

linører

**L&U DOK. SENTER**

L. NR. 12483080087

KODE Well 31/2-3 nr. 18

Returneres etter bruk

# Well Testing Report

UND — ARKIVET

Nr.:

Client = NORSKE SHELL

Field = WILDCAT

Well

= 31/2-3

FLOPETROL

**Schlumberger**

WE PRODUCE RESULTS

# FLOPETROL

DIVISION : NAR/NUD

BASE : STAVANGER

REPORT N°: 80/2301/34

## Well Testing Report

Client : NORSKE SHELL

Field : WILDCAT

Zone : GAS TEST NO 2 Date : 4 - 10 JULY 1980

UND — ARKIVET	
Nr.:	
= 31/2=3	

WILDCAT

Client : NORSKE SHELL

Section : INDEX

Field : WILDCAT

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Base : STAVANGER

Well : 31/2-3

Report N : 80/2301/34

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- 7 - WELL TESTING DATA

Flopetrol Chief operator

Client representativ

Name : BRIAN SCOTT

Name : ERIC KIPPERMAN

- TEST PROCEDURE -

Clean sand gas zone

Schlumberger perforated the interval 1435 - 1460 m with 8 shots/ft.

3 backsurge tests were carried out with a Halliburton R.T.T.S. string. The perforations were then gravel packed and completed with a Baker S.C. 1 packer. The test string was run with a G. 22 locator seal assembly, and tubing and all surface equipment pressure tested.

The original programme was modified and carried out as follows:

Clean up Flow

Bean up gradually to 32/64" adjustable choke and flow for 13 hours

Switch to 32/64" fixed choke, flow for 6 hours.

Switch to 60/64" fixed choke, flow for 10 hours.

Switch to 68/64" fixed choke, flow for 4 hours.

Bean up gradually to maximum choke setting (i.e. 2 x 2" chokes in choke manifold: 1½" choke on heater + heater by pass open: effective restriction assumed to be Sandec spool I.D. - 2 11/16") Well was flowing on maximum for 11 hours 20 minutes.

1st Maximum Flow

After running 2 x Sperry-sun M.R.P.G. + 1 amerada R.P.G. - 3 well as beaned up over 1 hour to maximum and flowed for 4 hours 35 minutes at this rate, shut-in for build-up and gauges retrieved.

2nd Maximum Flow

Gauges were re-run and well opened up over 1 hour to maximum, flowed at this rate for 5 hours 30 minutes. Shut-in and gauges retrieved.

1st Multirate Flow

Gauges were re-run and well opened up to 32/64" adjustable choke (10 MMSCFD) and flowed for 1 hour 20 minutes. Bean up to 46/64" adjustable choke (20 MMSCFD) and flowed for 6 hours; during flow period Thornton and K.S.L.A. sampling programmes were carried out, 4 sets of gas and condensate separator recombination samples taken and 2 Conoco gas sample bottles filled from the choke manifold. Well was beaned up to 60/64" adjustable choke (30 MMSCFD) and flowed for 1 hour 15 minutes. Bean up to maximum and flowed for 1 hour 25 minutes. Shut in for 3 hours and gauges retrieved.

P.C.T. Logging Flow

Well was opened up to 48/64" fixed choke, flowed for 1 hour 20 minutes and shut in for 1 hour while Schlumberger logged the perforations with flowmeter and resolution thermometer.

2nd Multirate Run

2 x Sperry-sun M.R.P.G. + 1 amerada R.P.G. - 3 were run and well opened up to 46/64" adjustable choke (20 MMSCFD) flowed for 1 hour.

Bean up to maximum (40 MMSCFD) and flowed for 1 hour. Shut in for 2 hours 60 minutes and gauges retrieved.

Well was killed by bullheading, then pulling out of packer and reverse circulated

## — MAIN RESULTS —

Tested interval: Clean sand gas zone      Perforations: 1435 - 1460 m

Operation	Duration	Bottom hole pressure	Well head pressure	Oil prod. rate	Gas prod. rate	<del>C.G.R.</del>
Units	Hr/ Min	PSIG	PSIG	B.C.P.D.	MMSCFD	Bbls/MMSCF
<u>Clean Up</u> 32/64" Fxd.	4.52		1839		11.87	N/A
32/64" Adj.	9.47		1835	46.8	14.12	3.3
32/64" Fxd.	4.42		1879	23.8	11.60	2.1
40/64" Fxd.	9.57		1783	28.9	17.07	1.7
48/64" Fxd.	4.13		1652	N/A	22.92	N/A
Max Choke	11.17		782	111	39.52	2.8
<u>1st Maximum Flow</u>	4.35	1612	790	116	40.70	2.8
<u>Build up</u>	5.40	2254	1997			
<u>2nd Maximum Flow</u>	5.32	1682	770	126	39.12	3.2
<u>Build up</u>	1.23	2254	2002			

Depth of bottom hole measurements: 1406 m      Reference: R, K, B

Temperature: 140°F at: 1406 m depth

Separator gas gravity (air : 1) at choke size: .605 at maximum choke

STO gravity at choke size: .784 at maximum choke

BSW: \_\_\_\_\_ Water cut: \_\_\_\_\_

### REMARKS AND OTHER OPERATIONS

Results are final results of each operation except condensate flow rates and condensate gas ratios which are averaged over the last hour of each flow.

## - MAIN RESULTS -

Tested interval: Clean sand gas zone Perforations: 1435 - 1460 m

OPERATION	DURATION	BOTTOM HOLE PRESSURE	WELL HEAD PRESSURE	OIL PROD. RATE	GAS PROD. RATE	<del>XXXXX</del> C.G.R.
Units	Hrs/Min	PSIG	PSIG	B.C.P.D.	MMSCFD	BBLs/MMSCF
<u>1st Multi-rate flow</u>						
32/64" Adj.	1.20	2226	1952	-	9.67	N/A
46/64" Adj.	6.05	1996	1757	36	20.68	1.8
60/64" Adj.	1.15	1961	1484	67	30.62	2.2
Max Choke	1.25	1765	875	147	39.43	3.7
Build up	2.56	2256	2001			
<u>P.C.T. Logging flow</u>						
48/64" Fxd.	1.22	-	1670	80	24.18	3.3
Build up	1.00		2004			

Depth of bottom hole measurements : 1406 m Reference : R.K.B.

Temperature : 140°F at : 1406 m depth

Separator gas gravity (air : 1) at choke size : .608 at maximum choke

STO gravity at choke size : .784 at maximum choke

BSW : \_\_\_\_\_ Water cut : 20% of liquid prod. at maximum choke

### REMARKS AND OTHER OPERATIONS

Results are final results of each operation except condensate prod. rate and condensate/gas ratios which are averaged over the last hour of each flow.

### — MAIN RESULTS —

 Tested interval : Clean sand gas zone      Perforations : 1435 - 1460 m

Operation	Duration	Bottom hole pressure	Well head pressure	Oil prod. rate	Gas prod. rate	<del>C.G.R.</del>
Units	Hr/Min	PSIG	PSIG	B.C.P.D.	MMSCFD	BBLs/MMSCF
<u>2nd Multi-rate flow</u>						
46/64" Adj.	1.02	2139	1774	N/A	20.65	N/A
Max Choke	1.00	1790	727	N/A	38.09	N/A
Build-up	2.58	2254	2002			

 Depth of bottom hole measurements : 1406 m      Reference : R.K.B.

 Temperature : 140°F at : 1406 m depth

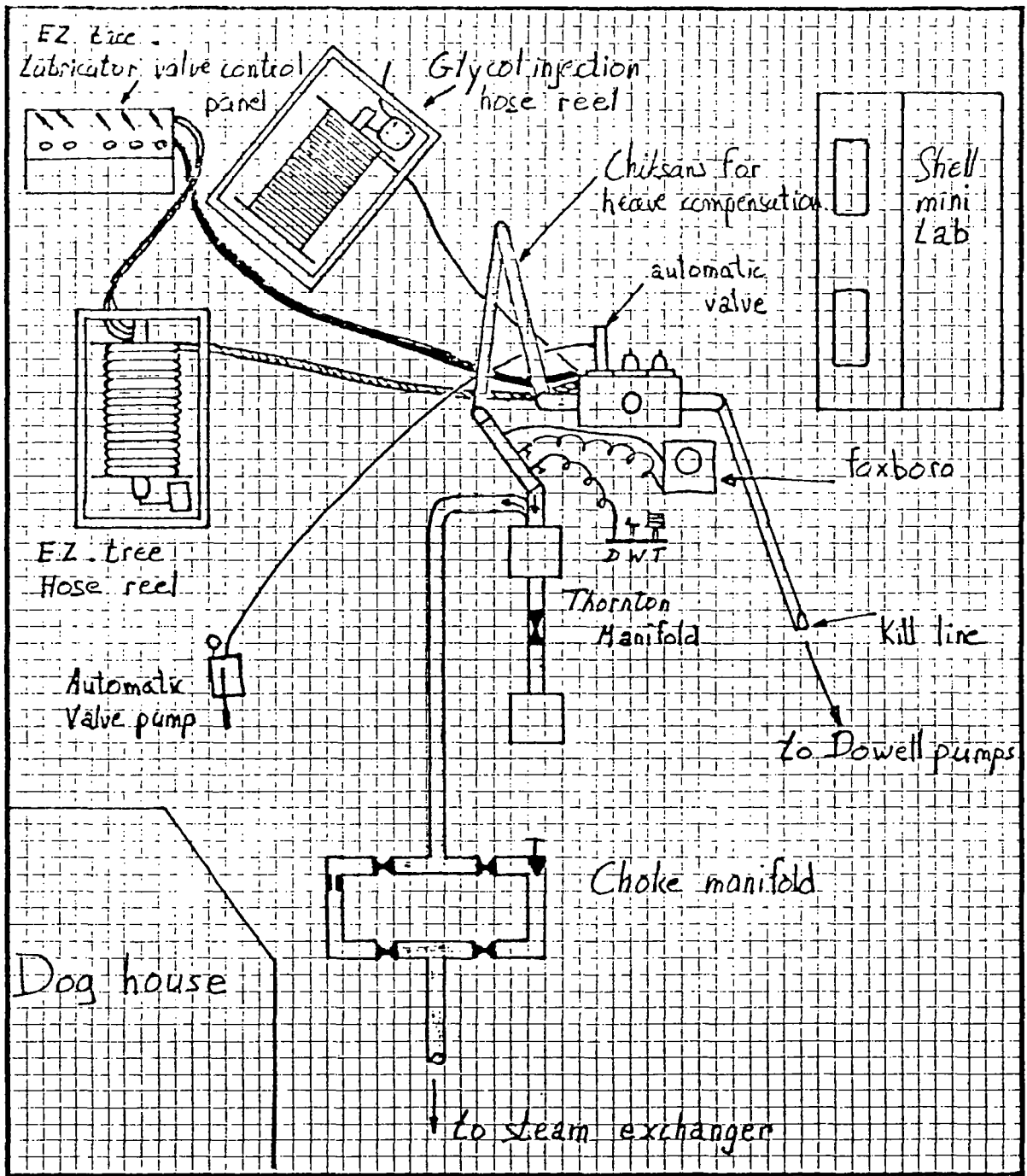
 Separator gas gravity (air : 1) at choke size : .609 at maximum choke

STO gravity at choke size : \_\_\_\_\_

BSW : \_\_\_\_\_      Water cut : \_\_\_\_\_

REMARKS AND OTHER OPERATIONS

- SURFACE EQUIPMENT LAYOUT - RIG FLOOR

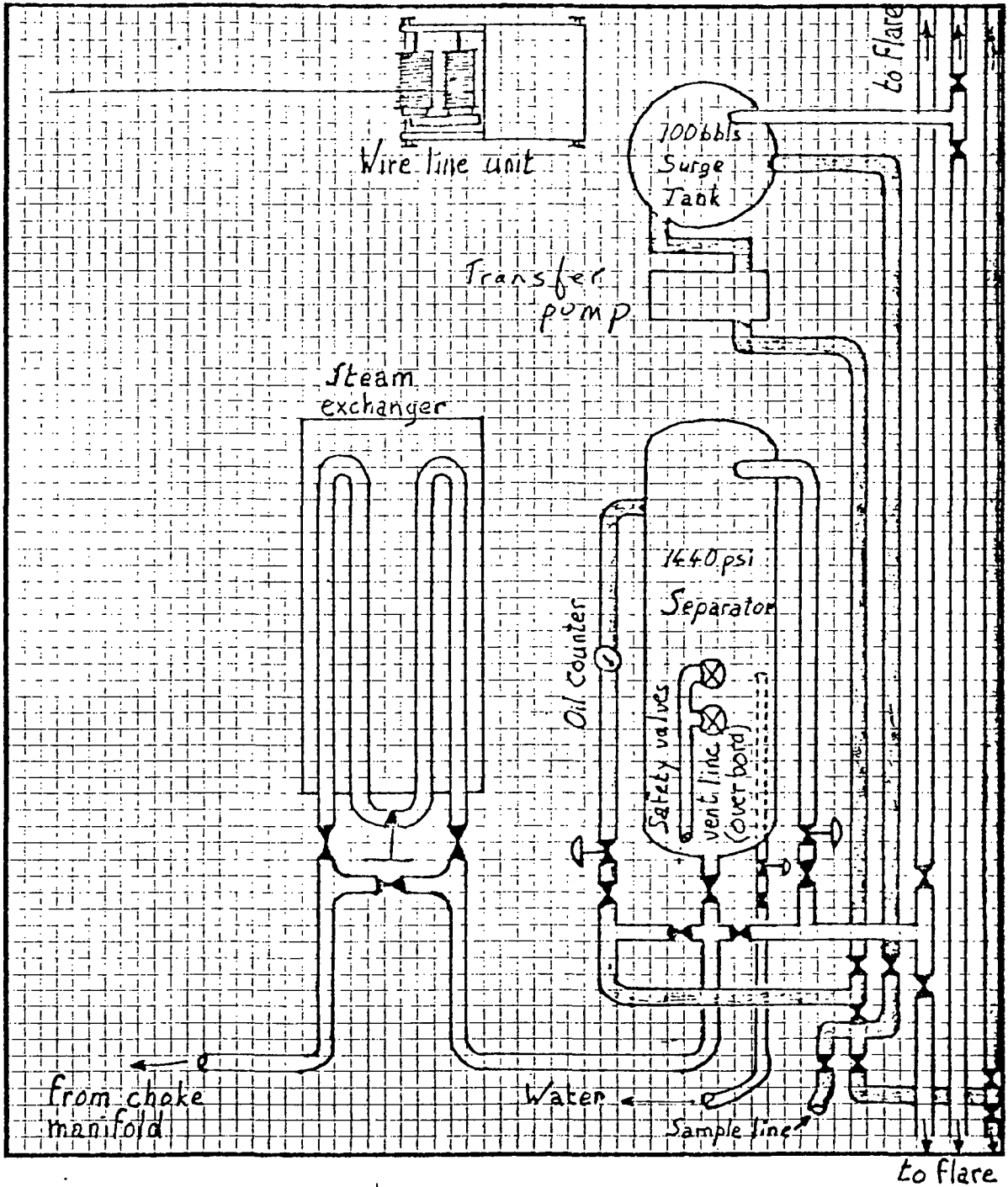


REMARKS :

- 1) Not to scale
- 2) D.W.T. and foxborro connected to instrument manifold.
- 3) Automatic wing valve can be operated from rig floor or separator.
- 4) For gas test No. 1 a thornton sampling manifold was placed upstream of the choke manifold. A sandtrap was also used towards the end of base test No. 1 on the rig floor.



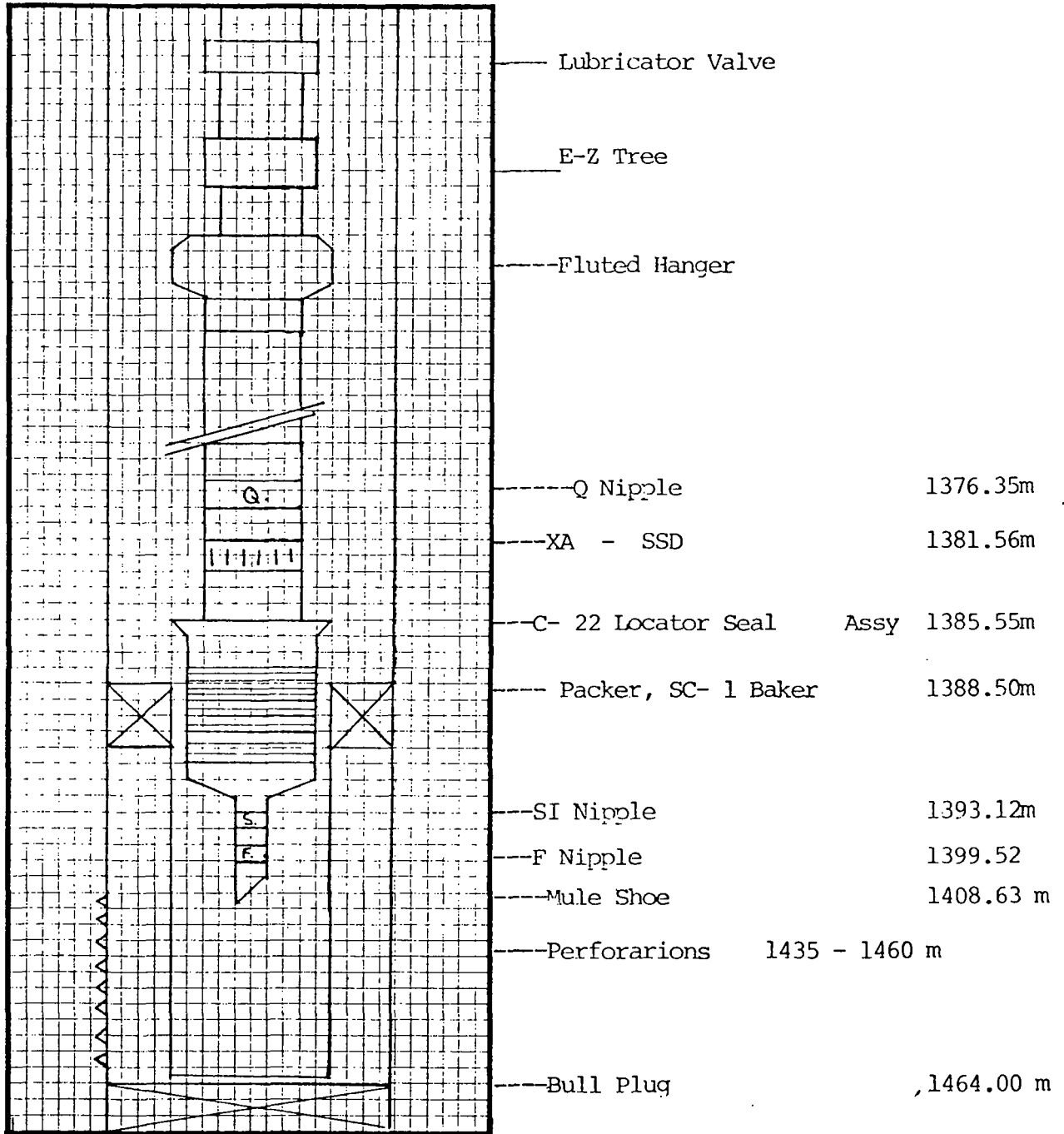
- SURFACE EQUIPMENT LAYOUT -



REMARKS :

NOT TO SCALE

- WELL COMPLETION DATA -



REMARKS :

NOT TO SCALE

- OPERATING AND MEASURING CONDITIONS -

A - TYPE OF GAUGE -

BOTTOM HOLE:

Pressure: Amerada R.P.G. - 3 0 - 3000 psig

Temperature: \_\_\_\_\_

WELL HEAD:

Pressure: D.W.T. 0 - 10 000 PSIG and Foxboro Recorder

Temperature: Foxboro Recorder 32 - 180 F

SEPARATOR:

Pressure: Barton 0 - 1500 psig

Temperature: Barton 0 - 200 F

B - PRODUCTION RATE CONDITIONS AND SOURCES -

OIL PRODUCTION RATE

- Tank
- Meter
- Dump
- 

- Floco
- Rotron

Reference conditions.

- Separator
- Atmospheric pressure 60 F

Shrinkage measurement.

- With tank
- With shrinkage tester

GAS PRODUCTION RATE

- Orifice meter
- 

Standard conditions.

14.73 psia  
60 F

WATER PRODUCTION RATE

- Tank
- Meter S. gallons
- 

C - WELL DATA -

WELL STATE DURING SURVEY:

Well producing through: tubing/drip pipe/casing

Main casing size 9 5/8" set at \_\_\_\_\_ Total well depth \_\_\_\_\_

Tubing size 5" VAM set at \_\_\_\_\_ Packer Baker S.C.1 set at 1388.5m

Perforations:

- Zone Clean sand from 1435 m to 1460 m From \_\_\_\_\_ to \_\_\_\_\_

- Zone \_\_\_\_\_ From \_\_\_\_\_ to \_\_\_\_\_ From \_\_\_\_\_ to \_\_\_\_\_

WELL STATE BEFORE TEST:

- ~~XXXXXXXXXX~~ Exploration
- Well flowing since \_\_\_\_\_ Producing zone \_\_\_\_\_
- Choke size \_\_\_\_\_

- SEQUENCE OF EVENTS -

TEST No. 4

CLEAN SAND GAS ZONE

DATE	TIME	OPERATION
27 - 28	06.80	Schlumberger perforated the interval with 8 S.P.F.
28.06.	1.07.80	Run backsurge tests No. 1,2,3.
1 - 2	07.80	Run gravel packer,
02.07.80		
	14.00	Make up B.H. sub assemblies and begin R.I.H.
	15.45	Pressure test B.H. sub assemblies
	16.15	Rig up W/L and R.I.H. to retrieve S.I. plug
	17.00	P.O.O.H. with S.I. plug
		Run 5" Vam tubing
03.07.80		
	00.45	E-Z Tree through rotary table
	04.00	Lubricator valve through rotary table
	05.30	Flow head on string
	05.40	Landed string
	06.15	Start to rig up wire line
	06.35	Close lubricator valve
	07.30	Pressure test wireline B.O.P.
	08.20	Start to run in hole for dummy run
	09.00	Wire line out of hole
	09.18	Wire line start to run in hole with Q Testplug
	09.45	Close B.O.P.
	10.10	Start pressure testing string
	11.40	Finish pressure testing string and start to pull out of hole with wire line
	12.10	Wire line at surface
	12.30	Rig up wireline lubricator and stuffing box

## SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
03.07.80		
	13.30	Rig up surface equipment, lines
	15.45	Begin pressure testing - burner and flares
		lines - 1000 psi, separator - 1300 psi, heater body -
		3000 psi, heater inlet-5000 psi, upstream choke -
		5000 psi, inlet Thornton - 5000 psi, outlet
		Thornton - 5000 psi, Sandtrap outlet and inlet -
		5000 psi
	23.15	Start rig up wire line
	23.40	Shifting tool in lubricator Test lubricator to
		5000 psi
	23.55	Open lubricator valve R.I.H.
04.07.80		
	00.10	Open sliding sleeve - wire line start to pull out
	00.40	Wireline in lubricator - close lubricator valve
	01.15	Close swab valve
	01.18	Open lubricator valve
	01.20	Close kill valve
	01.25	Pressure test kill line
	01.40	Open kill valve
	01.43	Start on acid stimulation
	02.45	Open flow line valve - closed in at choke manifold
	03.00	Dowell stop pumping
	03.04	Close lubricator valve
	03.05	Open lubricator valve
	03.10	Dowell continue pumping
	03.25	Dowell stop pumping - 73 Bbls pumped
	03.30	Close lubricator valve and bleed down lubricator
	03.45	Wire line in lubricator
	03.50	Pressure up lubricator and open lubricator valve

SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
04.07.80		
	03.50	Apply pressure on annulus to test if sliding sleeve open
	03.55	Wireline start to run in hole to close sliding sleeve
	04.25	Close sliding sleeve and start to pull out of hole
	04.46	Close lubricator valve
	04.55	Wire line out of lubricator and swab valve closed
	04.56	Open lubricator valve
	04.57	Dowell start to bull head well with 62 Bbls of diesel
	05.55	Dowell stop pumping - close lubricator valve
	06.05	Sand bailer in lubricator
	06.12	Run in hole with sand bailer
	07.20	Wire line at surface close lubricator valve
	07.22	Bleed down lubricator
	07.30	Retrieve sand bailer
	07.35	Close swab valve
	07.57	Open lubricator valve
	08.08	Open well on 10/64" adjustable choke
	08.20	Increase to 16/64" adjustable choke
	08.26	Increase to 20/64" adjustable choke
	08.38	Increase to a 24/64" adjustable choke
	10.46	Increase to 28/64" adjustable choke
	10.47	Switch to 28/64" fixed choke
	10.53	Switch to 32/64" adjustable choke
	11.05	Switch to 32/64" fixed choke
	11.18	Switch flow through separator
	13.00	Changed to 32/64" adjustable choke on heater
	16.52	By passed separator
	17.36	Switched back to separator
	22.47	Orifice up. back to 32/64" fixed choke on choke manifold

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SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
04.07.80		
	22.53	By passed heater
	23.02	Separator by passed
	23.20	Switched through heater on 32/64" fixed choke
	23.25	Flow through separators
	23.36	Changed orifice to 2.500
05.07.80		
	03.52	Left orifice plate out of Daniel orifice box
	04.02	Fit 32/64" fixed choke in choke manifold
	04.05	By pass heater
	04.19	Fixed choke 40/64" at choke manifold
	04.20	Flow through heater on adjustable choke
	04.55	by Pass heater
	04.08	Flow through heater on 40/64" fixed choke
	05.23	3" orifice plate in Daniel meter
	07.05	Lift Daniel orifice plate
	07.08	Switch flow through sandtrap
	07.10	3" plate back in Daniel orifice meter
	12.25	Started to pump liquid from tank to burner
	12:38	Gas flare out
	12.46	Gas flare lighted
	13.05	Finished pumping liquid to burner
	14.58	By passed Baker sandtrap
	15.00	Separator by passed
	15.05	On 40/64" adjustable choke at choke manifold
	15.17	On 48/64" fixed choke at choke manifold
	15.25	Switch to heater choke 48/64"
	15.55	Switch flow through separator
	16.15	Change orifice plate to 3,500 inches
	1934	Separator by passed

SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
05.07.80		
	19.38	Change to 44/64" adjustable at choke manifold
	19.40	Heater by passed
	20.00	Flow through heater
	20.10	56/64" adjustable choke on heater
	20.15	Flow through separator
	20.20	4 inches orifice plate in Daniel
	22.02	Orifice out
	22.05	Beaned up to 78/64" on heater
	22.08	4.500 orifice in Daniel
	22.14	4.250 orifice in Daniel
	22.35	Orifice out
	22.37	Bean up choke on heater
	22.45	Choke 86/64" on heater
	22.50	4.250 Orifice in Daniel
	22.56	Orifice out
	22.58	Bean up choke on heater
	23.05	Choke 96/64" on heater
06.07.80		
	01.00	Lift orifice plate in Daniel orifice box
	01.06	Open heater by pass
	01.08	Change choke to maximum ( I.D. of Sandec Spool 2.6875" )
	01.25	Lower orifice plate in Daniel orifice box
	01.30	Resume flow rate readings
	05.40	Burn off condensate from tank
	07.00	Stop burning from tank
	08.45	Start injecting methanol and glycol at well head and EZ Tree - Suspected hydrate plug
	12.16	Lift orifice plate in Daniel orifice box
	12.17	By passed separator

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SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
06.07.80		
	12.25	Shut in well at heater manifold
	12.34	Close lubricating valve
	12.55	Open kill valve to bleed off lubricator
	13.14	W.L. string in lubricator with C.I R.T. to check Tbg drift
	13.19	Pressure up lubricator
	13.22	Open lubricator valve R.I.H.
	13.52	W.L. string in lubricator
	13.54	Close lubricator valve
	13.59	Bleed down lubricator
	14.00	W.L. string out of lubricator
	14.08	Clock and stylus on P.E. No. 41673
	14.30	2 x Sperry-sun + 1 Amerada in lubricator
	14.36	Pressure up lubricator
	14.41	Open lubricator valve
	14.47	R.I.H
	14.57	Stop at 1062' for 5 minutes )
	15.14	Stop at 2529' for 5 minutes ) All depths taken from lubricator valve
	15.25	Stop at 3503' for 5 minutes )
	15.37	In "F" Nipple at 4512'
	15.39	P.O.H.
	15.57	In lubricator with W.L. string
	15.58	Close lubricatin valve
	16.03	Bleed off through kill line
	16.08	Open lubricator valve
	16.11	Close lubricator valve
	16.15	Bleed off through kill line
	16.20	W.L. tools out Lubricator rigged down
	16.34	Kill valve and swab valve closed Open lubricator valve

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SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
06.07.80	16.45	Open on 3/8" adj. choke on heater
	16.50	Increase to 1/2" adj choke on heater
	17.00	Increase to 5/8" adj choke on heater
	17.08	Increase to 7/8" adj choke on heater
	17.17	Increase to 1" adj choke on heater
	17.25	Increase to 78/64" adj choke on heater
	17.32	Increase to 90/64" adj choke on heater
	17.37	Increase to 96/64" adj choke on heater
	17.49	Fully open on heater choke
	18.30	Start injecting methonal and glycol at well head due to Hydrate problems
	21.10	Start flowing condensate into drums
	22.19	Shut in well at heater manifold for build up
	22.45	3 drums of condensate taken
07.07.80		
	04.04	Close lubricator valve
	04.15	Bleed down lubricator
	04.30	W/L pulling tool in lubricator
	04.32	Pressure up lubricator
	04.34	Open lubricator valve and R.I.H. to pull gauges
	05.17	Wireline at surface and close lubricator valve
	05.20	Bleed down lubricator
	06.27	Clock and stylus on P.E. No. 41673
	06.40	2 x Sperry sun and amerada in lubricator
	06.47	Pressure up lubricator valve
	06.50	Open lubricator valve
	06.55	Start running in hole
	07.05	Stop at 1062' for 5 minutes ) All depths taken
	07.23	Stop at 2529' for 5 minutes ) from lubricator valve
	07.36	Stop at 3503' for 5 minutes )

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SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
07.07.80	07.51	Gauges landed
	07.53	Start to pull out of hole
	08.15	Wireline at surface Close lubricator valve
	08.20	Bleed down lubricator
	08.25	Wireline rigged down
	08.30	Pressure up flowhead
	08.35	Open lubricator valve
	09.00	Open well on 1/4" adjustable choke at heater
	09.06	Increase choke to 3/8" adjustable on heater
	09.10	Increase choke to 1/2" adjustable on heater
	09.15	Increase choke to 5/8" adjustable on heater
	09.20	Increase choke to 3/4" adjustable on heater
	09.25	Increase choke to 13/16" adjustable on heater
	09.30	Increase choke to 7/8" adjustable on heater
	09.35	Increase choke to 1" adjustable on heater
	09.44	Increase choke to 1 7/32" adjustable on heater
	09.49	Increase choke to 1 13/32" adjustable on heater
	09.53	Increase choke to 1 1/2" adjustable on heater
		Effective choke now 1 1/2" at choke manifold
		Open heater by-pass
	10.00	Choke increased to maximum 2.6875" - sandec spool
	10.15	Start taking flow rate readings
	13.25	Through Thornton manifold
	14.00	Start flowing condensate into drums
	15.27	Oriface plate up
	15.32	Well shut in at heater manifold
	11.55	Lubricator valve closed
	17.00	Start to rig up wire line
	17.37	Open lubricator valve R.I.H.
	17.57	Start to pull out with 3 pressure bombs

SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
07.07.80	18.18	Lubricator valve closed
	18.21	Bleed off lubricator and retrieve bombs
	20.38	2 x Sperry-sun bombs (30 sec interval) + 1 amerada in lubricator
	20.40	Pressure up lubricator
	20.45	Open lubricator valve and R.I.H.
	21.10	Land gauges in 'F' Nipple and P.O.O.H.
	21.45	Rig down wire-line
	21.54	Open well on adjustable choke at heater manifold      Bean up adjuatable choke to 32/64"
	22.08	Going through Thornton manifold
	22.19	Orifice down 2.500"
	23.15	Bean up to 46/64" adjustable choke
	23.17	Orifice down 3.500"
8.07.80		
	01.00 to	Take first set of separator samples 20L gas No:- A-4875,
	01.25	560 cc condensate No:- 16251/84
	01.50	Start injecting glycol
	02.40	Stop injecting glycol
	02.45	Start taking second set of separator samples 20 L gas No:- A-49, 560 cc condensate No:- 22024/26      and take Conoco Sample No:- 12/73
	03.10	Start injecting glycol
	03.45	Finish taking second set of separator samples
	04.00	Start taking third set of separator samples 20L gas No:- A4738 560 cc condensate No:- 16251/5
	04.16	Take second Conoco sample No:- 12/72
	04.30	Finish taking third set of separator samples
	04.30	Start taking fourth set of separator samples 20 L gas No:- A 7588, 560 cc condensate No:- 20524/83

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SEQUENCE OF EVENTS (Continuation)

DATE	TIME	OPERATION
08.07.80	05.00	Finish taking fourth set of separator samples
	05.20	Increase choke size to 60/64" adjustable on heater (stop injecting glycol)
	06.35	Increase choke size maximum 2.6875" - Sandec spool Start injecting glycol again
	08.00	Shut in well at heater and start recording a build up
	10.56	Close lubricator valve
	11.05	Bleed down lubricator and start to rig up wire line to retrieve gauges
	11.23	Pressure up lubricator
	11.25	Run in hole with wire line
	11.45	P.O.H. with gauges
	12.06	Close up lubricator valve
	12.28	Bleed off lubricator
	12.43	Stylus off
	12.45	Rig down wire line
	15.00	Pressure test Schlumberger B.O.P.
	15.30	Rig up P.C.T.
	16.33	Open sandtrap manifold
	17.07	Open lubricator valve
		Problem with P.C.T. tools
	21.07	Open lubricator valve R.I.H. with P.C.T.
09.07.80		
	00.08	Open well - bean up gradually to 48/64" fixed choke at heater - for P.C.T. test
	01.30	Shut in well at choke manifold
	02.36	Schlumberger on surface, close lubricator valve
		Rig down Schlumberger
	04.30	2 x Sperry-sun gauges $\frac{1}{2}$ 1 amerada in lubricator
	04.32	Pressure up lubricator

N° DOP 108



# FLOPETROL

Client : NORSKE SHELL  
 Field : WILDCAT  
 Well : 31/2-3

Base : STAVANGER

## - WELL TESTING DATA SHEET -

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			WELL HEAD			SEPARATOR		PROD RATES AND FLUID PROPERTIES				GOR
	Bottom Hole Temp.	Pressure	Iq temp	Ig press	Cg press	Temp	Press	Oil Rate	Gravty	BSW	Rate	GAS	
Time	Cumul		F	PSIG									Air = 1
04.07.80													
08.08													
08.10			55	520									
08.15			55	527									
08.20			55	547				Change to 16/64" adj	choke size				
08.25			55	619									
08.26								Change to 20/64" adj	choke size				
08.30			52.5	687									
08.35			52.5	735									
08.38								Change to 24/64" adj	choke size				
08.40			50	799									
08.45			50	885									
08.50			50	977									
08.55			50	1040									
09.00			50	1340									0.1

LIQUID FLOW RATE MEASURING CONDITIONS :  
 Tested Interval : 1435 - 1460 m  
 Atmos. press at 60°F : See section 1.2  
 Depth Reference :  
 Depth of B H Measurements :

# FLOPETROL

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS		SEPARATOR				PROD. RATES AND FLUID PROPERTIES				GOR			
	BOTTOM HOLE	WELL HEAD	Temp.	Ig.press.	Cg.press.	Temp.	Press.	Rate	Gravity	BSW	Rate	GAS	CO <sub>2</sub> %	H <sub>2</sub> S PPM
Time Hr/min	Pressure	Temp. F	PSIG											Unit
04.07.80														
09.00														
09.05		50	1550											
09.10		50	1580											
09.15		50	1600											
09.20		50	1600											
09.25		50	1645											
09.30		50	1655											
09.35		50	1684											
09.40		50	1702									.25	Nil	
09.45		50	1725											
09.50		50	1740											
09.55		50	1749											
10.00		50	1760											
10.05		50	1770											
10.10		50	1780											
10.15		50	1789											
10.30		50	1802											
10.45		50	1814									.15	Nil	



# FLOPETROL

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS				PROD. RATES AND FLUID PROPERTIES				GOR			
	BOTTOM HOLE	WELL HEAD	SEPARATOR		OIL OR CONDENSATE	GAS						
Time	Temp. Pressure	Tg. temp. F	Tg. press. F	Temp. F	Rate BPPD	Gravity BSW	Rate MMSCF/D	Gravity Air=1	L.G.R. BBLs/	CO <sub>2</sub> %	H <sub>2</sub> S PPM	LIQUOR Units
10.45												
10.46		Increase choke size to 28/64" adj										
10.47		Switch to 28/64" fixed choke										
10.50		52.5	1842									
10.53		Switch to 32/64" adj choke										
10.55		52.5	1740									
11.00		50.0	1749									
11.05		52.5	1812									
11.10		52.5	1820									
11.15		52.5	1817									
11.30		52.5	1820									
11.45		52.5	1825									
12.00		52.5	1829	90	285				11.987	0.608		0.5
12.15		52.5	1831	90	270				11.785			0.5
12.30		52.5	1834	84	270				11.874	0.608		0.5
12.45		52.5	1839	84	270			153.6				0.5
13.00		52.5	1842	Changed to 32/64" adj on heater					11.918	0.608		0.5
13.15		54.0	1845	80	275			165.1	12.275			0.5



# FLOPETROL

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS		SEPARATOR		OIL OR CONDENSATE		GAS		GOR	CO <sub>2</sub> %	H <sub>2</sub> S	PH <sub>2</sub> O
	Temp	Pressure	WELL HEAD	Temp.	Press.	Rate	Gravity	Rate				
Time	Cumul		Ig. temp	Ig. press.	Cg. press.	Temp.	PSIG	OF	PSIG	OF	PSIG	Temp.
Hr/min												Temp.
												Units
04.07.80												
17.15												
17.30			53	1839						0.2	0	0.5
17.36												
17.45			53	1841		94	280					
18.00			53	1841		110	290					
18.15			53	1842		116	290					
18.30			53	1840		116	290					
18.45			53	1838		120	290					
19.00			53	1839		119	290					
19.15			53	1839		120	290				0	
19.30			52.5	1839		120	290					
19.45			52.5	1839		120	290					
20.00			52.5	1839		120	295					
20.15			52.5	1839		120	295					
20.30			52.5	1839		120	295				0	
20.45			52.5	1837		120	295					
21.00			52.5	1837		120	295					
21.15			52.5	1837		120	295					

Switched back to separator

0.5/  
20% cat.

# FLOPETROL

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DATE - TIME		PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			GOR		
Time Hr/min	Cumul	BOTTOM HOLE		WELL HEAD		Temp. OF	Press. PSI	OIL OR CONDENSATE		GAS		L.G.R. BBL/MMSCF	H2S %
		Temp.	Pressure	Tg. temp. OF	Ig. press. PSIG			Cg. press.	Rate BBL/D	Gravity	Rate MMSCF/D		
21.15													
21.30				52.5	1837	120	295	23.0		0.610	1.65		0.5
21.45				52.5	1837	120	295	20.2		0.610	1.44		0.5
22.00				52.5	1835	120	295	60.5		0.610	4.30		0.5
22.15				52.5	1835	120	297	60.5		0.610	4.28		0.5
22.30				52.5	1835	120	297	28.8		0.610	2.04		0.5
22.45				52.5	1835	120	297	37.4		0.610	2.65	0.5	0
23.45				51.5	1879	120	297	49.1		0.610	4.22	0.5	0
24.00				51.5	1879	120	300	43.3		0.610	3.76		
05.07.80													
00.15				50	1879	122	295	14.5		0.610	1.25	0.5	0
00.30				50	1879	125	290	28.8		0.608	2.48		0.5/20% α
00.45				50	1879	126	290	14.5		0.608	1.25		
01.00				50	1879	128	290	14.5		0.608	1.25		0.5/20% ca.
01.15				50	1879	128	290	14.5		0.608	1.25		
01.30				50	1879	128	290	5.8		0.608	0.50		0.5/20% ca.
01.45				50	1879	128	290	8.7		0.608	0.75		
02.00				50	1879	128	290	28.8		0.607	2.48		0.5/20% ca.



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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS		SEPARATOR		OIL OR CONDENSATE		PROD. RATES AND FLUID PROPERTIES		GOR	
	BOTTOM HOLE	WELL HEAD	Temp. O F	Cg. press. PSIG	Rate BBL/D	Gravity	Rate MMSCF/D	Rate MMSCF/D	GOR	L.G.R. BBL/MMSCF
05.07.80										
05.08										
05.10		51	1765							
05.15		51	1789		6 gallons of glycol used while by passing heater					
05.20		52.5	1790							
05.23				3" Orifice plate in Daniel Orifice meter						
05.25		52.5	1789							
05.30		52.5	1789	100	300		16.93	0.610		0.5/20
05.35		52.5	1789		300			0.610		
05.40		52.5	1789		300			0.610		
05.45		52.5	1789	106	300	127	16.83	0.610	7.55	
05.50		52.5	1789		300			0.610		
05.55		52.5	1789		300			0.610		
06.00		52.5	1789	108	300	57.6	16.92	0.610	3.40	0.5/20
06.05		52.5	1789		300			0.610		
06.15		52.5	1789	109	300	28.8	16.91	0.610	1.70	
06.30		52.5	1789	108	300	34.7	16.92	0.610	2.05	0.5/20
06.45		53.5	1789	110	300	52.0	16.89	0.610	3.07	
07.00		53.5	1789	110	300	34.7	16.89	0.610	2.05	0.5/20

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			L.G.R.	H2S PPM	CO2 %	PI						
	BOTTOM HOLE	WELL HEAD	TEMP.	Q F	PSIG	Temp.	Q F	PSIG	Press.					OIL OR CONDENSATE	GAS	CONC.			
Time	Temp	Pressure	Tg temp	O F	PSIG	O F	PSIG	Temp.	Q F	PSIG	Rate	Gravity	Rate	Gravity	MMSCF/D	Air = 1	BBL/MMSCF	Units	
05.07.80																			
Hr/mil																			
07.02																			
07.15			53.5	1782				110	300		11.6		16.89	0.610	0.68				
07.30			53.5	1782				111	300		112.7		16.88	0.610	6.68				0.5/20
07.45			54	1782				111	300		28.8		16.88	0.610	1.71				
08.00			55	1782				109	300		28.8		16.91	0.610	1.70				0.5/20
08.15			55	1782				111	300		28.8		16.88	0.610	1.71				
08.30			55	1782				112	300		49.1		16.86	0.610	2.91	0			0.5/20
08.45			55	1782				111	300		31.8		16.88	0.610	1.88				0.5-1.0/20%
09.00			55	1782				110	300		28.8		17.01	0.610	1.69				
09.15			55	1782				111	300		31.8		17.00	0.610	1.87				1.0/20
09.30			56	1782				110	300		37.4		16.97	0.613	2.20				
09.45			56.5	1782				111	300		31.8		16.96	0.613	1.88				
10.00			57.5	1782				110	300		26.0		16.97	0.613	1.53				1.0/20
10.15			57.5	1782				112	300		52.0		16.94	0.613	3.07	0			0.4
10.30			58.5	1782				110	300		23.1		16.97	0.613	1.36				1.0/20
10.45			59.0	1782				111	300		14.4		16.96	0.613	0.85				
11.00			60.0	1782				112	300		37.6		16.94	0.613	2.22				1.0-1.5/20%
11.15			60.0	1782				112	295		8.67		17.04	0.613	0.55				

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Time Hr/Min	Cumul	BOTTOM HOLE		WELL HEAD		TEMP.		PRESS.		OIL OR CONDENSATE		GAS		H2S	CO2	PE/ %COND units	
		Temp	Pressure	Tg. temp O F	Iq. press. PSIG	O F	PSIG	Rate BBL/D	Gravity	Rate MMSCF/D	Gravity Air = 1						
11.15																	
11.30				60	1782	112	300			54.9		17.13	.608	0	0.4	1-1.5/20%	
11.45				60.5	1782	111	300			49.1		17.15	.608				
12.00				57.5	1782	112	300			37.4		17.13	.608			1-1.5/20%	
12.15				57.5	1782	112	300			57.8		17.13	.608				
12.30				57.5	1782	112	300					17.13	.608			1-1.5/25%	
12.45				57.5	1782	112	300					17.13	.608				
13.00				57.5	1782	112	300					17.13	.608			1.5/30%	
13.15				59.0	1782	112	300					17.11	.610				
13.30				60.0	1784	112	300			43.3		17.11	.610			1.5/30%	
13.45				62.5	1784	113	300			28.8		17.09	.610				
14.00				62.5	1784	114	300			20.3		17.21	.610				
14.15				59.0	1784	114	300			31.8		17.21	.610			1.5-2/30%	
14.30				62.5	1784	114	300			26.0		17.21	.610				
14.45				62.5	1784	114	295			31.8		17.07	.610				
15.00				60.0	1783	114	295			26.0		17.07	.610			2/35%	
15.00				By passed separator change to 48/64" fixed choke													
15.05				58	1660	Switch to				adjustable							



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DATE - TIME		PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR				PROD. RATES AND FLUID PROPERTIES					
Time	Cumul	BOTTOM HOLE		WELL HEAD		SEPARATOR		OIL OR CONDENSATE		GAS		H2S	CO2	PI
		Temp.	Pressure	Tg. temp.	psig	O F	psig	Temp.	Press.	Rate	Gravity			
Hr./min		O F	psig	O F	psig	O F	PSIG	BBL/D	BBL/D	MMSCF/D	Air = 1	PPM	%	Unit.
15.05														
15.10		54	1657											
15.15			1860			Adjustable		choke plugging						
15.17		60	1610			On 48/64"		Fixed choke at choke manifold						
15.25		58.5	1595			Switch to		neater choke 48/64"						
15.30		58.5	1635											
15.35		58.5	1655											
15.40		58.5	1652											
15.45		58.5	1647											
15.55		62.5	1651			Switch flow		through separator						
16.00		68.0	1652											
16.15						Begin flow		rate measurements						1 - 1.5 / 35%
16.15		67.5	1652	98	385	Insufficient		fluid	23.07	.608				
16.30		65.0	1652	98	385	level to		measure	23.31	.608				
16.45		63.0	1652	98	385	flow		rate	23.31	.608				1 - 1.5 / 35%
17.00		60.0	1652	100	450				23.31	.608				
17.15		59.0	1652	100	450				23.31	.608				1 - 1.5 / 40%
17.30		59.0	1652	100	450				23.06	.608				



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	BOTTOM HOLE	WELL HEAD		Temp.	Press.	OIL OR CONDENSATE	GAS		L.G.R.	H2S	CO2	PH
Time	Temp.	Pressure	Tg temp	O F	PSIG	Rate	Gravity	Rate	Gravity	BBL/	PPM	% CORR
Hr/min	O F	PSIG	O F	PSIG	BBL/D	BBL/D	Air=1	MMSCF/D	Air=1	MMSCF	%	Units
05.07.80												
21.00												
21.15	60	1477	99	435	98			27.94	.606	3.51		2.0/40
21.30	60	1479	99	440				28.12	.606			
21.45	60	1480	98	440				28.77	.606			
22.00	60	1480	98	440				28.74				
22.02												
22.05												
22.08												
22.14												
22.15	58	1197	94	445				35.93	.606			
22.30	58	1144	92	317				30.40	.606			
22.33												
22.35	58	1082										
22.37												
22.40	58	1065										
22.45	58	1060										
22.50	58	1059										
22.55	58	1058	92	365				37.15	.606			



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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS		SEPARATOR				OIL OR CONDENSATE			GAS		L.G.R. BBL/MMSCF	H2S PPM	CO2 %	PH % CORR	
	BOTTOM HOLE	WELL HEAD	Temp. O F	Psig	Cg. press.	Temp. O F	Psig	Rate BBL/D	Gravity SG	Rate MMSCF/D	Gravity Air=1					
06.07.80																
Time Hr/min																
01.20																
01.25			52.5	735												
01.30			52.5	732							39.92				2.5/60	
01.45			52	732	63	345			116	.816	39.79	.608				
02.00			51.5	729	63	345			127	.816	39.79	.608				
02.15			51.5	727	62	345			104	.816	39.83	.608				2.5/60
02.30			51	729	62	345			121	.816	39.83	.608				2.5/60
02.45			50.5	732	62	340			153	.816	39.55	.608				
03.00			50	739	62	340			101	.816	39.55	.608				2.5/60
03.15			50	742	63	340			168	.816	39.51	.608				
03.30			50	744	63	340			108	.816	39.51	.608				2.5/65
03.45			50	752	64	340			144	.816	39.47	.608				
04.00			50	762	65	340			72	.816	39.43	.608				2.5/70
04.15			50	775	66	340			135	.816	39.40	.608				
04.30			50.5	795	70	340			95	.816	39.31	.606				2.5/75
04.45			50.5	824	72	340			116	.816	39.24	.606				
05.00			52	872	74	340			87	.816	39.00	.606				2.5/70
05.15			52.5	844	73	340			110	.816	38.82	.606				

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	BOTTOM HOLE	WELL HEAD	Temp. O F	Temp. PSIG	Temp. O F	Temp. PSIG	Rate BBL/S/D	Rate MMS F/D				
06.07.80												
Time Hr/min	Temp. O F	Ig. temp. PSIG	Cg. press. PSIG	Temp. O F	Temp. PSIG	Rate BBL/S/D	Rate MMS F/D	Gravity Air=1				
05.15												
05.30		52.5	907	80	340	92	38.33	.606	2.4			2.5/75
05.45		52.5	947	80	340	No readings	38.33	.606				
06.00		52.5	849	80	330	Emptying tank	37.99	.606				2.5/75
06.15		53.5	920	80	330		37.65	.606				
06.30		53.5	864	72	330		38.00	.604				2.5/70
06.45		53.5	880	67	330		38.04	.604				
07.00		54.5	860	60	320	Start readings	37.19	.604				2.5/70
07.15		53.5	849	58	325	153	38.30	.604	4.0			
07.30		53	879	52	325	150	38.22	.604	3.9			2.5/75
07.45		53.5	829	53	325	153	38.18	.604	4.0			
08.00		53	895	48	320	136	37.91	.604	3.6			2.5/75
08.15		53	962	42	315	188	37.54	.604	5.0			
08.30		53	904	41	320	131	37.45	.604	3.5			3.0/75
08.45		53.5	919	41	330	202	38.60	.604	5.2			
09.00		52.5	779	56	330	87	39.04	.604	2.2			3.0/75
09.15		52.5	777	60	335	202	39.34	.604	5.1			
09.30		52.5	762	64	340	101	39.64	.604	2.5			3.0/70







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	BOTTOM HOLE	WELL HEAD		Temp.	Press.	Temp.	Press.	OIL OR CONDENSATE	GAS		GOR		
Time	Temp	Pressure	Tg. temp	Tg. press.	Cg. press.	O. F.	PSIG	Rate	Gravity	BSW	Rate	Gravity	
Hr/Min		PSIG	O. F.	PSIG		O. F.	PSIG		Air=1			Units	
14.43													
14.45			62	1999									
14.47			R.I.H. with W.L. string										
14.50			64	1999									
14.55			60	1999									
15.00			59	1999									
15.13			59	1999									
15.26			59	1999									
15.38			59	1999									
15.39			P.O.O.H.										
15.58		2252	W.L. string on surface, lubricator valve closed										
			Lubricator rigged down Swab and fill valve closed										
16.34		2252	Open lubricator valve										
16.36		2252	60	1995									
16.40		2252	60	1997									
16.43		2252	60	1997									
16.45		2252	60	1980				Open on 3/8" adj choke heater					
16.50		2234	58	1917				Increase to 1/2" adj choke heater					

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Time Hr/min	Cumul	BOTTOM HOLE		WELL HEAD		Temp.	Press.	OIL OR CONDENSATE		GAS		Units
		Temp PSIG	Pressure PSIG	Tg. temp O F	Cg. press. PSIG			Rate	Gravity	Rate	Gravity	
16.50												
16.55			2193	58	1912							
17.00			2189	55	1882	Increase to 5/8" adj choke on heater						
17.05			2128	54	1805							
17.08			2123			Increase to 7/8" adj choke on heater						
17.10			2108	54	1552							
17.15			1972	54	1530							
17.17			1966			Increase to 1" adj choke on heater						
17.20			1904	55	1389							
17.25			1839			Increase to 78/64" adj choke on heater						
17.30			1816	54	1102							
17.32			1788			Increase to 90/64" adj choke on heater						
17.35			1783	54	1072							
17.37			1775			Increase to 96/64" adj choke on heater						
17.40			1720	53	920							
17.45			1708	53	902							
17.49			1687			Fully open on heater choke						
17.50			1682	52	830							

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			PROD. RATES AND FLUID PROPERTIES				X <del>XXX</del>		
	BOTTOM HOLE	WELL HEAD	SEPARATOR	OIL OR CONDENSATE	GAS		C.G.R.			
Time	Temp.	Pressure	Tg. temp.	Temp.	Rate	Gravity	Rate	H2S	CO2	P3
Hr/min	O F	PSIG	O F	PSIG	BBS/D	BSW	MMSCF/D	PPM	%	Units
17.50										
17.55		1680	51	850						
18.00		1685	51	888			39.95		.604	
18.15		1677	51	885	208		39.58		.604	5.3
18.30		1692	51	945	168	25	39.34		.604	4.3
18.45		1655	51	780	116		40.82		.604	2.8
19.00		1640	51	766	130		40.96		.604	3.2
19.15		1626	51	769	124		40.92		.604	3.1
19.30		1624	52	772	121	25	40.85		.605	3.0
19.45		1624	52	769	124		40.85		.605	3.0
20.00		1622	52	770	109		41.00		.605	2.7
20.15		1618	52	780	107		40.77		.605	2.6
20.30		1620	52	792	107		40.77		.604	2.6
20.45		1619	52	808	121		40.57		.605	3.0
21.00		1612	52	768	127		40.52		.605	3.1
21.15		1610	52	765			40.86		.602	
21.30		1610	52	767			40.86		.602	
21.45		1609	52	769			40.82		.602	



# FLOPETROL

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DATE - TIME		PRESSURE AND TEMPERATURE MEASUREMENTS			PROD. RATES AND FLUID PROPERTIES				GOR		
Time Hr/min	Cumul	BOTTOM HOLE		WELL HEAD Tg. temp O F	SEPARATOR Temp. PSIG	OIL OR CONDENSATE		GAS		Units	
		Pressure PSIG	Temp PSIG			Rate	Gravity	Rate	Gravity		
06.07.80											
22.45											
23.00		2254	55	2004							
23.15		2254	55	2002							
23.30		2254	55	2002							
23.45		2254	55	2000							
24.00		2254	55	2000							
07.07.80											
00.15		2254	55	2000							
00.30		2254	55	1999							
00.45		2254	55	1999							
01.00		2254	55	1997							
01.15		2254	55	1997							
01.30		2254	55	1997							
01.45		2254	55	1997							
02.00		2254	55	1997							
02.15		2254	55	1997							
02.30		2254	55	1997							
02.45		2254	55	1997							

# FLOPETROL

## \_WELL TESTING DATA SHEET\_(Continuation)

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS		WELL HEAD		SEPARATOR		PROD. RATES AND FLUID PROPERTIES			GOR
	BOTTOM HOLE	Temp.	Pressure	Temp.	Temp.	Press.	OIL OR CONDENSATE	GAS		
07.07.80	Cumul	O F	PSIG	Ig temp	Ig. press.	Cg. press.	Rate	Gravity	Rate	Gravity
02.45				PSIG						Air = 1
03.00			2254	55	1997					
03.15			2254	55	1997					
03.30			2254	55	1997					
03.45			2254	55	1997					
04.00			2254	55	1997					
04.04				Close	lubricator valve					
04.15				Bleed	down lubricator and rig up		wire line to retrieve		pressure	gauges
04.34				Open	lubricator valve and start		to run in hole			
05.00				55	1995					
05.17				Close	lubricator valve and bleed		down lubricator			
06.47				Redress	gauges and put on wire line		string to be re-run			
06.50				Pressure	up lubricator					
06.55				Open	lubricator valve					
07.05				55	1995		- Start to run in hole			
07.10				Frist	gradient stop at 1062'					

# FLOPETROL

## \_WELL TESTING DATA SHEET\_(Continuation)

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			GOR
	BOTTOM HOLE	WELL HEAD		Temp.	Press.	OIL OR CONDENSATE	GAS			
07.07.80	Temp.	Pressure	Tg temp	O F	Ig. press.	Cg. press.	Rate	Gravity	Rate	Gravity
Hr/min	PSIG	PSIG	PSIG	PSIG				Air = 1		Units
07.10										
07.23			Second gradient stop at 2529'							
07.25			55	1994						
07.36			Third gradient stop at 3503'							
07.40			55	1994						
07.51			Gauges landed in Nipple							
08.00			55.5	1994						
08.15			Wire line at surface - close lubricator valve and bleed down lubricator							
08.30			Pressure up flow head							
08.35			Open lubricator valve							
08.40			56	1994						
08.50			2254	57.5	1992					
09.00			2254	1992			Open well at heater	1/4" adjustable choke		
09.05			2243	1975						
09.06							Increase choke to 3/8" adjustable on heater			
09.10			2199	55	1915		Increase choke to 1/2" adjustable on heater			
09.15			2137	53	1907		Increase choke to 5/8" adjustable on heater			
09.20			2067	52.5	1690		Increase choke to 3/4" adjustable on heater			





# FLOPETROL

## \_WELL TESTING DATA SHEET\_(Continuation)

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS		SEPARATOR		OIL OR CONDENSATE		GAS		L.G.R.	CO2	H2O/SED PH
	BOTTOM HOLE	WELL HEAD	Temp.	Press.	Rate	Gravty	Rate	Gravty			
Time	Temp.	Iq. temp.	O F	PSIG	O F	PSIG	BBL/D	S.G.	MMSCF/D	Air=1	Unit.
07.07.80											
11.00											
11.15		1677	51	839	65	360	163	.784	42.09	.605	3.88
11.30		1668	52.5	817	66	360	136	.784	42.05	.605	3.23
11.45		1659	53.5	795	64	360	154	.784	42.13	.605	3.66
12.00		1655	52.5	770	62	360	145	.781	42.21	.605	3.44
12.15		1651	52.5	777	60	360	124	.781	42.29	.605	2.93
12.30		1648	52.5	784	60	360	156	.781	42.29	.605	3.67
12.45		1646	52.5	777	62	360	124	.781	42.21	.605	2.93
13.00		1637	52.5	770	62	360	144	.781	42.21	.605	3.42
13.15		1636	52.5	769	62	360	192	.781	42.21	.605	4.55
13.25		1635	52.5	739	Switch flow		through Thornton manifold				
13.30		1681	52.5	744	62	340	96		40.23		2.39
13.35			51	757							
13.40		1685	51	768							
13.45		1687	51	770	62	340	133	.781	39.89		3.33
14.00		1700	51	777	62	330	133		39.12		3.40
14.15		1690	51	763	60	330			39.20		
14.30		1689	51	774	60	330			39.20		



# FLOPETROL

## \_WELL TESTING DATA SHEET\_(Continuation)

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DATE - TIME		PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			GOR	
Time	Cumul	BOTTOM HOLE		WELL HEAD		Temp.	Press.	OIL OR CONDENSATE		GAS		Units
		Temp.	Pressure	O F	Ig. temp			Cg. press.	Rate	Gravity	Rate	
Hr/min			PSIG		PSIG							
16.00	.											
16.15			2254	56	2004							
16.30			2254	56	2004							
16.45			2254	56	2003							
16.55			2254	56	2002							
16.55					Lubricator valve close							
17.37					R.I.H. to get pressure bombs							
17.45					2000							
17.57					P.O.H. with pressure bombs							
18.00					2000							
20.45					R.I.H. with pressure bombs							
21.00					1995							
21.10					P.O.H.							
21.54			2255		Well open on adjustable choke at heater manifold							
					Bean up choke to 32/64"							
21.55					1980							
22.00			2215	57	1925							
22.08					Going through Thornton manifold							

# FLOPETROL

## \_WELL TESTING DATA SHEET\_(Continuation)

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES					
	BOTTOM HOLE	WELL HEAD	SEPARATOR	OIL OR CONDENSATE	GAS	L.G.R.	Rate	Rate	Rate			
Time	Pressure	Tg temp	Tg press	Cg press	Temp.	Press.	Gravity	BSW	MMSCF/D	Gravity	MMSCF	Units
Hr/min	PSIG	O F	PSIG	O F	O F	PSIG	Air=1					
22.08												
22.10		57	1919									
22.15	2208	51	1919									
22.20		51	1955									
22.25		51	1954									
22.30	2227	51	1954		124	315			9.65	.609		
22.45	2227	51	1954		126	315			9.63	.609		
23.00	2227	51	1952		128	315			9.62	.609		
23.15					128	315			9.67	.609		
23.15			Bean up choke to 46/64"									
23.20	2128	51	1774									
23.25	2121	51	1762									
23.30	2121	51	1760		102	330			21.19	.608		
23.45	2119	52	1755		100	327			21.14	.608		
24.00	2119	52	1750		99	330		58	21.09	.608	2.75	
08.07.80												
00.15	2119	53	1750		99	327		52	21.05	.608	2.47	
00.30	2118	55	1749		99	327		36	21.00	.608	1.71	

# FLOPETROL

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			CO2	H2S	RI
	BOTTOM HOLE	WELL HEAD		Temp.		Press.	OIL OR CONDENSATE	GAS				
08.07.80	Temp.	Pressure	Tg. temp	O F	PSIG	Cg. press.	O F	PSIG	Rate	Gravity	BBL/	Units
Hr/min		PSIG	O F						BBL/D	S.G.	MMSCF	
00.30												
00.45		2119	55		1740		99	327	15	.781	21.00	.608 0.71
01.00		2119	55		1734		100	327	43	.781	20.98	.608 2.05
01.15		2120	55		1733		100	327	15	.781	20.87	.608 0.72
01.30		2124	55		1674		102	327	23	.781	20.51	.615 1.13
01.45		2140	54		1604		104	325	20	.781	19.61	.615 1.02
02.00		2118	52.5		1700		105	325	32	.781	19.60	.615 1.62
02.15		2113	55		1744		104	325	49	.781	20.67	.615 2.37
02.30		2112	55		1750		102	325	58	.781	20.78	.615 2.79
02.45		2111	56		1750		100	325	35	.783	20.82	.615 1.68
03.00		2113	56		1734		100	325	58	.783	20.71	.615 2.80
03.15		2111	56		1742		100	325	29	.783	20.71	.615 1.40
03.30		2113	56		1737		100	325	Outlet to tank		20.60	.615
03.45		2113	56		1729		100	325	closed while		20.60	.615
04.00		2113	55		1757		100	325	taking samples		20.60	.615
04.15		2109	55		1757		100	325	"	"	20.71	.615
04.30		2109	55		1757		100	325	43	.783	20.71	.615 2.08
04.45		2109	56		1757		100	325	58	.783	20.71	.615 2.80

Not enough fluid

produced to take Pij an

B.S.W.

# FLOPETROL

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			OIL OR CONDENSATE			PROD. RATES AND FLUID PROPERTIES				
	BOTTOM HOLE	WELL HEAD		Temp.	PSI	Press.	Rate	Gravity	BSW	Rate	GAS	L.G.R.	H2S	PH
Time	Temp.	PSIG	Tg. temp.	O F	O F	O F	BBL/D	S.G.	%	MMSCF/D	Grav	BBL/	CO2	PH
Hr/Min	O F	PSIG	O F	PSI	PSI	PSI					Air=1	MMSCF		Units
04.45														
05.00		2109	56	1757	100	325	35	.783		20.71	.615	1.69		
05.15		2109	56	1757	101	325	9	.783		20.69	.615	0.44		
05.20		1996	56	1500	Increase choke to 60/64" adjustable on heater									
05.25		1981	57	1495										
05.30		1995	57	1499	88	340				30.33	.608			
05.45		1967	57	1484	84	340	101	.784		30.62	.608	3.30		
06.00		1965	57.5	1484	84	340	72	.784		30.62	.608	2.35		
06.15		1961	57.5	1480	84	340	86	.784		30.62		2.81		
06.30		1961	57.5	1484	84	340	9			30.62		0.29		
06.35		1959	55	787	Increase choke size to maximum									
06.40		1725	53	787										
06.45		1714	52.5	844	72	375	101	.784	20	40.44	.608	2.50		5.5
07.00		1719	52.5	889	64	360	182	.784	20	39.61	.608	4.60		5.5
07.15		1719	53	907	64	360	159	.794	20	39.43	.608	4.03		5.5
07.30		1757	52.5	890	No readings orifice plate out									
07.45		1765	52.5	875						36.13				
08.00		1748	52.5	800			133	.784	20	35.85	.608	3.71		







# FLOPETROL

## \_WELL TESTING DATA SHEET\_(Continuation)

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			GOR
	BOTTOM HOLE	WELL HEAD		Temp.	Press.	OIL OR CONDENSATE	GAS			
Cumul Time Hr/min	Temp. Pressure Hr/min	Ig. temp. O F	Cg. press. PSIG	O F	PSIG	Rate BBL/D	Gravity S.G.	Rate MMSCF/D	Gravity Air=1	Units
08.07.80										
21.45										
22.00			1875							
22.15			1884							
22.30			1887							
22.45			1897							
23.00			1897							
23.15			1897							
23.30			1897							
23.45			1897							
24.00			1897							
09.07.80										
00.08			Open well slowly to 48/64" fixed choke at heater							
00.10		54	1800							
00.15		52.5	1682							
00.20		50	1685							
00.25		50	1686							
00.30		50		69	315	No reading	.785	24.18	.605	
00.35		50	1694							







# FLOPETROL

## WELL TESTING DATA SHEET (Continuation)

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DATE - TIME	PRESSURE AND TEMPERATURE MEASUREMENTS			SEPARATOR			PROD. RATES AND FLUID PROPERTIES			GOR	
	BOTTOM HOLE	WELL HEAD	SEPARATOR	OIL OR CONDENSATE	GAS		OIL OR CONDENSATE	GAS			
Time	Temp.	Pressure	Tg. temp.	Cg. press.	Temp.	Press.	Rate	Rate	Rate	Gravity	
Hr./min		PSIG	O.F.	PSIG						Air=1	
08.09											
08.10		2254	55	2004							
08.11		2254	55	2007							
08.12		2254	55	2007							
08.15		2254	55	2007							
08.20		2254	55	2007							
08.25		2254	55	2005							
08.30		2254	55	2005							
08.45		2254	55	2004							
09.00		2254	55	2002							
09.15		2254	55	2002							
09.30		2254	55	2002							
09.45		2254	55	2002							
10.00		2254	55	2002							
10.15		2254	55	2002							
10.30		2254	55	2002							
11.00		2254	55	2002							
				Close lubricator valve		End of build up					