

Esso Exploration Norway Inc.  
Geological Summary  
Completion Report

15 / 6 - 3 WELL

## Geologic Summary

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I. Introduction:

- A. Well designation - 15/6-3.
- B. Well Classification - Extension Test.
- C. Well Location -
  - 1. Country: Norway
  - 2. Licence: 029
  - 3. Coordinates: Latitude 58° 30' 15.9"N  
Longitude 01° 42' 39.5"E
  - 4. Seismic Location: Line SC 21, 500' norht of SP 7642.
  - 5. Water Depth: 370'.

II. Purpose of Well:

To test the Dogger Sands that were gas bearing in 15/6-2, at a structurally higher position on a large north south trending anticline.

III. Results of the Well:

The Dogger Sands were encountered 310 feet higher than in the 15/6-2 well. They occurred from 11,442 feet to 11743 feet, 206 feet of which was porous reservoir rock. The well was drilled down to 12,452 feet which was the final total depth, in a Triassic red bed sequence. The Dogger Sands were perforated from 11,530 feet to 11550 feet and the well was flowed 34.408 million cubic feet of gas per day with 1037 barrels per day of 41.5° API condensate.

IV. Well History:

A. General:

- 1. Spud date September 5, 1974.
- 2. Completion date December 19, 1974.
- 3. Status, plugged and abandoned.
- 4. Total depth 12,452 feet.
- 5. KB 78 feet.

B. Contractor Rig - Norsedrill - Drillmaster.

C. Casing - 30 inch 564 feet.  
20 inch 1265 feet.  
13 3/8" 3914 feet.  
9 5/8" 9384 feet.  
7" liner top at 8869 feet.  
shoe at 12437 feet.

D. Mud Program:

A lignosulfonate seawater mud was used.

E. Drilling Problems:

No significant problems were encountered whilst drilling this well.

F. Coring:

1. Conventional Coring.

a. 10 cores were taken with up to 100% recovery,  
they were taken in the interval 11,523 feet to  
11,978 feet.

(See description attached)

2. Sidewall Cores.

a. 69 sidewall cores were shot, 67 of which recovered samples.

G. Logging:

1. Geoservices - Mud Logging includes the following data:

- a. Drilling Rate.
- b. Lithology.
- c. Cuttings Gas.
- d. Mud Gas.
- e. Chromatograph.
- f. H<sub>2</sub>S Detector.
- g. Shale Density.
- h. Core Analysis.

2. Schlumberger

a. IES      Run No. 1 1267' - 3934'.  
Run No. 2 3917' - 9438'.  
Run No. 3 9390' - 11973'.  
Run No. 4 11420' - 12451'.

SGR-C      Run No. 1 1267' - 3934'.  
Run No. 2 3917' - 9435'.  
Run No. 3 9390' - 11980'.  
Run No. 4 11420' - 12451'.

FDC-CNL      Run No. 1 3917' - 9435'.  
Run No. 2 11365' - 11978'.  
Run No. 3 10031' - 12451'.

## 2. Schlumberger - Cont'd.

Dipmeter Run No. 1 3917' - 9435'.  
9388' - 12450'.

CN Run No. 1 9300' - 12351'.

## 3. Velocity Survey

- a. Detailed velocity survey from surface casing to T.D.

H. Testing:

Ten FIT's were run numbers 1, 6, 7, 8, 9, and 10 failed. FIT numbers 2, 3, 4, and 5 were successful.

Two production tests were run. The first was between 11,815 feet and 11,825 feet, this had no flow. The second was between 11,530 feet and 11,550 feet, this flowed gas at a rate of 34,408 thousand cubic feet of gas per day with 1037 barrels per day of condensate of 41,5° API gravity.

I. Abandonment:

The well was permanently abandoned with cement plugs set at 11,027 feet, 8703 feet, 8122 feet, 5550 feet, 3625 feet, and 620 feet RKB. The first attempt to cut the wellhead was unsuccessful when the marine pack failed to sever the wellhead. Attempts to re-enter the wellhead were unsuccessful. A taper mill had to be run in the hole and the wellhead milled to 35 feet below the top of the wellhead. The wellhead was then cut and retrieved. The seafloor was left clean.

## V. Stratigraphy:

A table of stratigraphy of 15/6-3 well.  
KB 78 feet.

Stratigraphic Units:	Drill Depth:	Sub Sea:	Thickness:
Plio-Pleistocene	446'- 136 m	(- 368')	2164'
Miocene	2610'- 795 m	(- 2532')	1850'
Middle to Early Miocene	3730'-1137 m	(- 3652')	
Oligocene	4460'-1359 m	(- 4382')	820'
Middle Oligocene	5000'-1524 m	(- 4922')	
Eocene	5280'-1609 m	(- 5202')	1745'
Eocene B 2	6423'-1958 m	(- 6345')	
Paleocene	7025'-2141 m	(- 6947')	1827'
Early Paleocene	8670'-2643 m	(- 8592')	
Upper Cretaceous	8852'-2598 m	(- 8774')	1998'
Lower Cretaceous	10850'-3307 m	(-10773')	310'
Jurassic	11160'-3402 m	(-11082')	583'
Malm	11160'-3402 m	(-11082')	282'
Dogger	11442'-3488 m	(-11366')	301'
Trias	11743'-3579 m	(-11666')	709'+
T.D.	12452'-3823 m		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL # 15/6-3
HOLE SIZE:	GEOL.:	DATE:	COUNTRY: Norway	
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
		Water Depth 370' KB + 78' 30" at 562'		
-600	100	Clay, silty, sticky, grey, soft, calc. in part, occ. fossil frags, common quartz silt	cement	contamination
600-690	100	Silty clay, very silty (clean quartz silt) tending to v.f. sand, grey, tr. lignite fossil fragments, sand, calcareous soft.		
690-780	100	Silty clay tr. sand, lignite, mica.		
790-810	95	Silty clay, sandy in pt.		
	5	Lignite, brn-blk, firm.		
810-840	60	Silty clay, v. sdy. (tending to f.sd)		
	10	Lignite		
	30	Sand, unconsolidated quartz, well sorted, sr-r coarse - granular minor lithics/fossils.		
840-870	70	Silty clay		
	20	Sand mod - w. sorted, m-gran, sa-r		
870-900	30	Silt/silty clay clay washing away		Much cleaner
	70	Sand qtz, lithic in pt, abundant abraded fragments of shells calc. mat. m-gran, sa-r, mod -w sorted, loose tr lignite.		
900-960	10	Silt clean qtz silt		
	90	Sand qtz, lithic pyritic in pt, calc. mat. m-v.c. (some silt-f) w. sorted loose		

WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE:	17 1/2"	GEOL.:Bruce McKay	Esso Exploration Norway	15/6-3
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	DATE:	COUNTRY
960-	10	Clay	September 8/9, 1974	Norway
990	10	Silt wtz, pyr, sa-sr well sorted silt-vf.		
	80	Sand wtz, lithie, calc/fossil frags, v. pyr. in pt., m-vc. f-well sorted.		
990-	20	Clay		
1020	10	Silt		
	70	Sand		
1020-50	70	Sand, litiè figneous (micac, pyr) quartzose, calc mat, f-well sorted sa-r, m-vc.		
	30	Clay, tr silt, washing away?		
1050-60	60	Sand		
	40	Clay sli silty		
1060-	40	Sand		
1110	60	Clay, becoming silty		
1110-	20	Sand loose qtz, lithies, pyritic, m-c.		
1200	80	Clay, silty, micac, grey, soft, sticky tr. lignite.		
1200-30	100	Sandy clay, silt-m sd in grey soft clay, tr fine lignite, fossil frap.		
1230-60	90	Sandy clay		
	10	Sand, m qtz, fossils, lithics		
1260-	90	Silty clay, sandy, v. silty		
1300	10	Sand, f-m loose quartz tr fossils		

WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE:	GEOL.:		DATE:	15/6-3
17 1/2"	B. Barron		September 15, 1974	Norway
DEPTH Ft/M	LITH %	W. Depth 370' LITHOLOGIC DESCRIPTION	Csg 30" at 562' 20" at 1265'	SHOWS & REMARKS
1300-30	80	Cement		
	10	Caly - lt gr., silty, sandy		
	10	Sand - m - cg, (loose), unconsolidated		
	Tr	Shell/frag		
	Tr	Ls, micritic, lt gr - wh		
	Tr	Chert		
30-60	60	Cement		
	40	Clay - m gr, silty, hard shly strks		
	Tr	Sd - m - cg		
	Tr	Chert - dk gr - lt gr		
	Tr	Siltstone - slightly calc.		
60-90	80	Clay - m gr, v silty, soft		
	10	Siltstone - loose		
	10	Cement		
	Tr	Chert		
	Tr	Sd, cg		
90-1420	AA	a/a		
	Tr	Shell/frag		
1420-50	100	Clay - m gr, v silty, soft, sticky		
	Tr	Shell/frag		
50-80	100	Clay - gr - brn, v silty, soft, sticky		
80-1510	100	a/a		
1510-40	100	a/a		
	Tr	M cg, sd		
	Tr	Shell/frag		
	Tr	Mica		
40-70		a/a		
70-1600		a/a		
1600-30	90	Clay a/a, fossils (micrd)		
	10	Sd, m - fg, clear, qtz		
30-60		a/a		
60-90		a/a		
90-1720		a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE: 17 1/2" GEOL: B. Barron			DATE: September 16, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	W. Depth 370' LITHOLOGIC DESCRIPTION	Csg 30" at 562' 20" at 1265'	SHOWS & REMARKS
1720-50	-	a/a		
50-80	-	a/a microfauna/abnt, shell/frag		
80-1810	-	a/a		
1810-40	-	a/a more silty		
40-70	90	Shale a/a, shell/frag, lt gr - dk gr		
	10	Silt		
	Tr	Pyrite, lignite, mica		
	Tr	Crs sd		
70-1900	-	a/a		
1900-30	-	a/a		
30-60	-	a/a		
60-90	90	Clay, lt gr, soft, sticky, shell/frag		
	10	Silt, clear		
	Tr	Pyrite, mica		
	Tr	Sd - cg, clear		
	Tr	Lignite		
90-2020	-	a/a w/tr siltstone - lt gr clauconitic		
2020-50	-	a/a		
50-80	-	a/a		
80-2110	-	a/a		
2110-40	-	a/a		
2140-70	-	a/a w/tr dk gr siltstone - micaceous - clauc.		
70-2200	-	a/a		
2200-30	100	Clay - m gr, silty, fossiliferous		
	tr	fg sd, pyrite, lignite, mica		
30-60	-	a/a		
60-90	-	a/a		
90-2320	-	a/a		
2320-50	-	a/a microfauna/abnt		
50-80	-	a/a		
80-2410	90	Clay a/a		
	10	Shale - gr - grn, soft		
	Tr	a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE:	17 1/2"	GEOL: B. Barron	DATE:	15/6-3
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
2410-40	-	a/a		
40-70	60	Shale - gr - brn m firm, pyrite & Microfoss.		
	40	Clay a/a		
	Tr	Pyrite (common)		
	Tr	Shell/frag		
70-2500	-	a/a		
2500-30	-	a/a microfauna (common)		
30-60	-	a/a		
60-90	-	a/a more pyrite (v common)		
90-20	80	Sh a/a v silty to (vfg - sandy) soft		
	20	Shell/frag (macrdf) (drlg brk at 2610')		
2620-50	60	Sh a/a		
	20	Silt to fg sd		
	20	Shell/frag		
50-78	-	a/a pumped (circ. bott up at 2678')		(coming out of hole t repair eng.)
2680	-	a/a silty w/tr pyrite, chert		
80-2710	-	a/a		
2710-40	-	a/a		
40-70	-	a/a		
70-2800	-	a/a		
2800-30	-	a/a		
	50	Shale - lt - dk gr, soft w/clay		
	40	Silt - clear		
	10	Shell & Microfossils		
30-60	60	Silt a/a		
	30	Shale a/a		
	10	Shell a/a w/tr pyrite		
60-90	80	Silt a/a		
	20	Shly clay a/a		
	Tr	Shell/frag		
90-2920	-	a/a		
2920-50	70	Silt a/a		
	20	Shale & clay a/a		
	10	Shell/frag		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:		DATE: September 17, 1974	COUNTRY: Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
2950-80	70	Silt to vfg sd clear, subrounded, loose		
	20	Sh & clay m gr, soft		
	10	Shell/frag		
	Tr	Pyrite, c qtz grns, chert, glauconite		
80-3010	-	a/a		
3010-40	-	a/a		
	60	Silt a/a		
	20	Sh & clay a/a		
	20	Shell/frag a/a		
	Tr	a/a		
40-70	-	a/a		
70-3100	70	Silt a/a		
	20	Sh & clay a/a dk gr		
	10	Shell/frag		
	Tr	a/a		
3100-30	-	a/a		
30-60	-	a/a slightly more shell		
60-90	-	a/a		
90-3220	-	a/a tr c sd, clear qtzose, sub angular		
3220-50	60	Silt a/a		
	20	Sh & clay a/a		
	15	Shell/frag		
	5	Sd, cg a/a		
50-80	-	a/a		
80-3310	-	a/a		
3310-40	-	a/a vcg sd (clear - frosted) tr dk gr sh		
40-70	-	a/a		
70-3400	80	Silt a/a		
	10	Sh & clay lt gr a/a		
	10	Sh, brn, micacedus, silty, soft, glauconitic, tuffacedus		
3400-30	100	Silt - vfg sd - lt gr, v galuconitic		
	Tr	Sh brn, micac, glauc, soft, tuffacedus matl		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE: 17 1/2"	GEOL: B. barron	DATE: September 17, 1974	COUNTRY: Norway	
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
3430-60	80	Silt, lt gry, glauc, abdt, clear, loose		
	20	Clay - v. silty, lt gry, soft, micaceous		
	Tr.	Sh - br, micaceous, v. glauc., silty, calc.		
3460-90	-	a/a		
3490-520	70	a/a		
	30	Sh, gr-br, micaceous, sli. glauc., silty, soft, calc.		
3520-50	100	Sh, gr-br, - a/a shards - vol matl? ash		
	Tr.	Shell fragm.		
3550-80	-	a/a, tuffaceous matl/mostly dk br.		
3580-610	-	a/a		
3610-40	-	a/a		
3640-70	-	a/a		
3670-100	-	a/a		
3700-30	-	a/a		
3730-60	-	a/a		
3760-90	-	a/a		
3790-820	-	a/a - 50% gr - 50% br		
3820-50	-	a/a		
3850-80	-	a/a - mostly dk br		
3880-920	-	a/a		
3920-50	-	a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:		DATE: September 22, 1974	COUNTRY: Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/3970	100	Clay/sh, silty to fn grnd, med gr to gr brn, med hd, calc, sl mic (even v. calc) occ sndy	NS	
	Tr.	Glauconite, shell fgmnts, drilling cmt (up to 5%, forams.) (few)		
/3980	90	a/a - grbrn 50%		
	10	Drlg cmt		
	Tr.	a/a - glauconite abndt (fine grnd)		
/3995	100	Clay/Sh silty, a/a - (gr brn)	NS	
	Tr.	a/a - w/drlg cmt - spicules? (v small but numerous)		
/4010	100	a/a (gr brn domt) - occ grading to v fn grnd sandstone, soft med gr glauconite mic.		
	Tr.	a/a		
/4025	100	a/a (Sandstone v fn grnd up to 20%)	NS	
	Tr.	a/a (still w/spicules)		
/4040	100	a/a still clac (slightly)		
	Tr.	a/a (spicules)		
/4055	90	Shale, silty a/a - (dk brn)	NS	
	10	Drlg cmt		
	Tr.	a/a glauc, spicules		
/4070	70	Clay/sh, silty a/a (dk gr to gr brn)	NS	
	15	Sandstone, wh to gr, fn to med grnd, mod sorted, sl glauc, sli calc.		
	15	Drlg cmt		
	Tr.	a/a		
/4085	90	Clay/sh - a/a		
	10	Drlg cmt		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	12 1/4"	GEOL.: M. Bleriot	DATE: September 22, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
4100	95	Sh/clay, silty a/a (med gr, dk gr, gr brn) NS		
	5	Drlg cmt		
	Tr.	Sandstone a/a, glauconite, mica		
/4130	90	Sh/clay - a/a		NS
	10	Drlg cmt		
	Tr.	Sandstone a/a, glauconite, mica, v few shell fragments		
/4160		a/a - (gr brn domi.)		NS
/4190	80	Sh/clay a/a - (a/a)		NS
	10	Sandstone, v fn grnd, friable, wh to lt gr, occ med to fn, mod sorted		
	10	Drlg cmt		
	Tr.	Limestone, beige, micritic - glauconite shell fragments - forams. (v few)		
/4220	70	Sh/clay silty a/a (gr brn domi.)		NS
	20	Limestone - a/a		
	10	Drlg cmt		
	Tr.	a/a - Sandstone - a/a		
/4250	80	Sh/clay - a/a		NS
	15	Sandstone - a/a		
	5	Limestone - a/a		
	Tr.	Shell fragments, forams. (+abndt), glauc.		
/4280	90	Sh/clay - a/a		NS
	5	Sandstone - a/a		
	5	Limestone - a/a		
	Tr.	Drlg cmt, spicules		
/4350	100	Sh/clay - a/a		NS
	Tr.	Sandstone - a/a, limestone, glauc.		
/4340		a/a		NS
/4370		a/a - gr brn 90 %		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE: 12 1/4"		GEOL: M. Bleriot	DATE: September 23, 1974	COUNTRY Norway
DEPTH F/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/4400	95	Sh/clay - a/a - softer		NS
	5	Shell fragments		
	Tr.	Sandstone a/a - glauconite, forams, q. grns		
/4460	60	Sh/clay - a/a - softer		NS
	40	Shell fragments		
	Tr.	Q. grns		
/4490	95	Sh, silty a/a - (gr brn), micac, glauc		NS
	5	Shell fragments		
	Tr.	Sandstone - a/a - Q grns		
/4520	100	Shale - a/a - tighter		NS
/4550	100	Shale a/a - gr brn		
	Tr.	a/a		
/4580	100	a/a - tight		NS
/4610	100	a/a - tighter - finer grnd - still silty and mic.		
/4640	100	Shale - a/a - gr brn (dk gr)		NS
	Tr.	Sandstone - a/a, shell fragments, limestone micritic to biocl. fn grnd, hd, lt brn		
/4670	100	a/a		NS
	Tr.	a/a + spicules (a/a)		
/4694	90	Shale - a/a		NS
	10	Limestone - a/a - abndt		
	Tr.	Xtld calcite, brn abndt yell, glauc., v. few shell fragments - sh, soft, gr, silty (v. few fragments)		
POH		Change Bit.		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	12 1/4"	GEOL.: M. Bleriot	DATE: September 23, 1974	COUNTRY: Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/4700	100	Sh., silty, mic., lt med gr to gr brn, glauc. (50% each colour) soft Tr. Limestone, mic., buff, - a/a, few shell fragments and forams. Note: Lt med gr sh is softer than dk gr brn, both are sli dolom. (v litt. efferv.)	NS	
/4730	100	a/a Tr. a/a (forams, v. small) + xtld calcite yel brn a/a - + v few fragments green sh	NS	
/4760	90	Sh, silty - a/a	NS	
	10	Sandstone, wh to lt gr, v fn grnd to silty both mic. and glauc.		
		Tr. a/a - mainly limestone, micritic, lt gr		
/4790	100	Sh, silty - a/a Tr. Sandstone a/a - limestone a/a, xtld calcite yell brn a/a.	NS	
/4820	70	Sh, silty, soft, lt to med gr, mic, w/ spicules and glauc.	NS	
	30	Sh, silty brn to dk brn a/a		
		Tr. Shell fragments (few), limestone, wh, chalky		
/4850		a/a - both mic.	NS	
/4880	60	Sh, silty, lt to med gr - a/a, sl dolom.	NS	
	40	Sh, silty, brn - dk brn - a/a		
		Tr. (v. few) limestone a/a - gr, gn silty sh		
/4910	70	Sh, lt to med gr - a/a	NS	
	30	Sh, brn - a/a		
		Tr. Limestone a/a, sh gr-gn to grn - v fn xtld pyrite		

WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE:	12 1/4"	GEOL: M. Bleriot	DATE:	15/6-3
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION		COUNTRY
/4940	50	Sh, lt med gr - a/a		Norway
	50	Sh, brn - a/a		
	Tr.	Some fragments gr-grn silty (few) - lime- stone - a/a - buff, mic. - few wh "tubes" non calcitic		
/5000	60	Sh lt med gr - a/a		NS
	40	Sh brn - a/a		
	Tr.	Glauc. (abndt) - sh lt gr-grn - med gr-grn		
/5030		a/a		NS
	Tr.	a/a - + few shell fragments		
/5060	70	Sh lt med gr		NS
	30	Sh, brn - dk brn		
	Tr.	a/a - limestone a/a + wh "Tubes"		
/5090	50	Sh lt med gr a/a (darker)		
	50	Sh brn a/a		
	Tr.	a/a - v few sh gr-grn		
/5120		a/a		NS
/5150	60	Sh lt to med gr - a/a		NS
	40	Sh brn - a/a		
	Tr.	a/a - + few forams		
/5180	50	Sh lt to med gr (still darker)		NS
	50	Sh brn		
	Tr.	a/a - still limestone - no forams wh "tubes"		
/5210		a/a		NS
	Tr.	a/a - v few fn grn sandstone, gr, soft		
/5240		a/a		NS
	Tr.	a/a		
/5270		a/a		NS
	Tr.	a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:	DATE:	COUNTRY Norway	
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/5300	80	Sh, silty, micac., med gr to grn (occ lt - med gr) soft to med hd, w/small glauc grns, no more spicules.	NS	
	20	Sh, silty, mic., brn to gr yel dk brn, soft to med hd		
	Tr.	Limestone, mic., buff, med hd, biocl. v fn grnd, yel - wh - xtld calcite yel brn to to amber		
/5330	60	Sh, silty, mic, a/a lt gr to dk gr - sli dolom.	NS	
	20	Sh, brn - a/a		
	20	Dolom, limestone, wh to yel, wh, mic to detrital (fn) hd to med hd		Dolomitic (slow eff.)
	Tr.	Sandstone, v fn grnd		
/5360	90	Sh, lt to dk gr - a/a	NS	
	5	Sh, brn - a/a		
	5	Limestone - a/a (wh to yell. wh)		
	Tr.	Wh "tubes" - a/a, xtld calcite yel. - brn to red brn, v few forams, no or v litt. glauc.		
/5390	60	Sh, lt to dk gr - a/a - w/glauc	NS	
	40	Sh, brn to dk brn - a/a		
	Tr.	Limestone - a/a, sh, dk gr-grn (w/glauc.) Note: Both sh are v. sli. dolom.		
/5420	90	Sh, lt med to dk gr - a/a, silty (bigger cuttings than above)	NS	
	10	Sh, brn - a/a		
	Tr.	Sh, yel brn, sl. more calc., soft, lime stone - a/a wh "tubes" no more spicules (or v litt.)		
/5450		a/a	NS	
	Tr.	a/a + few gr-grn sh		
/5480	50	Sh, lt med gr to dk gr - a/a	NS	

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	12 1/4"	GEOL: M. Bleriot	DATE: September 24, 1974	COUNTRY Norway
DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
	50	Sh, brn to dk brn - a/a		
	Tr.	Limestone - a/a, calcite - a/a, v. litt. gr-grn sh.		
/5510	a/a		NS	
	Tr.	Sh, gr to gr-grn, a litt. more abndt - v fn Q. grns, wh "tubes"		
/5540	80	Sh, lt to med to dk gr - a/a	NS	
	20	Sh, brn to dk brn		
	Tr.	Sh, gr to gr-grn (little), sandstone, v fn grnd, wh gr, glauc, limestone, mic. - a/a pyrite		
/5570	a/a		NS	
	Tr.	a/a - xtld calcite, transp.		
/5600	a/a		NS	
	Tr.	a/a + lignite (v few) xtld calcite		
/5630	a/a		NS	
	Tr.	Wh "tubes", a/a (but v few) glauc. (litt.)		
/5660	60	Sh, silty, lt gr med to dk gr, soft, fn mic.	NS	
	40	Sh, silty, brn to dk brn		
	Tr.	Sh, gr-grn - a/a - pyrite		
/5690	70	Sh, silty, to siltstone, lt gr to med gr to lt med gr-grn - grns even + fn than a. (colour mostly lt gr-grn)	NS	non calc.
	30	Sh, brn to gr brn to red brn, silty v fn too		
	Tr.	Wh "tubes", limestone, mic. buff - a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL.:		DATE: September 25, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/5720	50	Sh, non silty, (Grns finer than silt) lt gr to lt gr grn non calc.	NS	
	50	Sh, silty, gr brn to brn - a/a		
	Tr.	Sandstone, poorly sorted, gr to grn		
/5750	50	Sh, lt gr-grn - a/a	NS	
	50	Sh, silty to non silty, brn to gr brn to purple brn		
	Tr.	Lignite		
		Note: Both shales are interbedded and interfingered.		
5780	70	Sh, lt gr-grn		
	30	Sh, brn		
	Tr.	Sandstone, wh fn grnd, well sorted		
/5810		a/a	NS	
/5840	80	Sh, lt gr-grn	NS	
	20	Sh, brn		
	Tr.	Sandstone - a/a, limestone, buff mic.		
/5870		a/a		
	Tr.	a/a (no sandstone)		
/5900		a/a	NS	
	Tr.	a/a (no sandstone) - some Q. grns		
/5930	20	Q. grns (small)	NS	
	70	Sh, grn		
	10	Sh, brn		
	Tr.	Limestone - a/a, sandstone fn grnd		
/5960	30	Q. grns (small)	NS	
	60	Sh, grn		
	10	Sh, brn		
	Tr.	a/a		
/5990	90	Sh, grn	NS	
	10	Sh, brn		
	Tr.	a/a + Q.grns		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE: 12 1/4"		GEOL.: M. Bleriot	DATE: September 25, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/6020		a/a		NS
	Tr.	a/a		
/6050	20	Q. grns		NS
	70	Sh, gr		
	10	Sh, brn		
	Tr.	a/a + lignite		
/6080	20	Q. grns		NS
	80	Sh, grn		
	Tr.	Sh, brn, sandstone - a/a, mica.		
/6110	10	Q. grns		NS
	80	Sh, grn		
	10	Sh, brn		
	Tr.	Sandstone - a/a - mica.		
/6140	80	Sh, grn		NS
	20	Sh, brn		
	Tr.	Q. grns, limestone - a/a		
6170	10	Q. grns		NS
	80	Sh, grn		
	10	Sh, brn		No flow, no cut
	Tr.	Sandstone, wh - a/a - glauc.		Heavy brn oil??
/6200	30	Q. grns (smaller mesh)		NS
	60	lt gr - grn sh.		
	10	Sh, lt brn		
	Tr.	Mica, limestone - a/a		
/6230	10	Q. grns		NS
	70	Sh, lt gr - grn		
	20	Sh, lt brn to brn		
	Tr.	Mica.		
/6260	30	Q.grns (smaller mesh) poorly sorted(rnd)		NS
	40	Sh, lt gr=grn - a/a		
	30	Sh, brn - a/a		
	Tr.	Pyrite, mica, sandstone - a/a, lignite, limestone - a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:	DATE:	COUNTRY Norway	
DEPTH F/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/6290	70	Sh., lt gr to grn - a/a	NS	
	30	Sh., brn to red brn - a/a		
	Tr.	Pyrite, mica., glauc., few Q. grns		
/6320	70	Sh, lt gr med grn to grn - a/a	NS	
	30	Sh, brn to red brn occ. silty		
	Tr.	Dol. limestone, yel. mic. - pyrite - few Q. grns, glauc.		
/6350	10	Q. grns - poorly sorted, sub rnd-mod sort.	NS	
	50	Sh, grn - a/a		
	40	Sh, brn - a/a		
/6380	Tr.	Glauc., forams, wh "tubes", sandstone, wh fn grnd, shell fragments, pyrite	NS	
	80	Sh, lt gr med gr to grn - a/a		
	20	Sh, brn to red brn - a/a - grading to brn yel.		
/6410	Tr.	Pyrite, dol. limstone - a/a, sandstone a/a v few Q. grns	NS	
	90	Sh, lt med gr to gr-grn a/a		
	10	Sh, brn to lt red brn - a/a		
/6440	Tr.	Limestone - a/a (dolom)	NS	
	a/a			
	Tr.	Limestone - a/a		
/6470	60	Sh, lt gr med gr med gr-grn - a/a	NS	
	40	Sh, gr brn - yel. brn sl. silty		
	Tr.	Grn sh, silty - v few Q. grns - limestone a/a		
/6500	30	Sh, lt gr to lt gr-grn - non silty	NS	
	70	Sh, lt gr brn to yel. brn non silty		
		these colours are continuos variations of the same lithology, from lt gr-grn to dk brn		
Tr.		Some small Q. grns, few limestone fragments a/a, few wh sandstone fragments a/a, xtld calcite	NS	

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:		DATE: September 25, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
/6530	80	Sh, lt gr brn to yell brn		NS
	20	Sh, lt gr-grn		
	Tr.	Dol. limestone, sandstone v fn grnd, lt gr		
/6560	a/a			NS
	Tr.	Q. grns, small (less than 5%) some coarser than a. - pyrite, mica., few forams. sandstone - a/a, glauc.		
/6590	90	Sh, lt gr lt gr-grn - a/a some dk grn		NS
	10	Sh, lt brn to red brn, occ silty		
	Tr.	Sandstone, wh a/a, v fn Q. grns, limestone a/a		
/6620=	30	Sh, lt gr lt gr-grn - a/a some dk grn		NS
	70	Sh, dk gr to brn few red brn		
	Tr.	Pyrite, limestone a/a v few Q. grns		
/6650	60	Sh, lt gr - lt gr-grn, dk grn - a/a grn dom		NS
	40	Sh, gr brn, dk gr, red brn (few)		
	Tr.	Sandstone, wh, fn grnd - a/a (more abndt) mod. sorted, Pyrite		
/6680	80	Sh, lt gr lt gr-grn, dk grn		NS
	20	Sh, gr brn, dk gr		
	Tr.	Pyrite, sandstone - a/a, limestone dol a/a		
POH		To change bit, depth 6700 -		
/6710	a/a			NS
/6740	a/a			NS
	Tr.	Pyrite, sandstone - a/a, limestone dol a/a		
/6770	95	Sh, lt gr lt gr-grn, dk grn - a/a		NS
	5	Sh, brn		
	Tr.	a/a - q. grns (small) more abndt		
/6800	a/a			NS
	Tr.	a/a - Q. grns (various sizes)		
		Pyrite.		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
			DATE:	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
6830-60	100	Shale - med gr - dk gr, soft		10 vgms
	Tr	Limestone - yellow micritic		
6860-90	60	Shale - med gr		Top Rosnas
	40	Shale - rusty brn		at 68.90'
6890-	60	Shale - rust brn		
6920	40	Shale - med gr		
	Tr	Limestone		
6920-80	70	Shale - rust brn		10 vgms
	30	Shale - med gr		
6980-	60	Shale - gr		
7010	40	Shale - rust brn		
	Tr	Tuff - white		
7010-40	40	Shale - gr		
	40	Shale - rust brn		
	20	Tuff - white		
7040-70	60	Shale - gr		
	40	Shale - red or rust brn		
7070-	100	Shale - med gr, gr grn, rust brn, 1st		70' - 90'/hr
7100		occ af gr brn		30 conn.
7100-30	100	Shlalae - a/a w/lt gr grn 1st occ.		
	Tr	Limestone - yellow granular		
7130-60	100	Shale - gr grn, rust brn, gr brn, gr		20 vgms
		pyrite		
	Tr	Limestone - a/a		
7160-90	90	Shale - a/a / pyrite		25 vgms BG
	10	Limestone a/a		38 conn.

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
DEPTH FT/M	LITH %	LITHOLOGIC DESCRIPTION	DATE: September 26, 1974	COUNTRY Norway
7190-	100	Shale - lt gr, dk gr, brittle, rust brn gr grn, ab pyrite		60' /hr
7220	Tr	Limestone		BG - 20 - 25 Conn - 30 - 35
	Tr	Tuff - white - lt gr		Tr C <sub>2</sub> + C <sub>3</sub>
7220-50	100	Shale - a/a		Drlg incr. from
	tr	limestone		50' - 70' /hr to
		Ab pyrite		85' - 90' /hr C.D.
7250-80	100	Shale - a/a ab pyrite		at 7322'
	Tr	Limestone		30 vgms
		Increase in qtz grns sub ang - sub rd		No fl - no show
7280-	100	Shale - a/a		
7310	Tr	Limestone		Tr large forams
	Tr	Tuff		
7310-23	80	Shale - a/a		TOS at 7295'
	10	Limestone - yellow granular		No show
	10	Sand - unconsolidated vfg. On visible in fine tray.		
7323-40	70	Shale - med gr - dk gr		20 vgms
	30	Sand - a/a		No show
		Ab sand in desander vfg N.S.		60' - 70' /hr
7340-70	80	Shale - a/a		Tr forams
	20	Sand - a/a		
7370-	90	Shale - a/a		
7400	10	Sand - a/a		
7400-30	80	Shale - a/a		15 vgms
	10	Sand		
	10	Marl - white, soft, stky		
		Ab pyrite		
7430-60	80	Shale - lt gr, med gr		6 vgms
	20	Sand - a/a		50' /hr

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration DATE:	WELL (Onshore/Offshore) 15/6-3 COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
7460-	50	Shale - lt gr to med gr	6	vgms BG
7550	50	Sand - uncons., qtz, sub ang - sub rd, vfg to crse grn		Sand increasing in fine tray
	Tr	Clay - white - no show		
7550-80	60	Sand - a/a		Desander showing
	40	Shale - a/a		100%
	Tr	Pyrite		SS
	Tr	Lignite		
7580-	80	Sand - a/a		Good % + K
7610	20	Shale - a/a		
7610-40	90	Sand - a/a vfg - to v crse		From desander
	10	Shale - a/a		
		Ab pyrite to lignite	40' - 115'/hr	
		Seeing at 50-50 in fine tray +		5 - 10 vgms
		90SH - 10SS in tray normally used.		
7640-70	90	Sand - a/a occ frosted grns		
	10	Shale - a/a		
7670-	90	Sand a/a	6	vgms
7700	10	Shale - a/a		
		RT at 7740'	E. Torque	S - 44
7700-60	100	Sand - a/a	55	vgms TG
	Tr	Shale	C <sub>1</sub>	3800 ppm
	Tr	Lignite + pyrite + calcite	C <sub>2</sub>	950 ppm
		Abundance of cavings	C <sub>3</sub>	270 ppm
7760-90	100	Sand - a/a		BG - 3 vgms
	Tr	Shale		
	Tr	Lignite + Pyrite + Calcite		
				50'/hr

WELLSITE SAMPLE DESCRIPTION		COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL.:	DATE: September 27-28, 1974	COUNTRY: Norway
DEPTH F/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS
7790-	100	Sand-uncons. qtz, vfg to v crse, sil cmt	50 '/hr
7820		sub ang - sub rd, poorly sorted	50 vgms
	Tr	Shale - lt to dk gr	No show
7820-50	100	Sand - a/a	Drlg dec.
	Tr	Shale - a/a	50/-40 '/HR
7850-	80	Sandstone - a/a	40,/-30 '/hr
7910	20	Clay - white calc., wash out	5 vgms
7910-40	70	Sandstone - a/a	
	30	Clay - a/a	
7940-70	60	Sandstone - a/a	25 '/hr
	20	Clay - white a/a	0 - 5 vgms
	20	Clay - gr brn	
7970-	50	Sandstone - a/a	
8000	30	Clay - gr brn	
	20	Clay - white	
8000-30	60	Sandstone - a/a	20-30 '/hr
	20	Clay - white	0 vgms
	20	Clay - gr brn	
8030-60	70	Sandstone - a/a	
	20	Clay - gr brn	
	10	Clay - white	
8060-	80	Sandstone - a/a	C.D. for
8104	10	Clay - gr brn	TNB 8104'
	10	Clay - white	

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	DEPTH Ft/M	LITH %	DATE: September 28, 1974	COUNTRY: Norway
LITHOLOGIC DESCRIPTION			SHOWS & REMARKS	
8104-30	70	Sandstone - uncons. qtz, sub ang - sub rd, vfg to vgc, poorly sorted.	Drlg 120'/hr	No shows
	20	Clay - gr brn		Abundance of cavings
	10	Clay - white		
	Tr	Lignite		
8120-50	90	Sanstone - v crse to fg, occ frosted grns	70-160'/hr	
	10	Clay - white - gr brn		
8150-80	90	Sandstone - a/a		Rate decreasing
	10	Clay - white - gr brn		100 - 70'/hr
		Ab pyrite		
8180-	90	Sandstone - a/a		
8240	10	Clay - a/a		
	Tr	Lignite		
8240-70	80	Sandstone - a/a	70 - 50'/hr	
	20	Clay - gr brn		10 voms
8270-	70	Sanstone - a/a		
8300	30	Clay - a/a		
8300-30	90	Sandstone - a/a		
	10	Clay - a/a		
8330-60	90	Sandstone - a/a vfg - crse	40/30'/hr	
	10	Clay - a/a		3 voms
	Tr	Lignite pyrite		
8360-90	90	Sandstone - a/a		
	Tr	Clay - a/a		
	Tr	Lignite pyrite		
8390-	90	Sandstone - a/a	30'/20'/hr	
8420	Tr	Clay - a/a		
8420-54	60	Sandstone		
	40	Clay, white, gr brn, lt gr		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	12 1/4"	GEOL:	D.J. Barkley	DATE: October 1, 1974
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION		SHOWS & REMARKS
8454-80	60	Sandstone - uncons, fg to crse, sub ang - sub rd, poorly sorted		XV at 8454 20' - 10'/hr
	20	Clay - lt gr, soft		
	20	Clay - lt gr, soft.		
	Tr	Lignite, glauc.		
	Tr	Limestone, white, chalk		
8480-	70	Clay - lt gr		15' - 10'/hr
8510	30	Sandstone		
	Tr	Limestone - lignite, glauc.		
8510-20	80	Shale - lt gr, gr, gr grn		10'/hr
	20	Clay - lt gr		
8520-40	100	Shale - lt gr, silty, sl calc. micaceous		5' - 10'/hr
				TNB 4JS
8540-50	70	Shale - lt gr, gr grn, silty, micr.		10' - 15'/hr
	20	Sandstone - white fg, firm, cons, poorly sorted, calc, silica cmt, slg calc.		
	10	Clay - white		
8550-60	60	Shale - a/a		40'-60'/hr
	30	Sandstone - uncons, fg - crse grnd		
	10	Clay - white, calc.		
	Tr	Sandstone - cons, white, calc.		
8560-70	80	Sandstone - poorly cons - cons fg - crse calc. + silica cmt, w/pyrite		60'/hr
	20	Shale - lt gr, grn gr		
	Tr	Clay - white calc.		
8570-80	80	Sandstone - a/a, cons		60' - 80'/hr
	20	Shale - a/a		
8580-90	80	Sandstone - a/a - cons, silica cmt		100'/hr
	20	Shale - a/a		
	Tr	Clay - white		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:	DATE:	COUNTRY Norway	
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
8590-	80	Sandstone - white, cons. to poorly cons, fg	Large foram	
8600		to crse, poorly sorted, sub ang - sub rd, silica cmt, no show	ab pyrite	
	20	Shale - lt gr, med gr, grn gr	0 vgms	
8600-20	90	Sandstone - a/a	100'/hr	
	10	Shale - a/a, lt gr pred		
	Tr	Clay - white		
8620-30	60	Sandstone - a/a		
	40	Shale - lt gr, striky		
8630-50	70	Sandstone		
	20	Shale - lt gr		
	10	Clay - white, calc.		
8650-	80	Sandstone - a/a, occ. crse, v. calc.		
	10	Shale - lt gr		
	10	Clay - white		
8660-70	20	Sandstone - a/a		
	40	Clay - white, soft		
	30	Shale - lt gr.		
8670-80	50	Sandstone - a/a	10' - 20'/hr	
	40	Clay - white - a/a	0 vgms	
	10	Shale - a/a		
8680-90	90	Sandstone		
	10	Shale		
	Tr	Clay		
8690-	60	Clay - white, soft, calc.		
8710	30	Sandstone - a/a		
	10	Shale - lt gry, calc.		
8710-20	60	Clay grading to marl , white, soft to firm		
	30	Sandstone		
	10	Shale		
8720-30	80	Marl to limestone - chalky slg firm		
	20	Sandstone - a/a	TNB 8746'	

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:	D.J. Barkley	DATE: October 1-2, 1974	COUNTRY: Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
8730-65	60	Sandstone - uncons. Qtz, poorly sorted		
	20	Shale - lt gr, med gr, gr grn	No show	
	20	Marl - chalky limestone - white soft-firm	20' - 25'/hr	
8765-80	60	Marl - limestone ch - a/à	8'/hr	
	30	Shale - gr grn - silty firm, lt gr		
	10	Sandstone - a/a		
8780-90	80	Limestone chalky - a/a (marl)	7'/hr	
	20	Shale - a/a		
8790-	100	Limestone (marl) chalk white 5-20% pale	6'/hr	
8800		red		
	Tr	Shale - a/a		
8800-10	100	Limestone (marl) chalk white 30-40% pale	5'/hr	
		red marl		
8810-20	100	Limestone (marl) chalk - 30-40% pale red	5'/hr	
		marl		
8820-30	100	Marl (limestone) - chalky white (50) -	5'/hr	
		pale red (50)		
	Tr	Shale - lt gr grn/grn		
8830-40	100	Marl (Limestone) - 80% red - 20% white	7'/hr	
8840-50	100	Marl - 60% red 40% white		
8850-60	Tr	Sandstone		
8860-70	80	Limestone - chalky - micritic 70% white	6' - 7'/hr	
		30% red		
	20	Sandstone - white vfg calc.	0 vgms	
8870-75	100	Limestone chalky - white micritic		
8875-80	30	Limestone - a/a		
	60	Marl white - gr		
	10	Sandstone, v. calc., fg		
8880-90	30	Limestone - a/a	6'/hr	
	60	Marl - a/a		
	10	Sandstone - a/a		



WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:		DATE: October 3, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
8950-60	100	Limestone - wh - buff mic. a/a Tr. stylo		
8960-70	100	a/a		
8970-75	50	Limestone - a/a		
	50	Marl - lt gry (washes out)		
8975-80	90	Limestone - a/a		
	10	Marl - a/a		
8980-90	70	Limestone - a/a		
	30	Sh - med. gry + Tr. brn sdy calc. soft carb. (cuttings OK) some marl - a/a, Tr. sd, M-FG, calc.		
8990-	90	Limestone - a/a		
9000	10	Sh - a/a Tr. sd - a/a		
9000-10	90	Limestone - a/a		
	10	Sh - a/a		
9010-20	90	Limestone - a/a		
	10	Sh - a/a tr. pyrite		
9020-30	100	Limestone - a/a		
9030-40	100	Limestone - a/a		
9040-50	100	Limestone - a/a		
9050-60	100	Limestone - a/a		
9060-70	70	Limestone - a/a		
	30	Marl - lt gry		
9070-80	85	Limestone - a/a		
	15	Sh med. gry - brn + Marl gry		
9080-83	85	Limestone - a/a		
	15	Sh/marl - a/a		
9083-84		a/a - 80-83		
9084-86	100	Limestone - chalky wh		
9086-88	100	Limestone - chalky wh		
9088-90	100	Limestone - chalky wh for 2 cluster FG Sd		
9090-100	85	Limestone a/a - Tr. micro fract. w/BIK & Calc. lining		
	15	Marl & Sh - a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE: 12 1/4"	GEOL.: J.D. Hulsey		DATE: October 4, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
9100-10	90	Limestone - chalky - wh - buff.		
	10	Shale - med gry, gm, brn, red incl. marl some silty (brn)		
9110-15	90	Limestone - a/a		
	10	Shale - a/a Tr. pyrite POH for NB 1400 4/10/74. T.D. 9121'. Did not C/D B.U.		
9115-21		Not collected.		
9121-30	30	Limestone - a/a		
	70	Sh - med gry w/tr red & brn (gm - pyritic)		
	Tr	Ss - FG, calc. qtz		
9130-40	40	Limestone - a/a		
	60	Shale - gry, gm, brn, tr. red. Abnd. FG Qtz in fines		
9140-50	40	Limestone - a/a		
	60	Shale - a/a - tr. Ss cuts		
9150-60	60	Limestone - a/a		
	40	Shale - a/a		
9160-65	80	Limestone - a/a		Flowck
	20	Shale - a/a		
9165-70	80	Limestone - a/a		
	10	Shale - a/a		
9170-80	90	Limestone - a/a		
	10	Shale - a/a		
9180-85	90	Limestone - a/a		
	10	Shale - a/a		
9185-90	100	Limestone - a/a Tr. Ss		
9190-200		Limestone - a/a		
9200-10	80	Limestone - a/a		
	20	Marl - gry + Tr. shale - a/a		
9210-15	90	Limestone a/a		
	10	Marl + Ss - a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE:	12 1/4"	GEOLOGIST:	Esso Exploration Norway	15/6-3
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
9215-20	100	Limestone - chalky wh - buff (Micrite) Tr sh - a/a + VFG ss		
9220-25	100	Limestone - a/a		
9225-30	90	Limestone - a/a		
	10	Sh - varied colors a/a		
9230-35	90	Limestone - a/a		
	10	Sh - a/a		
9235-40	100	Limestone - a/a		
9240-50	100	Limestone - a/a		
9250-60	100	Limestone - a/a		
9260-70	100	Limestone - a/a		
9270-80	100	Limestone - a/a		
9280-90	100	Limestone - a/a		
9290-300	100	Limestone - a/a		
9300-10	100	Limestone - a/a		
9310-20	100	Limestone - a/a		
9320-30	100	Limestone - a/a		
9330-40	100	Limestone - a/a		
9340-50	100	Limestone - a/a		
9350-60	100	Limestone - a/a		
9360-70	100	Limestone - a/a		
9370-80	100	Limestone - a/a		
9380-90	100	Limestone - a/a (5% sh - a/a)		
9390-400	100	Limestone - a/a (5% sh - a/a)		
9400-10	100	Limestone - a/a (5% sh - a/a)		
9410-20	100	Limestone - a/a (5% sh - a/a)		
9420-30	100	Limestone - a/a (5% sh - a/a)		
9430-35	95	Limestone - a/a (5% sh - a/a)		
	5	Sh brn - silty		
T.D. 9435		POH for logs.		

WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE:	GEOL.:	DATE:	Esso Exploration Norway	
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	October 14, 1974	
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
9450-60	100	Ls, micritic, chalky, hard		
	Tr	Sh, lt gr to gr-grn, pyrite		
9460-70	-	a/a		
3970-80	-	a/a - w/tr. chert-milky		
3980-00	80	Ls, - a/a		
	20	Sh, - a/a, v. calc., w/tr metal shvgs.		
9500-10	-	a/a - (w/pipe dope- grease - fluor).		
	-	a/a		
9510-20	-	Ls, - a/a/mostly cement/(pipe dope - fluor)		
	-	Sh, - a/a - metal shavings common		
9520-30	-	a/a		
9530-40	-	a/a		
9540-50	-	a/a		
9550-60	-	a/a		
9560-70	60	Ls, - a/a		
	20	Sh, lt gr, v. calc.		
	20	Sh, gr-grn, v. calc.		
	Tr.	Pyrite, (metal shavings)		
9570-80	-	a/a		
	-	a/a		
9580-90	60	Ls, - a/a		
	40	Sh, med gr, v. calc.		
9600-00	-	Ls & Sh - a/a		
9600-10	-	a/a		
9610-20	-	a/a		
9620-30	-	a/a		
9630-40	-	a/a		
9640-50	-	a/a		
9650-60	-	a/a - Tr sh - bm		
9660-70	-	a/a - Tr Sh, bm - red bm		
9670-80	-	a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL.:	B. Barron	DATE: October 15, 1974	COUNTRY: Norway
DEPTH. Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
9680-90	50	Ls, lt gry - white, micritic, hard		
	50	Sh, lt gry - gry-grn, brittle, v. calc. (marly)		
9690-00	-	a/a/Tr dk gry sh, - marly - platy		
9700-10	-	a/a		
9710-20	-	a/a		
9720-30	-	a/a		
9730-40	-	a/a/Tr brnsh calc.		
9740-50		a/a/Tr brnsh calc.		IIJ HII
9750-60	50	Ls, lt gry - wh, micritic		
	50	Sh, lt - med gry, v. calc. (40%) (10%) & dull red & brn - soft - marl		
9760-70	50	Ls - a/a		
	50	Sh - a/a - dec. in red + brn sh		
9770-80	40	Ls - a/a		
	60	Sh 45% gry a/a 15% red-brn a/a		
9780-90	50	Ls - a/a		
	50	Sh - 35% gry 15% red-brn		
9800	a/a	a/a		
9810	a/a	a/a		
9820	a/a	a/a	the more brn is splintery	
9830	a/a	a/a	the more brn is splintery	
9840	a/a	a/a		
9850	40	Ls - a/a		
	60	Sh - a/a		
9860	40	Ls - a/a		
	60	Sh - a/a 40 gry 20 red-brn		0700 16/10/74
9870	a/a	a/a	40 gry 20 red-brn	
9880	a/a	a/a	40 gry 20 red-brn	
9890	a/a	a/a	40 gry 20 red-brn	
9900	a/a	a/a	30 gry 30 red-brn	
9910	a/a	a/a	30 gry 30 red-brn	
9920	a/a	a/a	30 gry 30 red-brn	



WELLSITE SAMPLE DESCRIPTION			COMPANY:	WELL (Onshore/Offshore)
HOLE SIZE: 8½	GEOL: J.D. Hulsey		Esso Exploration Norway	15/6-3
			DATE:	COUNTRY
			October 25, 1974	Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
11245-50	-	a/a - poor spls - highly mixed lith. malm + creta- ceous shlae + limestone + marl		
11260	-	a/a		
11270	-	a/a - 10% brn shale		
11280	-	a/a		
11290		a/a 30% brn & gry shale, some black coaly matl.		
11300				
11310		Shale - brn - dk soft peaty + gry		Fair spl.
11320	100	Shale - a/a		
11330	100	Shale - a/a Tr. bik coal		
11340	100	Shale - a/a Tr. bik coal + dk gry. v. carb. tr. vfg sandstone N/S		
11350	100	a/a - overall appears to be med brn (spl is lighter color than above - maybe due small size)		
11360	100	a/a - 11340 - rel. dk brn + bik		
11370	100	a/a - 70 brn - 30 bik		
11380	100	a/a - 50 brn 50 bik v. carb - bik coaly malt.		
11390	100	Shale - a/a - 80 brn 20 bik abund. cret. shale & ls.		
11400	100	a/a 90 brn - 10 bik		
11410	100	a/a		
11420	100	Shale - brn + gry (? cret.) mixed Lith.		
11425	100	Shale brn + gry - some glauc. limestone?		Sli. brk
11430	100	Shale brn + gry inc. in gry		
11440	100	Shale - gry brn gry - bik		
11445	100	Gry - bik sahle, firm, slightly calc. + brn + gry		c/o brk
11450	100	Shale greyish - bik, gry (+red as seen thruout) tr crse Qtz grains		N/S c/o at 11450

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	8½	GEOL.: J.D. Hulsey	DATE: October , 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
11450-55	60	Coal - black - bright - reflectance, sli. pyritic conch. fracture, bleeds gas		Spl appears free of contamin.
	40	Shale - light gry, sli. pyritic & carb. firm. v. sli. calc. (Essen. no brn shale)		
	Tr.	Sparry calcite		6' + heave thruout
11460	70	Coal - a/a bleeds gas		11450 to
	30	Shale - a/a		
11465	10	Coal - a/a		
	90	Shale gry		
11470	10	Coal		Spl depth may be off
	90	Shale - a/a (+mixed Kretaceous)		due close B/S etc.
11475	Tr.	Coal		using 1 B/S
	100	Shale gry (+ red gm etc. mixed spls)		
11480	a/a	a/a		
11490	-	Mixed lith. shale gry, dk gry, brn red as ignored above, coallimestone, tr fg sandstone - calc. N/S		
11500	-	a/a - N/S		
11505	-	a/a		
11510	70	Brown & gry shale a/a		NB
	30	Sandstone Qtz mg sli. calc. sli carb. md, good sorting in Qtz but clayey mod. firm - fria.		No fl. sli. stain, no cut pale yet cut fl.
11515	80	Shale - a/a		
	20	Sandstone - a/a		
11520	a/a	a/a - 0-5% coal		
B.U.	50	Shale - a/a		
	20	Sandstone - a/a		
	30	Coal		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	8 1/2"	GEOL.: D.J. Barklay	DATE: November 9th, 1974.	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
11978-90	100	Sandstone - lt gry - grn gry, vfg to med grnd, poorly sorted, subang. - subrounded, calc, poorly, poor perm.	F-152 10'/hr	No Show
	Tr.	Shale - rust brn calc.		
	Tr.	Shale - dk gry micaceous		
	Tr.	Qtz, v crse grns, rose + smoky		
11990-	90	Sandstone - a/a		
12000	10	Shale - rust brn, dk gry, lt gry, grn gry	10'/hr	
	Tr.	Qtz		
	Tr.	Pyrite		
12000-20	100	Sandstone - lt gry, gry grn + wh a/a w/ab crse well rounded rose + smoky qtz grns, tr. glauc. + pyrite + v. micaceous	10'/hr	No Show
12020- 30	100	Sandstone a/a - ab crse qtz grns rose + smoky	10'/hr	
	Tr.	Shale - red + dk gry		No Show
12030'-40	90	Sandstone - a/a		
	10	Shale - red, dk gry, lt gry, grn gry		
12040-60	100	Sandstone a/a	10'/hr	
12060-70	100	Sandstone - a/a	12'/hr	
	Tr.	Shale		
12070-80	95	Sandstone - a/a	12'/hr	
	5	Clay - lt gry grn		
12080-90	100	Sandstone - a/a - occ poorly cons.		
			Drlg break 12100 10-	
			17'/hr.	

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE: 8 1/2"	GEOL: D.J. Barklay		DATE: November 9th-10th, 1974	COUNTRY Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
12090-100	80	Sandstone - wh, lt gry, gry grn ab pyrite	Drlg bk from 10 & 14 to 17'/hr	
	10	Shale - dk gry micaceous, hard		
	10	Shale - lt gry, gry grn, soft		
12100-110	90	Sandstone - a/a		
	10	Shale - dk gry mica		
	5	Shale - lt gry, gry grn - soft		
12110-20	5	Shale - rust brn	No Show	
	90	Sandstone - a/a		
	5	Shale - dk gry mica.		
	5	Shale - lt gry, gry grn		
12120-40	Tr	Shale - red	Excess Torque at 12140	
	80	Sandstone - a/a		
	10	Shale - dk gry		
	10	Shale - lt gry - gry grn, red brn		
12140-60	90	Sandstone - a/a		
	10	Shale - lt gry, dk gry		
12160-70	90	Sandstone	10'/hr	
	10	Shale - dk gry, med gry, lt gry, red brn		
12170-90	70	Sandstone - a/a		
	30	Shale - a/a		
	30	Shale - a/a		
12180-90	70	Sandstone - a/a	11'/hr	
	30	Shale - a/a		
12190-240	0 - 60	Sandstone - a/a	10'-20'/hr	
	30 - 40	Shale - a/a		Excessive heave
12240-50	60	Sandstone - a/a		
	40	Shale - rust brn, lt gry, med gry, dk gry, gry grn		
12250-60	70	Sandstone - a/a		
	30	Shale - a/a		

WELLSITE SAMPLE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL (Onshore/Offshore) 15/6-3
HOLE SIZE:	GEOL:	DATE:	NOVEMBER 10, 1974	COUNTRY: Norway
DEPTH Ft/M	LITH %	LITHOLOGIC DESCRIPTION	SHOWS & REMARKS	
12260-70	80	Sandstone - wh, lt gry, grn gry, vfg to crse, poorly sorted, sub ang. - subrounded, mica, pyritic	at 12270- slows from 15'/8'/hr	
		No Show		
	20	Shale - dk gry, firm mica, lt gry, med gry, grn gry red brn,		
	Tr.	Carlate		
12270-80	60	Sandstone - a/a	8' - 10'/hr	
	40	Shale - a/a, marked increase in rusty brn shale		
12280-90	70	Sandstone - a/a		
	30	Shale - dk gry, med gry, lt gry, grn brn, rusty brn		
12290-300	70	Sandstone - a/a		
	30	Shale - a/a		
12300-20	60	Sandstone - a/a - ab pyrite		
	40	Shale - a/a		
12320-30	60	Shale - a/a		
	40	Sandstone - a/a		
12330-40	60	Sandstone - a/a		
	40	Shale - a/a		
12340-50	90	Sandstone - a/a	20'/hr	
	10	Shale - a/a		
12350-60	80	Sandstone - a/a, poorly sorted		
	20	Shale - multi colored		
12360-70	60	Sandstone - occ. sed. Ss	Mud turned	
	40	Shale - lt gry, silty, red brn, dk gry	red	
		Abundance of clay washes out		
12370-80	80	Sandstone - wh - a/a		
	20	Shale - a/a		





CONVENTIONAL CORE DESCRIPTION							COMPANY	
DATE 30/10/74		GEOL. Jess Hulsey			WELL 15/6-3		COUNTRY (Onshore/Offshore) Norway	
CORE NO.	INTERVAL:				RECOVERY:			
2	11553'	FROM : 11553' TO: 11585'6"			32'6" FT/R.			100 %
DEPTH	LITHOLOGY + CONTACTS ACCESSORIES FOSSILS	SED. STRUCTURES	DIP	POROSITY % OBSER. MEAS. P F G 4	K	Pluss LITHOLOGIC DESCRIPTION vertical & horizontal (REMARKS)		
11553						Core is non-calc.		
11556						Ss - Qtz - fg - vfg - lt brn to gr Mica, Argil, some lithic. grms sli. pyritic - carb. Fine lam. - weak Fractured at 60°		
11560								
11564						Scour Siliac. FG Fractured, v. silic. v. hard - med VFG Weakly lam. Fractured 60°		
11568								
11572		Sharp				Dark grey w/bik lam. Massively burrowed (tubes) v. carb & Argil lam. - fine lam. Abund. micro faults		
11576								
11580	(cont'd.)					Dk. grey Tube burrows Fine lam. - v. carb argil - silty mica. on lam current rips & scour fg		

Shallow Marine - Facies Stream Mouth

Stream Mouth Bar?

## CONVENTIONAL CORE DESCRIPTION

30/10/74

**GEOL.**

Jess Hulsey

**COMPANY.**

Esso Exploration Norway Inc.

WELL

**COUNTRY (Onshore/Offshore)**

15/6-3

## Norway

15/6-3

## Norway

DATE.

?

**INTERVAL :**

GEOL.

Jess Hulse

#### **RECOVERY:**

— 1 —

## Norway

300

CONVENTIONAL CORE DESCRIPTION						COMPANY: Esso Exploration Norway Inc.
DATE: 31/10/74 GEOL: R.L. Koenig			WELL: 15/6-3			COUNTRY (On/Offshore) Norway
CORE No:	INTERVAL: 3 FROM: 11585.6"	TO: 11643'	RECOVERY: 57.5 FT/M.			100 %
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	POROSITY % DIP OBSER. P F G Meas.	K MD	LITHOLOGIC DESCRIPTION (REMARKS)	
11589			10°		11585' - 11597' Sandstone, qtzoze, fine-med. grnd. subang. - subrounded, poorly sorted Abund., thin (2-4mm) arg. laminae, very fine cross-bedding. Abund. organic matter at top. No mica. Becomes increas. coarse, less arg. Toward base. Tight (cement, lith?)	No floor Slow, dull cut
11597			15°		11597' - 11638' Sandstone, qtzoze, med. coarse grnd. very friable, very poorly cemented subang., well-sorted ave. gn size 7mm. occas. thin beds with gns up to 4mm in upper 10 feet. Becoming finer toward base. Trace arg. beds with organic matter, some burrowing and distroted arg. beds in lower 11 feet. In general a thick consistant bed with no apparent cross-bedding or slumping or collapse structure.	No floor Slow, dull cut
11605	vug		10°	23.4H 2800 22.8V 2800	Porous vug $\frac{1}{2}$ " wide with unident. mineral lining at 11605.	
11613			10°			

CONVENTIONAL CORE DESCRIPTION							COMPANY: Esso Exploration Norway Inc.	
DATE: 31/10/74			GEOL: R.L. Koenig		WELL: 15/6-3		COUNTRY (On/Offshore) Norway	
CORE No:	INTERVAL: 3 11585.6"	FROM:	TO:	11643'	RECOVERY:		57.5FT/M.	100 %
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	DIP	POROSITY % OBSER. Meas.	K MD	LITHOLOGIC DESCRIPTION (REMARKS)		SHOWS Type-Quality Enviro
				P F G				
11618	.	.		228H 1385 242V 2250				
11621	.	.		23.5H 1800 23.4V 245			- 11624.6', Palyn., Dogger, Dynoflage-lazes, bath, Baj.	
11629	.	.	10°	19.6H 192 22.0V			- 11632', Palyn. bath baj.	
11637	34.0H 15' →	~	10°				- 11638' - 11643' Sandstone as in 11585' - 11597' with abundant burrows arg. laminae and organic matter.	
11643	~	~					- 11640', Palyn. - bath. - baj. slight increase in grain size.	

CONVENTIONAL CORE DESCRIPTION								COMPANY: Esso Exploration Norway Inc.	
DATE: 1/10/74		GEOL: R.L. Koenig		WELL: 15/6-3		COUNTRY (On/Offshore) Norway			
CORE No:	14	INTERVAL: FROM: 11643'		TO: 11700'		RECOVERY:			
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	POROSITY %		K	LITHOLOGIC DESCRIPTION (REMARKS)		SHOWS Type-Quality	Environ
			DIP	OBSER.	Meas.				
			P	F	G				
11643			20°				11643' - 11658' Sandstone, qtzitic, med.-coarse-grnd Tr fluor (ave. 7 mm), mod. well sorted, mod. Fair, dull well ruded, clean, friable, warm yellow cut burrows and arg. material in upper 3 feet.		
							25H 3100H 27V 2550V		
11650'			20°						
			5°				Hair line fractures 30° from vertical		
11658			<5°				33.3V5400 23.8H1790	11658' - 11581' Sandstone qtzitic med. grnd. (4mm), Tr fluor well sorted, mod. well ruded, arg. Dull, streaks especially abundant in upper yellow cut 6 feet.	
							26H 215H 25V 190V		
11666			<5°						
11674									



CONVENTIONAL CORE DESCRIPTION							COMPANY: Esso Exploration Norway Inc.
DATE: 11/2/74 GEOL: K.L. Koenig			WELL: 15/6-3		COUNTRY (On/Offshore) Norway		
CORE No:	INTERVAL:			RECOVERY:			
5	FROM: 11700'			TO: 11743'		43 FT/M.	100 %
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	DIP	POROSITY % OBSER. P F G Meas.	K	LITHOLOGIC DESCRIPTION (REMARKS)	SHOWS Type-Quality Enviro:
11700'			50°	17.2 .4H 15.2 .34V		11700' - 11719'	No fluor No cut
11707'		≈	50°	18 .3H 16.3 .4V		Sandstone, qtzitic, fine grnd, lt gry well sorted, clean, micac., non-calc. contorted and interbedded thin laminae of siltstone and black and grn shale (<5% of rock) mod. friable	Core bleeds Gas
11715'		≈	50°	17.7 .5H 18.6 .27V			-40 units Gas
11721'	MW					11719' - 11721'	
11723'	MW		20°			Shale, black, pyritic, soft, fissile carbonaceous specks.	-110 units Gas
11724'	MW		20°			11721' - 11723½'	
						Siltstone grn-gry, soft, clayey, tr. carbonaceous mineral.	Very slow, very slight cut.
						11721' - Palyn. - good assemb. spores and pollen, Lower Dogger.	Core bleeds G
11731'			20°	20 2.5H 14.7 .7V		11723½' - 11736'	
						Sandstone, f. grnd, lt. gry, well sorted, clean, mod. friable.	-35 units Gas

CONVENTIONAL CORE DESCRIPTION						COMPANY:
DATE: 11/2/74 GEOL: R.J. Koenig						Esso Exploration Norway Inc.
WELL: 15/6-3						COUNTRY (On/Offshore)
Norway						

CORE No:	5	INTERVAL: FROM: 11700'	TO: 11743'	RECOVERY:		
				43	FT/M.	100 %

DEPTH	LITHOLOGY	Sed. Contacts Accessories Fossils	Structures	POROSITY %	K	LITHOLOGIC DESCRIPTION (REMARKS)	SHOWS Type-Quality	Enviror
	DIP	OBSER.	Meas.	P F G				
11735'						(3578) 11736' - 11743'		
						Shale and mud stone, tan and lt. gray-black. Highly calcareous.		
						11736' - Palyn., barren.		
						11742' - Palyn. - Good assemblage sporesand, pollen, Lower Dogger.		
11743 (3580.1)						Palyn. Finds no Dinotlagelated in cores 4&5, suggesting less marine than in core No. 3.		

CONVENTIONAL CORE DESCRIPTION								COMPANY: Esso Exploration Norway Inc.					
DATE: 11/4/74 GEOL: R.L. Koenig				WELL: 15/6-3				COUNTRY (On/Offshore) Norway					
CORE No:		INTERVAL: 11743' - 11799'				RECOVERY:							
		Recovered 3580.2 35475						15 FT/M.		26 %			
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	DIP	OBSER.	POROSITY % Meas.	K	LITHOLOGIC DESCRIPTION (REMARKS)				SHOWS Type-Quality Enviror		
11743'					14.6H	.64	11743' - 11755' Shale, claystone med. grey-black, soft sticky, chunky, came out of core barrel as a thick, soft mass, which broke into angular chunks.						
11750'							A 1 foot lense of v. fine sand and silt at 11745', unconsolidated, may be water wet but probably contami - nated by drilling mud.						
							11755' - 11758' (Core badly ground. up). Shaly siltstone, lt grey - tan tight.				No fluor		
							So - Sw analysis not pos. due to poor core quality.				No cut.		
							2 random Palyn. samples, badly pre- served spores. Dogger.						



CONVENTIONAL CORE DESCRIPTION							COMPANY: Esso Exploration Norway Inc.		
DATE: 11/6/74 GEOL: R.L. Koenig			WELL: 15/6-3		COUNTRY (On/Offshore) Norway				
CORE No:	INTERVAL:	RECOVERY:							
8	FROM: 11806' TO: 11860'	54 FT/M.	100 %						
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	POROSITY % DIP OBSER. P F G Meas.	K	LITHOLOGIC DESCRIPTION (REMARKS)		SHOWS Type-Quality Environ		
11806'			45°		O = clay galls.  Sandstone, qtzose, fine med. grnd, subrounded, well sorted. Calcite cement results in fair-poor porosity, some pyrite, glauconite and indent. dark mineral grns. Abund. muscovite, mod. friable.				
11814'			15°		Clay galls, and contorted bedding, common from 11806' - 11811' and 11830' - 11839'. High angle micro-faults and fractures common from 11806' - 11832'. They appear to be post depositional and post oil migration ave. disp. app. 3 mm.	32 units	Gas		
			20°	13.5H1.64	Cross-bedding common throughout Core.				
11822'					Gas bled from entire length of core.		Brown oil stain common with poor fluv. an good-very good streaming, quick, bright yellow cut.		
							11819' 40 units gas.		
11830'			20°						
							- 16 units ga No oil stain Poor floor weak cut.		
11838'			15°	13.6H .67	Palyn. samples 11809' ) 11860' ) Barren				

CONVENTIONAL CORE DESCRIPTION				COMPANY: Esso Exploration Norway Inc.
DATE: 11/6/74	GEOL: R.L. Koenig	WELL: 15/6-3	COUNTRY (On/Offshore) Norway	

CORE No:	INTERVAL: 8 FROM: 11806'	RECOVERY:				LITHOLOGIC DESCRIPTION (REMARKS)	SHOWS Type-Quality Enviror.
		TO: 11860'	54 FT/M.	100 %			
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	DIP 15°	POROSITY % OBSER. Meas. P F G	K	LITHOLOGIC DESCRIPTION (REMARKS)	SHOWS Type-Quality Enviror.
11842'	02			16.3H1.63		Shale, black, micaceous, soft, 8" thick.	Oil stain Poor fluor Good cut a/a
11850'	00						Traces of oil stain Poor fluor, weak cut.
11860'				13.5H1.72			Oil stained intervals. Alt. with no stained intervals.

COMPANY:  
Esso Exploration Norway Inc.

## CONVENTIONAL CORE DESCRIPTION

DATE: 11/7/74 GEOL: R.L. Koenig/D.J. Barklay

WELL:

15/6-3

COUNTRY (On/Offshore)

Norway

CORE No:

INTERVAL: 3615.85'

3633.50'

9

FROM: 11860'

TO: 11918'

RECOVERY:

58 FT/M.

100 %

DEPTH	LITHOLOGY	Sed. Contacts Accessories Fossils	Structures	DIP	POROSITY %	K	LITHOLOGIC DESCRIPTION (REMARKS)	SHOWS Type-Quality	Enviro:
					OBSER.				
					Meas.				
					P F G				
11860'									
11870'									
11880'									
11890'									
11900'									
11910'									
11918'									

HIGH ENERGY

BLDG GAS  
NO FLUOR  
PALE WHITE - YELLOW CUT = SLOW NO CUT

CONVENTIONAL CORE DESCRIPTION						COMPANY: Esso Exploration Norway Inc.	
DATE: 11/7/74		GEOL: D.J. Barklay		WELL: 15/6-3	COUNTRY (On/Offshore) Norway		
CORE No:	INTERVAL: 11918' - 11978'			RECOVERY: 60/60 FT. <sup>3</sup> 100 %			
DEPTH	LITHOLOGY Contacts Accessories Fossils	Sed. Structures	DIP 0° 45° 45° 55° 10° 45° 10° 0° 10° 45° 10° 5° 10° 0° 0° 2° 5° 5° 0° 5° 0° 10° 5° 5°	POROSITY % OBSER. P F G Meas.	K	LITHOLOGIC DESCRIPTION (REMARKS)	SHOWS Type-Quality
11928'						Sandstone, lt. gry, v.f.grnd to f. grnd, ab. mica. stringers w/contorted bedding + slumping, and micro faulting friable poorly sorted, subrounded v. thin bedded lt. gry v.f.grnd, gry f. grnd, occ. v. small sh. clasts, poor e + poor perm. 42-45 graded bedding. 46-48 md - crse grnd.	
11938'							NO SHOWS
11948'						51-53 ab grnd shale, cl. w/md. grnd ss 1/4" grnd shale at 58'. 58-63 - sh 1/4" - 1" th contorted w/1/4" - 1" ufg lt gry ss. 63-64 shale red calc. Reworked triassic?	HIGH ENERGY
11958'						1/8" red shale at 11965½ 68 - ab grn clasts 70-md-crse grnd 72-73 md grnd	
11968'							
11978'							

SIDEWALL CORE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL: 15/6-3
RUN NO:	TYPE:	HOLE SIZE:	DATE: October 8, 1974	GEOL: Jess Hulsey
DEPTH Feet	REC. In.	LITHOLOGIC DESCRIPTION	POROSITY	SHOW
		Paleo SWC - Shot 24 Rec. 24.		
		No Acid used on SWC.		
9115	$\frac{1}{2}$	Marl - lt gry		
8872	$\frac{1}{2}$	Sand - lt gry, calc. VFG		
8836	$\frac{1}{2}$	Marl - lt pink		
8813	$\frac{1}{2}$	Shale - med gry		
8786	$\frac{1}{2}$	Chalk - Marl - lt gry, soft		
8720	$\frac{1}{2}$	Marl - lt gry		
8670	$\frac{1}{2}$	Marl - lt gry, lam. carb.		
8566	1	Shale - black lam.		
8535	$1\frac{1}{4}$	Shale - gry and orange mottled		
8493	$1\frac{1}{4}$	Shale - grn-gry		
7525	$1\frac{1}{4}$	Sand - gry VFG, calc., pyrite		
7476	$1\frac{1}{4}$	Sand - gry - VFG		
7453	1	Shale - gry		
7411	$1\frac{1}{4}$	Shale - dk gry		
7394	$1\frac{1}{4}$	Shale - dk gry		
7076	$1\frac{1}{4}$	Shale - med gry		
6972	$1\frac{1}{4}$	Shale - mottled red brn and gry		
6894	$1\frac{1}{4}$	Shale - greenish gry		
6766	$1\frac{1}{4}$	Shale - med gry		
6675	$1\frac{1}{4}$	Shale - sli mottled gry, w/red brn		
6423	$1\frac{1}{4}$	Shale - dk gry, lam.		
6135	$1\frac{1}{4}$	Shale - dk gry, soft		
5988	$1\frac{1}{4}$	Shale - dk gry, soft		
5733	$1\frac{1}{4}$	Shale - med gry		
Packed for shipment to Lee Smith 8/10/74				

SIDEWALL CORE DESCRIPTION			COMPANY: Esso Exploration Norway	WELL: 15/6-3
RUN NO: 2	TYPE:	HOLE SIZE: 12 1/4"	DATE: November 16, 1974	GEOL.: J.C. Parmenter
DEPTH feet	REC. In.	LITHOLOGIC DESCRIPTION	POROSITY Depth marked on bottles	SHOW
9732.0		Grey mic. Ls.		9720
9901.5				
10011.5		Red brown Shale		10000
10111.5		Grey mic. argil Ls.		10100
10311.0		Grey mic. Ls.		10300
10411.0		Red brown Marl.		10400
10510.5		Ls. white mic.		10500
10610.5		Grey black silty Sahle.		10600
10710.5		Grey-green Ls. mic.		10700
10810.0		Ls. white		10800
10910.0		Marl, grey shell fragments		10900
10959.5		Shale, silty, grey calc.		10950
11109.5		A/A		11100
11129.0		A/A - grey brown		11120
11149.0		A/A		11140
11159.0		Grey Marl.		11150
11163.5		Brown Shale.		11155
11168.5		A/A		11160
11173.0		A/A		11165
11178.0		Grey - A/A		11170
11183.0		Black Shale.		11175
11185.0		Grey brown Shale		11185
11189.5				
11204.5		Grey brown Shale		11200
11304.0		A/A		11300
11404.0		A/A		11400
11413.5		A/A		11410
11423.5		A/A - silty		11420
11433.5		A/A		11430
11443.0		A/A - mic.		11440
11453.0		Ss med grn, poor sort, dirty, poor Ø no show		11450
11462.5	460	Coal		11460
11468.0	465	Ss med-fine grn buff, clean good Ø no show		11465



VI. Reservoirs:

The Dogger sand from 11442 feet to 11743 feet was the only hydrocarbon reservoir encountered whilst drilling the well. There was 206 feet of net gas bearing sand, the average porosity was 21% and the average water saturation was 21%.  
15  
16

The Triassic was not a viable reservoir one production test in the Trias from 11815 feet to 11825 feet failed to flow.

VII. Hydrocarbon Shows:

The only major show was in the Dogger sand.

VIII. Conclusion:

15/6-3 was a successful extension test to the 15/6-2 gas discovery. The pay sand was encountered some 310 feet higher than the discovery wildcat. Further delineation drilling is required to establish the gas water contact.