

PHILLIPS PETROLEUM COMPANY

GEOLOGICAL WELL PROGRAM

MERKN.
02967*18.0KT71
SAKSEL.
EKSP.
MERKN.

Well No. 17/12-1X

Location: Shotpoint 45
Seismic Line PG 5811

Approx: 58° 11' 15"N
03° 56' 06"E

Prospect: Breem

Classification: Wildcat

AFE NW 5605

RKB Elevation: Est 90'

Water Depth: Est. 380'

A. Projected Total Depth: 13,200'

B. Anticipated Formation Tops: (XX = Seismic Reflectors)

	<u>Estimated</u>		<u>Actual</u>	
	RKB	Subsea	RKB	Subsea
<u>Tertiary</u>				
Paleocene	2340	-2250		
Danian	2540	-2450		
<u>Mesozoic</u>				
Upper Cretaceous XX	2590	-2500		
Lower Cretaceous XX	3590	-3500		
Jurassic Shale XX	6690	-6600		
Jurassic Sand Sect. XX	7090	-7000		
Triassic				

Paleozoic

Permian (Zechstein) XX 13090* -13000
*Zechstein may be encountered as high as 8300'. If such is the case T.D. will be approximately 8500'

C. Principle Objective Horizons:

Primary

Jurassic Sands estimated top 7090 (-7000) Estimated net 200'

Secondary

Sand developments within the Lower Cretaceous and Triassic sections are regarded as secondary objectives.

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D. Logging Program

0 - 2000	Lithology and drilling rate Logs
Run 1 - 17½" hole, 2000' - 4000'	IES; S-GR (BHC) (run GR up to sea floor) *LL7; *MLL; *FDC; *SNP.
Run 2 - 12¼" hole, 4000' - 8000'	IES; S-GR (BHC); *LL7; *MLL; *FDC; *SNP; possibly HDT *** and SWC***
Run 3 - 8½" hole, 8000' - 12000'	IES; S-GR (BHC); *LL7; *MLL; *FDC; *SNP; possibly HDT*** and SWC***.
Run 4 - 6½" hole, 12000' - T.D.	IES; S-GR (BHC); *LL7; *MLL; *FDC; *SNP; Velocity Survey; ** possibly HDT*** and SWC***.

- * Run over potential pay zones
- ** Run only at total depth
- *** To be determined at time of logging

E. Casing Program (for details see Drilling Prospectus)

Estimated	30"	at	600' 580
	20"	at	2000' 1500
	13¾"	at	4000' 3600
	9⅝"	at	8000' 7900
	7"	at	12000' 13,200

F. Sample Program

Samples should be caught as soon as returns are achieved below the 20" casing at approximately 2000'. Catch at 25' intervals until the drilling rate is slow enough to permit sampling at 10' intervals. Samples should be caught at 5' intervals as soon as the drilling rate will permit, continuing to T.D.

1. Catch six sets of washed and dried cuttings. Store samples on the rig until well reaches T.D. Then ship all samples at one time to Stavanger Shorebase for storage and/or distribution. Samples should be sorted into six complete sets prior to shipping to the shorebase in order to facilitate handling.
2. Catch two sets of unwashed cuttings, put in plastic bags and seal securely for shipment to:
 - a. Robertson Research. Ship as soon as metal ammunition box is full or no less than once per week.
 - b. Norges Geologiske Undersøkelse (Norwegian Geological Survey). Boxes should be marked "Kontinental Soclen" and should be stored on the rig until drilling is completed at which time the entire set should be shipped to Stavanger Shorebase for distribution to NGU.

G. Anticipated Coring and Testing

1. Coring will be limited to the evaluation of valid hydrocarbon shows at the discretion of the wellsite geologist.
2. Sidewall core samples should be taken every 50'-100' in any potential hydrocarbon source rock. These cores should be placed first in the S-J glass jars then each jar placed inside a cloth sample bag. Both the jar and the cloth bag should be identified as to well number and sample depth. Ship (via Stavanger Shorebase) to J.G. Erdman, Bartlesville. The London Office should be advised of the data samples are shipped to Mr. Erdman.
3. DSTs should be made of all significant hydrocarbon shows. Testing will be done through perforations after running casing

H. Anticipated Hole Problems.

No unusual hole problems are anticipated with the exception of heaving shale which can be expected through the Tertiary and possibly Jurassic sections.

I. Daily Geological Reports

A daily geological report will be given to the London office - (01-828-9766) every morning between 9:00 and 9:30 A.M. This report should be given to T.L. Sandridge or in his absence to E.L. Benoit.

Night line numbers in the office are:

Sandridge	}	01 - 828 - 1690
Benoit		

Home telephone numbers are:

Sandridge	01 - 589 - 5875
Benoit	01 - 589 - 0974

All radio reported depths, formation tops and sample descriptions should be given in the code which will be provided.

J. Miscellaneous

Detailed well site instructions will be issued separately to those concerned.

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Distribution

C. Arcilise	P.W. Reynolds (8)
R.E. Beck	T.L. Sandridge
E.L. Benoit	J.F. Settle
M.E. Evans	A.A. Slanis
A.B. Haywood	PPCo - E-A (r) S. Eha (3)
H.H. Heikkila	Petrofina
T.J. Jobin	AGIP
H.L. Megan	Elf, Paris (3)

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