
6296	1.1060	1709.4	0.037	1.1000	1704.8	0.031
LUB.	0.9290	1435.0	---	0.9280	1438.4	---

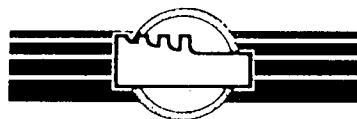
GENERAL REMARKS

CASING 1717 KPA

STRZELECKI # 10 — STATIC PRESSURE GRADIENT — 13/4/91
ELEMENT # 56432 / 3000 (TOP)



EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' KB.

PAGE: ONE OF SEVEN

WELL NAME: STRZELECKI #10 LOWER

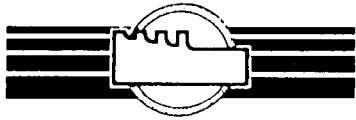
FORMATION : TOOLACHEE 61-2

DATE: 20-03-91

TEST TYPE : SINGLE RATE TEST

OPR : T. CHAPMAN

TIME		WELLHEAD DATA				SEPERATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /D	OIL BBLS m ³	WATER BBLS m ³		
20 TH	MARCH 1991				64										
16:00		10273	1731		S.I.										ARRIVE ON LOCATION
17:30		10273	1731												R.I.H WITH 1.75" DRIFT
17:55															TAG T.D. @ 6528' KB - P.O.O.H.
18:15		10308	1744												AT SURFACE - SECURE WELL.
21 ST	MARCH 1991														
07:00															MOVE EQUIPMENT AND RIG UP.
15:20		10287	1744												PRESSURE TEST LINES
15:30		10177	1744												PRESSURE TEST SEPERATOR
15:40		9046	1744		16/64										OPEN ON BYPASS TO FLARE
15:45		6516	1744		16/64										DIVERT THROUGH SEPERATOR.
15:50		4744	1731		16/64										
16:00		3310	1724	27	16/64	1034	29	16.340	0	0					INSTALL 1.250" ORIFACE PLATE
16:00															START THE SURVEY
16:30		1993	1724	27	16/64	896	29	11.837	0	0	.247				
16:45					16/64										INSTALL 1.00" ORIFACE PLATE
17:00		1710	1731	28	16/64	690	29	7.673	0	0	.406				FLUID TO SURFACE
17:30		2379	1724	30	16/64	821	29	6.425	0	0	.540				INSTALL .750" ORIFACE PLATE
18:00		2689	1717	30	16/64	876	29	6.223	0	0	.670				
18:30		2689	1717	29	16/64	924	27	5.373	0	0	.782				
18:45															INSTALL .625" ORIFACE PLATE



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' KB

PAGE: TWO OF SEVEN

WELL NAME: STRZELECKI #10 LOWER

FORMATION : TOOLACHEE 61-2

DATE: 21-03-91

TEST TYPE : SINGLE RATE TEST

OPR : T. CHAPMAN

TIME		WELLHEAD DATA				SEPERATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°C)	CHOKE SIZE /64	PRESSURE (PSI/KPa)	TEMP (°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³	L.G.R. m ³ /10 ⁶ m ³	G.L.R. (G.W.R.) m ³ /m ³
21 ST	MARCH 1991														
19:00	3	2786	1710	30	16/64	1076	27	6.583	ACHIEVE	LEVELS.	.919				
20:00	4	2772	1710	29	16/64	1076	26	6.389	0	11.197	1.185	0	.467	1752.5	571
21:00	5	2772	1710	29	16/64	1069	25	6.331	0	9.598	1.449	0	.867	1516.0	660
22:00	6	2772	1703	29	16/64	1110	25	6.336	0	12.797	1.713	0	1.400	2019.7	495
24:00	8	2758	1703	29	16/64	1138	25	6.243	0	12.000	2.233	0	2.400	1922.2	520
22 ND	MARCH 1991														
02:00	10	2627	1696	29	16/64	1158	24	6.251	0	12.797	2.754	0	3.466	2047.2	488
06:00	14	2096	1696	29	16/64	1214	23	5.510	0	10.797	3.672	0	5.266	1959.5	510
10:00	18	2006	1710	31	16/64	876	27	4.509	0	9.198	4.424	0	6.799	2040.0	490
14:00	22	2069	1710	32	16/64	896	32	4.199	0	9.998	5.124	0	8.465	2381.0	420
18:00	26	2049	1689	30	16/64	1000	28	4.382	0	9.198	5.854	0	9.998	2099.0	471
22:00	30	2041	1682	29	16/64	1103	24	4.151	0	10.397	6.546	0	11.731	2504.7	399
23 RD	MARCH 1991														
02:00	34	2000	1682	28	16/64	876	21	4.239	0	9.998	7.253	0	13.397	2358.6	424
06:00	38	2027	1689	27	16/64	855	19	3.938	0	9.600	7.909	0	14.997	2437.8	410
10:00	42	2006	1682	31	16/64	710	26	4.053	0	10.797	8.585	0	16.797	2664.0	375
14:00	46	2000	1689	35	16/64	717	31	3.920	0	9.598	9.238	0	18.397	2448.5	408
18:00	50	1986	1682	32	16/64	855	29	4.385	0	9.998	9.968	0	20.063	2280.0	439
22:00	54	1924	1675	31	16/64	1000	24	4.119	0	9.998	10.656	0	21.729	2427.3	412

TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' KB

PAGE: THREE OF SEVEN

WELL NAME: STRZELECKI #10 LOWER

FORMATION : TOOLACHEE 61-2

DATE: 24-03-91

TEST TYPE : SINGUE RATE TEST

OPR: T. CHAPMAN.

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE /64	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m³10³/D	OIL BPD m³/D	WATER BPD m³/D	GAS MMSCF m³10³	OIL BBLs m³	WATER BBLs m³	L.E.R. m³/10⁶m³	G.L.R. m³/m³
24TH	MARCH 1991														
02:00	58	1765	1682	30	16/64	945	22	4.312	0	10.397	11.374	0	23.462	2411.2	415
06:00	62	1641	1689	30	16/64	579	22	3.784	0	11.997	12.005	0	25.462	3170.5	315
10:00	66	1703	1682	34	16/64	586	29	4.284	0	9.198	12.719	0	26.995	2147.1	466
14:00	70	1724	1682	37	16/64	710	34	4.472	0	10.397	13.464	0	28.728	2324.9	430
18:00	74	1765	1682	35	16/64	800	32	4.677	0	10.397	14.244	0	30.461	2223.0	450
22:00	78	1800	1675	32	16/64	945	27	4.409	0	9.598	14.979	0	32.061	2176.9	459
25TH	MARCH 1991														
02:00	82	1869	1669	32	16/64	690	24	4.493	800	9.598	15.728	.133	33.661	2165.8	462
06:00	86	1896	1669	31	16/64	752	24	4.510	800	8.798	16.479	.266	35.127	1980.3	505
10:00	90	1944	1682	36	16/64	793	31	4.450	0	9.598	17.221	.266	36.727	2156.9	464
14:00	94	1979	1682	40	16/64	821	38	4.577	.400	9.998	17.984	.334	38.393	2271.8	440
18:00	98	1965	1675	37	16/64	827	35	4.617	.400	9.198	18.754	.401	39.926	2078.8	481
22:00	102	1965	1669	34	16/64	738	28	4.494	0	8.798	19.503	.401	41.392	1957.7	511
26TH	MARCH 1991														
02:00	106	2013	1669	33	16/64	821	25	4.454	0	10.397	20.245	.401	43.125	2334.3	428
06:00	110	2013	1669	31	16/64	772	23	4.175	1.200	7.998	20.941	.601	44.458	2203.1	454
10:00	114	2082	1682	37	16/64	676	33	4.480	.800	8.400	21.688	.734	45.858	2053.6	487
11:00	115	2034	1662	38	16/64			PRESSURE UP	THE LUBRICATOR.						
12:00	116	2041	1669	39	16/64										
13:00	117	2075	1682	39	16/64			DISCOVER A RESTRICTION IN FLOW - REPORT	TO MOOMBA						



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' KB.

PAGE: FOUR OF SEVEN.

WELL NAME: SIRZELECKI #10 LOWER

FORMATION : TOOLACHEE 61-2

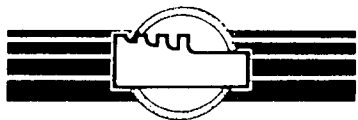
DATE: 26-03-91

TEST TYPE : SINGLE RATE TEST

* = SURFACE SAMPLES TAKEN.

OPR : T. CHAPMAN.

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	L.G.R. m ³ /10 ⁶ m ³	G.L.R. m ³ /m ³
26TH	MARCH 1991														
14:00	118	2420	1682	40	16/64	814	38	4.721	0	9.598	22.475	.734	47.458	2033.0	492
16:00	120	2503	1669	38	16/64	703	37	4.524	0	8.798	22.852	.734	48.191	1944.7	514
18:00	122	2565	1669	36	16/64	931	34	4.643	0	9.598	23.239	.734	48.991	2067.2	484
22:00	126	2558	1669	32	16/64	993	27	4.443	0	8.798	23.980	.734	50.457	1980.2	505
27TH	MARCH 1991														
02:00	130	2579	1669	30	16/64	1076	24	4.494	.400	8.398	24.729	.801	51.857	1957.7	511
06:00	134	2599	1669	30	16/64	1089	24	4.521	.400	8.798	25.483	.868	53.323	2034.5	492
09:25		2593	1669	32	16/64			PRESSURE UP THE LUBRICATOR.							
10:00	138	2586	1669	31	16/64	834	27	4.469	.800	8.398	26.228	1.001	54.723	2058.2	486
11:30		2592	1675	33	16/64			RUN IN THE HOLE WITH TANDUM 3000 PSI PRESSURE GAUGES.							
12:00	140	2606	1669	33	16/64			HANG GAUGES AT PROGRAMMED DEPTH OF 6395' KB.							
13:00	141	2510	1669	33	16/64	834	29	4.397	0	9.598	26.778	1.001	55.923	2182.9	458
14:00	142	2572	1669	33	16/64	869	30	4.470	0	6.398	26.964	1.001	56.190	1431.3	699
* 15:00	143	2544	1669	34	16/64	814	30	4.454	.800	8.798	27.149	1.034	56.557	2154.9	464
* 16:00	144	2572	1682	34	16/64	814	34	4.614	0	7.998	27.342	1.034	56.890	1733.4	577
17:00	145	2572	1669	34	16/64	779	31	4.470	0	7.998	27.528	1.034	57.223	1789.3	559
18:00	146	2565	1662	32	16/64	945	29	4.591	1.600	14.396	27.533	1.101	57.823	3484.2	287
20:00	148	2579	1662	30	16/64	1021	26	4.510	0	5.599	27.909	1.101	58.290	1241.5	806
22:00	150	2579	1662	30	16/64	1083	25	4.498	0	9.198	28.284	1.101	59.056	2044.9	489
22:00						SHUT IN THE WELL FOR BUILD UP.									



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' ICB.

PAGE: FIVE OF SEVEN.

WELL NAME: STRZELECKI #10 LOWER.

FORMATION : TOOLACHEE 61-2

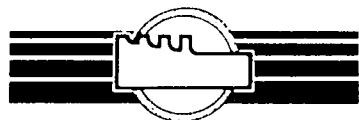
DATE: 27-03-91

TEST TYPE : SINGLE RATE TEST

OPR : T. Chapman

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /D	OIL BBLs m ³	WATER BBLs m ³		
27 TH	MARCH 1991														
22:00	0	2579	1662	30		SHUT	IN THE WELL	FOR PROGRAMMED	96	HOUR BUILD UP.					
22:01		2751	1669	30											
22:02		2868	1669	30											
22:03		2965	1669	30											
22:04		3055	1669	30											
22:05		3123	1662	30											
22:10		3551	1662	30											
22:15		3882	1662	29											
22:30		4682	1662	27											
22:45		5309	1655	25											
23:00	1	5785	1655	23											
23:15		6185	1655	22											
23:30		6543	1655	21											
23:45		6861	1655	20											
24:00	2	7136	1655	19											
28 TH	MARCH 1991														
00:15		7385	1655	19											
00:30		7598	1655	18											
00:45		7812	1655	18											
01:00	3	8012	1655	17											

013



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' KB.

PAGE: SIX OF SEVEN.

WELL NAME: STRZELECKI #10 LOWER

FORMATION : TOOLACHEE 61-2

DATE: 28-03-91

TEST TYPE : SINGLE RATE TEST

OPR : T. CHAPMAN.

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /D	OIL BBLS m ³	WATER BBLS m ³		
28 TH	MARCH 1991						WELL SHUT IN ON BUILD UP.								
01:15		8191	1655	17											
01:30		8371	1655	16											
01:45		8564	1655	16											
02:00	4	8695	1655	16											
06:00	8	10736	1676	12											
10:00	12	10839	1676	32											
14:00	16	10639	1682	39											
18:00	20	10460	1682	30											
22:00	24	10280	1676	22											
29 TH	MARCH 1991														
02:00	28	10218	1669	20											
06:00	32	10225	1669	20											
1000	36	10218	1675	29											
1400	40	10205	1682	30											
1800	44	10198	1689	32											
2200	48	10239	1682	23											
30 TH	MARCH 1991														
0200	52	10239	1675	19											
0600	56	10246	1682	19											
10:00	60	10260	1682	23											

0140

TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6362' → 6382' CB.

PAGE: SEVEN OF SEVEN.

WELL NAME: STRZELECKI # 10 LOWER.

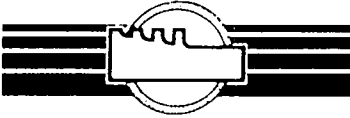
FORMATION : TOOLACHEE 61-2

DATE: 30-03-91

TEST TYPE : SINGLE RATE TEST

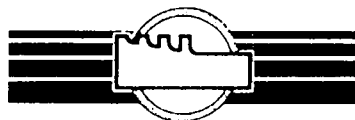
OPR: T. CHAPMAN.

[illegible]

EXPERTEST PTY. LTD.		TEST RESULTS													
		CUSTOMER : SHANTOS LTD.							PERFORATIONS: 6258' - 6335'				PAGE: 1 OF 6		
		WELL NAME: STRELECKI #10							FORMATION : TOOLACHEE				DATE: 3-4-91		
		TEST TYPE : SINGLE RATE + BUILD UP											OPR : L. RILEY		
TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE 6A THS	PRESSURE (PSI/KPa) ₁	TEMP (°F/°C)	GAS MMSCFD 10 ³ m ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCFD m ³ 10 ³	OIL BBLS m ³	WATER BBLS m ³	m ³ /10 ⁶ m ³	
WEDNESDAY	3/4/91														
1440		10322	1689		16/64			OPEN	WELL ON 16/64 THS	FLOW ON BYPASS TO FLARE					
1445		7681	1689	31											
1450		6081	1676	31											
1455		4827	1676	31											
1500		3779	1676	31											
1515		3172	1676	31											
1530	1	2648	1676	31											
1545		2482	1676	31				DIVERT	FLOW THRU	SEPARATOR - INSTALL 1.00" O/P					
1600	1.5	2413	1676	31		759	28	14.14	0	0		0	0		
1700	2.5	2255	1676	31		827	27	13.32							
1800	3.5	2027	1676	30		862	26	11.53							
2000	5.5	1786	1676	28		1138	25	10.51							
2200	7.5	1655	1676	27		931	20	10.09							
THURSDAY	4/4/91														
0200	11.5	1634	1669	25		965	19	8.9	LIQUID TO	SURFACE -					
0600	15.5	1979	1669	25		1069	19	10.83			6.6	0	0		
1000	19.5	2006	1676	30		689	26	8.55	0	4.02				467	
1400	23.5	2034	1676	35		621	32	8.58	0	0					
1800	27.5	2006	1669	31		648	29	8.60	0.80	1.61				280	
2200	31.5	1931	1669	28	16/64	689	23	8.53	0	0.8				94	

0142

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6256' 6335'

PAGE: 2 OF 6

WELL NAME: STRZELECKI #10

FORMATION : TOOLACHES

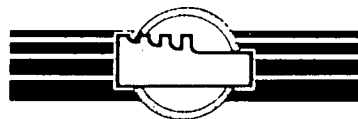
DATE: 5/4/91

TEST TYPE : SURGE RATE BUILD UP.

OPR : L. RILEY

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLs m ³	WATER BBLs m ³	L.S.R m ³ /m ³ E ⁶	
FRIDAY 5/4/91															
0200	35.5	1924	1669	28	16/64	930	20	8.21	1.61	4.82				783	
0600	39.5	1938	1662	27		930	20	8.71	0	0	15.14	0.26	1.3	—	
1000	43.5	1662	1669	33		930	29	9.48	0	1.61				170	
1400	47.5	1689	1662	37		930	35	8.49	0.80	1.80				188	
1800	51.5	1593	1662	33		930	30	9.46	0	1.61				170	
2200	55.5	1689	1655	30		896	25	8.93	0	0				—	
SATURDAY 6/4/91															
0200	59.5	1696	1662	29		1034	24	11.3	0	1.80				71	
0600	63.5	1662	1655	28		1034	21	11.2	1.40	0	24.95	0.4	1.9	36	
1000	67.5	1655	1655	34		621	30	9.59	0	3.22				336	
1400	71.5	1758	1662	37		586	35	9.58	0	3.22				336	
1800	75.5	1696	1662	33		827	31	9.33	0	3.22				346	
2200	79.5	1675	1662	31		862	27	9.00	0	3.22				358	
SUNDAY 7/4/91															
0200	83.5	1696	1662	30		896	26	9.42	1.0	3.22				342	
0600	87.5	1675	1648	30		862	24	8.99	0	1.80	34.27	0.4	3.78	89	
1000	91.5	1675	1655	34		690	29	9.35	0	2.81				301	
1034		1710	1655	34		PRESSURE LUBRICATOR TO FLEX PRESSURE ELEMENTS.									
1100	92.5	1655	1655	35		690	31	9.63	0	1.61				167	
1134		1758	1655	36		DEPRESSURE LUBRICATOR									
1200	93.5	1662	1669	39		793	34	10.13	0	4.82				476	

0143



TEST RESULTS

CUSTOMER : SANTOS LTD.

PERFORATIONS: 6256' - 3335'

PAGE: 3 OF 6

WELL NAME: STRZELECKI #10

FORMATION : TOOLACHEE

DATE: 7/4/91

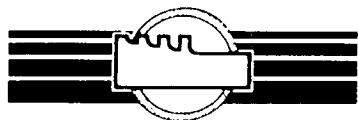
TEST TYPE : SINGLE RATED BUILD UP.

OPR : L. RINEY.

TIME		WELLHEAD DATA				SEPARATOR		FLOW RATES			CUMULATIVE PRODUCTION				
DATE	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS (MMSCFD m ³ /10 ³ D)	OIL (BPD m ³ /D)	WATER (BPD m ³ /D)	GAS (MMSCFD m ³ /10 ³)	OIL (BBLS m ³)	WATER (BBLS m ³)	LSR	
TIME															
SUNDAY 7/4/91															
1234		1675	1648	40	16/64			PRESSURE UP LUBRICATOR							
1235		1675	1648	40				R.I.H. WITH 2 x PRESSURE			PLETTENS				
1250		1710	1662	40				HANG Q 6296' K.B.							
1300	94.5	1820	1662	40		724	35	10.28	0	1.61				157	
1400	95.5	1731	1655	39		655	35	9.42	0	1.61				171	
1500	96.5	1813	1662	39		724	35	9.97	0	1.61				161	
1600	97.5	1779	1662	37		724	34	9.67	0	1.61				166	
			COLLECT 1 x GAS SAMPLE FROM SEPARATOR METER RUN (SPE 300) + 1 L.P. H ₂ O SAMPLE FROM LIQUID LINE.												
1700	98.5	1751	1655	36		758	32	9.06	0	3.22				355	
			COLLECT 1 x GAS SAMPLE FROM METER RUN (SPE 051) + 1 L.P. H ₂ O SAMPLE FROM LIQUID LINE.												
1800	99.5	1765	1655	34		723	31	9.47	0	1.61				170	
1900	100.5	1765	1655	33		896	30	9.07	0	1.61				178	
2000	101.5	1800	1655	32		931	28	9.28	0	1.61				173	
2100	102.5	1758	1655	32		931	28	9.50	0	1.61				169	
2200	103.5	1730	1648	32		931	28	9.61	0	3.22				335	
2300	104.5	1730	1648	31		931	27	9.62	0	1.61	41.03	0.4	4.89	167	
		SHUT IN WELL & RECORD BUILD UP.													

0144

EXPERTEST PTY. LTD.



TEST RESULTS

CUSTOMER : SANTOS LTP.

PERFORATIONS: 6258' - 6335'

PAGE: 4 OF 6

WELL NAME: STRZEMIECKI #10

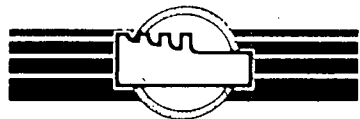
FORMATION : TOOLACHEE

DATE: 8/4/91

TEST TYPE: SINGLE RATE & BUILD UP

OPR: L. RILEY

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ /10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ /10 ³	OIL BBLS m ³	WATER BBLS m ³		
SUNDAY		7/4/91													
2305		2606	1648												
2310		3351	1655												
2315		3951	1662												
2330		4861	1669												
2345		6130	1689												
2400	1	6998	1710												
MONDAY		8/4/91													
0015		7585	1723												
0030		7984	1710												
0045		8281	1696												
0100	2	8495	1682												
0115		8736	1682												
0130		8943	1676												
0145		9143	1675												
0200	3	9308	1675												
0215		9474	1675												
0230		9625	1682												
0245		9859	1682												
0300	4	9922	1682												
0600	7	11163	1655												
															0145



TEST RESULTS

CUSTOMER : SANTOS
 WELL NAME : STRZELECKI #10
 TEST TYPE : S.R.T. & BUILD UP

PERFORATIONS: 6256' - 6335'
 FORMATION : TOOLACHEE

PAGE: 5 OF 6
 DATE: 8.4.91
 OPR: M. MUELLER

TIME		WELLHEAD DATA						FLOW RATES			CUMULATIVE PRODUCTION				
DATE TIME	FLOW-OR SHUT IN TIME (HOURS)	TUBING PRESSURE (PSI/KPa)	ANNULUS PRESSURE (PSI/KPa)	WELLHEAD TEMP (°F/°C)	CHOKE SIZE	PRESSURE (PSI/KPa)	TEMP (°F/°C)	GAS MMSCFD m ³ 10 ³ /D	OIL BPD m ³ /D	WATER BPD m ³ /D	GAS MMSCF m ³ 10 ³	OIL BBLS m ³	WATER BBLS m ³		
8.4.91															
1000	11	11363	1675												
1400	15	10322	1731												
1800	19	10280	1724												
2200	23	10239	1724												
9.4.91															
0200	27	10218	1710												
0600	31	10211	1703												
1000	35	10205	1703												
1400	39	10184	1717												
1800	43	10170	1717												
2200	47	10143	1717												
10.4.91															
0200	51	10122	1717												
0600	55	10108	1717												
1000	59	10115	1717												
1400	63	10122	1717												
1800	67	10094	1717												
2200	71	10087	1710												
11.4.91															
0200	75	10067	1703												
0600	79	10053	1703												

TEST RESULTS

CUSTOMER : SANTOS

PERFORATIONS: 6256 - 6335

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WELL NAME: STRZELECKI # 10

FORMATION : TOOLACHEE

DATE: 11.4.91

TEST TYPE : S.R.T & BUILD UP.

OPR : MMUELLER

[illegible]



SAMPLE	DEPTH feet metres	PALYNOSTRATIGRAPHICAL UNIT [age]	INFERRED STRATIGRAPHICAL UNIT	REWORKED PALYNOMORPH		PRESERV- ATION	YIELD	DIVERSITY	REMARKS
				%	AGE				
FHC	6423.75	PP4.3 [LATE PERMIAN]	BASAL TOOLACHEE FM			FAIR	LOW	LOW	CORE DEPTH 6411'9". Bisaccate pollen common, <u>Didecitriletes</u> spp and <u>Punctatisporites</u> spp prominent. <u>D. dulhuntyi</u> present.
FHC	6435.50	PP4.3 [LATE PERMIAN]	BASAL TOOLACHEE FM			FAIR	LOW	LOW	CORE DEPTH 6423'6". Bisaccate pollen abundant, advanced cheilocardiod spores frequent. <u>D. ericianus</u> and <u>D. dulhuntyi</u> present.
FHC	6438.00	PP4.3 [LATE PERMIAN]	BASAL TOOLACHEE FM			FAIR	MOD.	MOD.	CORE DEPTH 6426'. Bisaccate pollen abundant, <u>Didecitriletes</u> spp common, <u>D. dulhuntyi</u> present.
FHC	6444.00	PP3 [EARLY PERMIAN]	UPPER PATCHAWARRA FM OR MURTEREE SHALES			POOR	MOD.	LOW	CORE DEPTH 6432'. Bisaccate pollen abundant, simple cheilocardiod spores common. <u>G. trisinus</u> and <u>P. cicatricosus</u> present.
FHC	6444.50	PP3.2 [EARLY PERMIAN]	UPPER PATCHAWARRA FM OR MURTEREE SHALES			POOR	LOW	LOW	CORE DEPTH 6432'6". Restricted assemblage. Bisaccate pollen common, <u>M. tentula</u> frequent, <u>G. trisinus</u> , <u>P. cicatricosus</u> and <u>P. sinuosus</u> present.

G.R. WOOD

DECEMBER 1994

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