

March, 2004

Fig.(1): LOCATION MAP OF THE STUDY AREA.

ERA	PERIOD	EPOCH	AGE	FORMATION	MEMBER	LITHOLOGY	RESERVOIR	REMARKS		
CENOZOIC	QUATERNARY	RECENT & PLEISTOC.								
		PLIOCENE								
	TERTIARY	NEOGENE	MIOCENE	MIDDLE MIOCENE	ZEIT					
					SOUTH GHARIB					
						BELAYIM	H. FARAUN		●	A2,3,4,5 & A6
						FEIRAN		●	B2,3,4 & B5-C1 & C4	
					KAREEM		●	A2,3,4,5A, A6, B1, 2, 3, 4, B5, C1, 2, C4, D1, D5B, D6, E4 & E5A		
				LOWER MIOCENE	RUDEIS		●	B3, C1, C3 & C5		
					NUKHUL	GARRA				
						SHOAB ALI	●	A4, A4A, B1, C1, C6, D2, D4A & E3		
				PALEOGENE	EOCENE	L. EO.	THEBES		●	B2
					PALEOC.	L. EO. BPPL	ESNA			
	MESOZOIC	CRETACEOUS	UPPER CENOMANIAN		LATE CRET.	SUDR				
			LOWER SENONIAN		MATULLA	●	B2 & E4			
EARLY CRET.				NUBIA FACIES	●	A8A, B5, 6, 7, B8, C2, D6, E1, 2 & E6A				
PRE - CAMBRIAN						X X X X X	●	C2 & E4		

FIG. (2): SHOAB ALI FIELD STRATIGRAPHIC COLUMN

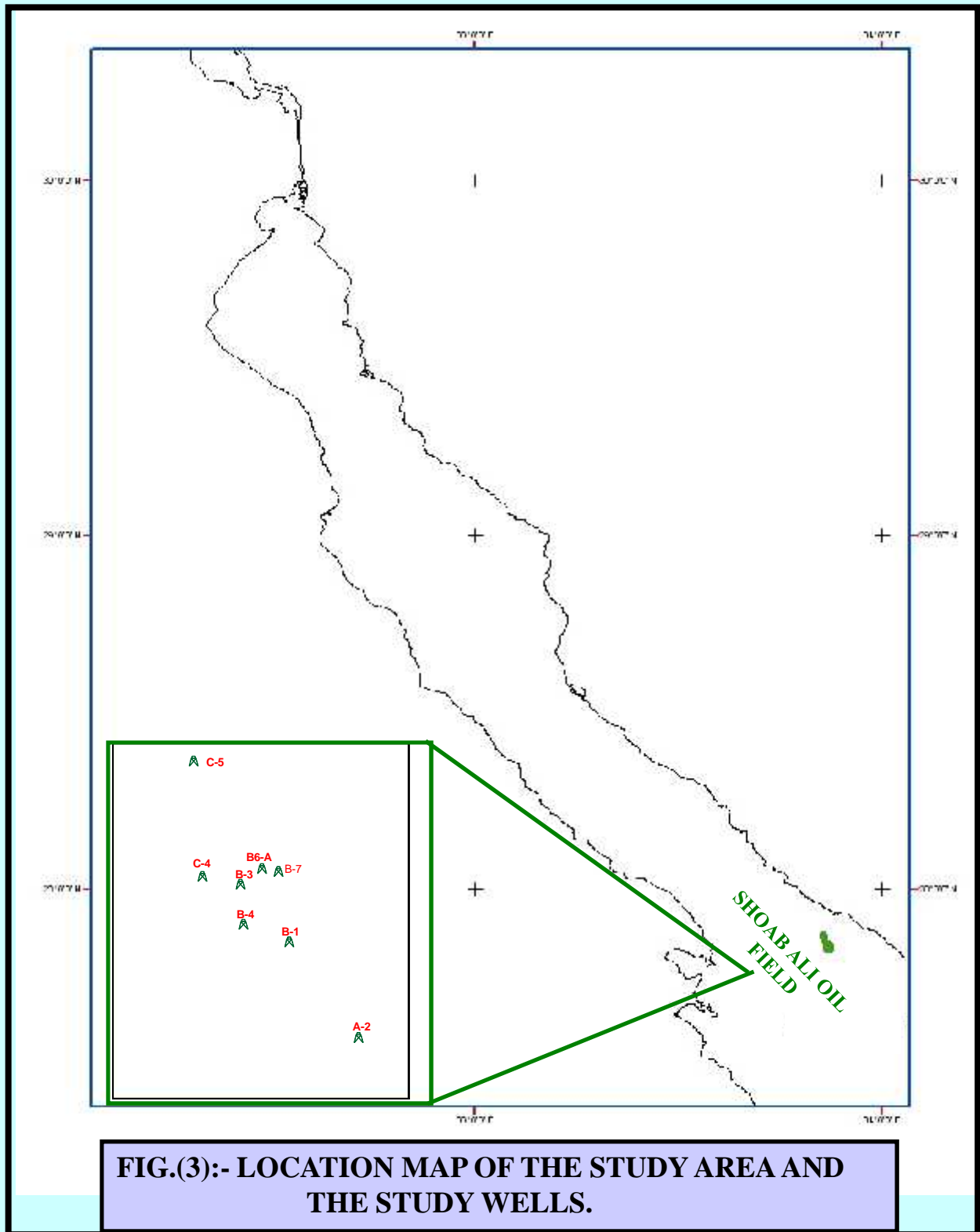


FIG.(3):- LOCATION MAP OF THE STUDY AREA AND THE STUDY WELLS.

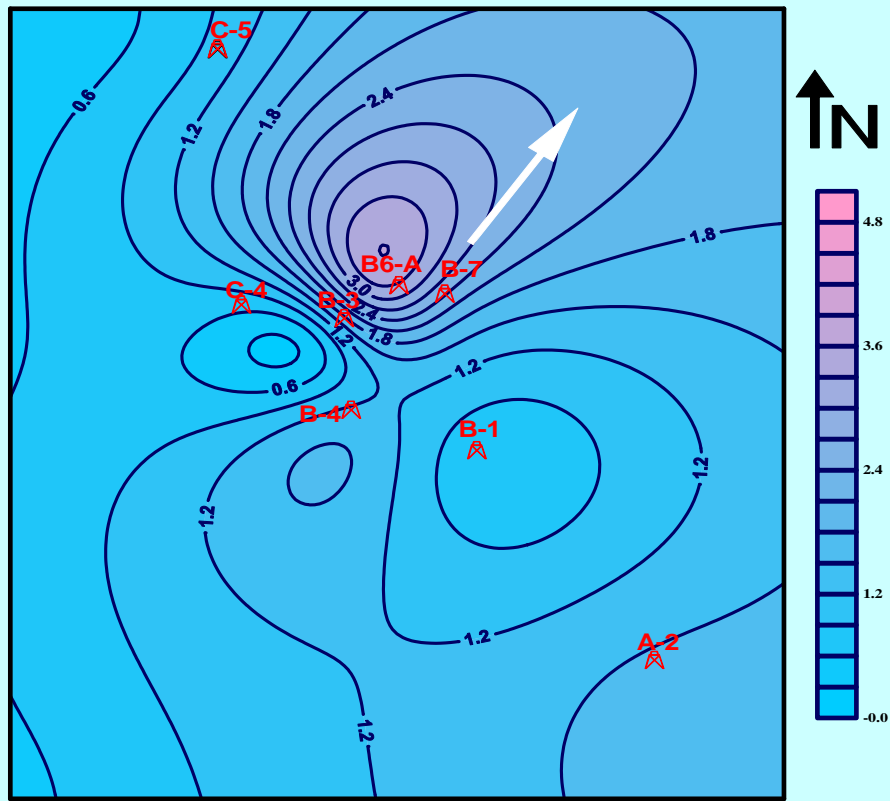


FIG.(4):- AVERAGE ORGANIC CARBON CONTENT OF BELAYIM FORMATION IN THE STUDY AREA.

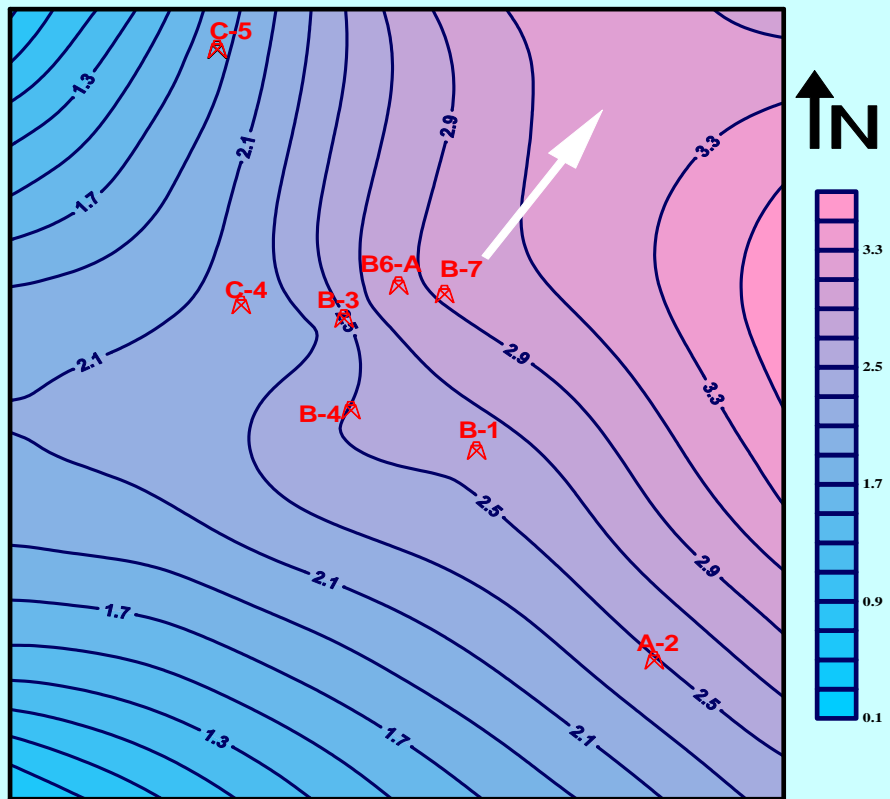


FIG.(5):- AVERAGE ORGANIC CARBON CONTENT OF KAREEM FORMATION IN THE STUDY AREA.

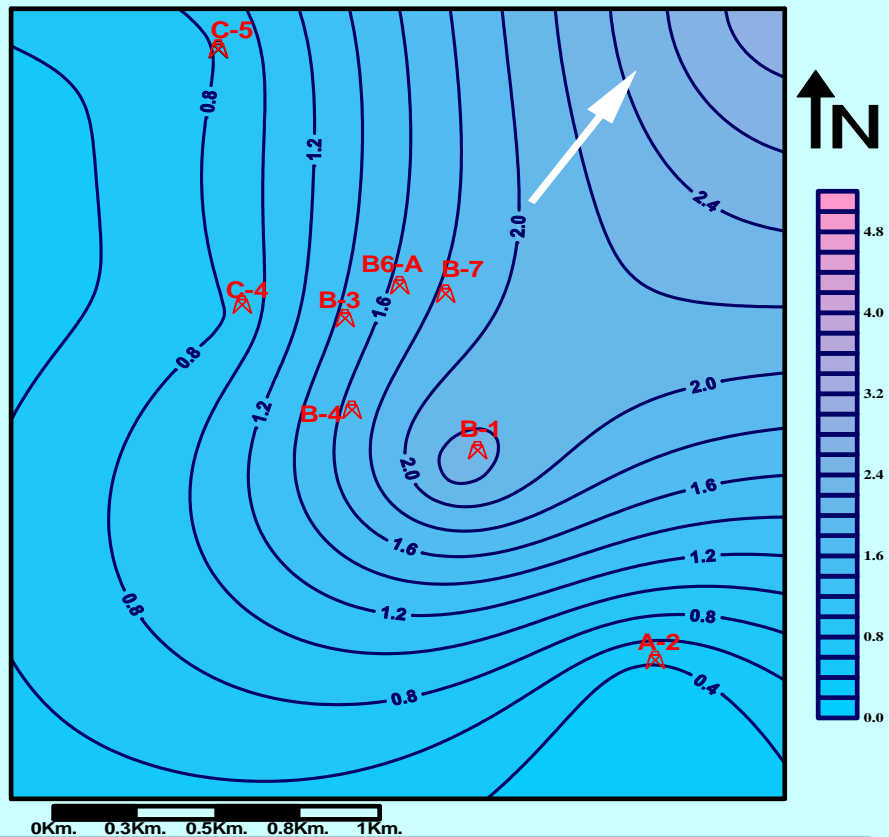


FIG.(6):- AVERAGE ORGANIC CARBON CONTENT OF NUKHUL FORMATION IN THE STUDY AREA.

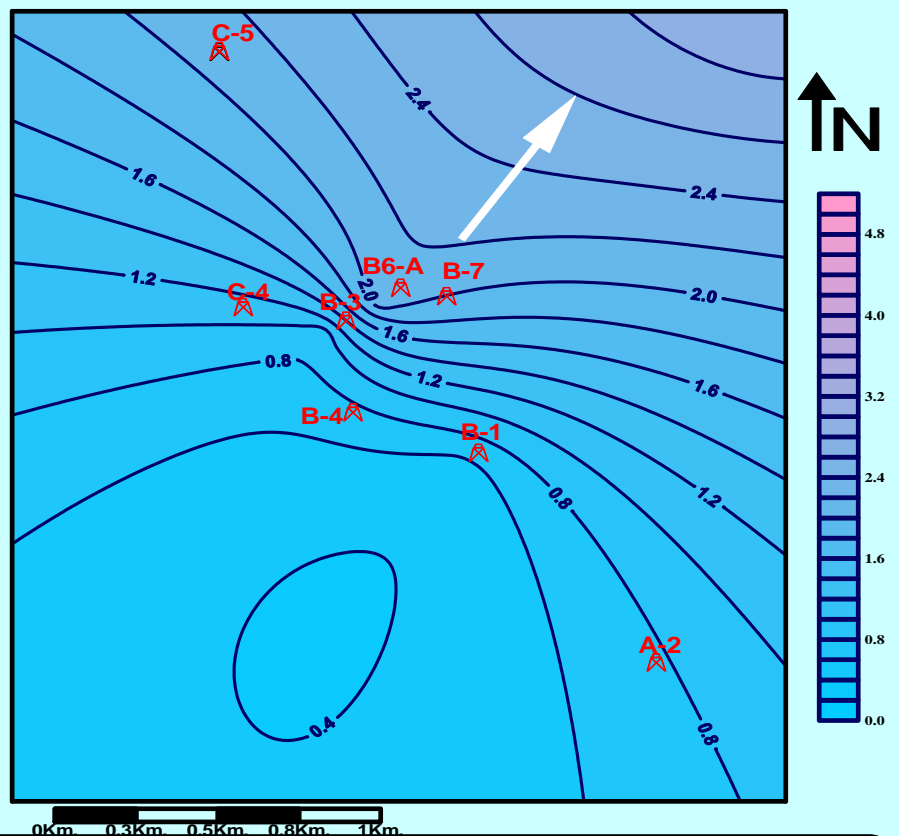


FIG.(7):- AVERAGE ORGANIC CARBON CONTENT OF THEBES FORMATION IN THE STUDY AREA.

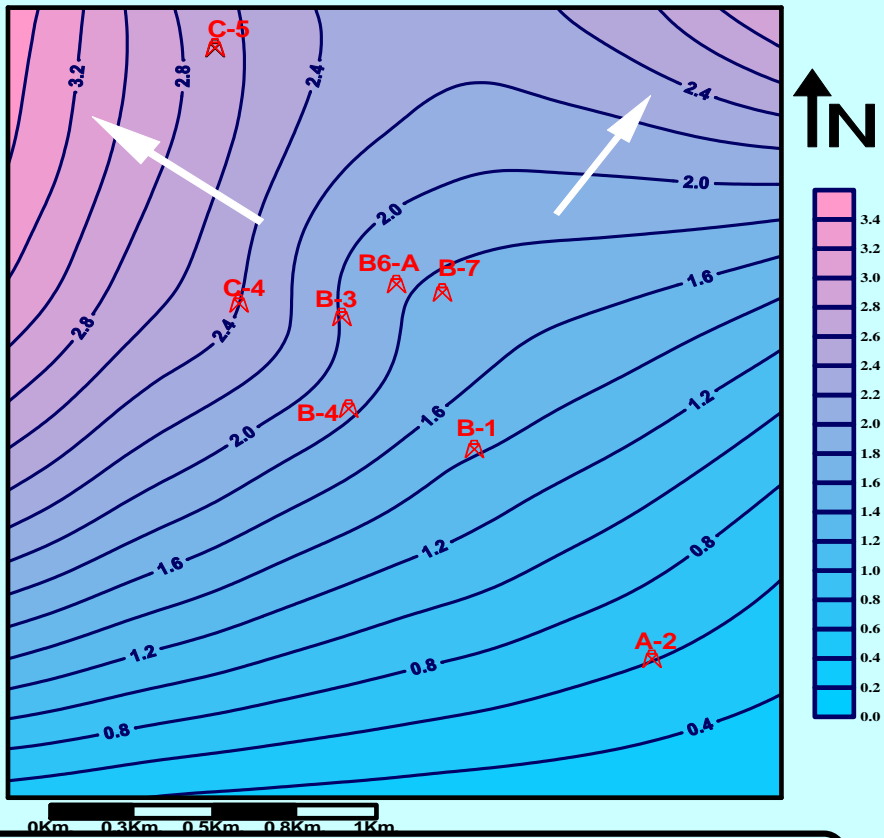


FIG.(8):- AVERAGE ORGANIC CARBON CONTENT OF ESNA FORMATION IN THE STUDY AREA.

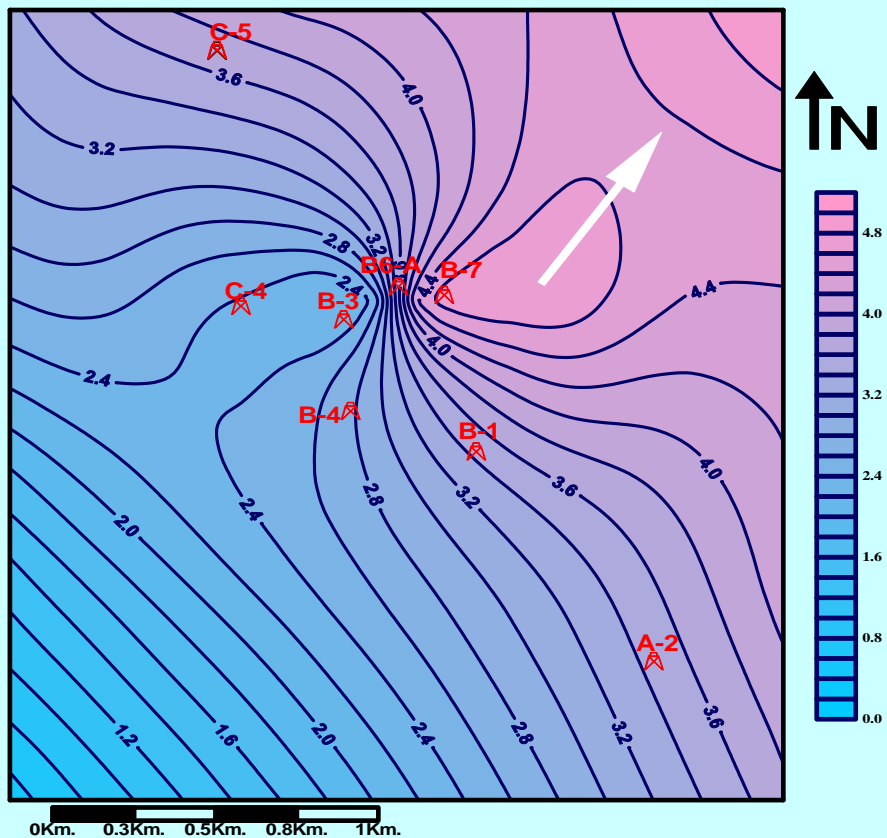


FIG.(9):- AVERAGE ORGANIC CARBON CONTENT OF SUDR FORMATION IN THE STUDY AREA.

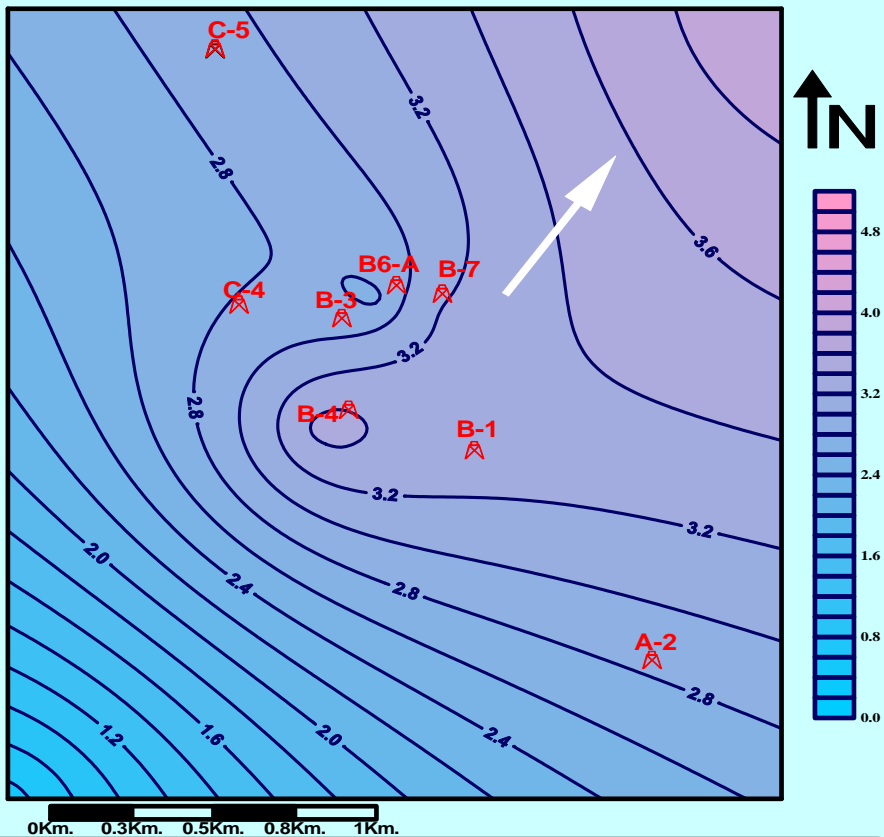


FIG.(10):- AVERAGE ORGANIC CARBON CONTENT OF MATULLA FORMATION IN THE STUDY AREA.

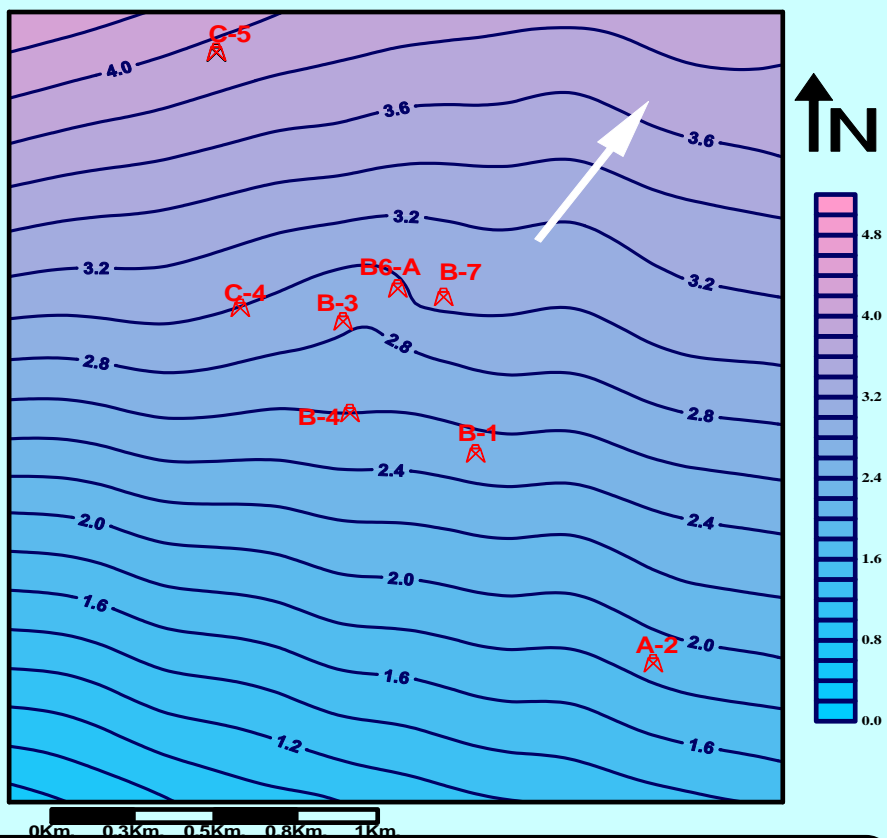


FIG.(11):- AVERAGE ORGANIC CARBON CONTENT OF NUBIA FORMATION IN THE STUDY AREA.

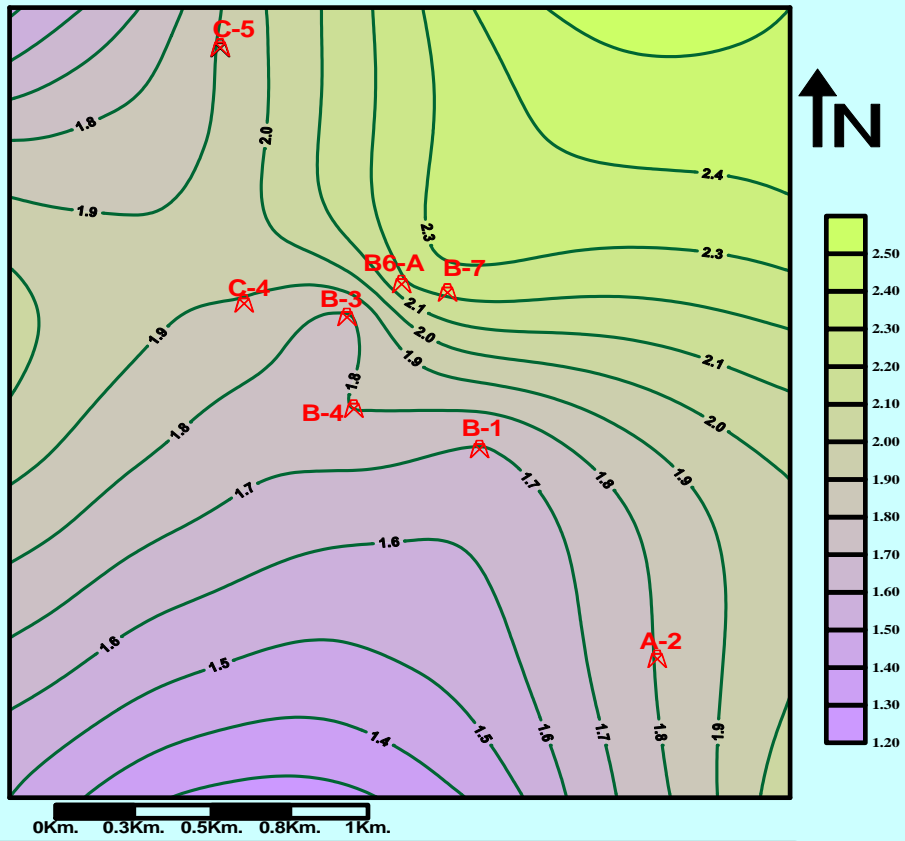


FIG.(12): GEOTHERMAL GRADIENT MAP OF THE STUDY AREA.

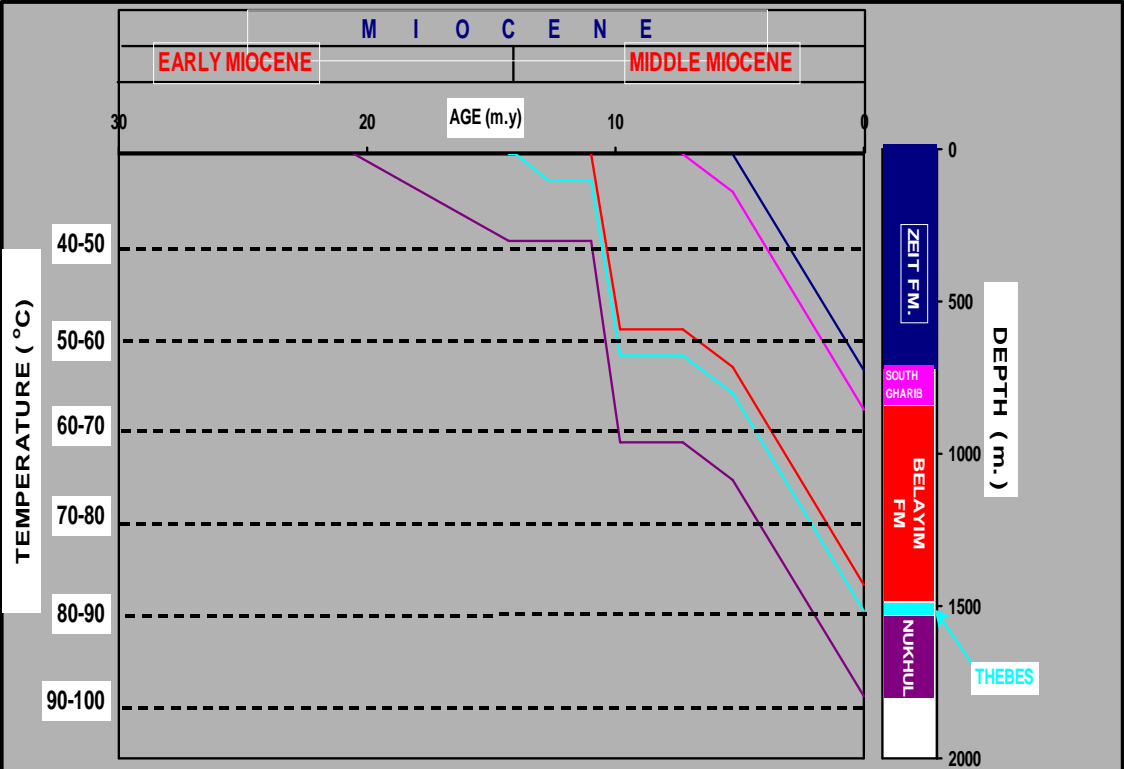
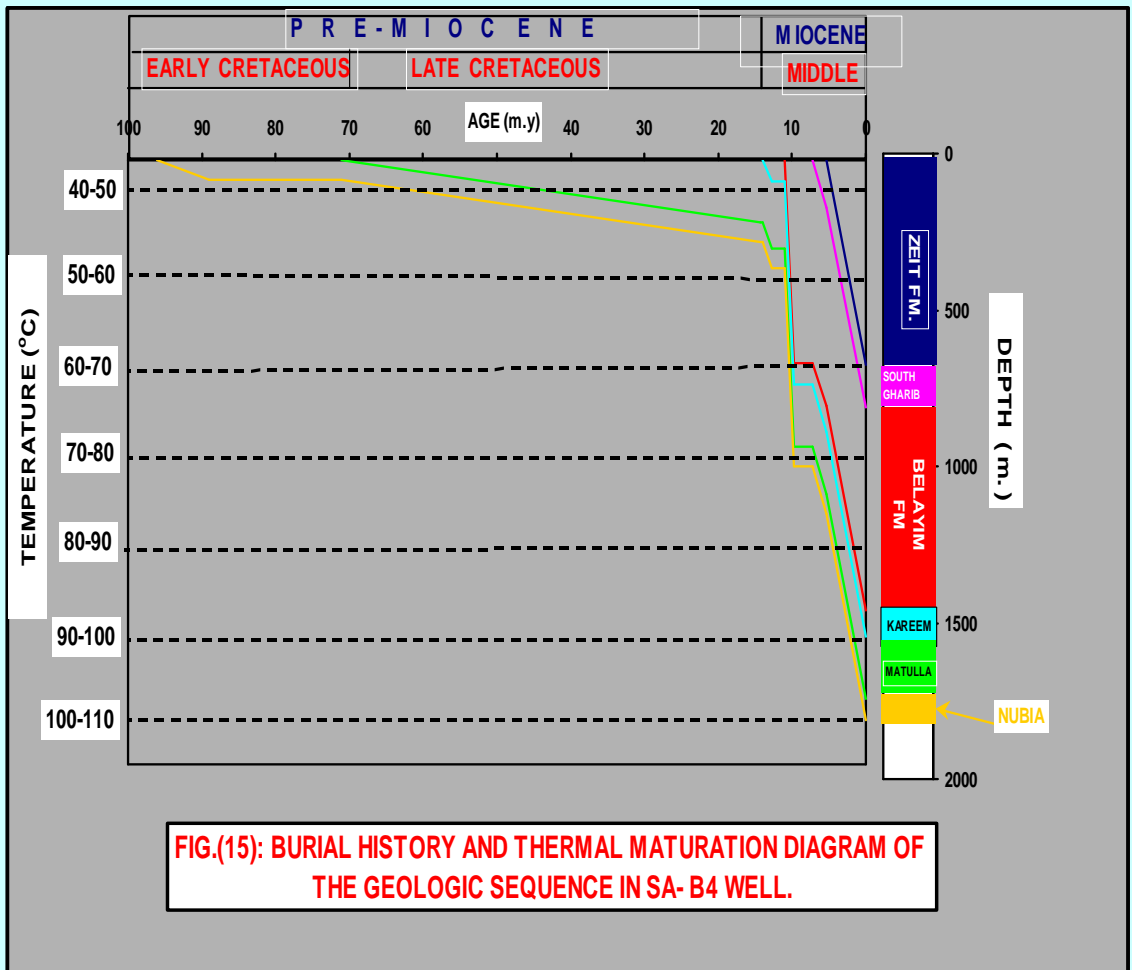
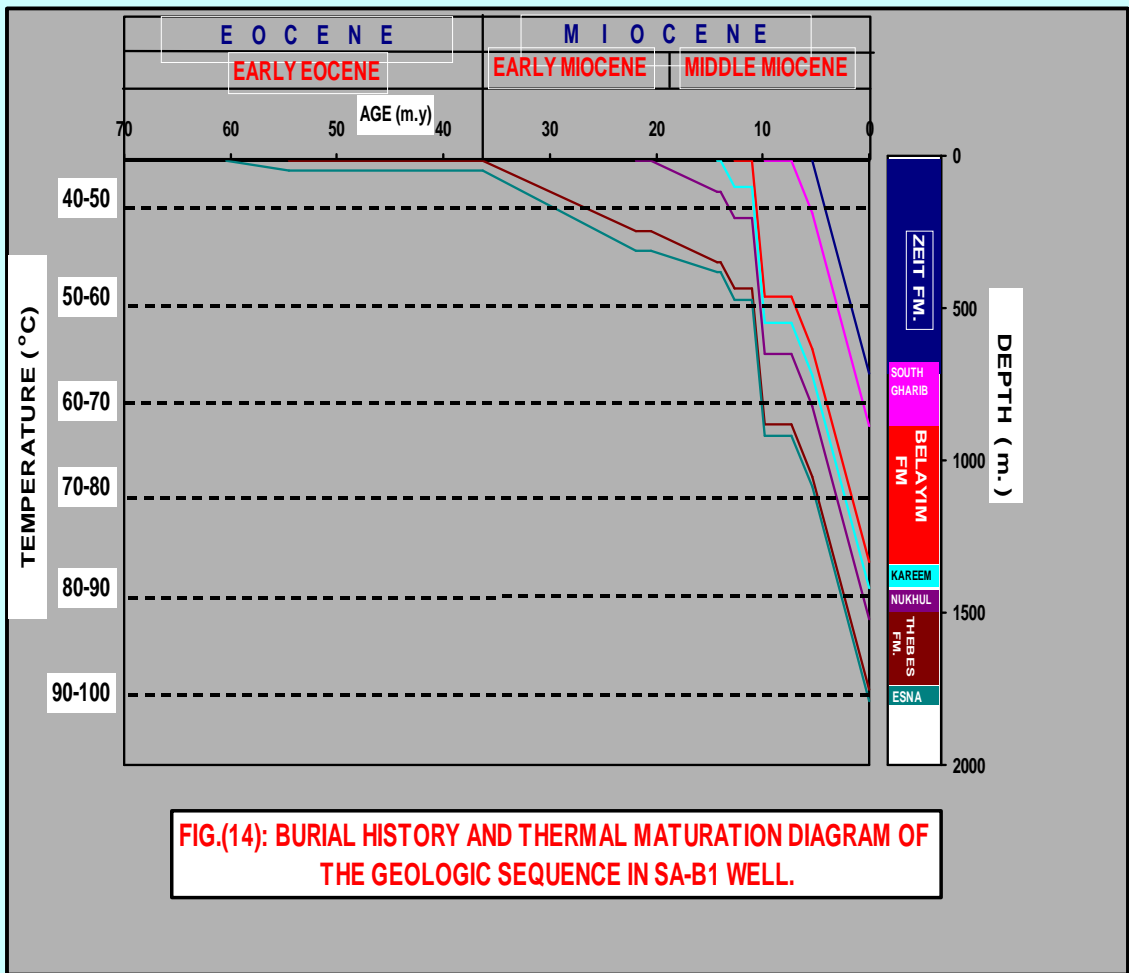
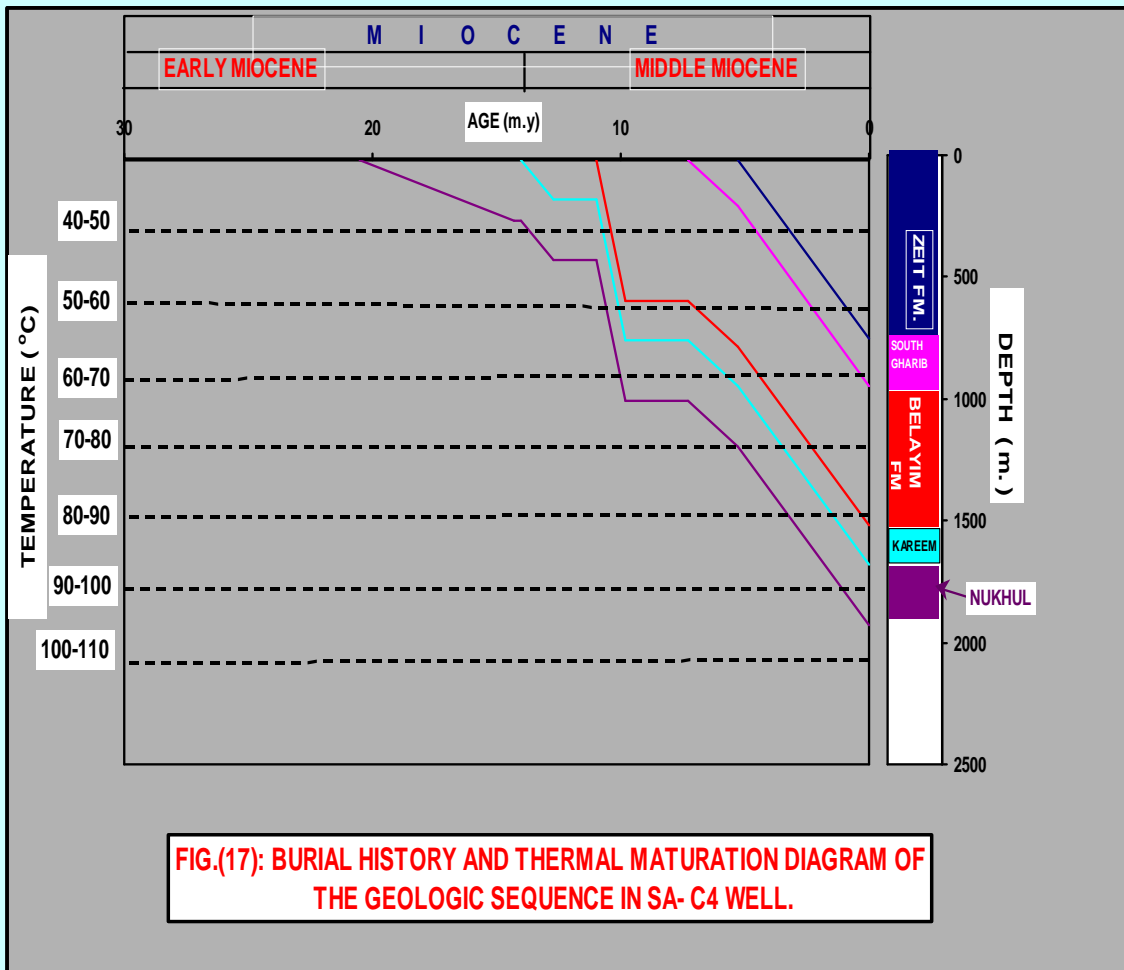
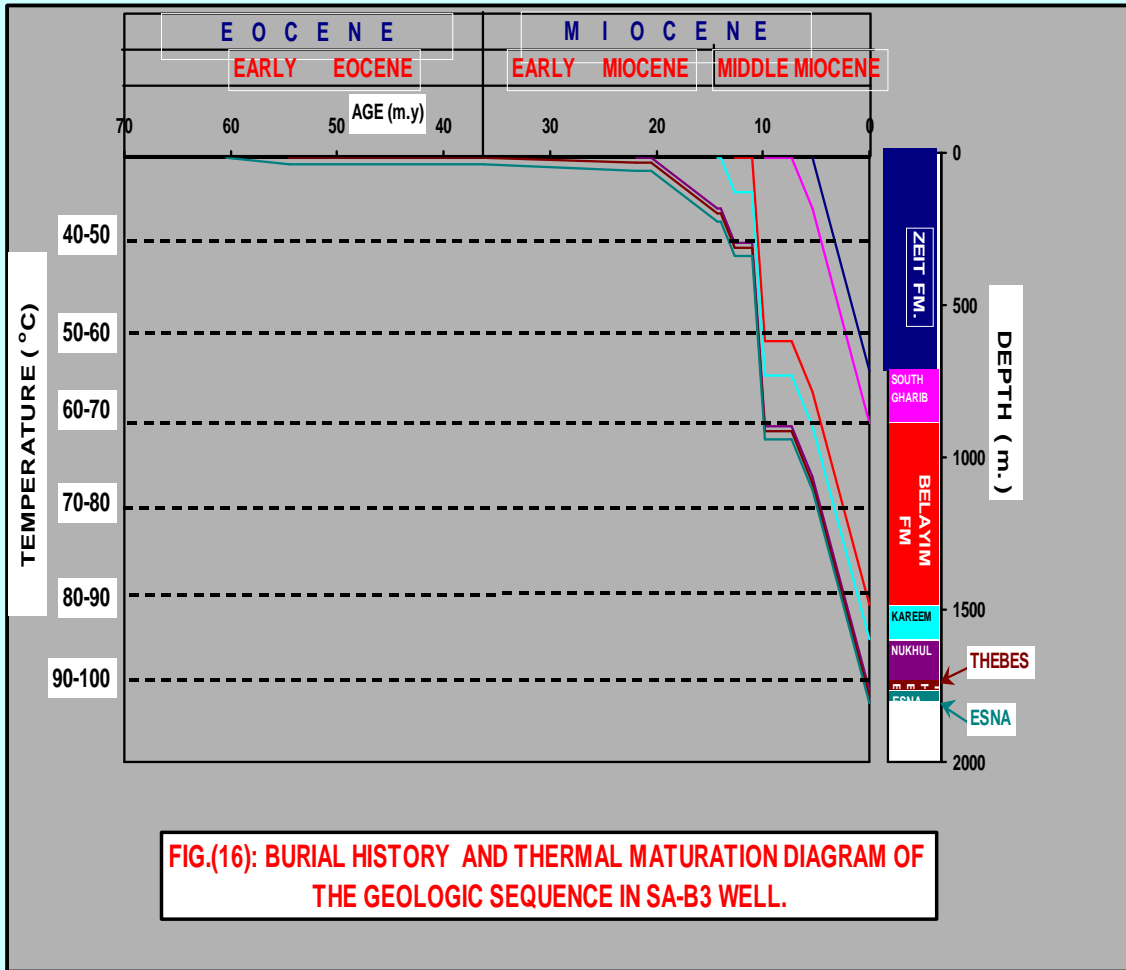
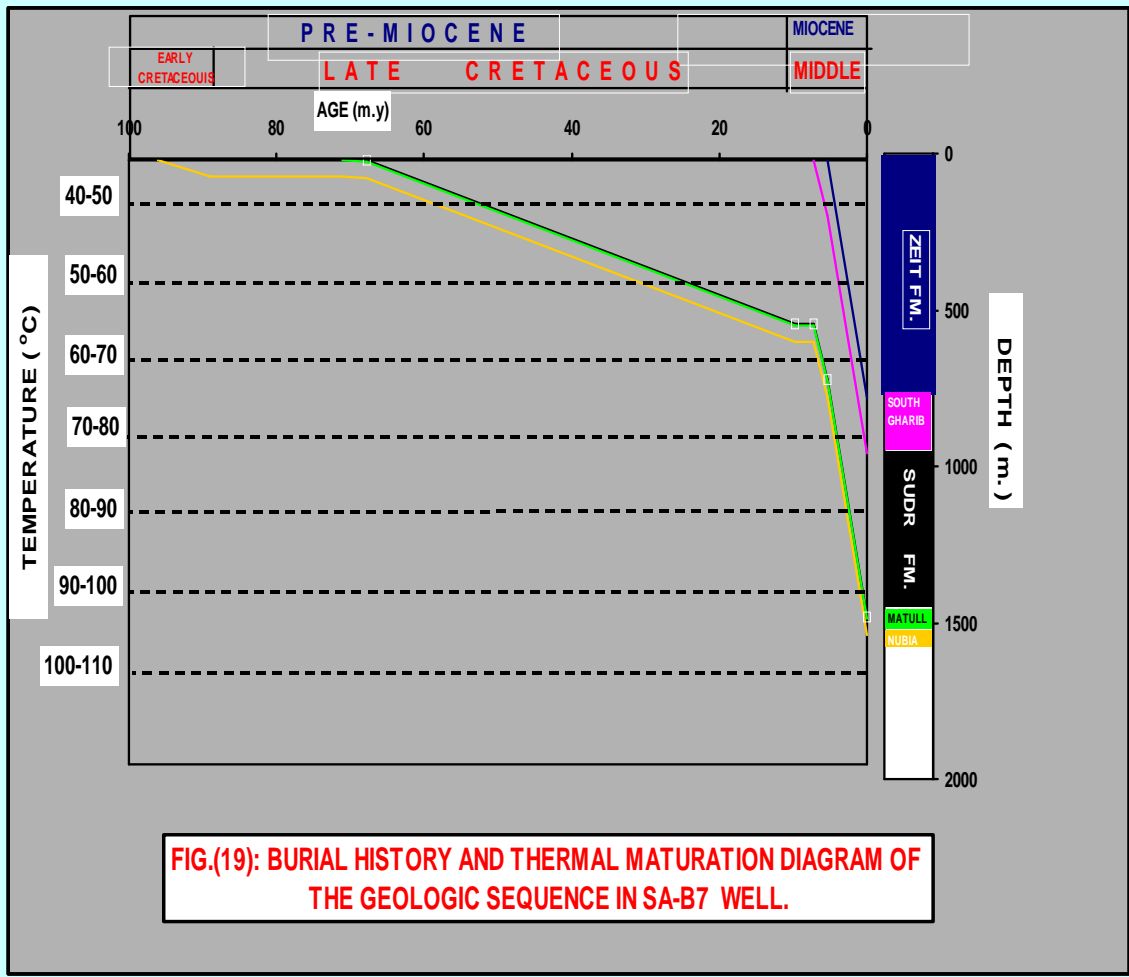
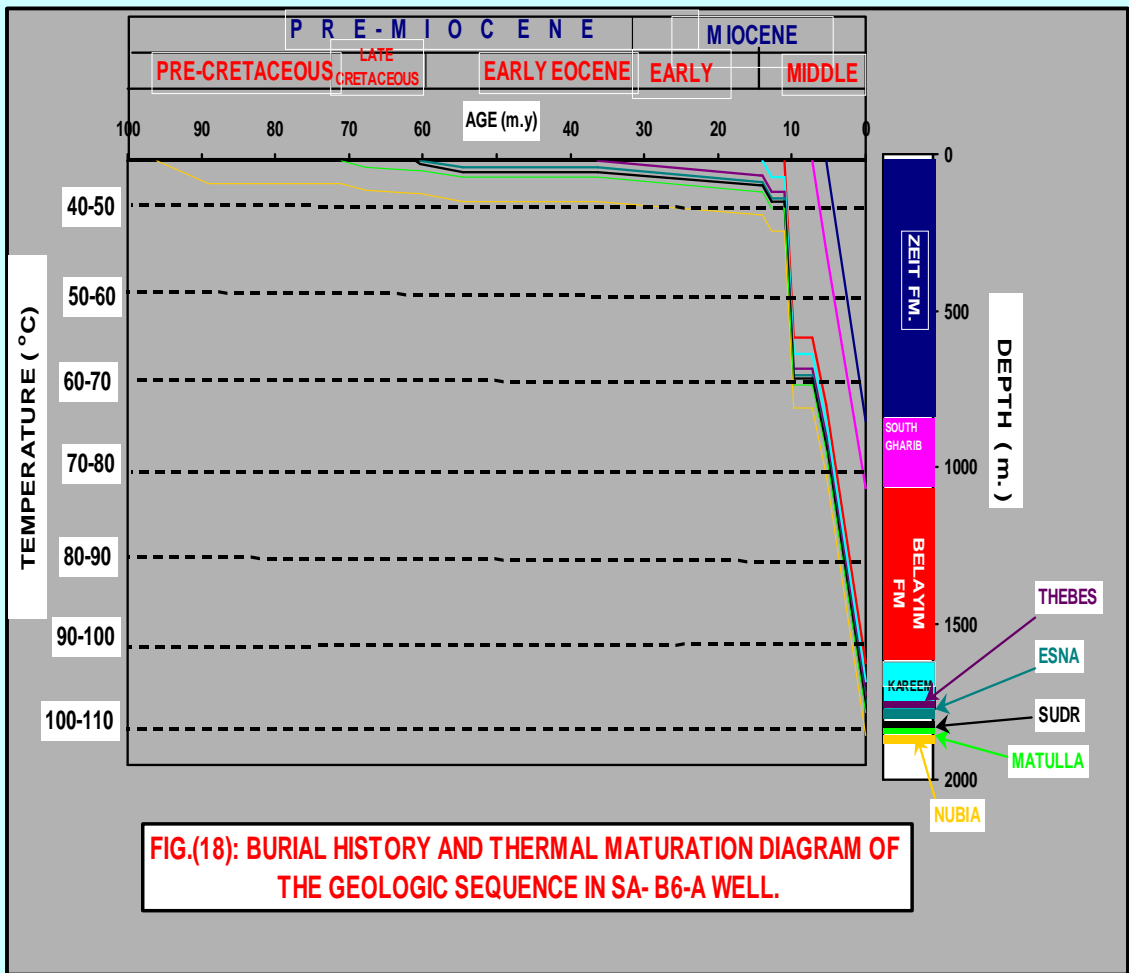
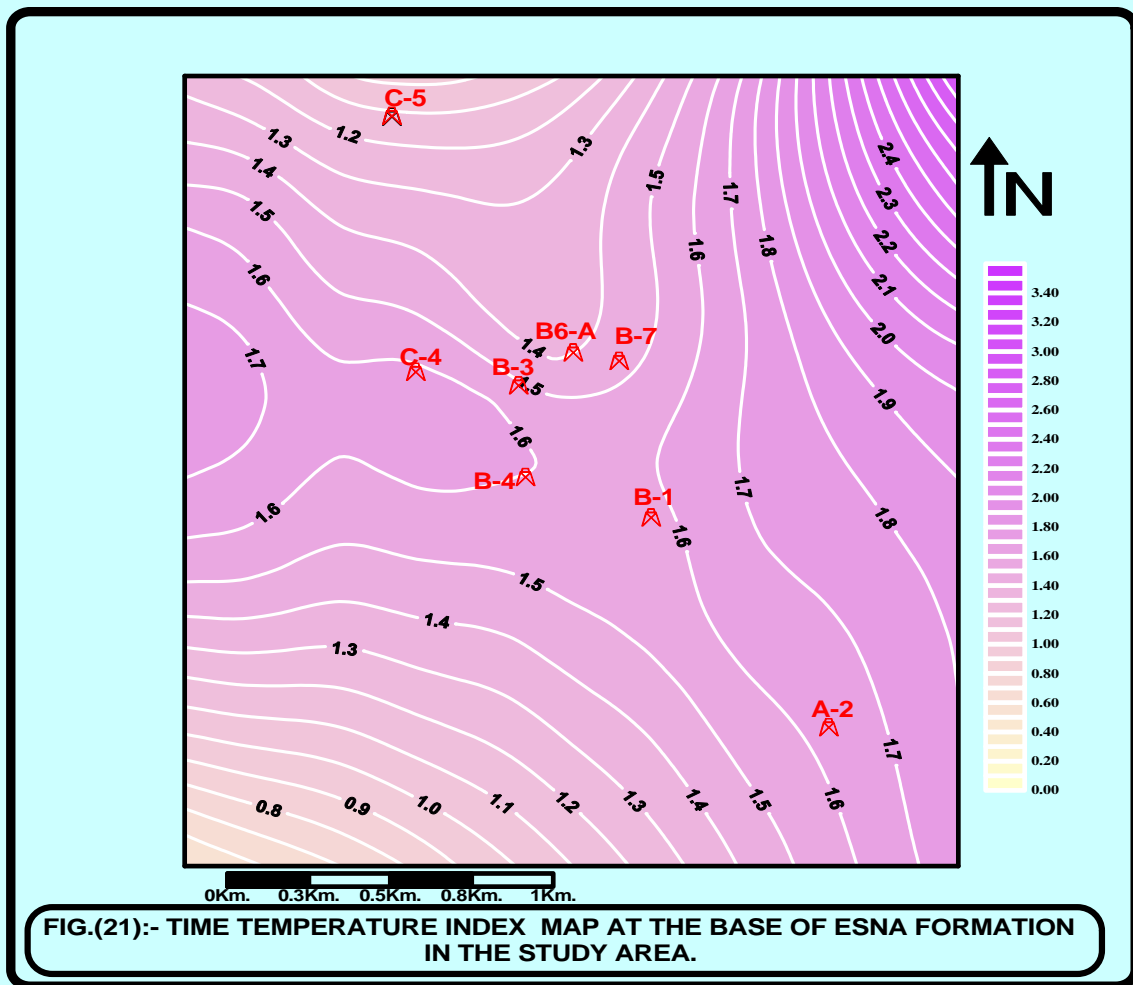
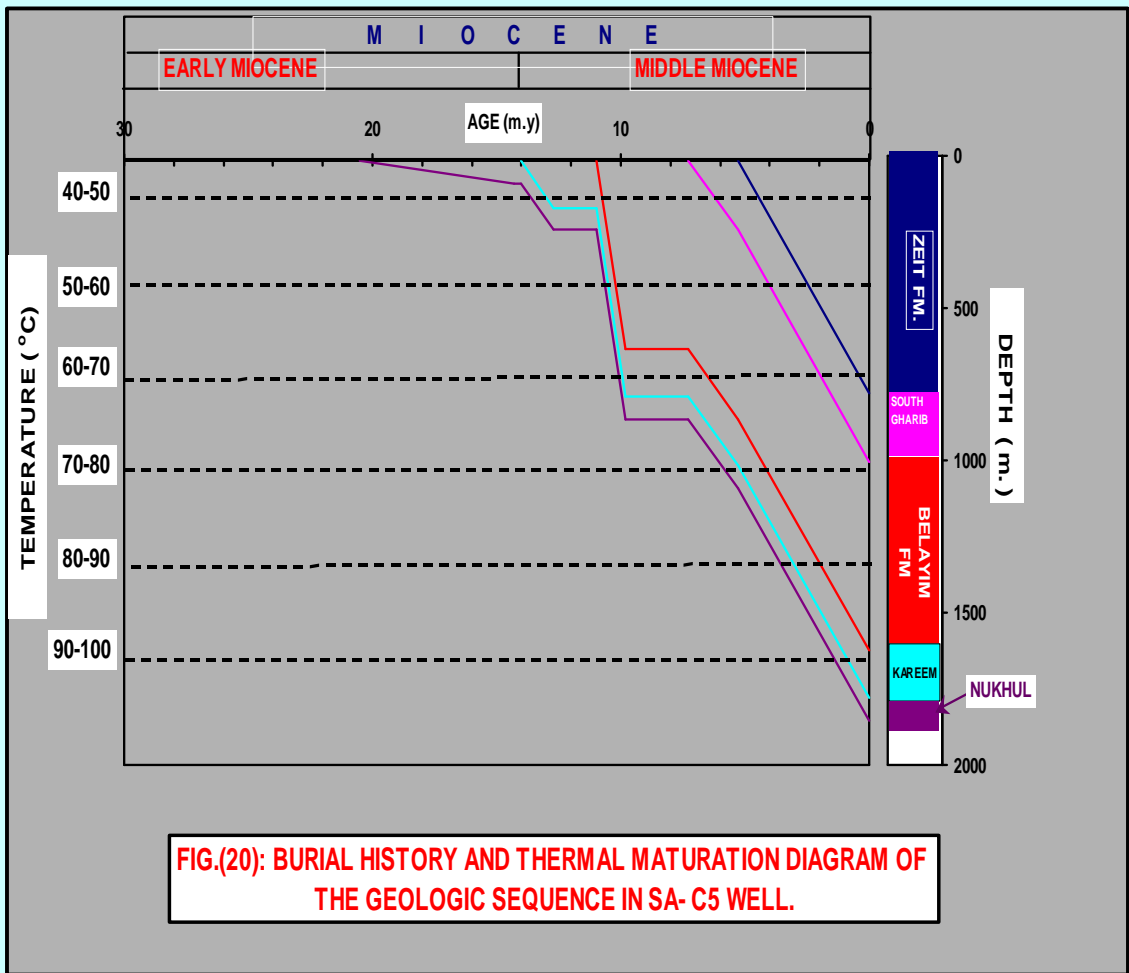


FIG.(13): BURIAL HISTORY AND THERMAL MATURATION DIAGRAM OF THE GEOLOGIC SEQUENCE IN SA-A2 WELL.









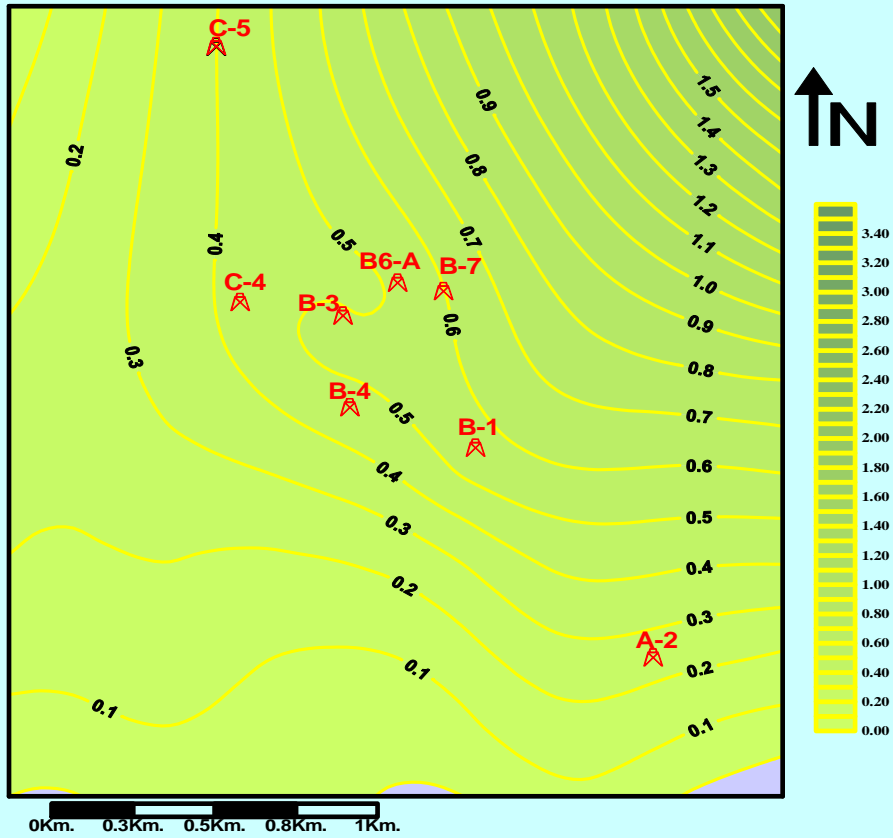


FIG.(24):- VITRINITE REFLECTANCE MAP OF ESNA FORMATION IN THE STUDY AREA.

TABLE(1): GEOTHERMAL GRADIENT OF THE STUDY AREA.

well	geothermal gradient F/100 Ft.	geothermal gradient C/100m.
A-2	1.8	3.24
B-1	1.7	3.1
B-4	1.8	3.367
B-3	1.8	3.36
C-4	1.9	3.42
B6-A	2.2	4.01
B-7	2.2	3.95
C-5	1.9	3.396

TABLE(2):ESTIMATED GEOCHEMICAL PARAMETERS FOR A-2 WELL.

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	1.57	<0.2	<0.4	<0.4	0.557
KAREEM	2.39	<0.2	<0.4	<0.4	0.599
NUKHUL	0.198	<0.2	0.43	0.5	1.146

TABLE(3):ESTIMATED GEOCHEMICAL PARAMETERS FOR B-1 WELL

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	0.762	<0.2	<0.4	<0.4	0.519
KAREEM	2.52	<0.2	<0.4	<0.4	0.589
NUKHUL	2.32	<0.2	<0.4	<0.4	0.892
THEBES	0.49	<0.2	0.46	0.5	1.747
ESNA	1.39	<0.2	0.5	0.5	1.556

TABLE(4):ESTIMATED GEOCHEMICAL PARAMETERS**FOR B-4 WELL**

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	1.357	<0.2	<0.4	0.5	1.107
KAREEM	2.49	<0.2	<0.4	0.5	1.207
MATULLA	3.49	<0.2	0.56	0.505	1.7
NUBIA	2.52	<0.2	0.62	0.52	2.24

TABLE(5):ESTIMATED GEOCHEMICAL PARAMETERS**FOR B-3 WELL**

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	0.765	<0.2	<0.4	<0.4	0.65
KAREEM	2.31	<0.2	<0.4	0.5	0.897
NUKHUL	1.34	<0.2	<0.4	0.505	1.412
THEBES	0.901	<0.2	0.45	0.505	1.542
ESNA	2.12	<0.2	0.5	0.505	1.591

TABLE(6):ESTIMATED GEOCHEMICAL PARAMETERS**FOR C-4 WELL**

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	0.601	<0.2	<0.4	<0.4	0.656
KAREEM	2.13	<0.2	<0.4	0.5	0.938
NUKHUL	0.75	<0.2	0.45	0.52	1.808

TABLE(7):ESTIMATED GEOCHEMICAL PARAMETERS**FOR B6-A WELL**

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	0.62	<0.2	<0.4	0.5	0.224
KAREEM	2.75	<0.2	<0.4	0.5	1.017
THEBES	2.12	<0.2	0.46	0.5	1.254
ESNA	1.87	<0.2	0.52	0.505	1.339
SUDR	2.59	<0.2	0.54	0.505	1.413
MATULLA	2.76	<0.2	0.55	0.508	1.46
NUBIA	2.86	<0.2	0.62	0.52	2.33

TABLE(8):ESTIMATED GEOCHEMICAL PARAMETERS**FOR B-7 WELL**

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
SUDR	4.35	<0.2	0.53	0.505	1.514
MATULLA	3.15	<0.2	0.54	0.505	1.585
NUBIA	2.96	<0.2	0.58	0.52	2.021

TABLE(9):ESTIMATED GEOCHEMICAL PARAMETERS**FOR C-5 WELL**

FORMATION	TOC Wt.%	Ro equation	Ro chart(1)	Ro chart(2)	SUM TTI
BELAYIM	0.824	<0.2	<0.4	0.5	1.02
KAREEM	1.71	<0.2	0.4	0.505	1.653
NUKHUL	0.714	<0.2	0.48	0.52	1.995

