

gent to norske shell tananger eppo, eppo/1, eppo/1, eppo/1, eppo/1/21
epxv/1 (eppd , eppd/1 , eppd , eppd/1/21
eppp/5 .

tilhorer



L&U DOK. SENTER

L. NR. 20088390009

KODE Well 31/2-3 nr.8

Returneres etter bruk

t:21/6/80

x : 0604

Object: test information micaceous sand gas tes.

Time	thp (psig)	sep ress (psig)	gas rate (mmscfd)	cgr (bbls/mmscf)
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6/80

0	984	470	15.614	3.829
0	1036	430	15.857	3.885
0	1040	420	15.848	2.401

0 closed well in slowly over 15 mins.

5 closed in

0 1974

5 1981 ran in hole with wireline drift.

0 1981

5 1982 wireline back at surface

0 rig up sperry sun and amarada gauge

0 gauges in lubricator

5-2205 calibration in lubricator

5-2313 gradient stop at 1171 ft.

1 hour gradient stop at 2892 ft

6-80

started rin

0-0130 1 hour gradient stop at 3876 ft

1989 (Landed gauges in f-nipple)

0 1988

0 1987

1985 opened up well slowly on adjustable choke.
opened on 48/64 " fixed choke

1014	430	15.857	
1020	430	16.074	2.706
1022	430	16.011	3.282

increased slowly to 60/64 " adjustable choke

829	490	20.321	
912	490	20.361	2.569
860	490	20.576	3.048

increased to adj. 70/64 " choke by 0750 hrs.
traces of sand ,on readings on 'sandec'

y dolphin/lfsd

l.t her how ??est?

urgent to norske shell tananger (eppo/), eppo/2/12, eppo/2/12, epxv/1 (eppd, eppd/), eppo, eppo/1/21, epxt/13, eppp/5

STAT-96

dat:21/6/80

tlx : 0604

subject: test information micaceous sand gas test, well 31/2-3

time	thp (psig)	sep ress (psig)	gas rate (mcpd)	sep (bbls/mcpd)
20/6/80				
1630	984	470	15.614	3.829
1700	1036	430	15.857	3.885
1730	1040	420	15.848	2.401
1730	closed well in slowly over 15 mins.			
1745	closed in			
1800	1974			
1815	1981	ran in hole with wireline drift.		
1900	1981			
1915	1982	wireline back at surface		
2000	rig up sperry sun and amarada gauge			
2100	gauges in lubricator			
2105-2205	calibration in lubricator			
2213-2313	gradient stop at 1171 ft.			
2324	1 hour gradient stop at 2892 ft			

21/6-80

0024	started rih			
0030-0130	1 hour gradient stop at 3876 ft			
0145	1989 (Landed gauges in f-nipple)			
0200	1988			
0300	1987			
0400	1985	opened up well slowly on adjustable choke.		
0435	opened on 48/64 " fixed choke			
0515	1014	430	15.857	
0530	1020	430	16.074	2.706
0600	1022	430	16.011	3.282
0632	increased slowly to 60/64 " adjustable choke			
0645	829	490	20.321	
0700	912	490	20.361	2.589
0715	860	490	20.976	3.048

choke increased to adj. 70/64 " choke by 0750 hrs. only traces of sand ,on readings on 'sandec'

borgny dolphin/lfsd

var alt her now ??est?

S7A 7014

from : borgny dolphin eppo/3 , eppd/3
urgent to norske shell tananger eppo , eppo/1 , eppp/2/12 ,
epxv/1 (eppd , eppd/1 , eppp , eppp/1/21 , epxt/13)
eppp/5 .

date 21.06.80
tlx 0608

subject : test information micaceous sand 31/2-34

time	thp (psig)	sep p (psig)	gas rate (mmscf/d)	cgr. bbls/mmscf)
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21.6.80.

choke 60/64

0700	912	490	20.361	2.589
0715	877	490	20.576	3.048
0730	805	490	20.982	3.206
0732	increased choke to 62/64 adj.			
0735	869			
0736	- increased choke to 64/64 adj.			
0740	865			
0741	increased choke to 66/64 adj.			
0745	782			
0746	increased choke to 68/64 adj.			
0750	770			
0751	increased choke to 70/64 adj.			
0755	755			
0756	increased choke to 72/64 adj.			
0758	changed " " " fixed			
0800	842			
0806	decreased adj choke to 68/64			
0809	increased adj choke to 72/64			
0815	667			
0830	677			
0845	754	440	22.996	
0900	727	440	22.996	2.846
0915	750	440	22.903	2.897
0930	742	440	23.864	1.676
0945	745	440	23.011	3.634
0955	increased choke to 74/64 adj.			
1000	762			
1001	"	"	"	76/64 adj
1006	"	"	"	78/64 adj

1015	656			
1030	647	330	26.150	
1045	660	320	26.485	2.547
1100	650	320	26.799	2.378
1115	654	320	26.269	2.533
1130	637	320	26.169	2.354
1131		increased choke to		80/64
1136		::	::	82/64
1142		::	::	84/64
1145	606			
1146		::	::	86/64
1151		::	::	88/64
1156		::	::	90/64
1200	592	250	26.659	
1215	580	250	26.654	2.355
1230	582	250	26.801	2.531
1245	587	250	27.121	2.833
1300	602	255	27.516	1.941
1315	637	285	29.151	2.571
1330	632	285	29.462	2.353
1336		increased choke to		96/64
1340		::	::	102/64
1345	625			
1350		increased choke to		104/64 adj.
1415	605	255	28.383	2.760
1430	600	255	28.383	2.726
1445	590	255	27.820	2.424
1500	614	260	28.644	2.969

⊕
small exol

from : borgny dolphin eppo/3 , eppd/3
urgent to norske shell tananger eppo , eppo/1 , eppp/2/12 ,
epxv/1 (eppd , eppd/1 , eppp , eppp/1/21 , epxt/13)
eppp/5 .

date:22/6/80
tlx no: 0610

subject: test information micaceous sand well 31/2-3

21-6-80

time	thp (psig)	sep. (psig) press	gas rate (mmscfd)	cgr (bbl/mmscf)
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1500- decrease choke size slowly down to
1506 92/64" adj.

1530	594	250	27.573	2.426
1545	595	250	27.711	2.448
1600	614	250	27.847	2.779
1630	605	250	27.782	2.648
1700	614	250	28.053	2.623
1730	642	270	29.996	2.835
1800	660	270	30.132	3.183
1830	665	270	30.297	-
1900	667	280	31.339	2.622
1930	670	275	31.072	3.352
2000	682	285	31.939	2.303
2030	665	275	30.967	3.459
2100	667	275	31.102	2.918
2130	667	285	31.634	3.02
2200	667	280	31.369	3.23
2230	665	280	31.369	2.559
2300	665	280	31.369	3.08
2330	684	290	32.418	3.33
2400	694	290	32.655	3.160
0030	692	285	32.386	2.832
0100	695	290	32.721	3.182
0130	685	290	32.587	2.345
0200	689	290	32.587	3.313
0230	692	290	32.619	2.607

0236 well closed in

0237 1649

0240 1920

0245 1977

0250 1980

0255 1984

0300 1984

0310 1985

0315 1987

0320 1985

0325 1985

0330 1985

0335 1987

0338 closed lubricator valve and wing valve to install sand trap
,and replace adj choke and elbows downstream of choke.

Borgny dolphin Lfsd

shell

from

urgent

date : 20.05.20

tlx no : 2058

subject

date 20.05.20

time

0745

0845

0850

0855

0900

0904

0905

0909

0910

0915

0918

0920

0923

0930

0935

0938

1000

1010

1015

1020

Station
at T. Sand

ZCZC
FROM: BORGNY DOLPHIN, EPPQ/3, EPPD/3
URGENT TO: NORSKE SHELL TANANGER EPPQ/EPPQ/1, EPPP/2/12, EPXV/1
(EPPD, EPPP, EPPP/1/21, EPX, EPXT/13)

16/06/1980
REF TLX NO 0558/80

GENERAL TEST INFORMATION WELL 31/2-3

MICACEOUS SAND GAS TEST - DATE 15 JUNE 1980, 2400 HRS

BOTTOM HOLE INFORMATION:

BOTTOM PERFORATIONS	1535M
TOP PERFORATIONS	1520M
TOP MODEL 'D' PACKER	1474.2M
MID-RUBBER SEAL 'D' PACKER	1474.7M
MULE SHOE	1491M
'F' NIPPLE	1482M
'S-1' NIPPLE	1478.5M
XA-SSD	1468M
'Q' NIPPLE	1463.5M

PRODUCTION STRING (TOP TO BOTTOM)

DEPTH (M)

-X-MAS TREE	
-X-OVER 6 1/2 ACME X 4 1/2 PH6 OVERSTAND	3.18
TUBING 4 1/2'' PH6 19.2/FT	0-23.9
X-OVER 4 1/2'' PH6 X 4 1/2'' ACME	23.9
LUBRICATOR VALVE	24.2
X-OVER 4 1/2'' ACME X 4 1/2'' PH6	25.9
TUBING 4 1/2'' PH6	27.1-350.0
X-OVER 4 1/2'' PH6 X 4 1/2'' ACME	350.0
EZ-TREE 4 1/2'' ACME	350.3
SLICK JOINT 4 1/2'' ACME	353.8
FLUTED HANGER 4 1/2'' ACME HANG OFF POINT	357.1
X-OVER 4 1/2'' ACME X 5'' VAM	357.2
5'' VAM (TOP)	357.4
TUBING 5'' VAM 15 LBS/FT	357.4-1455.8
PUP JT 5'' VAM	1455.8
X-OVER 5'' VAM X 3 1/2'' CS(P)	1457.2
TUBING JT 3 1/2'' CS	1457.6
'Q' NIPPLE 3 1/2'' CS (B)X(P)	1457.8
X-OVER 3 1/2'' CS (B) X 2 7/8'' CS (P)	1467.8
PUP JOINT 2 7/8'' CS	1468.3
PUP JOINT 2 7/8'' CS	1469.8
XA-SSD CS (B)X(P)	1470.8
PUP JOINT 2 7/8'' CS	1472.1
PUP JOINT 2 7/8'' CS	1473.6
X-OVER 2 7/8'' CS (B)X 3 1/2'' CS (P)	1476.4
SEAL ASSEMBLY	1476.8
BAKER MODEL 'D' PACKER (MID RUBBER)	1477.1
X-OVER, 3 1/2 EU(B)X2 7/8'' CS(P)	1477.3
OTIS 'S-1' NIPPLE CS (B)X(P)	1477.5
PERFORATED JOINT 2 7/8'' CS (B)X(P)	1477.6
BAKER 'F' NIPPLE 2 7/8'' CS (B)X(P)	1477.8
TUBING JT 2 7/8'' CS	1477.9
HALF MULE SHOE 2 7/8'' CS (B)	1478.0

FLOW PERIOD 1, CLEAN UP.

TIME THP SEP PRESS GAS MM SCF
(PSI)

0420 PRESSURED UP THE TUBING TO 147 PSI
 0423 PERFORATED, PRESSURE DROPPED TO 50 PSI
 0424 50
 0425 85
 0426 115
 0427 147
 0428 177
 0429 203
 0430 225
 0431 245
 0432 263
 0433 280
 0434 293

0435-0527 : PULLING OUT PERFORATING GUN.

0528 386

0556-0844 : FISHING PERF. GUN.

0845 240

0845 WELL OPENED TO GAUGE TANK ON 8/64'' FIXED CHOKE

0845 240

0850 50

0900 50

0915 50

0930 50

1000 50 (PROD. 188 B/D DIESEL).

1030 50 (,, 298 ,, ,,).

1100 125 (,, 636 ,, ,,).

1130 370 PROD. TO BURNER.

1200 672

1230 835

1300 932

1310 CHANGED TO 16/64'' CHOKE

1330 949 CHANGED CHOKE TO HEATER 24/64''

1400 899 INCREASED TO 28/64'' CHOKE

1430 547

1445 FLOW THROUGH SEPARATOR

1500	562	205	1.818	H2S = 0
1530	598	250	2.526	
1600	607	250	2.662	CO2 = 0.5 0/0
1630	670	250	2.726	
1645	688	250	2.898	
1700	668	270	3.037	GAS GRAVITY 0.610
1730	665	280	3.083	
1800	708	280	3.245	
1830	711	320	3.395	DUMPED 12.3 US GAL WATER
1900	719	315	3.387	
1930	723	300	3.464	DUMPED 10.5 US GAL WATER
2000	735	300	3.546	TR. SEDIMENT IN WATER
2030	743	300	3.599	DUMPED 2.7 US GAL WATER
2100	765	300	3.570	
2130	777	305	3.682	DUMPED 3 US GAL WATER
2200	780	310	3.764	
2230	793	300	3.786	TR SEDIMENT AND CONDENSAT
2300	805	305	3.891	DUMPED 4.2 US GAL WATER
2330	806	305	3.974	
2400	811	325	4.118	

NOTE: PRESSURE SEEMS TO INCREASE MORE RAPIDLY AFTER MIDNIGHT.

+

NNNN
 BD TOD: 0236 HRS
 *
 33368B SHELP N
 TOT TOD: 0257 HRS
 V
 OK LER DETT MAD DE

StatOil
attn. T. Sund

Borgny dolphin

shell expl

ZCZC

from: borgny dolphin, eppo/3, eppd/3

urgent to: norske shell tananger, eppo, eppo/1, eppp/2/12, ep xv/1,
epp, eppp/5, (eppd, eppp/1/21, ep x, ep xt/13).

09/06/1980

ref tlx no 0524/80

general test information - oil test well 31/2-3.

date	time	whp psig	est rate bbl/d	scf/d
8/6/80	1846	197		
	1951	199		
	1856	201		
	1901	202		
	1906	203		
	1910			rin with pressure bombs
	1922	204		first 20 rin gradient
	1927	205		stop at 1256 m
	1932	206		
	1937	206		
	1942	206		bombs moved to next
	1943			grad. stop bombs at 1306m
	1945	206		
	1950	207		
	2000	207		
	2003			bombs moved to next
				grad. stop.
	2004			bombs at 1356
	2005	207		
	2020	207		
	2024			bombs moved to next
				grad. stop.
	2025			bombs at 1406m
	2030	207		
	2040	207		
	2043			bombs moved to next
				stop.
	2044			bombs at 1456m
	2045	207		
	2100	207		
	2106			bombs moved to next stop.
	2107			bombs at 1506m.
	2110	207		
	2125	206		
	2130	206		
	2132			bombs landed at 1556.000m
	2200	208		
	2300	208		
	2330	208		open well slowly on adj. choke changed to 3/64

9/6/40

2334	125		
2335	128		
2340	139	8.7	
2345	132		
2350	140		
2400	135	72.0	1288
0005	149		
0010	130		
0015	125	78	4068
0020	120		
0025	105		
0030	115	35	6440
0045	95	35	7457
0100	92	35	8474
0115	87	30	8813
0130	82	41	9491
0145	82	30	9491
0200	61	35	9491
0215	81	52	10169
0230	81	38	10169
0300	75	41	10169
0330	79	35	10508
0400	82	30	10169
0430	79	35	10169
0500	75	43	10169
0530	75	38	9530
0600	70	43	10169
0610	75	116	10847
0630	55	98	12203
0700	33	69	flared gas
0730	22	52	" "
0800	22	17	" "
0830	26	52	12881
0900	16	64	14915
0930	20	67	14237
1000	19	41	14237
1030		147	14237
1045		55	
1100	16	69	11186
1103			
1115	10	283.0	25762
1130	2	20	
1200	4	0	
1230	14	303	
1245	2	113	
1300	2	0	

gas gravity 0.667
oil api = 16 dg

oil api = 16 dg

bsw = 20 o/o
mostly water/oil emulsion

bsw 10 o/o
chgd to 10/64 choke

flared gas
api = 18.0

bsw = 5

api = 20.0
api = 21

gas gravity = 0.680
api=22 adj choke to 20/64

1/2" fixed choke

gas metering stopped due
to excessive pressure
differential over flow
meter.

+
ends++

nnnn
bd tod: 1240 hrs
shell expl