



# HYDROCARBON SHOW EVALUATION REPORT

COMPANY: GAS AND FUEL EXPLORATION

WELL: STONEYFORD No. 1

DATA		SHOW INTERVAL: 545 - 552 METERS				DATE: 21ST JAN, 1984	
MUD PROPERTIES: DEPTH 545 METERS		W 9.1	V 31	F 25	CI 300	OIL NIL	
DRILLING PARAMETERS		BEFORE		DURING		AFTER	
GPM	PP	WOB 14	RPM 100	TORQ	WOB 14	RPM 100	TORQ
DRILL RATE		15 M/HR		12 M/HR		17 M/HR	
MUD SALINITY (ppm Cl)		300		300		300	



**LITHOLOGY SANDSTONE: LIGHT GREY, MODERATELY HARD, SILTY TO FINE GRAINED, DOMINANTLY VERY FINE, SUBANGULAR, TO SUBROUNDED, MODERATELY SORTED, QUARTZ GRAINS WITH ABUNDANT GREY AND OCCASIONAL BROWN LITHICS, ABUNDANT WHITE ARGILLACEOUS (KAOLIN) MATRIX, MODERATE ANKERITE CEMENT, TRACE TO ABUNDANT CARBONACEOUS FLECKS, VERY POOR VISUAL POROSITY. THIS SANDSTONE IS overlain AND UNDERLAIN BY A TIGHT SANDSTONE/SHALE SEQUENCE.**

GAS		(1 UNIT = 200 PPM CH <sub>4</sub> IN AIR)		LAST CARBIDE: DEPTH		UNITS		MW		V	
		BEFORE		DURING		AFTER					
DITCH GAS (UNITS)		TOTAL	1/2	PV	0	TOTAL	3	PV	0	TOTAL	1
CUTTING GAS (UNITS)		TOTAL	0	PV	0	TOTAL	TRACE	PV	0	TOTAL	0
CHROMATOGRAPH		PPM	% Cn/ΣC	PPM	% Cn/ΣC	PPM	% Cn/ΣC	PPM	% Cn/ΣC		
METHANE	C <sub>1</sub>	50	100.00%	70	30.4%	60	44.4%				
ETHANE	C <sub>2</sub>	NIL		NIL		NIL					
PROPANE	C <sub>3</sub>	NIL		NIL		NIL					
ISO-BUTANE	iC <sub>4</sub>	SEE NOTE BELOW:		160	69.6%	75	55.6%				
N-BUTANE	nC <sub>4</sub>	NIL		NIL		NIL					
PENTANE	C <sub>5</sub>	NIL		NIL		NIL					
TOTAL	ΣC										
NON-COMBUSTIBLE GAS: TYPE %		CO <sub>2</sub> NIL		CO <sub>2</sub> NIL		CO <sub>2</sub> NIL					

**OIL**

ODOR: MUD **NIL** SAMPLE **NIL** BLENDOP **NIL**

OIL IN MUD: **PIPE-DOPE CONTAMINATION ONLY** BLENDOR SAMPLE OIL **PIPE DOPE CONTAMINATION ONLY**

LIVE OIL IN UNWASHED CUTTINGS IMMERSSED IN WATER: SURFACE APPEARANCE **NIL** % OF SURFACE **NIL**

OIL STAIN OF WASHED RESERVOIR SAMPLE: **NIL** DISTRIBUTION **NIL** COLOR **NIL**

FLUORESCENCE OF WASHED RESERVOIR SAMPLE: %100 DISTRIBUTION **SOLID TO EVEN** COLOR **GREY-WHITE** COLOR INTENSITY **DULL**

CUT, FLUORESCENT **VERY WEAK CUT WHEN SAMPLE WAS WET. WHEN DRY, THE SANDSTONE GAVE A MODERATELY FAST STREAMING MODERATELY BRIGHT BRIGHT MILKY WHITE CUT FLUORESCENCE. NO NATURAL CUT COLOUR.**

**EVALUATION REMARKS** THE SHOW WAS HELD WITHIN A SANDSTONE UNIT, overlain BY A TIGHT SANDSTONE/SHALE SEQUENCE. THE SANDSTONE, DUE TO ABUNDANT WHITE CLAY MATRIX AND CEMENT, IS CONSIDERED TO HAVE INSUFFICIENT POROSITY/PERMEABILITY FOR PORE FLUID RECOVERY. NO ADEQUATE EXPLANATION PRESENTS ITSELF FOR THE UNUSUAL GAS ANALYSIS IN THIS ZONE. PRIOR AND SUBSEQUENT INSTRUMENT CALIBRATION CHECKS CONFIRM THE ABOVE ANALYSIS, HOWEVER SOME DOUBT EXISTS AS TO WHETHER THE GAS IDENTIFIED AS ISO-BUTANE IS ISO-BUTANE OR ANOTHER GAS OF SIMILAR MOLECULAR MOBILITY.

**SHOW EVALUATION CONCLUSIONS** VERY POOR SHOW DUE TO THE ABUNDANCE OF MATRIX AND CEMENT IN THE HOST ROCK.

FLUID TYPE: **LIGHT TO MEDIUM GRADE OIL**

PRODUCTION POTENTIAL: **PROBABLY INSUFFICIENT POROSITY/PERMEABILITY FOR ECONOMIC FLOW RATES.** LOGGING GEOLOGIST **D. HORNER/S. QUINLAN**