

CERTIFICATE

I have the pleasure to certify that Brigadier Tumul Varma, VSM, has pursued his research work and prepared the present dissertation titled **"Geostrategic Dynamics of Shale Oil & Gas-Implications for India"** under my guidance and supervision. The dissertation is the result of his own research and to the best of my knowledge, no part of it has earlier comprised any other monograph, dissertation or book. This is being submitted to the Panjab University, Chandigarh for the degree of Master of Philosophy in Social Sciences in partial fulfillment of the requirement for the Advanced Professional Programme in Public Administration (APPPA) of Indian Institute of Public Administration (IIPA), New Delhi.

I recommend that the dissertation of Brigadier Tumul Varma, VSM is worthy of consideration for the award of M.Phil degree of Panjab University, Chandigarh.



Dr Manan Diwedi
Supervisor
Indian Institute of Public Administration,
I.P. Estate, Ring Road,
New Delhi-110002