

WELL TEST MAIN RESULTS

ANGSI-6

(Open)

ATTACHMENT 8 : WELL TEST SUMMARY

8.1 WELL ANGSI-6 (GPSC)

Period	Choke Size /64"	Oil Rate (stb/d)	Gas Rate (m scf/d)	Water Rate (stb/d)	Oil Gravity API	SG Gas Air = 1	GOR (mscf/stb)	BS&W (%)	CO2 (%)	H2S (ppm)
DST #1										
Main Flow	40	349	290	250	29	0.996	0.83	40	6.3	0
MRT #1	20	143	126	137	33	0.99	0.88	50	6.6	0
MRT #2	28	354	189	417	52	0.928	0.53	60	6.5	1
MRT #3	36	227	260	239	52	1.024	1.15	60	6.3	2
Max. Flow	56	229	287	270	47	1.026	1.26	60	6.2	1
		Condensate Rate (stb/d)	Gas Rate (mmscfd)							
DST #2										
Main Flow	32	39.19	1.156	7.0	62.89	0.889	33.9	15	4.7	2
MIT #1	24	69.99	1.329	3.7	62.20	0.913	52.7	5	4.7	2
MIT #2	48	83.81	1.506	36.3	62.59	0.911	55.7	30	4.2	4
MIT #3	64	77.35	1.506	33.5	63.74	0.931	51.4	30	4.7	4
Main Flow #2A	48	245.77	10.331	13	60.49	0.836	23.7	5	3.7	1
Max. Flow	128	263.36	11.886	14.0	58.86	0.842	22.2	5	4.1	1

Note : All measurement were taken from the last representatives reading of each period.

FLUID DATA SHEET

WELL	ANGSI-6	HOLE SIZE (IN)	8-1/2 "	Rmf @ 75 DEG F	
DATE	24 / 9 / 97	TYPE OF TOOL	MDT / OFA / PO / GR	Cl-Calc (kppm)	
GEOLOGIST/S	Tunku Sufrizal / Mohd Fadzil	LOG. ENGINEER	Fuad / J. Digby	Cl-Titr (kppm)	
RKB (m)	22 m	LOG. CONTRACTOR	Schlumberger Wireline	Ca++ (ppm)	

FLUID RECOVERY DATA

RUN #	TEST #	DEPTH (m)	GAL	GAS (cuft)	OIL/COND (CC)	API GRAVITY	COLOUR	FLUOR COLOUR	POUR PT (°C)	GOR	WATER/FIL (CC)	COLOUR	Rf @	Cl-Calc	Cl-Titr
2	5	1798	1	16.7	35		dark brash green	milky blush white			220	cloudy dark brown			
	6a	1808.5	1	15.4	50		brash green	milky blush white			270	dark yellow brown			
	8	1862.3	1	10.6	100		dark yellow green	milky blush white			870	dark yellow brown			
1	30b	1887	1	10.5	2000		dark brown to black	fair bright hitish yellow							

GAS ANALYSIS

RUN #	TEST #	DEPTH (m)	GAL	CHAMBER PRES. (PSI)	C1 (%)	C2 (%)	C3 (%)	nC4 (%)	iC4 (%)	nC5 (%)	iC5 (%)	H2S (ppm)	CO2 %	REMARKS
2	5	1798	1	1550	70.96	12.34	8.84	1.32	3.97	0.27	0.62	0	0.818	
	6a	1808.5	1	1600	66.26	11.89	9.86	2.64	5.32	0.46	1.31	0	0.89	
	8	1862.3	1	1400	65.82	12.79	9.79	2.77	3.9	0.46	1.12	0	0.882	
1	30b	1887	1	1300	79.8	10.9	5.3	0.6	1.7	0.3	0.3		1.1	

GENERAL COMMENTS :

Oil sample at 1887 m appears very thick and heavy

PRESSURE DATA SHEET

WELL		Angsi-6				HOLE SIZE (IN)		8-1/2										
DATE		24/9/97				TYPE OF TOOL		MDT / PO / OFA / GR										
GEOLOGIST/S		Sufrizal / Fadzil				LOG. ENGINEER		FUAD / J. DIGBY										
RKB (m)		22 m				LOG CONTRACTOR		Schlumberger wireline										
RUN #	TEST #	DEPTH (m)		GAUGE TYPE	IHP		PRETEST DATA SIP		SAMPLE DATA					FHP		TEMP °C	MOBILITY (mD) COMMENTS	SAS2 CODE
		RKB	TVDSS		PSI	PPGe	PSI	PPGe	GAL	IFP	FFP	TIME	FSIP	PSI	PPGe			
3	1	1858.0		QUARTZ														
	2	1882.5		QUARTZ	3085.4									3085.8		116.1	Dry slow build -up	T
	3	1664.5		QUARTZ	2735.6									2736.1		113.0	dry test	T
	3a	1666.0		QUARTZ	2737.7									2738.3		110.3	dry test	T
	4	1764.5		QUARTZ	2895.0									2896.1		111.3	dry test	T
	5	1768.0		QUARTZ	2901.7									2903.5		111.1	dry test	T
	6	1786.5		QUARTZ	2931.4									2931.5		111.3	dry test	T
	7	2021.5		QUARTZ	3306.7									3306.9		120.9	dry test	T
	7a	2020.5		QUARTZ	3304.4									3304.8		122.6	dry test	T
	8	2012.5		QUARTZ	3292.0									3292.1		123.8	dry test	T
	9	1834.5		QUARTZ	3006.6									3006.5		123.9	dry test	T
	10	1772.5		QUARTZ	2907.3									2907.7		116.1	dry test	T
	11	1636.8		QUARTZ	2689.9									2690.1		116.0	dry test	T
				QUARTZ														
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				QUARTZ														
GENERAL COMMENTS																		
All point tight.																		
QUARTZ GAUGE = PSIA STRAIN GAUGE = PSIG V = VALID TEST, T = TIGHT, SC = SUPERCHARGED, SF = SEAL FAILURE, I = INCOMPLETE SO = SAMPLE ONLY																		

PRESSURE DATA SHEET

WELL		Angsi-6		HOLE SIZE (IN)		8-1/2	
DATE		23/9/97		TYPE OF TOOL		MDT / PO / OFA / GR	
GEOLOGIST/S		Sufrizal / Fadzil		LOG. ENGINEER		FUAD / J. DIGBY	
RKB (m)		22 m		LOG CONTRACTOR		Schlumberger wireline	

RUN #	TEST #	DEPTH (m)		GAUGE TYPE	IHP		PRETEST DATA SIP		SAMPLE DATA					FHP		TEMP °C	MOBILITY (mD) COMMENTS	SAS2 CODE
		RKB	TVDSS		PSI	PPGe	PSI	PPGe	GAL	IFP	FFP	TIME	FSIP	PSI	PPGe			
2	4	1768.0		QUARTZ			CANCELLED (SHALY - TIGHT)											
				QUARTZ														
	5	1797.5		QUARTZ	2947.6		2555.9		12.8 liter pumped out , 7 min					2947.5		103.4	64.5 md, OFA = GAS & OI	V
	6	1808.0		QUARTZ	2967.7		2576.0 ?							2967.5		109.3	still building-up , unstable	SC ?
	6a	1808.5		QUARTZ	2968.5		2570.9		44 liter pumped out , 30 min					2967.7		109.4	OFA= GAS & OIL	V
	7	1833.2		QUARTZ	3007.6		2580.3 ?							3007.4		110.9	still buiding up	SC ?
	7a	1833.5		QUARTZ	3008.6		2601.7							3008.9		111.6	still build up	SC ?
	8	1856.5		QUARTZ	3045.6									3045.5		111.8	tight	T
	8a	1857.0		QUARTZ	3046.4									3046.0		112.3	very slow build up	T
	9	1858.5		QUARTZ	3048.7									3048.7		112.8	very slow build up	T
	10	1862.3		QUARTZ	3054.6		2613.4		55.6 liter pumped out , 44 min					3053.7		113.4	* see remarks	V
	11	1864.0		QUARTZ	3056.6									3056.6		115.2	tight	T
	12	1896.0		QUARTZ	3107.7									3107.8		115.4	tight	T
	12a	1896.6		QUARTZ	3108.7		2643.5							3108.4		115.8	54.2 md	V
2	13	2082.0		QUARTZ	3404.6		2951.9							3404.6		120.8	ery slow to stabilize , 1.02m	V
	14	2088.2		QUARTZ	3413.7									3413.5		123.9	tight	T
	15	2090.0		QUARTZ	3416.4									3416.5		124.8	tight	T
	16	2089.0		QUARTZ	3414.8									3414.9		125.4	tight	T
	16a	2087.5		QUARTZ	3411.8		2952.6							3412.2		125.9	25 mins to stabilize , 2.9 md	V
				QUARTZ														

GENERAL COMMENTS

- OFA self calibration mode not functioning. Unable to determine whether fluid is oil , water or filtrate . But gas column was showing intermittent to steady flow of high gas. went ahead with sampling at 1862.3 m
- Completed MDT @ 0600 hrs, 24/9/97, POOH and waiting for sample at surface

QUARTZ GAUGE = PSIA STRAIN GAUGE = PSIG V = VALID TEST, T = TIGHT, SC = SUPERCHARGED, SF = SEAL FAILURE, I = INCOMPLETE SO = SAMPLE ONLY