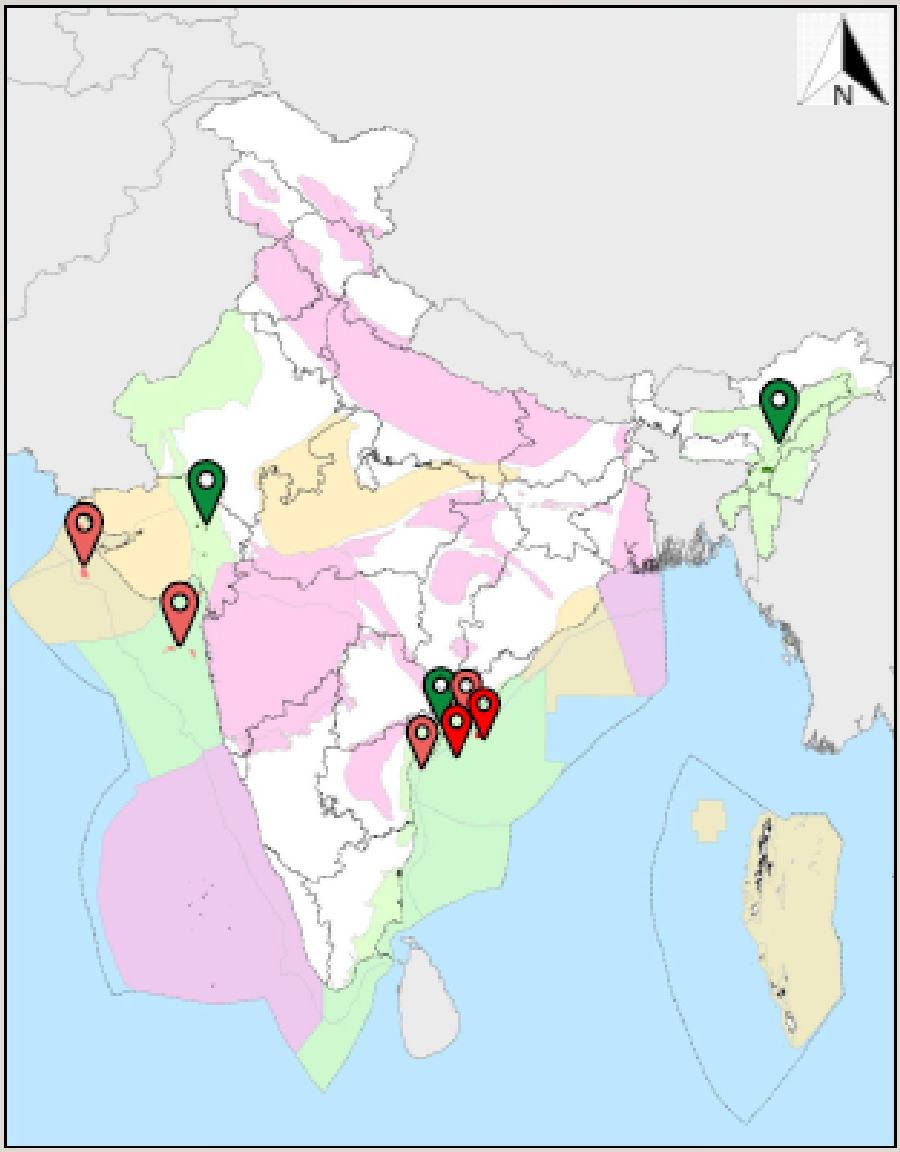
पेट्रोलियम एवं
प्राकृतिक गैस मंत्रालय
MINISTRY OF
PETROLEUM AND NATURAL GAS

सत्यमेव जयते

DGH

DIRECTORATE GENERAL OF HYDROCARBONS
(Ministry of Petroleum & Natural Gas,Government of India)

INFORMATION DOCKET



CONTRACT AREA

KG/OSDSF/A3/2025

DISCOVERED SMALL FIELD BID ROUND - IV

DISCLAIMER

This document, titled Information Docket, provides a consolidated overview of the Contract Area comprising the discoveries/fields offered under the Discovered Small Fields (DSF) Bid Round-IV. This docket has been prepared based on original inputs /information received from National Oil Companies, Private Operators/JV and available at National Data Repository (NDR).

Third Parties were engaged to independently assess the information and estimate the in-place volumes. In conducting these estimations, Third Parties used the available data/information and employed assumptions, procedures and methods deemed necessary given the timeframe available for evaluation.

The accuracy and clarity of the information presented herein, including the reported hydrocarbon resources, are thus limited to the data available at the time of analysis and the verifications performed by the Third Parties during the evaluation timeframe. The findings are subject to further review and validation by bidders upon receipt of additional and clarified data/information.

Given these limitations, all bidders are hereby advised to undertake their own independent technical and commercial due diligence and conduct thorough evaluations of the data and resource potential to support informed investment and bidding decisions.

Table of Contents

1. INTRODUCTION

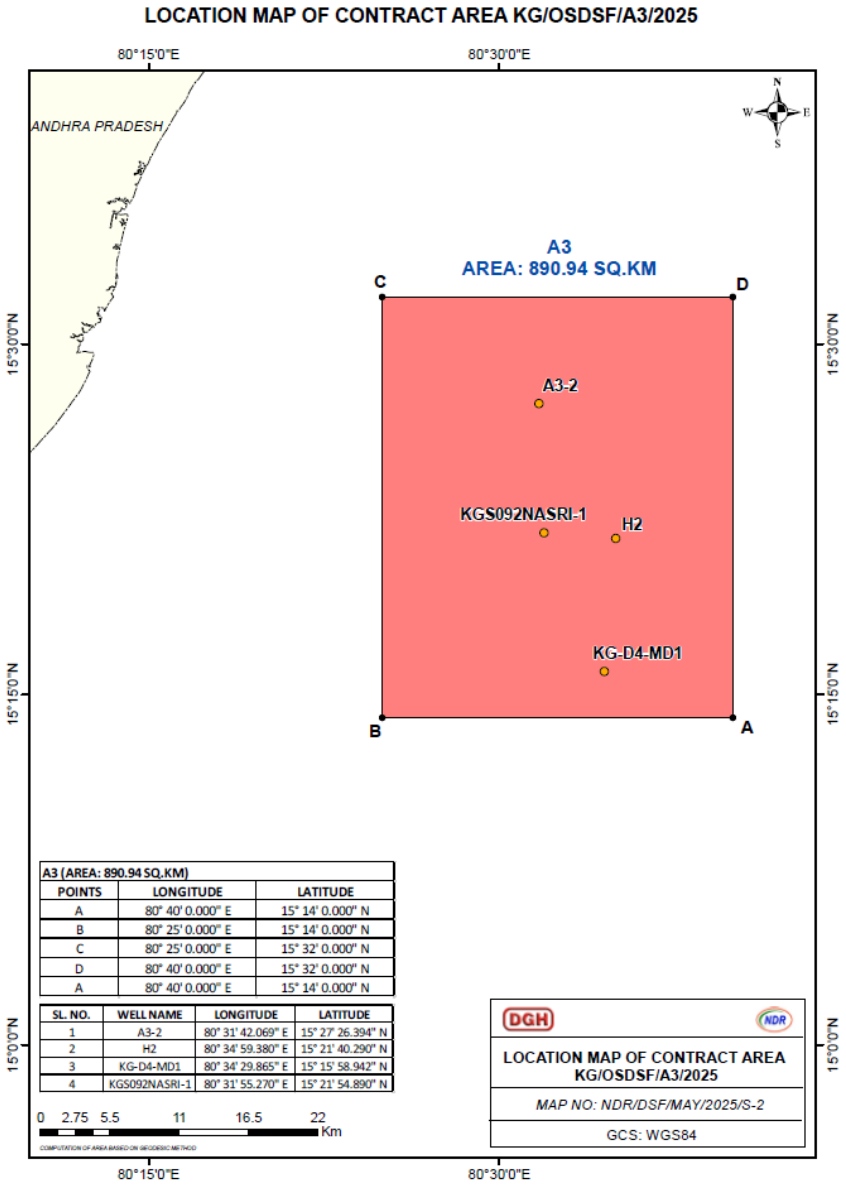
With the extension of the DSF policy 2015, DSF Bid Round IV offers 55 small-to-mid-size oil and gas discoveries through international competitive bidding. There are 9 Contract Areas under DSF-IV spread over Cambay, Assam & Assam Arakan, Gulf of Kutch, Mumbai Offshore and Krishna Godavari Basins. Out of 55 discoveries, there are 19 onshore discoveries in 3 Contract Areas, 26 shallow water discoveries in four Contract Areas and 10 Deepwater discoveries in two Contract Areas. The discoveries have been suitably clustered in order to leverage shared resources and operational flexibility.

In terms of hydrocarbon prospectivity, the fields-on-offer lie in 5 sedimentary basins which include 8 Contract Areas in Category I basins with hydrocarbon reserves and 1 Contract Area in Category II basins with contingent resources.

Each Contract Area on offer has multiple discoveries comprehensively described in this Information Docket to bring in all relevant subsurface facts of geo-scientific and engineering information. This technical booklet will be useful if read while working with the Data Package which would be available on sale once the Data Room is set up for viewing.

2. CONTRACT AREA DESCRIPTION

The contract area titled KG/OSDSF/A3/2025 is located offshore within the Krishna-Godavari (KG) Basin and comprises a total offered area of approximately 890.94 sq. km under this DSF Bid Round. Within this contract area, three distinct blocks are included: KG-OSN-2009/3, KG-DWN-98/1, and KG-OSN-2009/2. These blocks lie in shallow offshore waters and represent part of one of India's most prospective hydrocarbon basins. The contract area includes multiple discoveries and exploration wells distributed across the three blocks. In the map enclosed with the NIO (Notice Inviting Offer) document, the contract area is referred to as A3. The following figure(s) illustrate the layout of the contract area across the included blocks and highlight the distribution of key fields and structures.



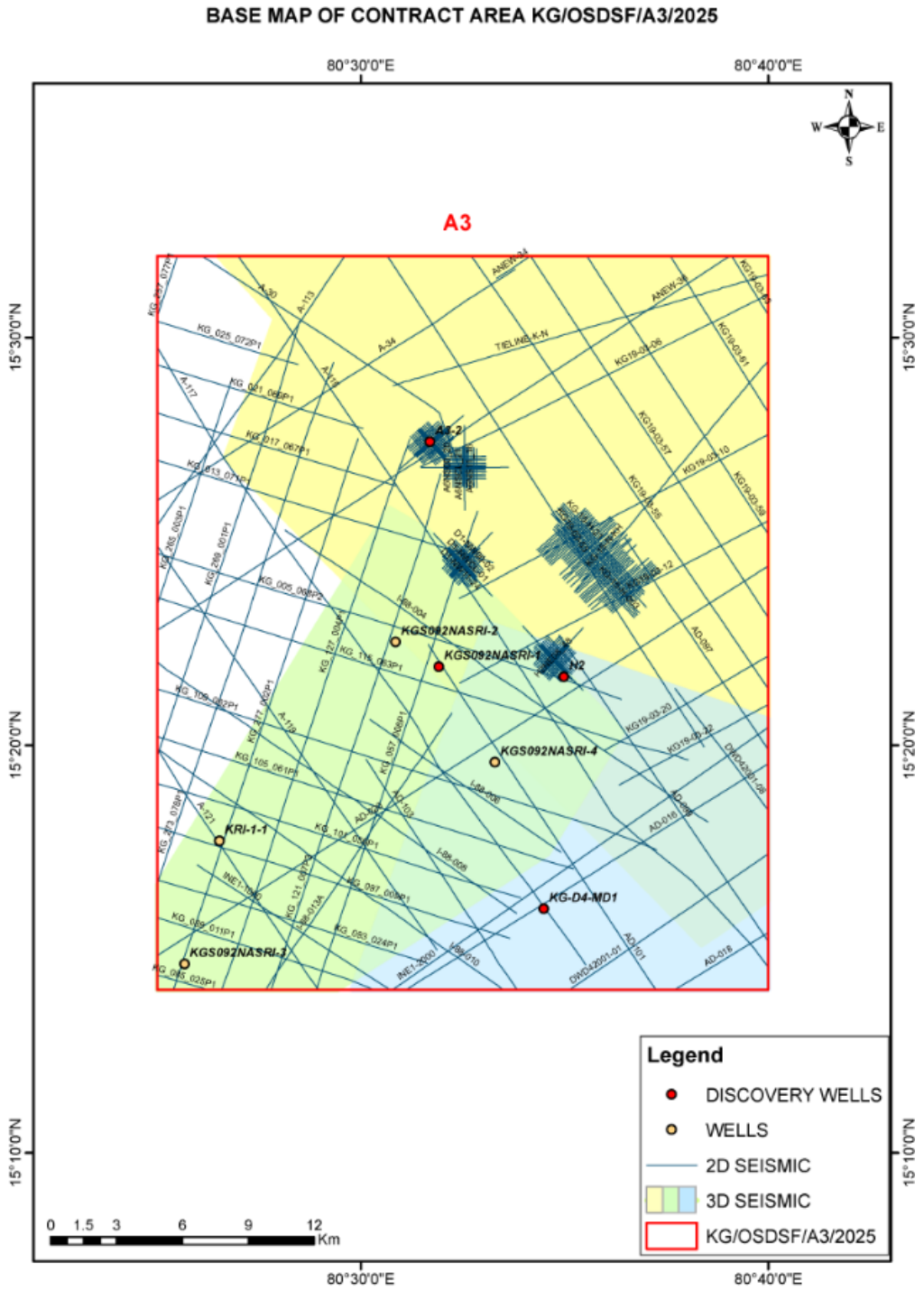
A3 (AREA: 890.94 SQ.KM)

POINTS	LONGITUDE	LATITUDE
A	80° 40' 0.000" E	15° 14' 0.000" N
B	80° 25' 0.000" E	15° 14' 0.000" N
C	80° 25' 0.000" E	15° 32' 0.000" N
D	80° 40' 0.000" E	15° 32' 0.000" N
A	80° 40' 0.000" E	15° 14' 0.000" N

SL. NO.	WELL NAME	LONGITUDE	LATITUDE
1	A3-2	80° 31' 42.069" E	15° 27' 26.394" N
2	H2	80° 34' 59.380" E	15° 21' 40.290" N
3	KG-D4-MD1	80° 34' 29.865" E	15° 15' 58.942" N
4	KGS092NASRI-1	80° 31' 55.270" E	15° 21' 54.890" N

The area has information of 1370.73 LKM 2D seismic data and 768.67 sq km of 3D seismic data. There are 8 wells in the contract area. The following figure shows the coverage of available seismic 2D and 3D seismic data along with the wells drilled across fields.

Seismic and well data coverage in KG/DWDSF/GD10/2025 Contract Area:



3. BASIN OVERVIEW

The KG Basin is characterized by a primarily siliciclastic shelf margin and is situated along the east coast of the Indian peninsula, lying between the Mahanadi Basin to the north and the Cauvery Basin to the south. Commercial hydrocarbon occurrences spread over wide stratigraphic horizons ranging from the Permian to the Pliocene with geographical onland and offshore distribution, including ultradeep bathymetry. Several oil and gas fields have been discovered onland and offshore with structural, stratigraphic, and strati-structural entrapment conditions. The exploration thrust in the basin has resulted in the discovery of large to medium- and small-sized oil and gas pools in the onland and offshore areas of the shallow, deep, and ultradeep water. The basin is a dual-rift province with a Late Jurassic rift that resulted in a northeast/southwest-trending passive margin basin orthogonally superimposed over the northwest/southeast-trending Gondwana Pranhita-Godavari Basin. The KG Basin consists of sediments with thickness of more than 7,000 meters, ranging in age from the Early Permian to Recent. The onland portion of the basin is mostly covered by the alluviums deposited by the major Godavari and Krishna River systems and several stratigraphic sequences, including that of the Lower Gondwana, which are outcropped near the basin margin. The reservoirs are primarily sandstones with isolated occurrences of limestone and unconventional reservoirs like fractured basalts. The effective source rocks have been identified to be Permian to Eocene shales. The hydrocarbon accumulations often indicate charging by more than one source, and the potential for biogenic plays is significant.

The KG Basin is a Category I basin in the newly formulated three-tier category, implying that the basin has potentially commercially discoverable volumes of in-place hydrocarbons (reserves), which need efficient exploitation through accelerated and enhanced production. This categorization was made in accordance with the industry-standard Petroleum Resources Management System (PRMS) and conforms to various policies in place or under implementation by government of India.

The basin covers an area of 230,000 square kilometers: 31,456 square kilometers onland, 25,649 square kilometers in shallow water (up to 400 meters of water depth), and 17,2895 square kilometers in deepwater. Twelve plays have been identified within the Basement, Permian, Mesozoic, Paleocene, Eocene, Miocene (+Biogenic), and Pliocene (+Biogenic).

Fig.: Reference sedimentary basin:

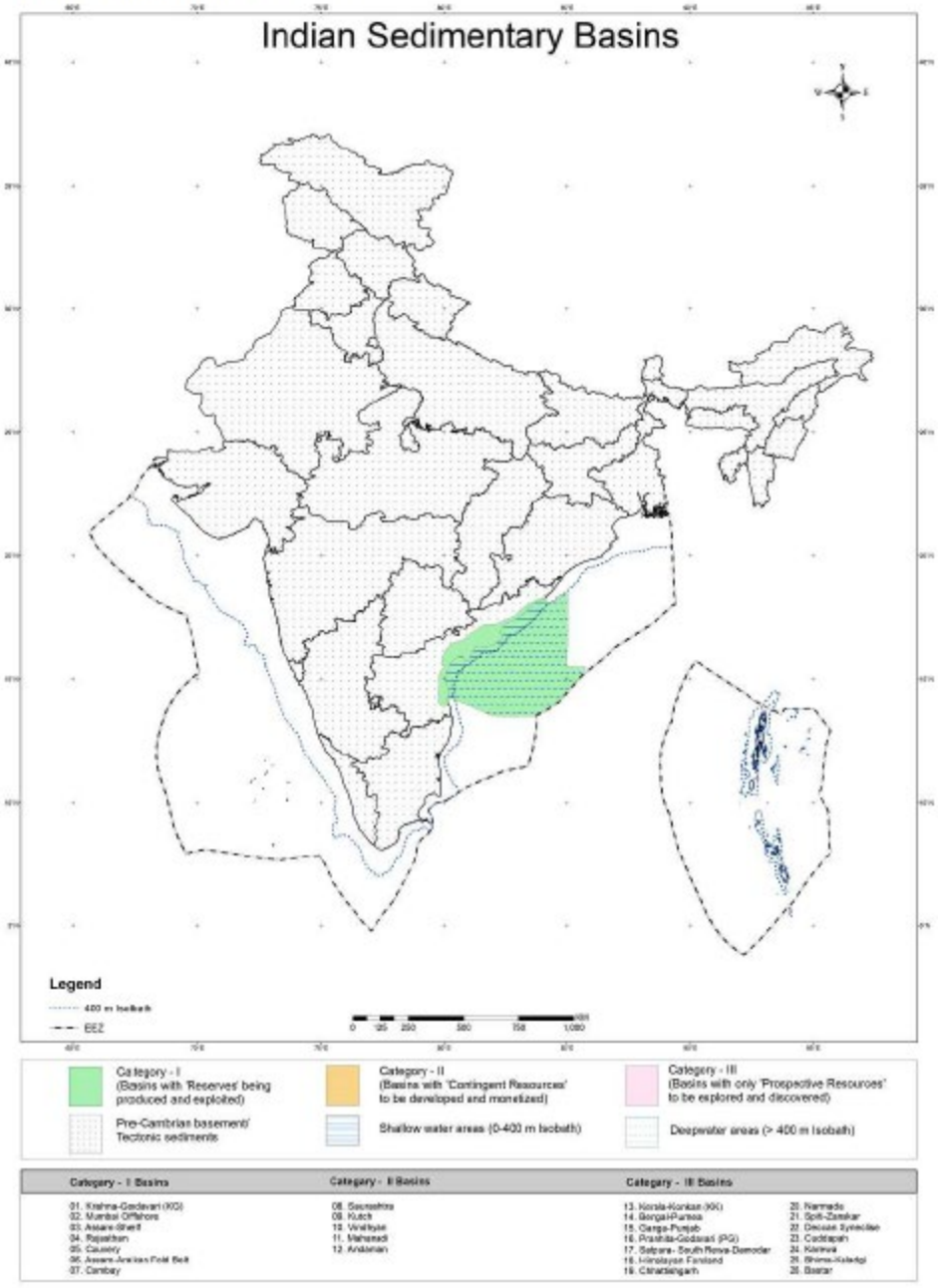


Fig.: Generalized stratigraphy of the basin:

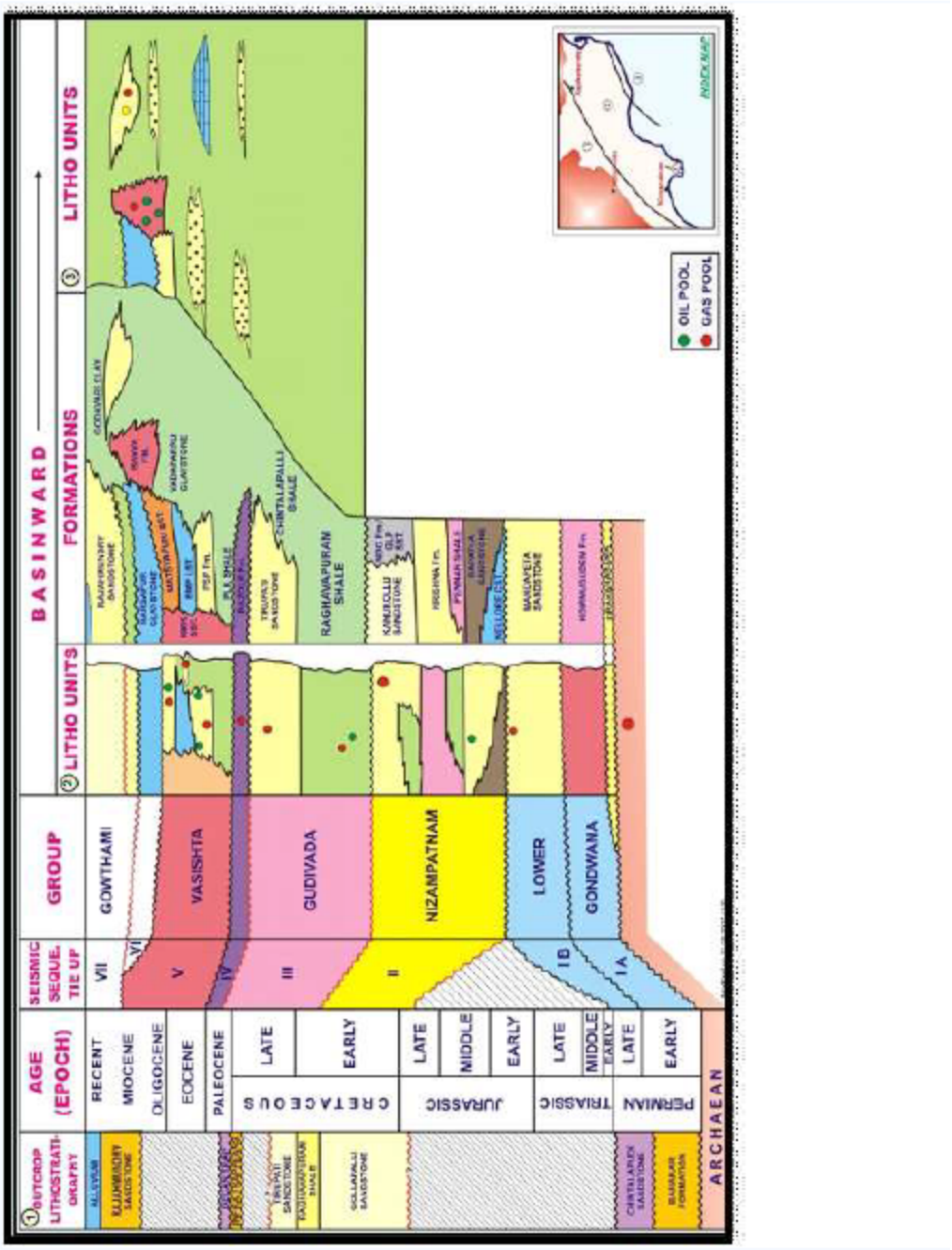
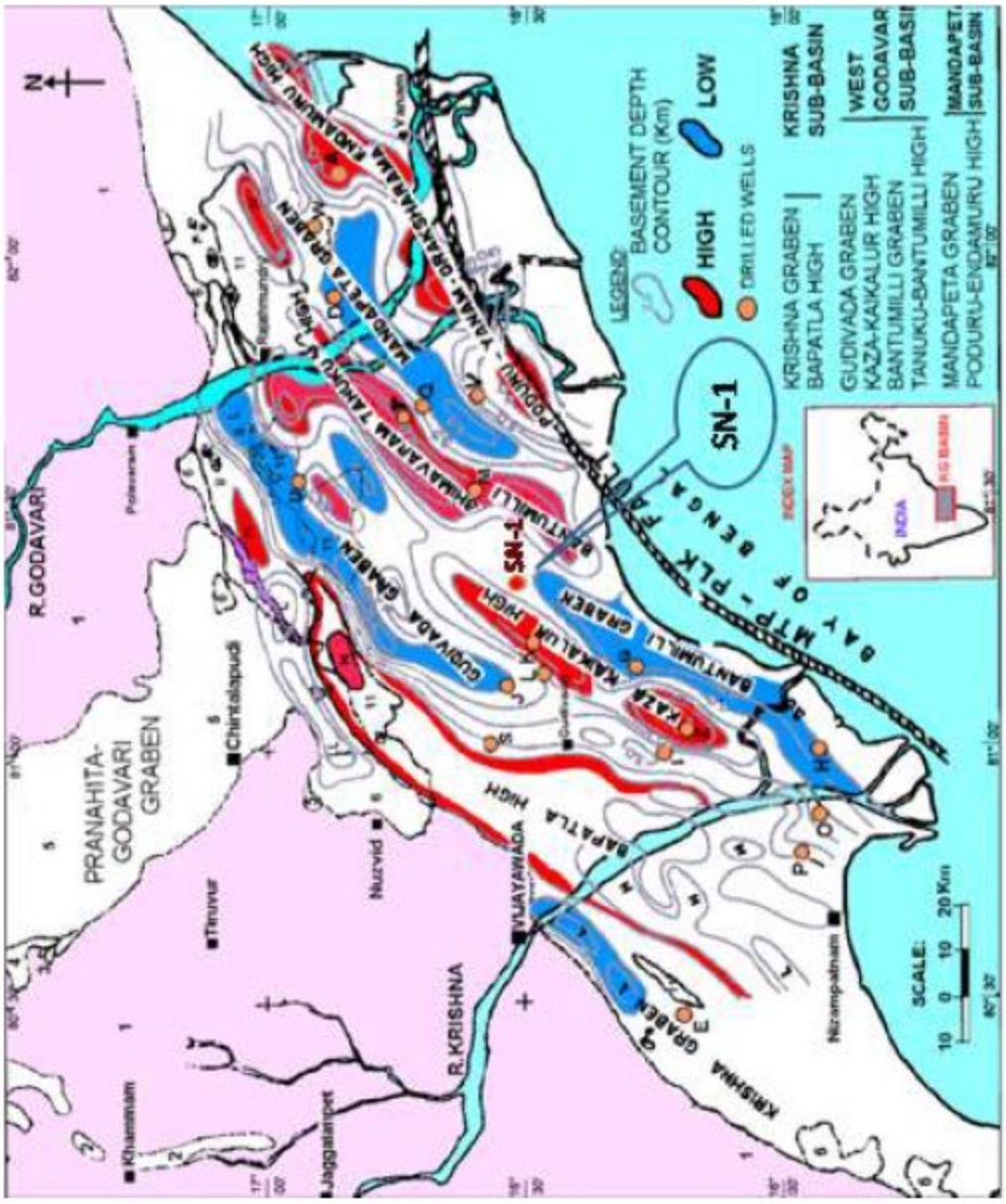


Fig. Tectonic map of the basin:



4. PHYSIOGRAPHY AND ACCESSIBILITY OF THE AREA

The general gradient of the area is toward the east and southeast. The Godavari and Krishna Rivers form the major deltas in the area. The Krishna delta is a fluvial-dominated elongate and constructive type, and the Godavari delta is lobate and partially affected by wave action. The shelf is narrow near the river mouths and widens in the bay areas. The climate is hot and humid with temperatures reaching up to 42 degrees Celsius (°C) during the summer. The mean daily temperature varies between 35°C and 40°C during the summer and between 25°C and 30°C during the winter. Widespread rains with occasional cyclonic storms occur during the period from June to August due to the southwest monsoon and during the period from October to December due to the northeast monsoon. The average annual rainfall is about 1,250 millimeters. The nearest international airports are located in the cities of Chennai (Madras) and Hyderabad. The cities of Vijayawada and Rajahmundry, at distances of 150 kilometers and 100 kilometers to the west and east, respectively, also offer air connectivity. Narsapuram/Narsapur and Machilipatnam are important nearby towns. Visakhapatnam (250 kilometers) is a major port city with ship repair and cargo handling facilities while Kakinada (150 kilometers) is the nearest seaport with all facilities.

The ONGC HPHT PLQP is located approximately 297 km away, the ONGC OGT Mallavaram facility is 278 km away, and the ONGC Odalarevu Onshore Terminal is 251 km away.

5. A3 DISCOVERY AND FIELD DESCRIPTION

5.1. A3-2 DISCOVERY AND FIELD DISCRIPTION

The A3-2 well is located in the KG-OSN-2009/3 exploration block within the Krishna sub-basin, offshore Andhra Pradesh, India. Operated by Cairn Oil & Gas (Vedanta Limited), the block lies in shallow waters with depths ranging from 5 to 200 m. The well was drilled in fulfillment of the minimum work program, targeting Mesozoic rift play objectives identified through extensive 2-D and 3-D seismic surveys supported by gravity and magnetic data.

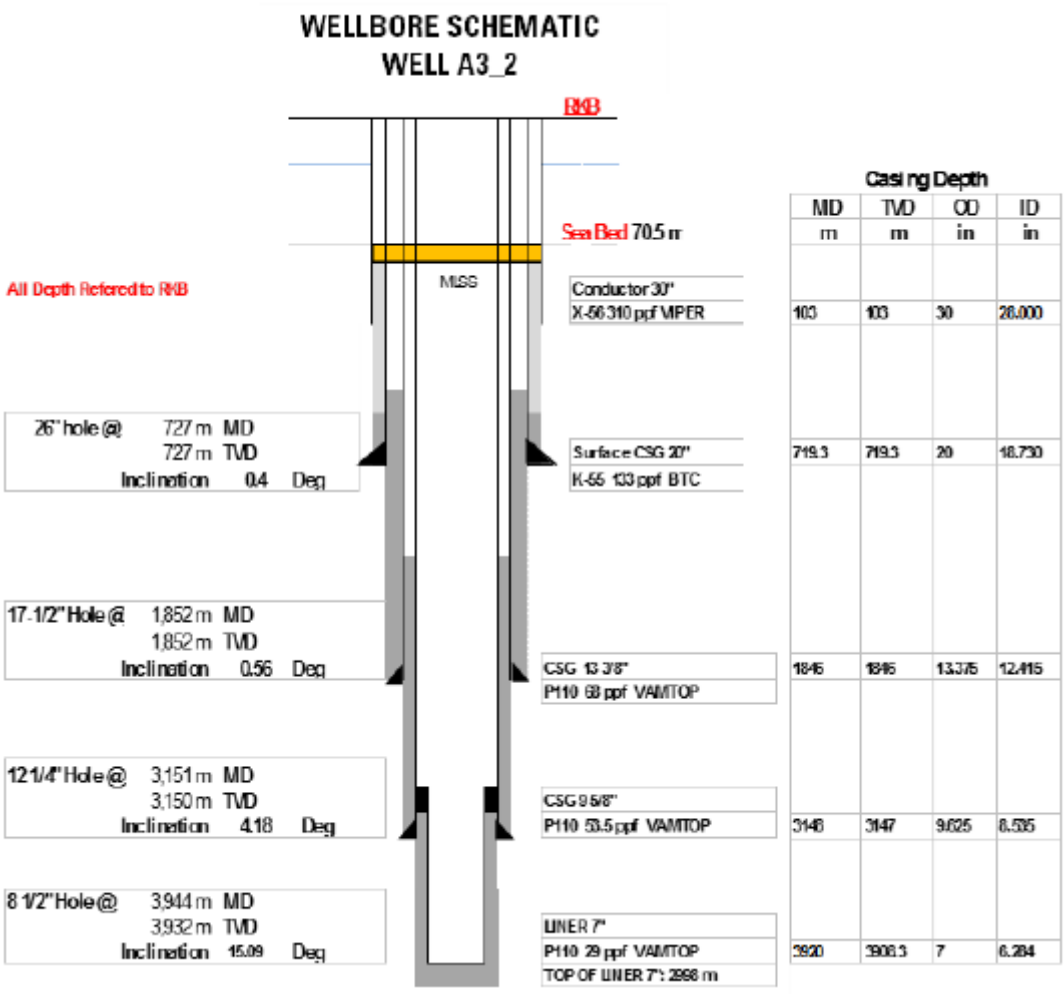
The well is situated about 9 km east of Nasri-1 in the West Godavari sub-basin. It was drilled vertically to a total depth of 3,944 m TVDRT, testing both the Top Mesozoic (Syn-rift) and the Mesozoic Lower (Early-rift) intervals. The primary Syn-rift target was encountered at 3,338 m TVDRT and the Early-rift at 3,841 m TVDRT.

Wireline logging, MDT sampling, and a Drill Stem Test were performed. Three hydrocarbon-bearing zones were identified within the Syn-rift section, with MDT samples confirming the presence of oil, gas, and water. Production testing in two zones showed gas flow rates of 30–80 MSCFD and formation water with traces of oil.

The Early-rift section, characterized by siltstones and interbedded claystones, exhibited resistivity anomalies suggesting hydrocarbons, although no flow testing was conducted. This zone remains an upside target for future appraisal.

5.1.1. Drilling and Well Completion

Key information regarding the drilled wells has been collated and presented herein. The adjoining figures, wherever shown, illustrate the well construction diagram and the litho-column information for key wells. Other well statics, such as kelly bushing reference depth, water depth, and drilled and logged depths (including well coordinates) are also provided.



5.1.2. Well Logging and Formation Evaluation

The well logs of all discovery wells as well as selected key wells in the contract area were reviewed. The logs recorded in various open-hole sections along with casedhole logs and information from conventional and other wireline formation test data are presented in this docket. The availability of key input reports, such as well completion reports (WCR) and formation evaluation reports (FER), was checked. Reservoir parameters of interesting zones and results of the tested zone(s) are included in this report. Log motifs of tested/interesting zones of key wells are also appended.

5.1.2.1. Well completion and log evaluation reports availability

WCR/FER availability	Spud date	KB	Drilled depth
Only WCR available	04.28.2018	47.4 m	3944 m MDRT

5.1.2.2. Well logs acquired

Drill hole size (inch) and well logs recorded

12.25 SS-PPCGR (1847.4 - 3158.3 m)
MDT-GR (2196.3 - 3136.6 m)
8.50 ADTNEXTGR (3153 - 3942.87 m)
SS-DOBMI-PPC-GR (3153 - 3945.16 m)
MDT-GR (3356.1 - 3386.7 m)
MDT-GR (3356.1 - 3714.6 m)
MDT-GR (3626.8- 3907.7 m)
MSCT-GR (3356 - 3730 m)
MSCT-GR (3330 -3910 m)
ZVSP-GR (70.1 -3935 m)

5.1.3. Well Testing and Workover History

5.1.3.1. Drill Stem Test (DST)

Zone-1: DST#1A and 1B

Testing of Zone-1 was conducted in two stages (DST#1A and DST#1B) due to mechanical issues during DST#1A. The total perforated interval was 56.5 m, covering depths from 3610 to 3715 m MDBRT. DST#1A recovered minimal mud volume before being curtailed, while DST#1B achieved gas flow rates of 33–80 MSCFD with a gas specific gravity of 0.73 over 68 hours at tubing head pressures below 100 psi. No oil or condensate was observed at surface, but increasing wellbore temperature suggested fluid influx, likely gas condensate based on MDT results, which indicated no water production.

The formation showed low permeability, estimated between 0.8 and 1.5 millidarcies, and a low effective permeability range of 80–150 nanoDarcy, suggesting a very tight reservoir. Initial pressures were higher than MDT values, consistent with underbalance during MDT sampling.

Parameter	Value	Unit
Initial Reservoir Pressure (Pi) (at gauge depth) (P* from DST 1A)	7726	psia
Initial Reservoir Pressure (Pi) (extrapolated to mid perf, assuming mud column of 12.5 ppg)	7947	psia
Pi range (Extrapolated to mid perf)	7604 to 8058	psia
Temperature (Last Recorded Build Up temperature) (Gauge) (DST 1B)	303.8	degF
K.H range	0.014 to 0.028	md.ft
K range	0.00008 to 0.00015	md
Skin	0 to -1.7	--

Zone-2: DST#2

Zone-2 was perforated over a total of 60 m, covering two intervals between 3367–3397 m and 3490–3520 m MDBRT. The perforations were shot underbalanced using base oil as cushion fluid. Following perforation, the well exhibited very low self-flow rates, requiring nitrogen and coil tubing assistance for well unloading. Fluid cleanup indicated water production with a salinity of approximately 30,000 ppm and traces of oil.

5.1.4. Reservoir Engineering Studies and Analysis

Key reservoir engineering datasets, wherever available, were collated and are presented under various data genres. In a comprehensive data presentation, the results from well tests, formation dynamics tests, reservoir pressure buildup studies, and pressure-volume-temperature (PVT) data/results are included.

5.1.4.1. Formation dynamics tests

Test Point Table – 12.25” section

File	MD (m)	TVD (m)	Res. Cell Temp (DegF)	Mud Pressure (psi)		Equivalent MP in g/cc	Last BUP (psia)	Formation Pressure (psia)	Equivalent FP in g/cc	Mob.	Pretest Type	Pretest Code	Remarks (Please mention all the details including anomolous events)
				Before	After								
2	2196.4	2196.20	208.1	4237.70	4238.26	1.36	NA	NA	NA	NA	VD	D	
3	2196.31	2196.10	210.4	4239.00	4240.28	1.36	3090.13	3090.13	0.99	0.23	VD	G	Couldn’t sustain pumping
6	2196.51	2196.29	213.5	4239.66	4244.91	1.36	3087.05	3087.05	0.99	101.05	VD	G	Pumped 12.9ltrs. FID water
7	2233.90	2233.68	213.5	4322.83	4329.32	1.36	3167.11	3167.11	1.00	157.66	VD	G	Pumped 46.4 Ltrs. Took Sample in MRSC and MPSR-Bottle 1.
8	2486.86	2486.57	219.9	4802.78	4803.32	1.36	NA	NA	NA	NA	VD	L	
9	2486.96	2486.68	222.0	4804.04	4804.27	1.36	NA	NA	NA	NA	VD	L	
10	2486.66	2486.38	223.9	4801.49	4802.39	1.36	NA	NA	NA	NA	VD	L	
11	2715.70	2715.32	231.3	5248.31	5249.54	1.36	NA	NA	NA	NA	VD	D	
12	2715.80	2715.41	233.7	5249.30	5249.18	1.36	NA	NA	NA	NA	VD	D	
13	2715.60	2715.22	234.9	5247.67	5247.40	1.36	NA	NA	NA	NA	VD	L	
14	2943.75	2943.06	245.9	5678.97	5681.13	1.36	NA	NA	NA	NA	VD	L	Tried Pumping to seal.
15	2943.85	2943.16	248.9	5681.43	5681.91	1.36	NA	NA	NA	NA	VD	L	Tried Pumping to seal.
16	2943.65	2942.96	250.7	5679.96	5680.96	1.36	NA	NA	NA	NA	VD	L	Tried Pumping to seal.
17	2943.95	2943.26	251.7	5677.47	5679.15	1.36	NA	NA	NA	NA	VD	L	
18	3101.60	3100.57	259.7	5986.07	5986.22	1.36	NA	NA	NA	NA	VD	L	
19	3040.00	3039.10	262.6	5853.55	5856.41	1.35	NA	NA	NA	NA	VD	L	TEST : Tried Pumping to seal.
20	2715.8	2715.42	257.8	5229.38	5231.89	1.35	NA	NA	NA	NA	VD	L	TEST: Tried Pumping to seal.
21	3136.4	3135.29	262.7	6054.75	6054.74	1.36	NA	NA	NA	NA	VD	L	Tried Pumping to seal.
22	3136.6	3135.48	264.1	6054.27	6054.55	1.36	NA	NA	NA	NA	VD	L	Tried Pumping to seal.
23	1800.65	1800.48	212.2	3475.15	3478.15	1.36	NA	NA	NA	NA	VD	D	**Casing Check.**
24	3101.6	3100.57	259.6	5988.03	5988.04	1.36	NA	NA	NA	NA	VD	L	Repeat post casing check
25	3101.5	3100.47	261.7	5988.09	5987.82	1.36	NA	NA	NA	NA	VD	L	
26	3101.7	3100.68	263.0	5988.10	5987.83	1.36	NA	NA	NA	NA	VD	L	
27	3136.4	3135.28	264.5	6058.88	6058.72	1.36	NA	NA	NA	NA	VD	L	
28	3136.3	3135.19	265.7	6058.28	6057.78	1.36	NA	NA	NA	NA	VD	L	
29	3136.5	3135.38	267.6	6057.9	6056.84	1.36	NA	NA	NA	NA	VD	L	
30	2233.9	2233.67	232.3	4307.5	4311.35	1.36	3166.64	3166.64	1.00	172.96	VD	G	Re-attempt to confirm seal. Good Test

Test Point Table - 8.5” section

Probe Stations													
RUN-3													
File	MD (m)	TVD (m)	Res. Cell Temp (DegF)	Mud Pressure (psi)		Equivalent MP in PPG	Last BUP (psia)	Formation Pressure (psia)	Equivalent FP in PPG	Mob.	Pretest Type	Pretest Code	Remarks (Please mention all the details including anomolous events)
				Before	After								
3	3386.7	3383.9	288.5	6816.75	6822.33	1.41	6824.65	6824.65	11.83	NA	VD	G	pressure close to/above mud hydrostatic
4	3383.8	3381.1	288.9	6811.27	6814.37	1.41	6819.82	-	-	NA	VD	D	No stable pressure; pressure above/ close to mud hydrostatic
5	3368.8	3366.2	288.7	6788.95	6789.29	1.41	6790.17	6790.17	11.83	NA	VD	G	pressure close to/above mud hydrostatic
6	3376.3	3373.7	288.7	6802.55	6802.13	1.41	6821.32	6821.32	11.86	NA	VD	G	pressure close to/above mud hydrostatic
8	3371.8	3369.2	289.4	6791.61	6793.85	1.41	6796.12	6796.12	11.83	0.2	VD	G	Medium confidence Pressure
9	3360.9	3358.4	289.6	6770.91	6773.15	1.41	6775.12	-	-	NA	VD	D	pressure close to/above mud hydrostatic
10	3356.1	3353.6	289.3	6760.73	6763.68	1.41	6765.67	6765.67	11.83	NA	VD	G	pressure close to/above mud hydrostatic
RUN-4													
4	3368.8	3366.2	279.7	7028.77	7031.64	12.25	7031.77	7031.77	12.25	NA	VD	L	No stable pressure; pressure above/ close to mud hydrostatic
3	3371.8	3369.2	278.7	7026.27	7034.02	12.23	NA	NA	NA	NA	VD	L	pressure close to/above mud hydrostatic
9	3434.1	3430.9	286.5	7153.95	7158.34	12.23	7158.09	7158.09	12.24	NA	VD	L	pressure close to/above mud hydrostatic
10	3436.8	3433.6	286.7	7165.9	7166.74	12.24	7167.15	7167.15	12.24	NA	VD	L	
8	3456.3	3452.9	286.6	7195.4	7202.22	12.22	NA	NA	NA	NA	VD	L	pressure close to/above mud hydrostatic
15	3491.1	3487.35	291.2	7271.73	7273.86	12.23	7276.79	7276.79	12.24	0.07	VD	G	pressure close to/above mud hydrostatic

RUN-4													
File	MD (m)	TVD (m)	Res. Cell Temp (DegF)	Mud Pressure (psi)		Equivalent MP in PPG	Last BUP (psia)	Formation Pressure (psia)	Equivalent FP in PPG	Mob.	Pretest Type	Pretest Code	Remarks
16	3508.21	3504.29	291.3	7303.69	7307.45	12.22	NA	NA	NA	NA	VD	L	
13	3512.8	3508.8	288.7	7317.02	7318.63	12.23	7318.1	7318.1	12.23	NA	VD	L	pressure close to/above mud hydrostatic
17	3714.6	3708.8	299.7	7712.56	7719.52	12.2	7719.17	7719.17	12.21	13.62	VD	L	
18	3712.3	3706.5	301.3	7714.77	7720.19	12.21	7717.89	7717.89	12.21	1.5	VD	G	Could not sustain pumping.
20	3705.8	3700	301.4	7700.59	7705.48	12.21	NA	NA	NA	NA	VD	D	
21	3703.6	3697.9	301.3	7696.95	7699.47	12.21	NA	NA	NA	NA	VD	L	

Saturn													
RUN-3													
Pretest	File	MD (m)	TVD (m)	Res. Cell Temp (DegF)	Mud Pressure Before (psi)	Mud Pressure After (psi)	Equivalent MP in PPG	Last BUP (psia)	Formation Pressure (psia)	Equivalent FP in PPG	Mob. (mD/cP)	Pretest type	Pretest Code	Remarks
5	7	3383.8	3381.1	289.6	6814.09	6818.62	1.41	6853.72	6853.72	11.89	1.28	NA	NA	Water+Oil+ possibly OBM filtrate Sample captured in MPSR
RUN-4													
4	7	3356.1	3353.67	288.7	6997.47	7001.04	12.24	6858.30	6858.30	11.99	0.19	NA	NA	Oil+Water Sample captured 1 MPSR
3	6	3368.8	3366.3	287.4	7030.27	7032.03	12.25	7031.66	7031.66	12.25	0.31	NA	NA	Only Pretest
8	11	3436.8	3433.58	292.2	7158.33	7161.19	12.23	NA	NA	NA	NA	NA	NA	Unable to seal
9	12	3437.5	3434.27	291.7	7162.23	7159.47	12.23	NA	NA	NA	NA	NA	NA	Unable to seal
11	14	3499.1	3495.27	296.2	7288.40	7290.55	12.23	7286.77	7286.77	12.23	0.22	NA	NA	Oil+Water Sample in 2 MPSR's
16	19	3712.3	3706.46	306.0	7717.3	7718.18	12.21	7478.75	7478.75	11.83	0.14	NA	NA	Gas+Oil Sample in 2 MPSR's.
19	22	3703.6	3697.87	306.9	7697.54	7699.15	12.21	7689.15	7689.15	12.20	0.15	NA	NA	Gas+Oil Sample in MPSR.
RUN-5													
1	3	3856.8	3847.3	314.7	7987.23	8007.38	12.18	NA	NA	NA	NA	NA	NA	Tight Test
2	4	3907.7	3896.5	316.9	8109.22	8113.70	12.21	NA	NA	NA	NA	NA	NA	Tight Test
3	5	3870.2	3860.3	318.6	8022.44	8034.60	12.19	NA	NA	NA	NA	NA	NA	Tight Test
4	6	3755.0	3748.5	315.3	7778.09	7795.01	12.17	NA	NA	NA	NA	NA	NA	Tight Test
5	7	3626.8	3621.9	304.8	7532.72	7538.86	12.20	7528.86	7528.86	NA	2.17	NA	NA	Gas+Oil Sample in 2 MPSR.

5.1.4.2. PVT

Formation: Mesozoic rift| Interval(m.): 3712 m | Sample No.: Sample 1.06
C1: 81.97 %| C2: 8.42 %| C3: 2.45 %| iC4: 0.37 %| nC4: 0.55 %| iC5: 0.19 %| nC5: 0.07 %| C6+: 1.58 %| Carbon-dioxide: 4.32 %| Nitogen+Oxygen: 0.07 %| Sp.Gr.: 0.682|Molar Mass: 21.40

5.1.4.3. Geothermal gradient (from wireline logs)

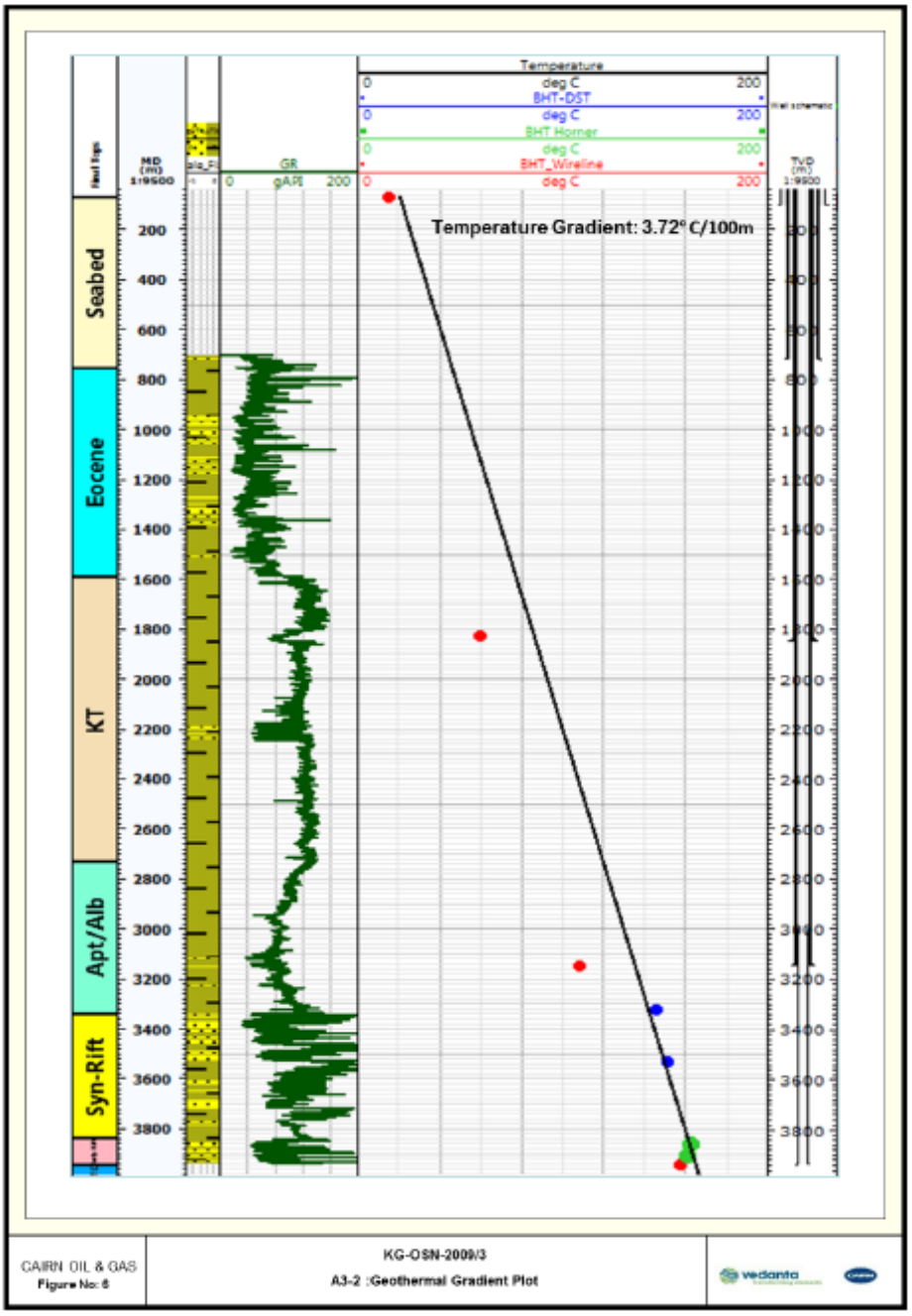
Formation: Not specified | Depth of measurement: 70.5 m | Temperature: 15.0°C |
Formation: KT Boundary | Depth of measurement: 1826.8 m | Temperature: 60.0°C |
Formation: Albian | Depth of measurement: 3149.9 m | Temperature: 108.0°C |
Formation: Mesozoic rif | Depth of measurement: 3317.0 m | Temperature: 145.6°C |
Formation: Mesozoic rif | Depth of measurement: 3523.0 m | Temperature: 151.0°C |
Formation: Zone 3| Depth of measurement: 3933.5 m | Temperature: 154.4°C |
Formation: Zone 3 | Depth of measurement: 3933.5 m | Temperature: 157.2°C |
Formation: Albian | Depth of measurement: 3383.9 m | Temperature: 143.3°C |
Formation: Zone 3 | Depth of measurement: 3708.7 m | Temperature: 152.8°C |
Formation: Zone 3 | Depth of measurement: 3896.5 m | Temperature: 160.6°C |
Formation: Zone 3 | Depth of measurement: 3892.8 m | Temperature: 160.6°C |
Formation: Zone 3 | Depth of measurement: 3922.8 m | Temperature: 161.1°C |

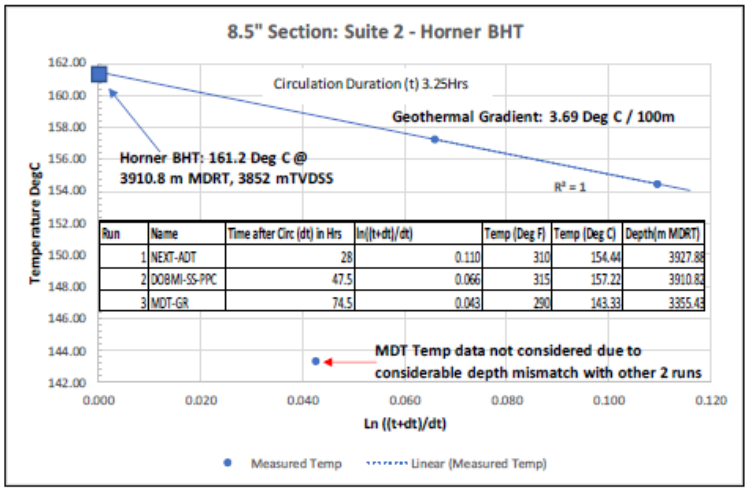
5.1.4.4. Other reservoir studies

Thermal Maturity and Maceral Analysis

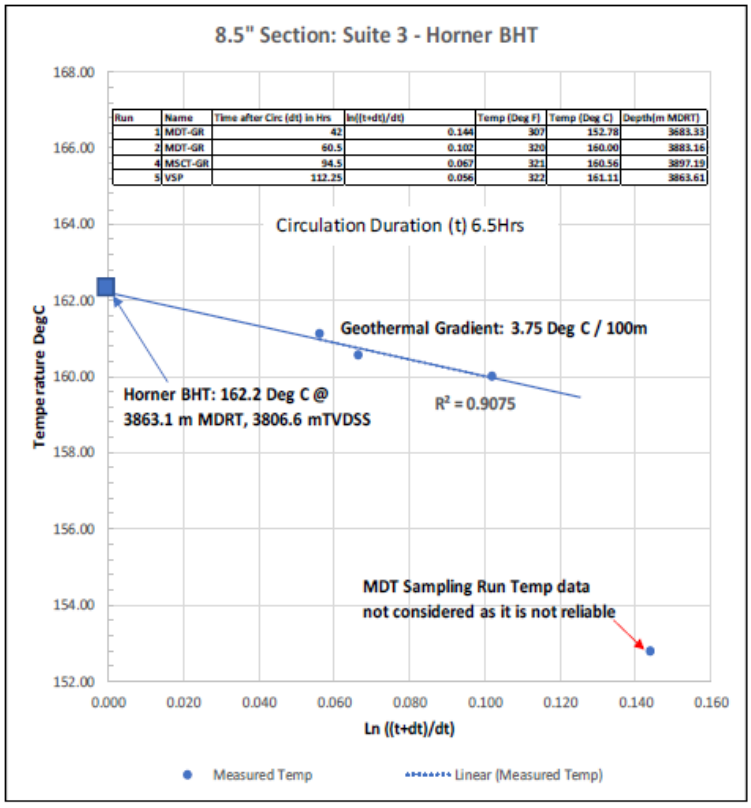
A Stratigraphic Reconstruction of Bulk Volatile Chemistry from Fluid Inclusions in A3-2
Fluid Analysis Report
Mercury Injection Capillary Pressure Report

5.1.4.5. Annexure to Reservoir Engineering studies/analysis





Run	Name	Time after Circ (dt) in Hrs	ln((t+dt)/dt)	Temp (Deg F)	Temp (Deg C)	Depth(m MDRT)
1	NEXT-ADT	28	0.110	310	154.44	3927.88
2	DOBMI-SS-PPC	47.5	0.066	315	157.22	3910.82
3	MDT-GR	74.5	0.043	290	143.33	3355.43



Run	Name	Time after Circ (dt) in Hrs	ln((t+dt)/dt)	Temp (Deg F)	Temp (Deg C)	Depth(m MDRT)
1	MDT-GR	42	0.144	307	152.78	3683.33
2	MDT-GR	60.5	0.102	320	160.00	3883.16
4	MSCT-GR	94.5	0.067	321	160.56	3897.19
5	VSP	112.25	0.056	322	161.11	3863.61

5.1.5. Geology and Reservoir Description

The geology of the area was comprehensively reviewed using correlations, sections, and maps. The well correlation, seismic sections, top structure, seismic attribute/amplitude, and net sand/pay maps were used to illustrate the magnitude and distribution of key reservoir properties in and around the discovered gas pools (accumulations). The local tectonic setting and geological section of the area, wherever available, are also provided. These maps/sections are sequentially shown field-wise and reservoir-unit-wise on figures, each of which is appropriately titled and illustrated in the following section.

5.1.5.1. Geological description

The Krishna-Godavari Basin is a NE-SW trending pericratonic basin located along the eastern continental margin of India. It is characterized by an en-echelon half-graben system filled with thick sedimentary sequences ranging from the Permian to the Recent, making it one of India's most promising hydrocarbon provinces. The KG-OSN-2009/3 block, situated in the Nizamapatnam Bay area of the Krishna-Godavari Basin, covers an area of approximately 1,288 square kilometers. The A3-2 well was drilled within this block to evaluate the hydrocarbon potential of the Top Mesozoic (Syn-rift) reservoir play.

The geological evolution of the basin occurred in two main phases: an initial rift phase active during the Jurassic to Early Cretaceous, followed by a drift phase that extended from the Late Cretaceous to the Holocene. Structurally, the basin consists of a series of rotated half-grabens, arranged en-echelon and bounded by major cross-trends, as highlighted by gravity data interpretation. The current NE-SW tectonic orientation of the Krishna-Godavari Basin is orthogonal to the older NW-SE trend of the Permo-Triassic Pranhita-Godavari graben system, which is not clearly evident within the Krishna sub-basin where block KG-OSN is located.

5.1.6. Reservoir Properties and OHIP

Estimates of in-place volumes presented in this section have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

The volumetric method was used to estimate the original gas in place (OGIP) of certain fields evaluated herein. A review of selected geophysical data, in conjunction with well control and other relevant information, served as the basis for the structural interpretation of the fields. The geological interpretation provided by DGH was extensively reviewed and, where appropriate, adjusted.

Wireline electrical logs, radioactivity logs, wireline formation pressure tests, wireline fluid sample tests, and other data were acquired in wells drilled in the evaluated fields. When available, drill cuttings, hole cores, and sidewall cores were analyzed. These combined analyses of the well-log data were used to establish petrophysical properties. Estimates of OGIP were made using net pay isopach maps. These isopach maps were constructed using geological depth structure maps and petrophysical analyses of the well-log data.

Following is the summary of the average reservoir parameters and estimates of OGIP. Seismic sections, log motifs, structure and isopach maps are in the annex bound with this information docket.

RESERVOIR PARAMETERS and ORIGINAL GAS in PLACE
as of
JANUARY 1, 2025
for the
A3-2 DISCOVERY
of
KG/OSDSF/A3/2025 CONTRACT AREA

	Reservoir Zone 1	Total
Low		
Area, acres	1,063	
Gas Formation Volume Factor, scf/rcf	0.0040	
Average Thickness, ft	77.2	
Average Porosity, %	11.00	
Average Water Saturation, %	56.00	
Original Gas in Place, $10^9 ft^3$	43.00	**43.00**
Original Gas in Place, 10^6 eq ton	1.08	**1.08**
Best		
Area, acres	2,199	
Gas Formation Volume Factor, scf/rcf	0.0038	
Average Thickness, ft	82.0	
Average Porosity, %	12.00	
Average Water Saturation, %	52.00	
Original Gas in Place, $10^9 ft^3$	120.63	**120.63**
Original Gas in Place, 10^6 eq ton	3.04	**3.04**
High		
Area, acres	3,731	
Gas Formation Volume Factor, scf/rcf	0.0030	
Average Thickness, ft	91.5	
Average Porosity, %	13.00	
Average Water Saturation, %	48.00	
Original Gas in Place, $10^9 ft^3$	332.52	**332.52**
Original Gas in Place, 10^6 eq ton	8.38	**8.38**

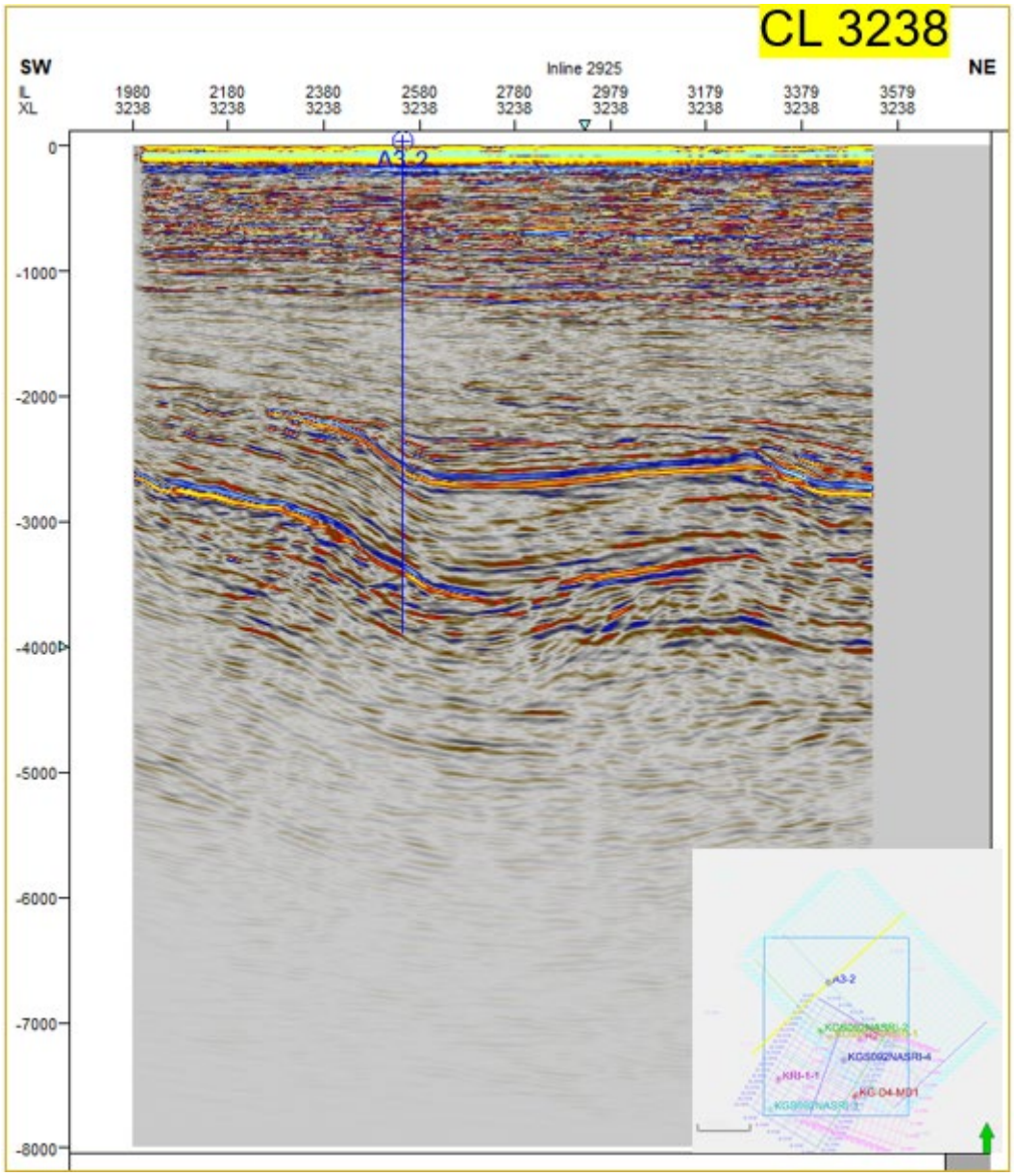
Note: Conversion used 10^9 scf equal to 0.02519 10^6 eq tone.

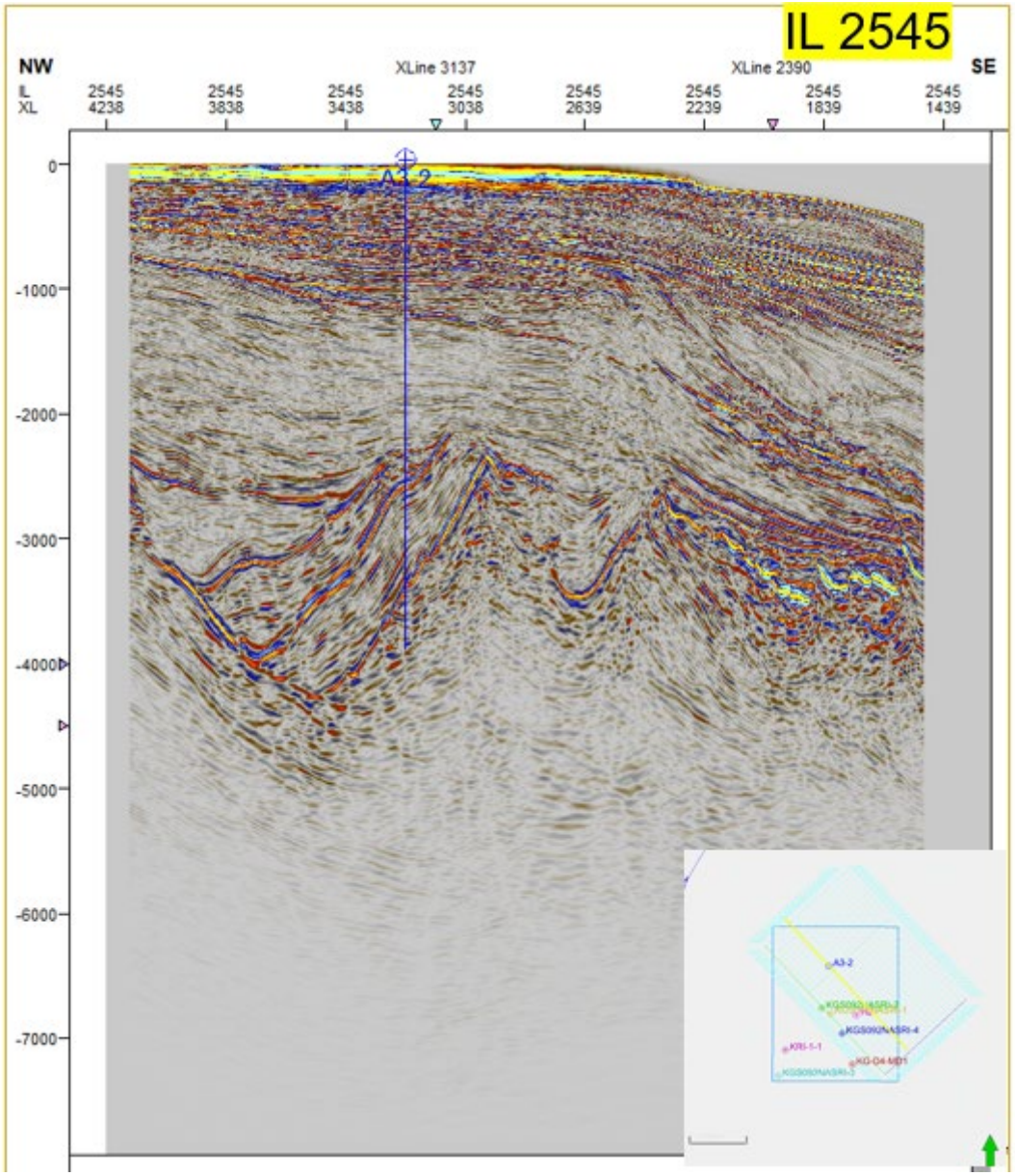
Volumes estimated by a Third Party

The operator has reported an in-place volume of 57.5 MMTOE (Best case).

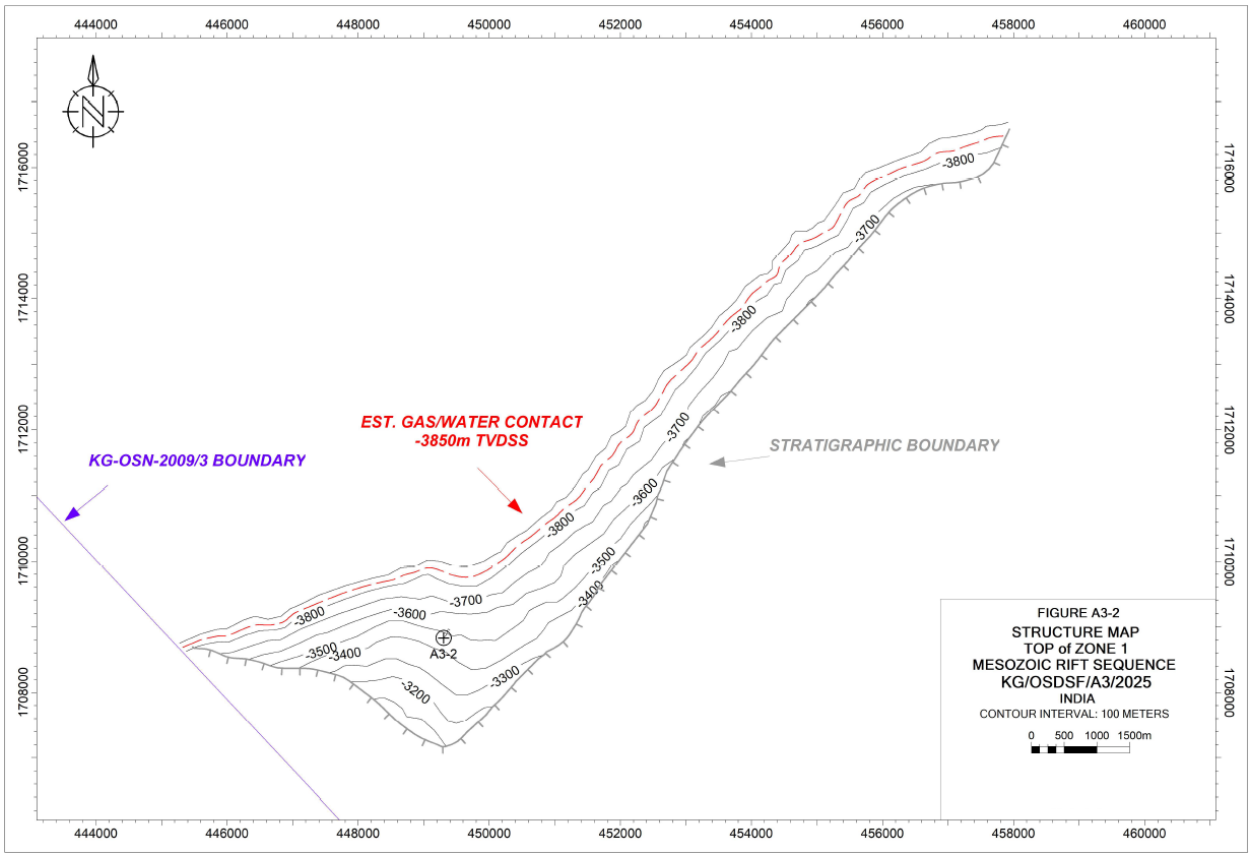
5.1.7. Annex

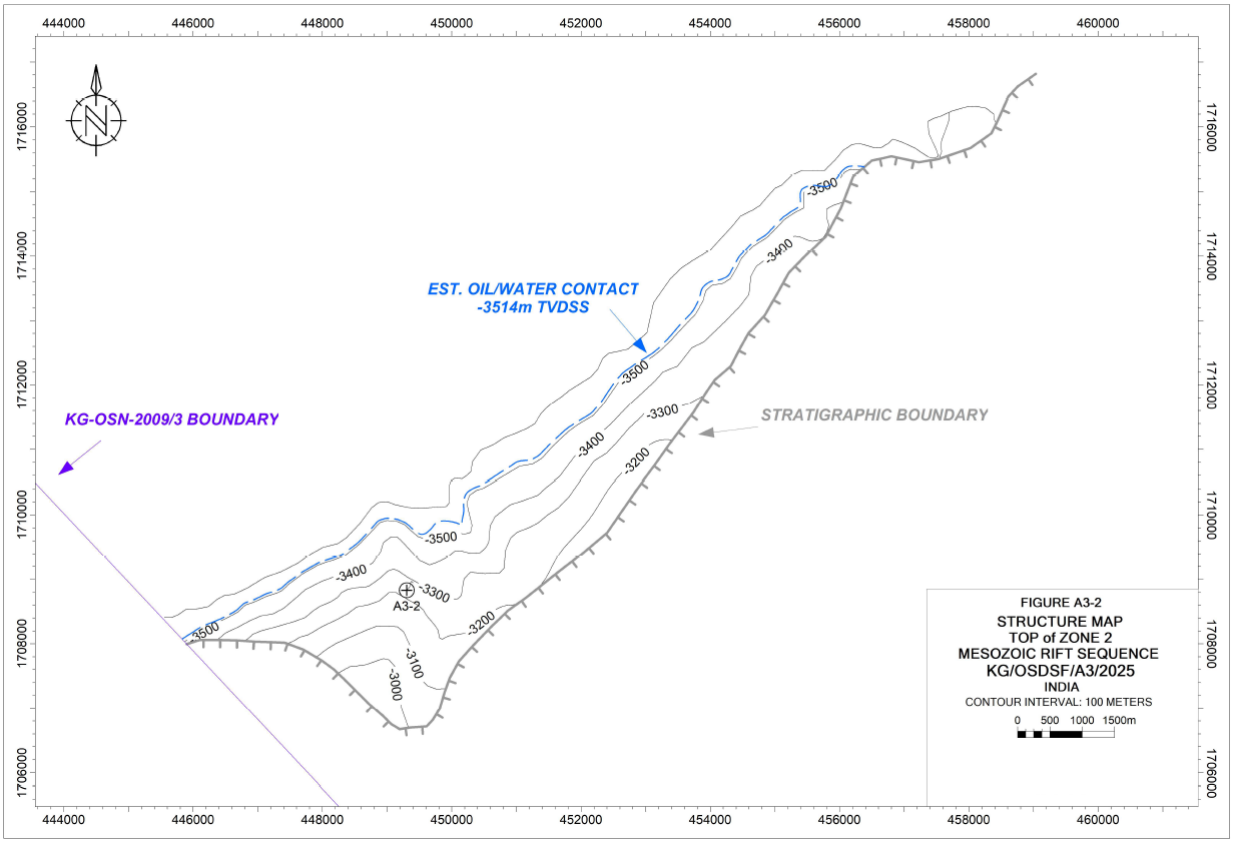
5.1.7.1. Seismic Sections

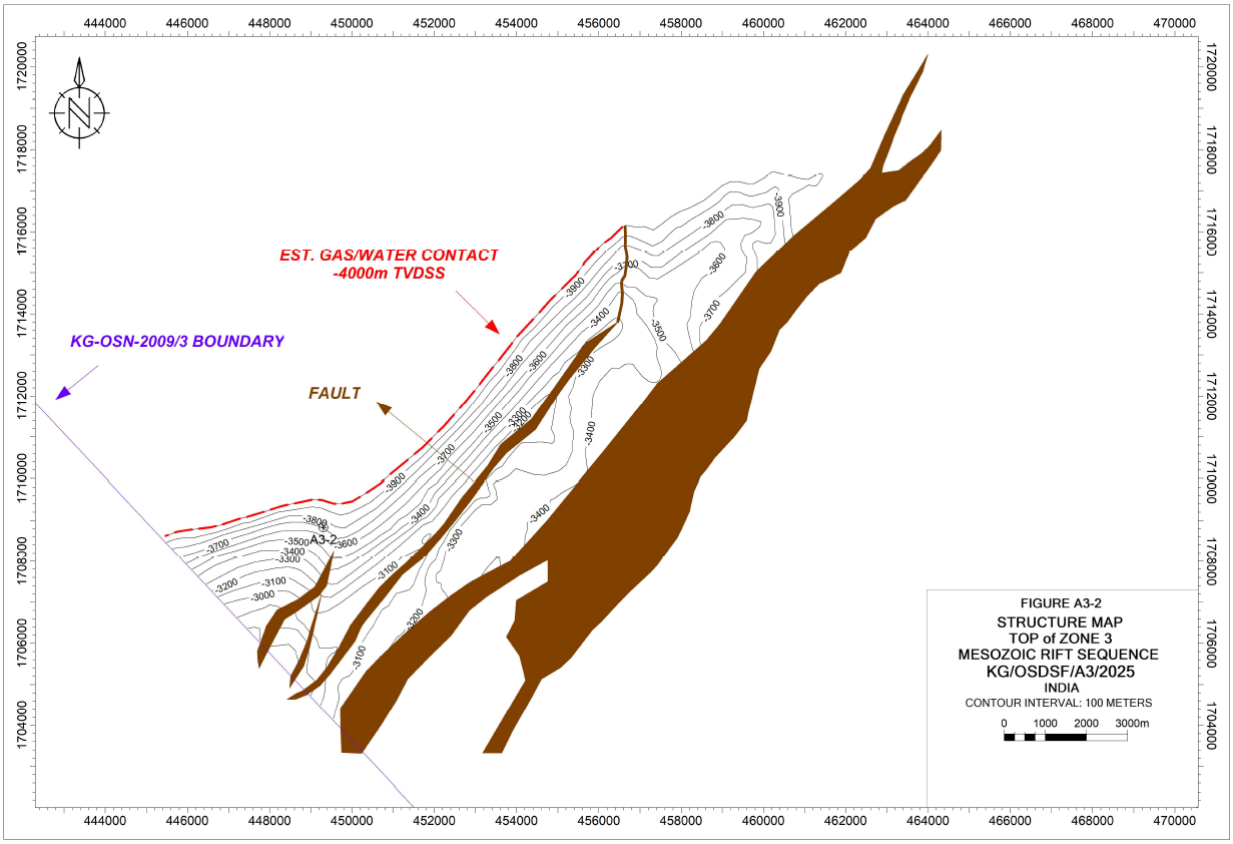



IL 2545
NW
SE
XLine 3137
XLine 2390
IL
XL
2545 4238
2545 3838
2545 3438
2545 3038
2545 2639
2545 2239
2545 1839
2545 1439
0
-1000
-2000
-3000
-4000
-5000
-6000
-7000
A3-2

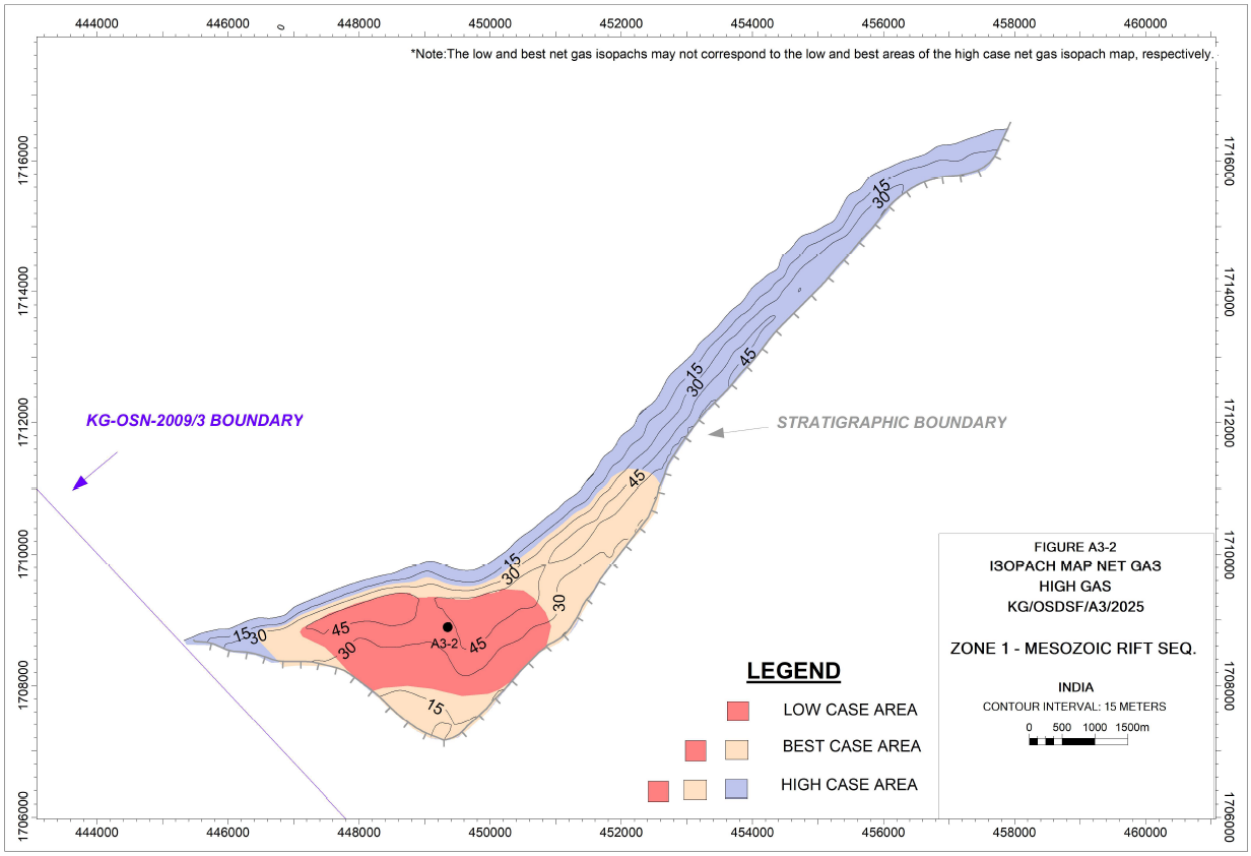
5.1.7.2. Structural Maps

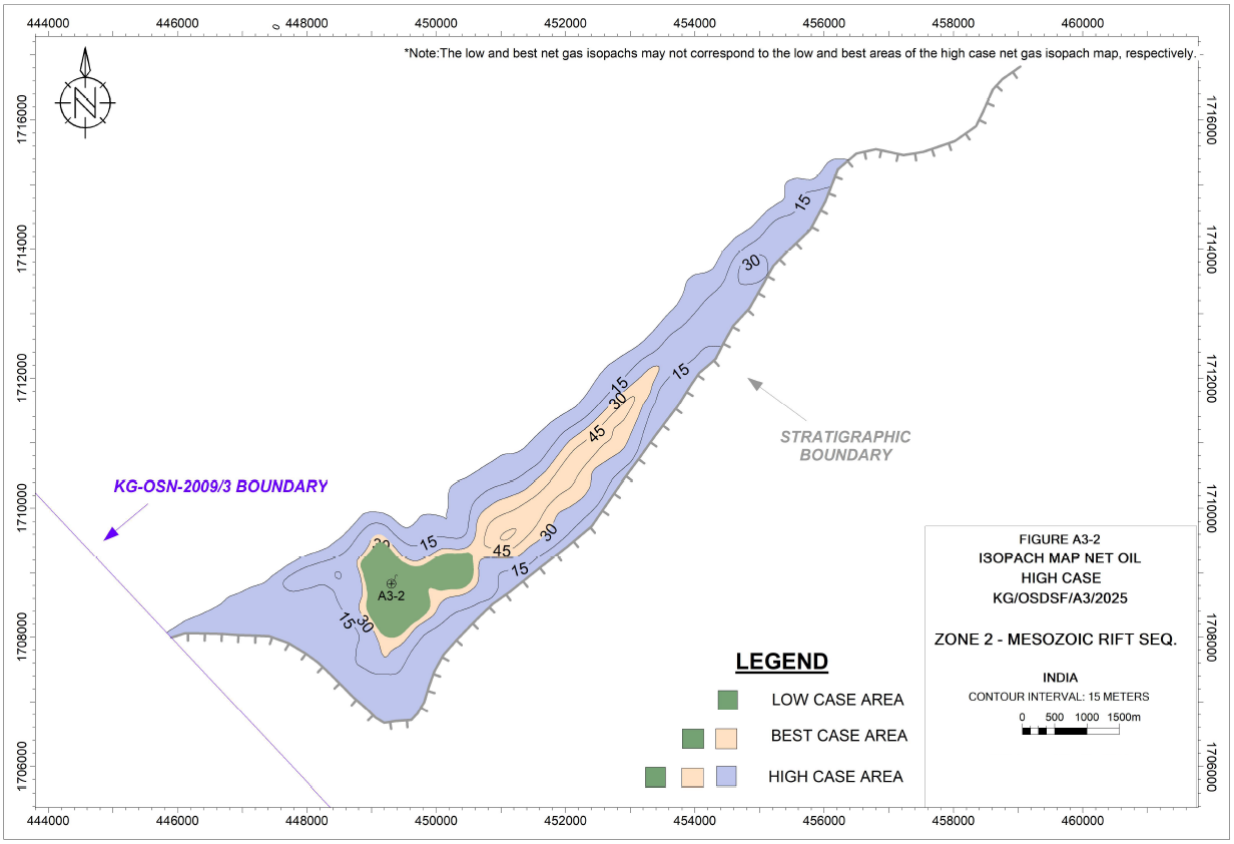


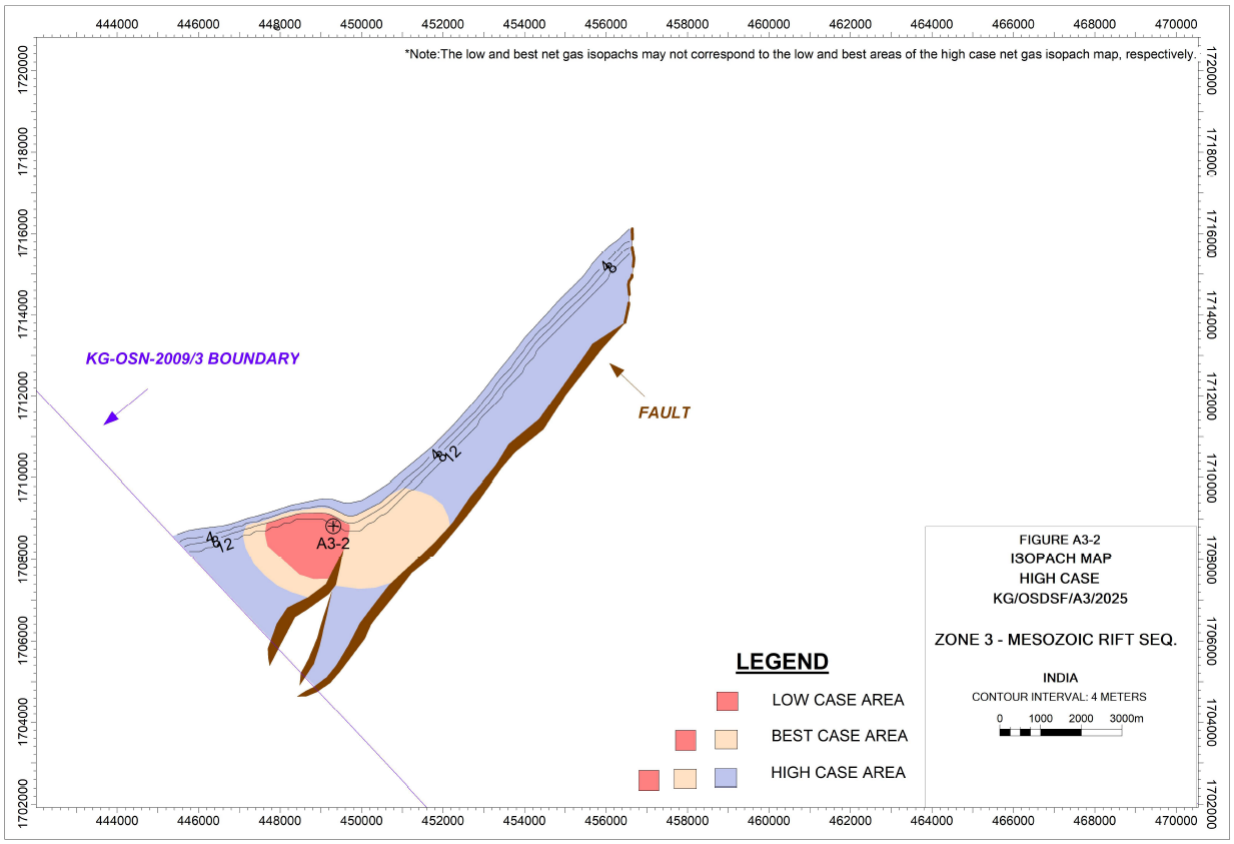

EST. OIL/WATER CONTACT
-3514m TVDSS
KG-OSN-2009/3 BOUNDARY
STRATIGRAPHIC BOUNDARY
A3-2
-3500
-3400
-3300
-3200
-3100
-3000
FIGURE A3-2
STRUCTURE MAP
TOP of ZONE 2
MESOZOIC RIFT SEQUENCE
KG/OSDSF/A3/2025
INDIA
CONTOUR INTERVAL: 100 METERS
0 500 1000 1500m


EST. GAS/WATER CONTACT
-4000m TVDSS
KG-OSN-2009/3 BOUNDARY
FAULT
A3-2
FIGURE A3-2
STRUCTURE MAP
TOP of ZONE 3
MESOZOIC RIFT SEQUENCE
KG/OSDSF/A3/2025
INDIA
CONTOUR INTERVAL: 100 METERS
0 1000 2000 3000m

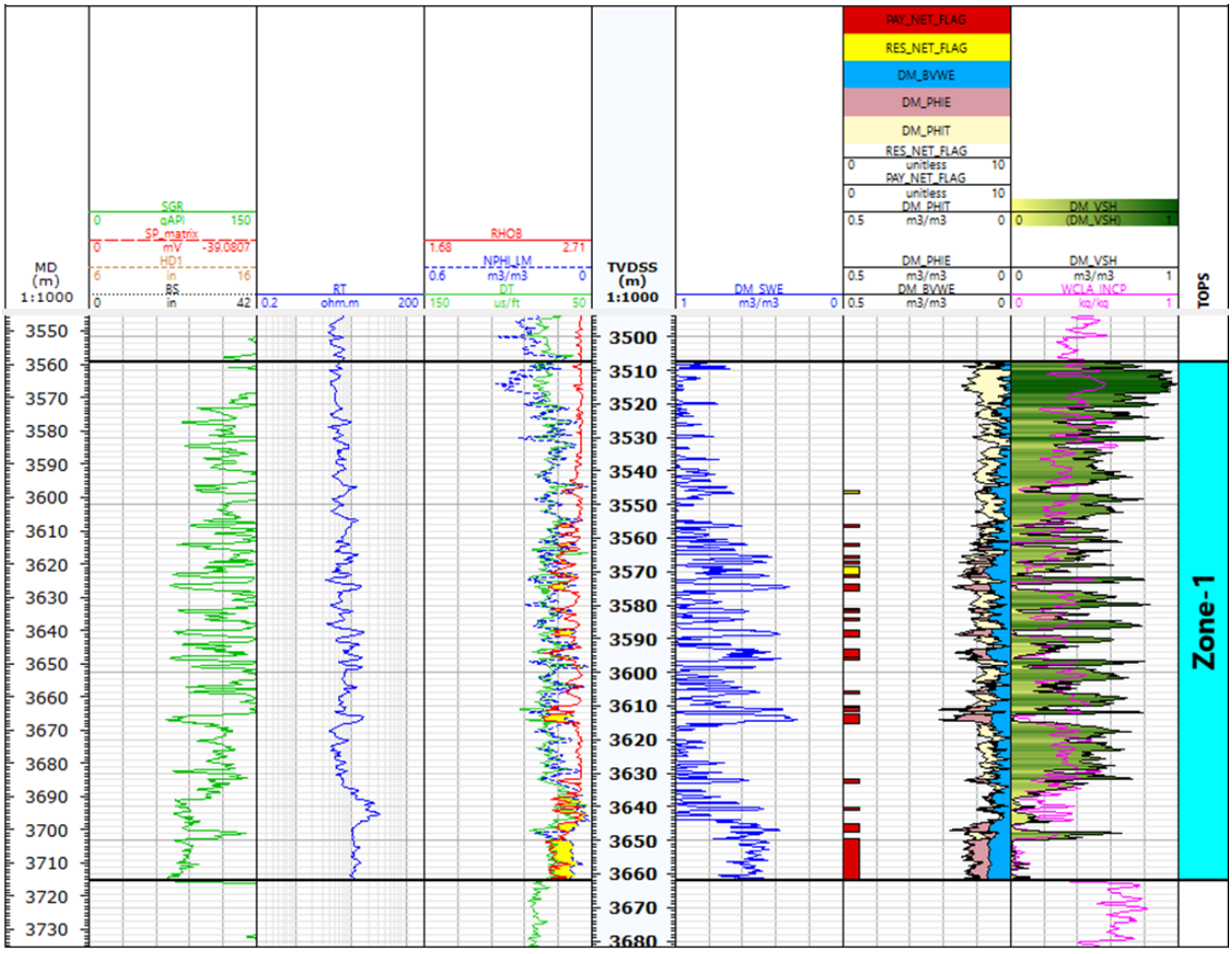
5.1.7.3. Isopach Maps

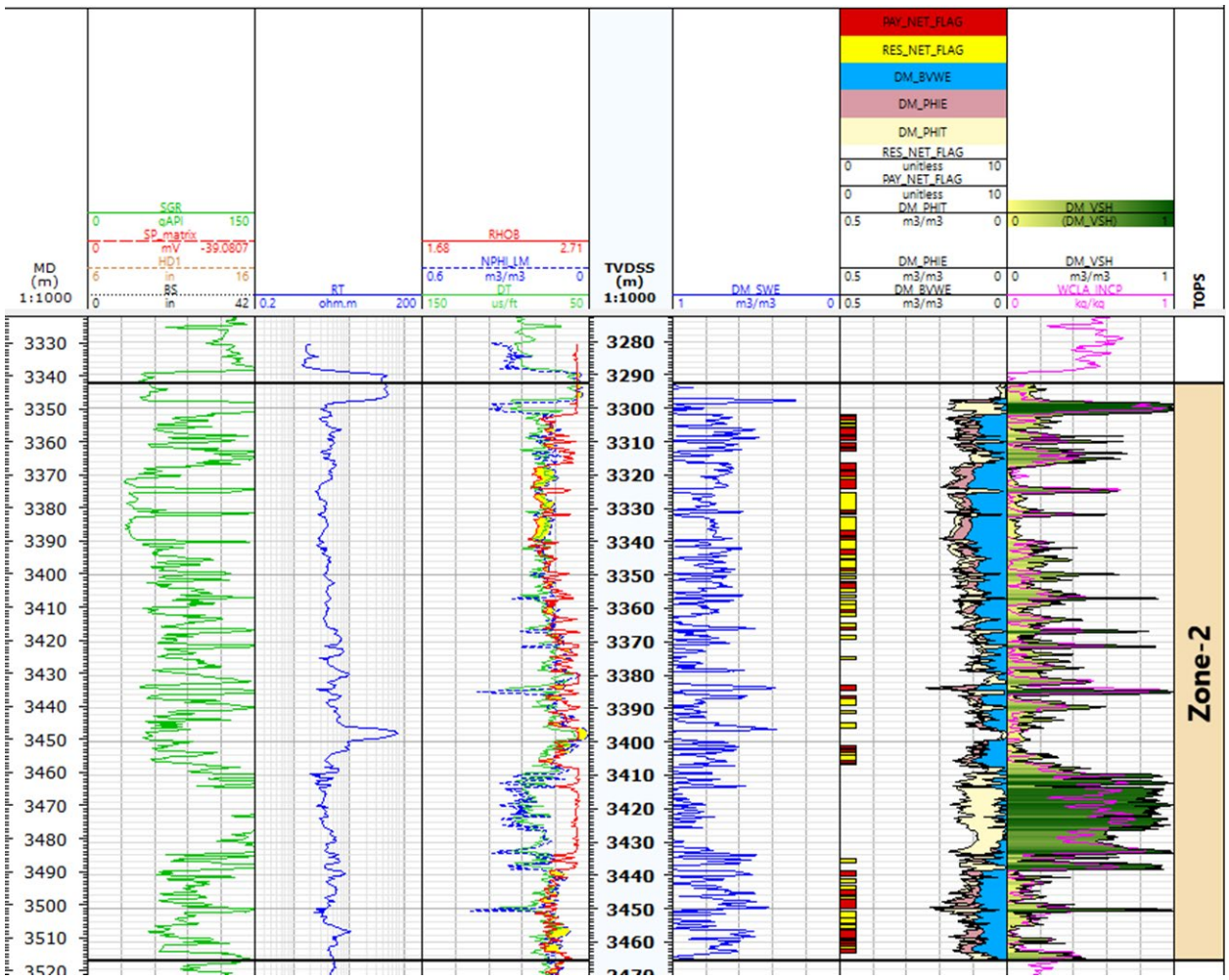


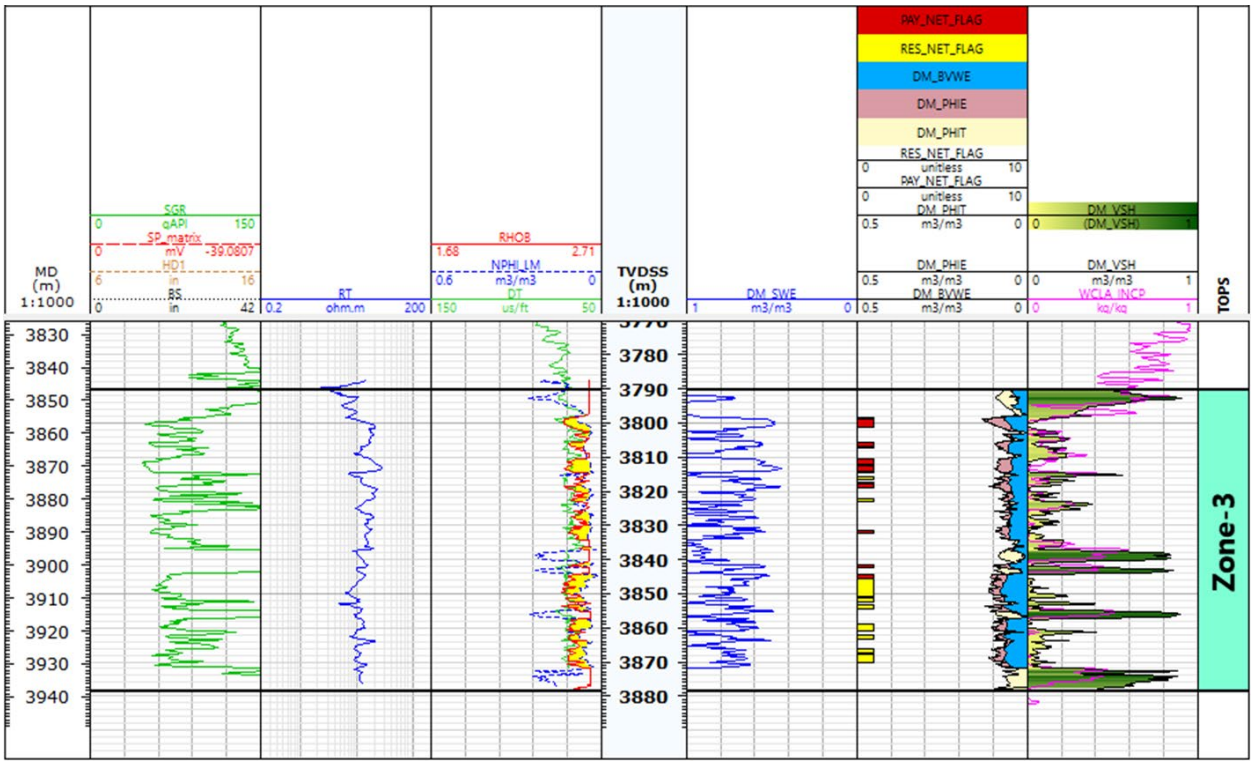

*Note:The low and best net gas isopachs may not correspond to the low and best areas of the high case net gas isopach map, respectively.
KG-OSN-2009/3 BOUNDARY
STRATIGRAPHIC BOUNDARY
A3-2
15
30
45
LEGEND
LOW CASE AREA
BEST CASE AREA
HIGH CASE AREA
FIGURE A3-2
ISOPACH MAP NET OIL
HIGH CASE
KG/OSDSF/A3/2025
ZONE 2 - MESOZOIC RIFT SEQ.
INDIA
CONTOUR INTERVAL: 15 METERS
0 500 1000 1500m


*Note:The low and best net gas isopachs may not correspond to the low and best areas of the high case net gas isopach map, respectively.
KG-OSN-2009/3 BOUNDARY
FAULT
A3-2
4
8
12
LEGEND
LOW CASE AREA
BEST CASE AREA
HIGH CASE AREA
FIGURE A3-2
ISOPACH MAP
HIGH CASE
KG/OSDSF/A3/2025
ZONE 3 - MESOZOIC RIFT SEQ.
INDIA
CONTOUR INTERVAL: 4 METERS
0 1000 2000 3000m

5.1.7.4. Log Motifs




MD (m) 1:1000
SGR
0 gAPI 150
SP_matrix
0 mV -39.0807
HD1
6 in 16
BS
0 in 42
RT
0.2 ohm.m 200
RHOB
1.68 2.71
NPHI_LM
0.6 m3/m3 0
DT
150 us/ft 50
TVDSS (m) 1:1000
DM_SWE
1 m3/m3 0
PAY_NET_FLAG
RES_NET_FLAG
DM_BVWE
DM_PHIE
DM_PHIT
RES_NET_FLAG
0 unitless 10
PAY_NET_FLAG
0 unitless 10
DM_PHIT
0.5 m3/m3 0
DM_PHIE
0.5 m3/m3 0
DM_BVWE
0.5 m3/m3 0
DM_VSH
0 (DM_VSH) 1
DM_VSH
0 m3/m3 1
WCLA_INCP
0 kg/kg 1
TOPS
3330
3340
3350
3360
3370
3380
3390
3400
3410
3420
3430
3440
3450
3460
3470
3480
3490
3500
3510
3520
3280
3290
3300
3310
3320
3330
3340
3350
3360
3370
3380
3390
3400
3410
3420
3430
3440
3450
3460
Zone-2


MD
(m)
1:1000
SGR
0
gAPI
150
SP_matrix
0
mV
-39.0807
HD1
6
in
16
BS
0
in
42
RT
0.2
ohm.m
200
RHOB
1.68
2.71
NPHI_LM
0.6
m3/m3
0
DT
150
us/ft
50
TVDSS
(m)
1:1000
DM_SWE
1
m3/m3
0
PAY_NET_FLAG
RES_NET_FLAG
DM_BVWE
DM_PHIE
DM_PHIT
RES_NET_FLAG
0
unitless
10
PAY_NET_FLAG
0
unitless
10
DM_PHIT
0.5
m3/m3
0
DM_PHIE
0.5
m3/m3
0
DM_BVWE
0.5
m3/m3
0
DM_VSH
0
(DM_VSH)
1
DM_VSH
0
m3/m3
1
WCLA_INCP
0
kg/kg
1
TOPS
3830
3840
3850
3860
3870
3880
3890
3900
3910
3920
3930
3940
3780
3790
3800
3810
3820
3830
3840
3850
3860
3870
3880
Zone-3

5.2. A3-H2 DISCOVERY AND FIELD DISCRIPTION

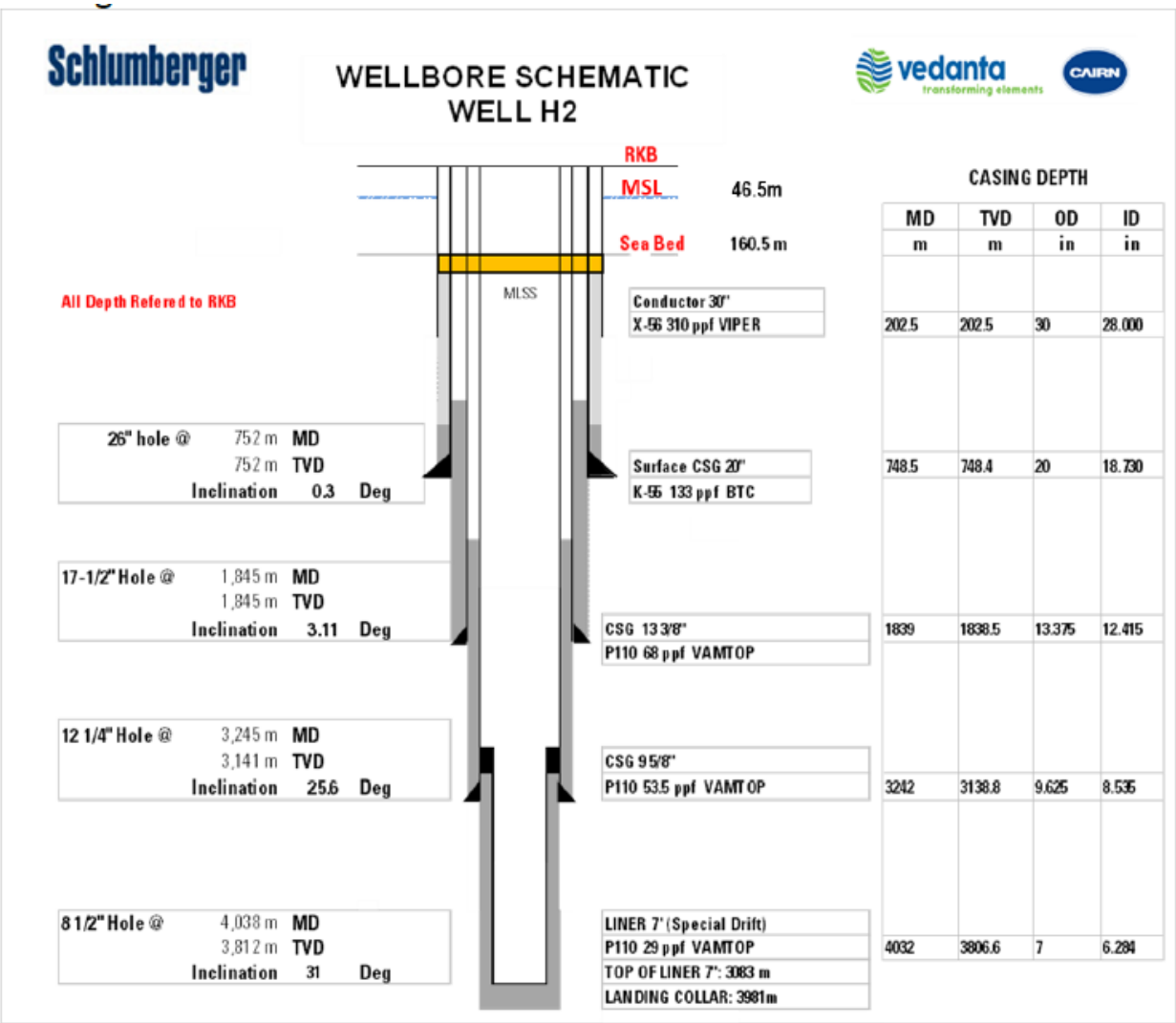
The H2 well, located in Prospect-H within the southwestern part of Block KG-OSN-2009/3 offshore East Coast India (Krishna sub-basin), was drilled by Cairn India, the operator with 100% participating interest. Drilling commenced on January 18, 2019, targeting a four-way anticlinal closure at the Early-rift level based on 3D seismic data. The well was planned as a J-shaped deviated well, with a kick-off point at approximately 1850 m MDRKB (base of the Eocene) to achieve a maximum inclination of 25 degrees. The maximum deviation recorded was 137.88 m at 3553.52 m MDRKB. The well reached a total depth of 4017.8 m MDRKB (3747.78 m TVDSS) and was terminated in the basement, confirmed by the presence of hornblende, quartz, feldspar minerals, banded granules, and varied lithic fragments.

The primary target was the Early-rift section, prognosed at 3190 m TVDSS (3352 m MDRKB) and encountered at 3306 m MDRKB (3149.8 m TVDSS). The secondary target, the Aptian-Albian sands prognosed at 2982 m TVDSS (3123 m MDRKB), was not encountered. Two hydrocarbon-bearing zones were identified for testing between 3403.2–3409.0 m MDRKB and 3424.0–3431.0 m MDRKB, based on LWD and wireline interpretation, gas shows, and MDT fluid analysis. A USIT-CBL-GR log run across the 7” liner interval (3087–3975 m) confirmed good cement quality across the perforated intervals and inside the 9⅝”/7” overlap.

LWD triple combo, wireline sonic (DSI), and VSP logs were acquired across the basement section. Despite gas indications and MDT samples, fluid data quality was not sufficient for pressure gradient analysis. Further evaluation details are discussed in Appendix-A.4 of the report.

5.2.1. Drilling and Well Completion

Key information regarding the drilled wells has been collated and presented herein. The adjoining figures, wherever shown, illustrate the well construction diagram and the litho-column information for key wells. Other well statics, such as kelly bushing reference depth, water depth, and drilled and logged depths (including well coordinates) are also provided.



5.2.2. Well Logging and Formation Evaluation

The well logs of all discovery wells as well as selected key wells in the contract area were reviewed. The logs recorded in various open-hole sections along with casedhole logs and information from conventional and other wireline formation test data are presented in this docket. The availability of key input reports, such as well completion reports (WCR) and formation evaluation reports (FER), was checked. Reservoir parameters of interesting zones and results of

the tested zone(s) are included in this report. Log motifs of tested/interesting zones of key wells are also appended.

5.2.2.1. Well completion and log evaluation reports availability

WCR/FER availability	Spud date	KB	Drilled depth
Only WCR available	01.18.2019	46.5 m	4038 m MDRT

5.2.2.2. Well logs acquired

Drill hole size (inch) and well logs recorded

12.25 MDT-GR (2071.9 - 2081.6 m)
MDT-LFADP-GR (3308 - 3429 m)

8.50 APS-PPCDSI-GPITHNGS (3244 - 4033.5 m)
CMRPlus-HNGS (3300 - 3980 m)
VSP-GR (1.1 - 3975 m)
USIT-CBL-VDL-GR-CCL (3087 - 3975 m)
TCP / GR-CCL (3240 - 3337 m)

5.2.3. Well Testing and Workover History

5.2.3.1. Drill Stem Test (DST)

Summary (3403.2 – 3409.0m MDRKB, 3424.0 - 3431.0m MDRKB)

A cased hole DST was conducted in well H2 targeting the Early-rift interval between 3403.2–3409.0 m and 3424.0–3431.0 m MDRKB. The test aimed to confirm hydrocarbon presence and assess reservoir deliverability, as MDT and LFA data had indicated possible oil at these depths. The objectives included evaluating flow capacity, measuring reservoir properties (k, skin, Pi, T), collecting PVT samples, and confirming flow boundaries. The DST was performed on March 10, 2019, with prior brine displacement (10.8 ppg) using nitrogen down to 1900 m to achieve ~1800 psi drawdown. A total of 45.5 bbls of brine was recovered, and WHP post-displacement was ~3100 psi.

5.2.4. Reservoir Engineering Studies and Analysis

Key reservoir engineering datasets, wherever available, were collated and are presented under various data genres. In a comprehensive data presentation, the results from well tests, formation dynamics tests, reservoir pressure buildup studies, and pressure-volume-temperature (PVT) data/results are included.

5.2.4.1. Formation dynamics tests

Pretest	File	MD (m)	TVD (m)	Res. Cell Temp (degF)	Mud Pressure (psi)		Equivalent MP in ppg	Last BUP (psia)	Formation Pressure (psia)	Equivalent FP in ppg	Mob. (mD/cP)	Pretest Type	Pretest Rate (cc/min)	Pretest Volume (cc)	Pretest Code	Remarks (Please mention all the details including anomalous events)
					Before	After										
Main Pretests																
1	2	3308.3	3198.3	258.7	6287.05	6273.60	11.53	5622.62	5622.62	10.31	0.75	VD	30,30,30	5,5,5	G	
2	3	3311.0	3200.7	260.1	6279.99	6278.66	11.51	5665.90	5665.90	10.38	0.22	VD	30,30,30	5,5,5	G	
3	4	3315.5	3204.7	260.1	6288.29	6286.55	11.51	5063.18	NA	NA	NA	VD	30,30	5,5	D	
4	5	3315.8	3205.0	260.1	6286.69	6286.54	11.51	5667.14	NA	NA	NA	VD	30,30	5,5	D	
5	6	3320.6	3209.3	260.3	6296.92	6294.98	11.51	5306.16	NA	NA	NA	VD	30,30	5,5	D	
6	7	3320.9	3209.5	260.4	6295.07	6295.14	11.50	5202.96	NA	NA	NA	VD	30,30	5,5	D	
7	8	3325.5	3213.6	261.4	6306.03	6303.31	11.51	5666.64	5666.64	10.34	0.14	VD	30,30,30	5,5,5	G	
8	9	3326.1	3214.1	261.9	6304.83	6303.54	11.51	5668.51	5668.51	10.34	0.28	VD	30,30,30	5,5,5	G	
9	10	3308.0	3198.1	261.2	6268.24	6271.78	11.50	5627.80	5627.80	10.32	0.14	VD	30	5	G	Did not wait for pressure to stabilize since pressure was recorded at 3308.3 m
10	11	3400.5	3279.0	262.8	6432.98	6429.90	11.51	5804.80	5804.80	10.38	18.44	VD	30,30	5,5	G	
11	12	3400.5	3279.0	265.9	6440.00	6455.63	11.52	5804.85	5804.80	10.38	21.36	VD	30	5	G	Pumping done for 86 mins and total 40.18 L of formation fluid pumped. 2 PVT samples collected.
12	13	3429.0	3303.1	265.9	6500.50	6494.16	11.54	5098.35	NA	NA	NA	VD	30,20	5,5	D	
13	14	3402.5	3280.7	265.6	6435.12	6429.77	11.51	5799.05	5799.05	10.37	8.45	VD	20,20	5,5	G	
14	15	3404.0	3281.9	265.6	6432.19	6432.24	11.50	5802.88	5802.88	10.37	0.31	VD	20,20	5,5	G	
15	17	3420.5	3295.9	268.5	6461.59	6477.40	11.50	5913.42	5913.42	10.52	5.16	VD	20,20,20	5,5,5	G	Pumping done for 79 mins and total 23.6 L of formation fluid pumped. 2 PVT samples collected.
16	18	3424.0	3298.9	267.7	6480.66	6472.74	11.52	5880.42	5880.42	10.46	0.37	VD	20,20	5,5	G	

5.2.4.2. PVT

PVT was done. Report not available.

5.2.4.3. Geothermal gradient (from wireline logs)

Formation: Early rift | Depth of measurement: 3792.53 m | Temperature: 148.86ºC |
Formation: Early rift | Depth of measurement: 3792.53 m | Temperature: 150.94ºC |
Formation: Early rift | Depth of measurement: 3747.35 m | Temperature: 148.89ºC |

5.2.4.4. Other reservoir studies

No other studies available.

5.2.4.5. Annexure to Reservoir Engineering studies/analysis

No other studies available.

5.2.5. Geology and Reservoir Description

The geology of the area was comprehensively reviewed using correlations, sections, and maps. The well correlation, seismic sections, top structure, seismic attribute/amplitude, and net sand/pay maps were used to illustrate the magnitude and distribution of key reservoir properties in and around the discovered gas pools (accumulations). The local tectonic setting and geological section of the area, wherever available, are also provided. These maps/sections are sequentially shown field-wise and reservoir-unit-wise on figures, each of which is appropriately titled and illustrated in the following section.

5.2.5.1. Geological description

Block KG-OSN-2009/3 is located in the Nizampatnam Bay area of the Krishna-Godavari Basin, covering 1288 km². Hydrocarbon accumulations occur in sediments ranging from Permian to Pliocene. The Krishna-Godavari Basin shows two major tectonic phases: a rift phase (Jurassic–Early Cretaceous) and a drift phase (Late Cretaceous–Holocene). The basin trends NE–SW, orthogonal to the older NW–SE Permo-Triassic Pranhita-Godavari trend. Well H2 was drilled to assess the hydrocarbon potential of Early-rift sands from the Late Cretaceous to Early Jurassic age. The basin is a NE–SW trending peri-cratonic rift with a horst and graben architecture, filled with thick sediments and considered one of India's most prospective petroleum basins.

5.2.6. Reservoir Properties and OHIP

Estimates of in-place volumes presented in this section have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

The volumetric method was used to estimate the original oil in place (OOIP) of certain fields evaluated herein. A review of selected geophysical data, in conjunction with well control and other relevant information, served as the basis for the structural interpretation of the fields. The geological interpretation provided by DGH was extensively reviewed and, where appropriate, adjusted.

Wireline electrical logs, radioactivity logs, wireline formation pressure tests, wireline fluid sample tests, and other data were acquired in wells drilled in the evaluated fields. When available, drill cuttings, hole cores, and sidewall cores were analyzed. These combined analyses of the well-log data were used to establish petrophysical properties. Estimates of OOIP were made using net pay isopach maps. These isopach maps were constructed using geological depth structure maps and petrophysical analyses of the well-log data.

Following is the summary of the average reservoir parameters and estimates of OOIP. Seismic sections, log motifs, structure and isopach maps are in the annex bound with this information docket.

RESERVOIR PARAMETERS and ORIGINAL OIL in PLACE
as of
JANUARY 1, 2025
for the
H2 DISCOVERY
of
KG/OSDSF/A3/2025 CONTRACT AREA

	Reservoir	Total
Low		
Area, acres	974	
Oil Formation Volume Factor, rbbl/bbl	1.18	
Average Thickness, ft	36.5	
Average Porosity, %	11.00	
Average Water Saturation, %	48.13	
Original Oil in Place, 10^6bbl	13.33	**13.33**
Original Oil in Place, 10^6eq ton	1.95	**1.95**
Best		
Area, acres	1,307	
Oil Formation Volume Factor, rbbl/bbl	1.21	
Average Thickness, ft	40.9	
Average Porosity, %	12.00	
Average Water Saturation, %	44.95	
Original Oil in Place, 10^6bbl	22.66	**22.66**
Original Oil in Place, 10^6eq ton	3.31	**3.31**
High		
Area, acres	1,643	
Oil Formation Volume Factor, rbbl/bbl	1.25	
Average Thickness, ft	44.7	
Average Porosity, %	13.00	
Average Water Saturation, %	41.98	
Original Oil in Place, 10^6bbl	34.42	**34.42**
Original Oil in Place, 10^6eq ton	5.03	**5.03**

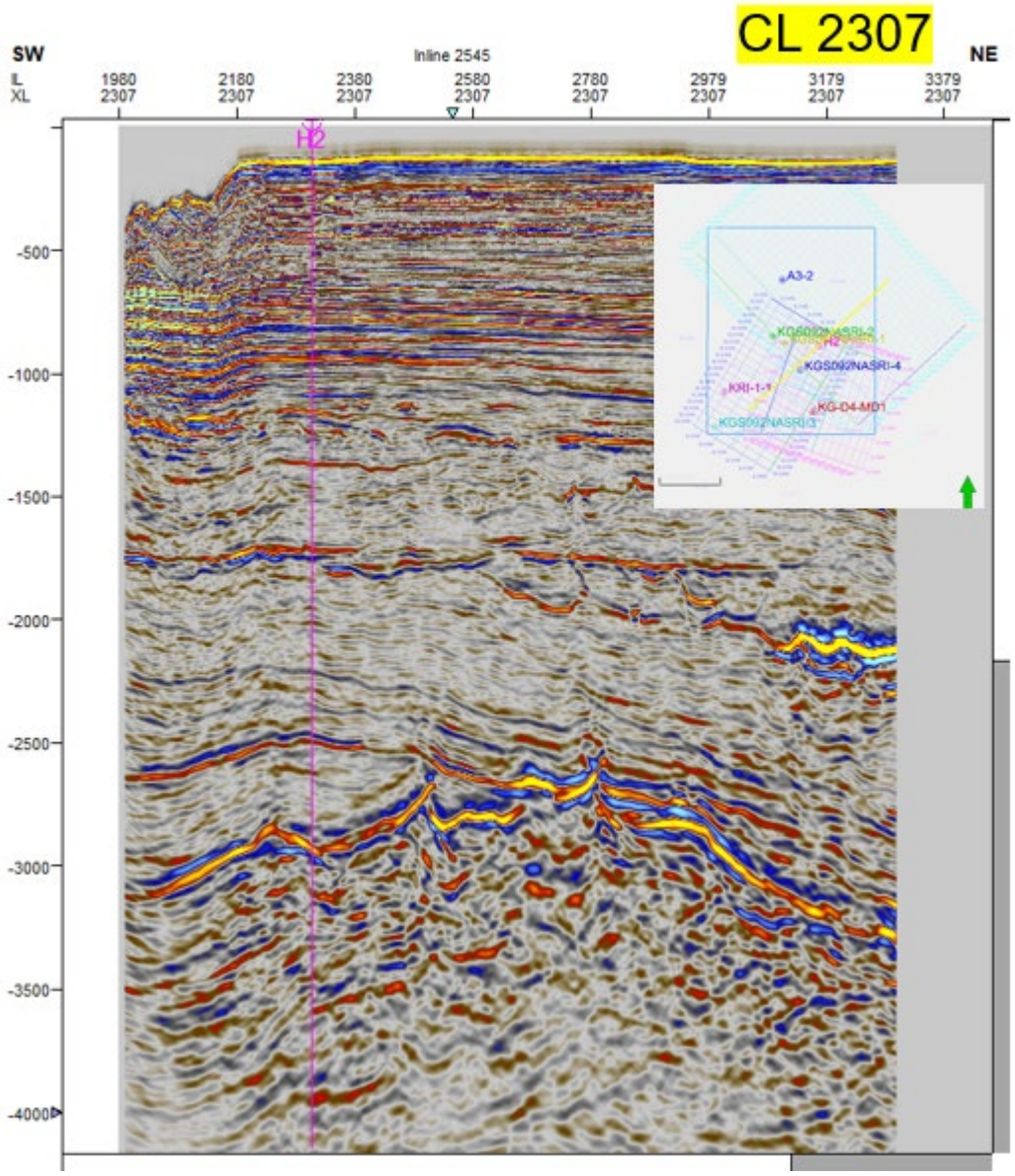
Note: Conversion used 10^6 bbl equal to 0.1461 10^6 eq tone.

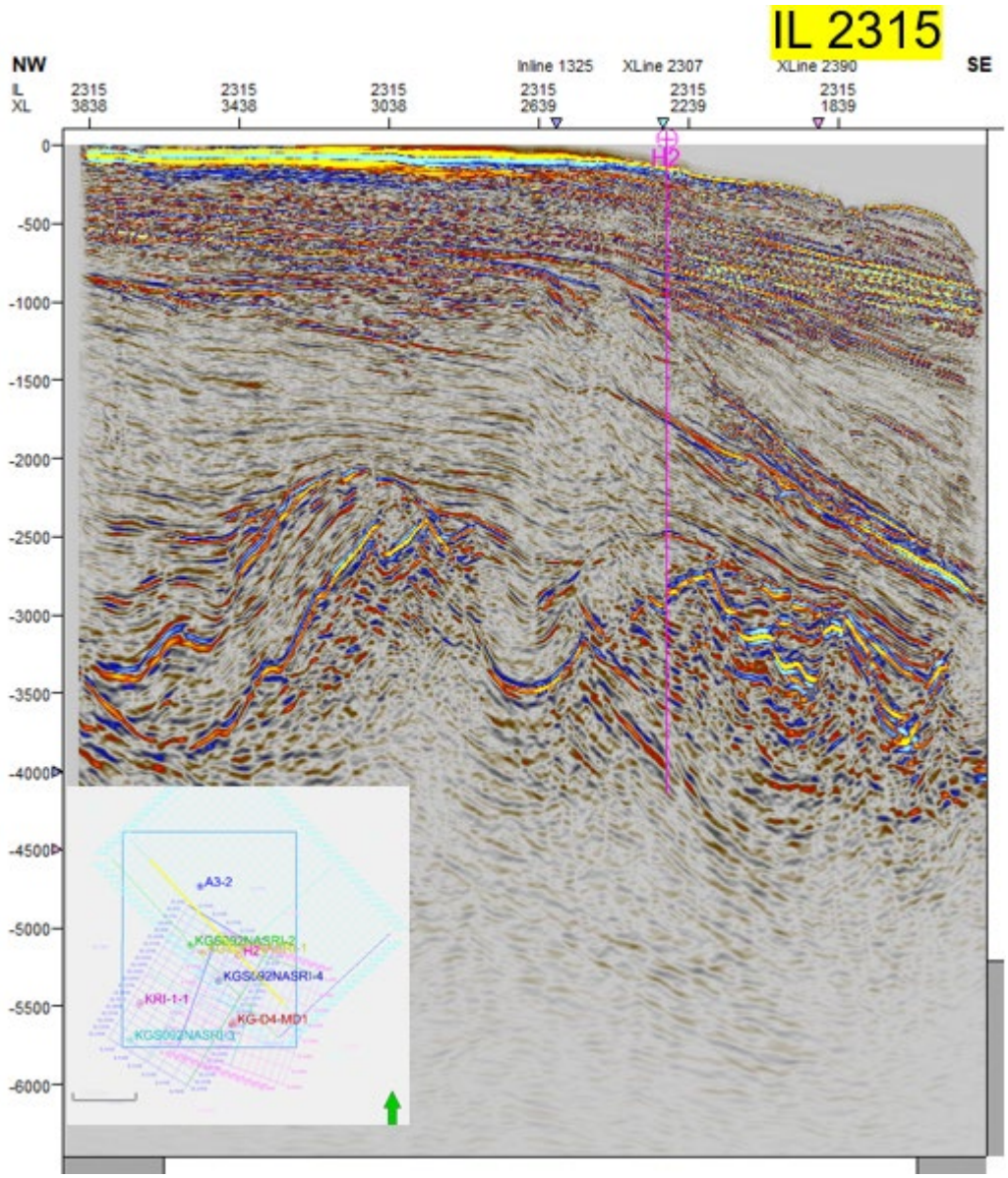
Volumes estimated by a Third Party

The operator has not reported any in-place volumes.

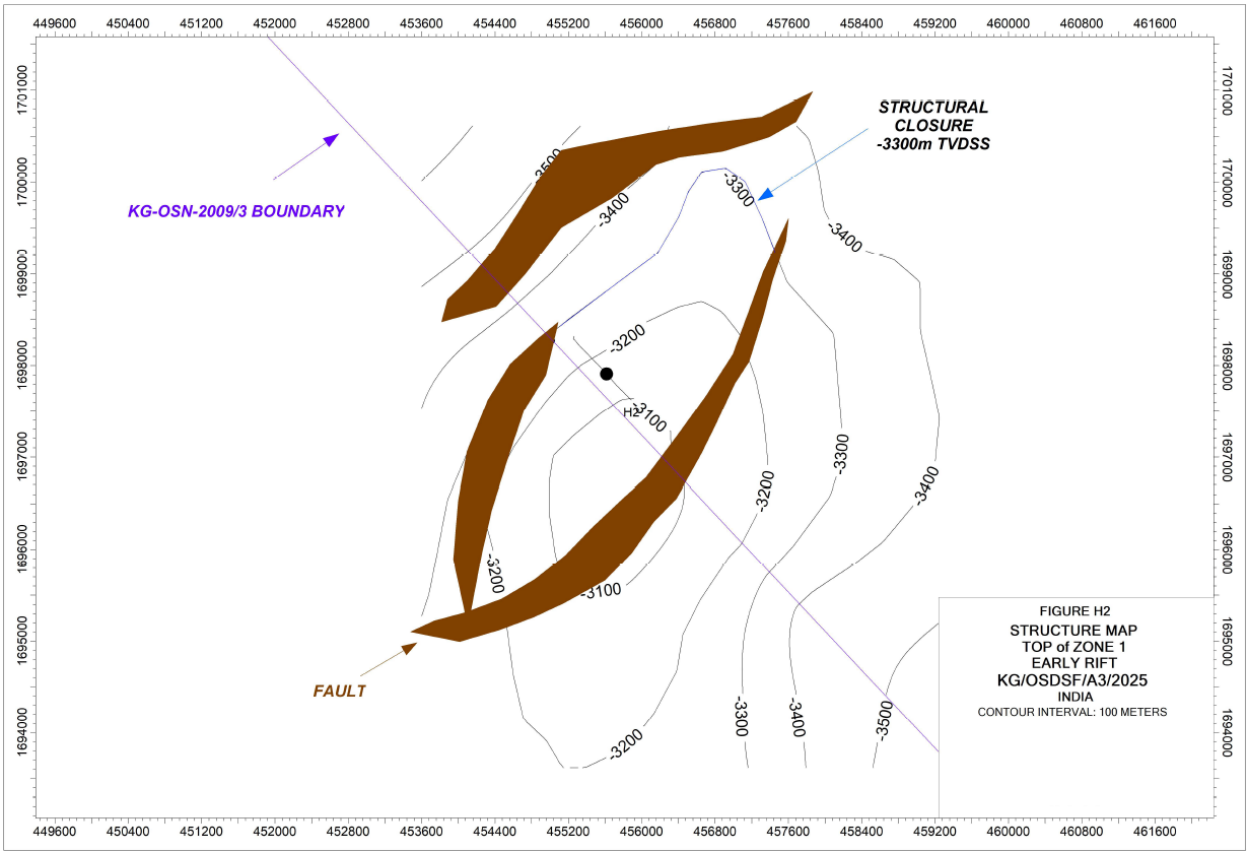
5.2.7. Annex

5.2.7.1. Seismic Sections

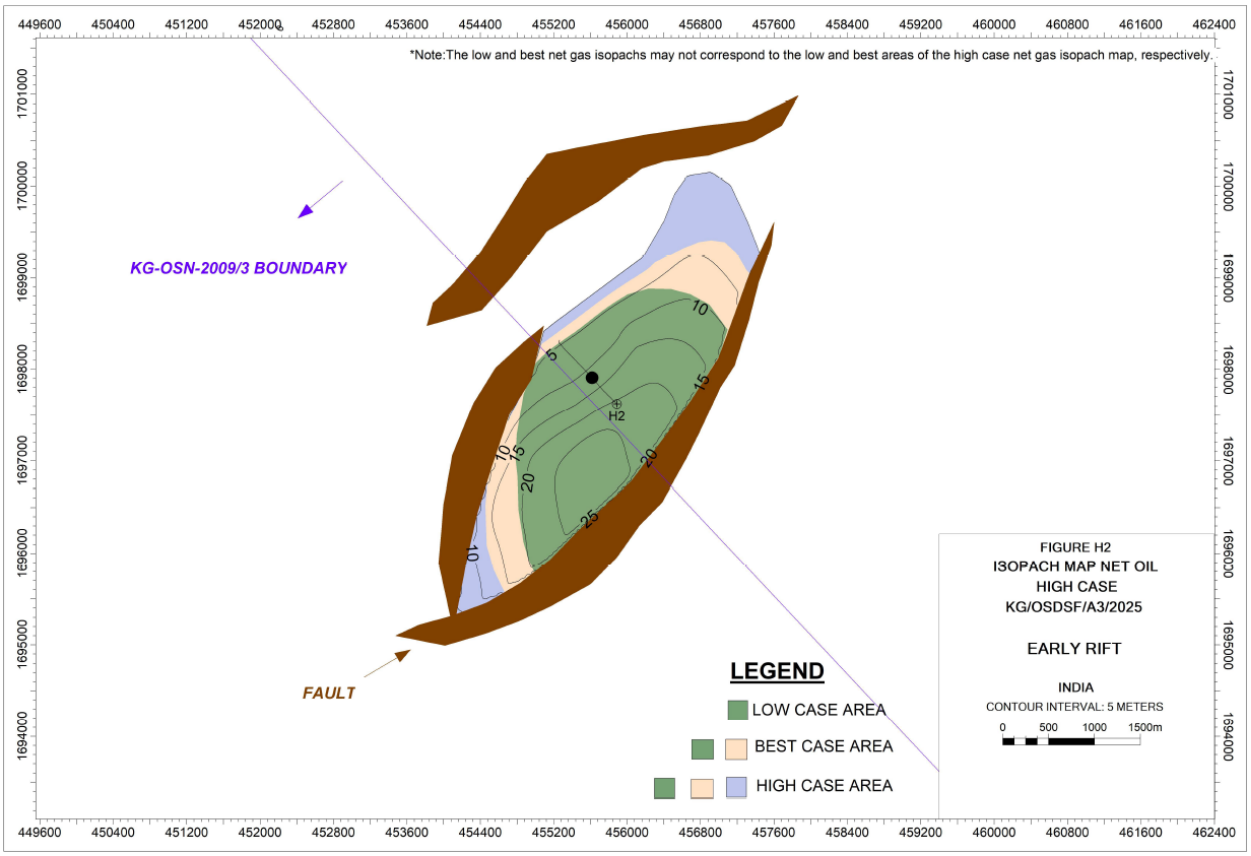



IL 2315
NW
SE
Inline 1325
XLine 2307
XLine 2390
IL
XL
2315 3838
2315 3438
2315 3038
2315 2639
2315 2239
2315 1839
0
-500
-1000
-1500
-2000
-2500
-3000
-3500
-4000
-4500
-5000
-5500
-6000
A3-2
KGSL92NASRI-4
KRI-1-1
KG-D4-MD1

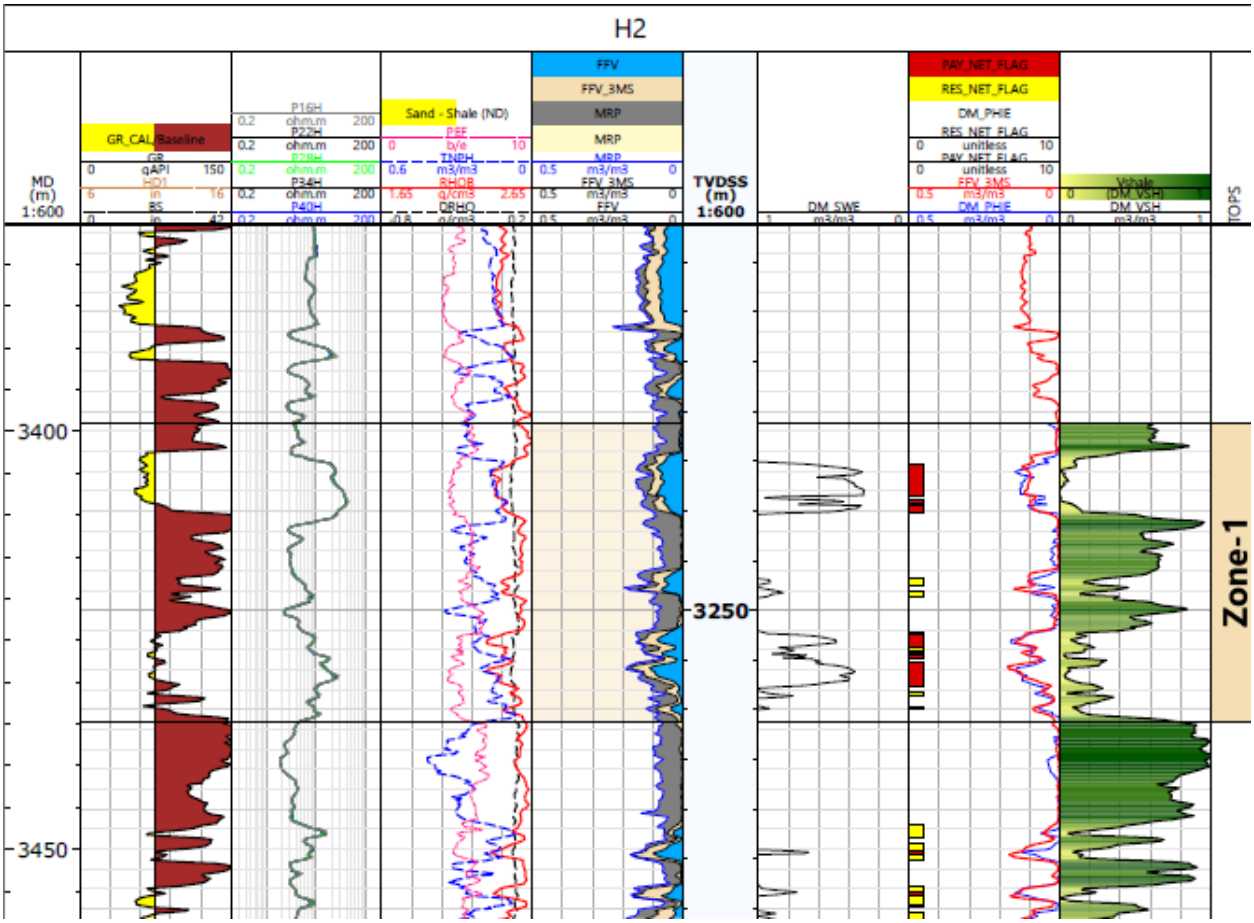
5.2.7.2. Structural Maps



5.2.7.3. Isopach Maps



5.2.7.4. Log Motifs



5.3. KG-D4-MD1 DISCOVERY AND FIELD DISCRIPTION

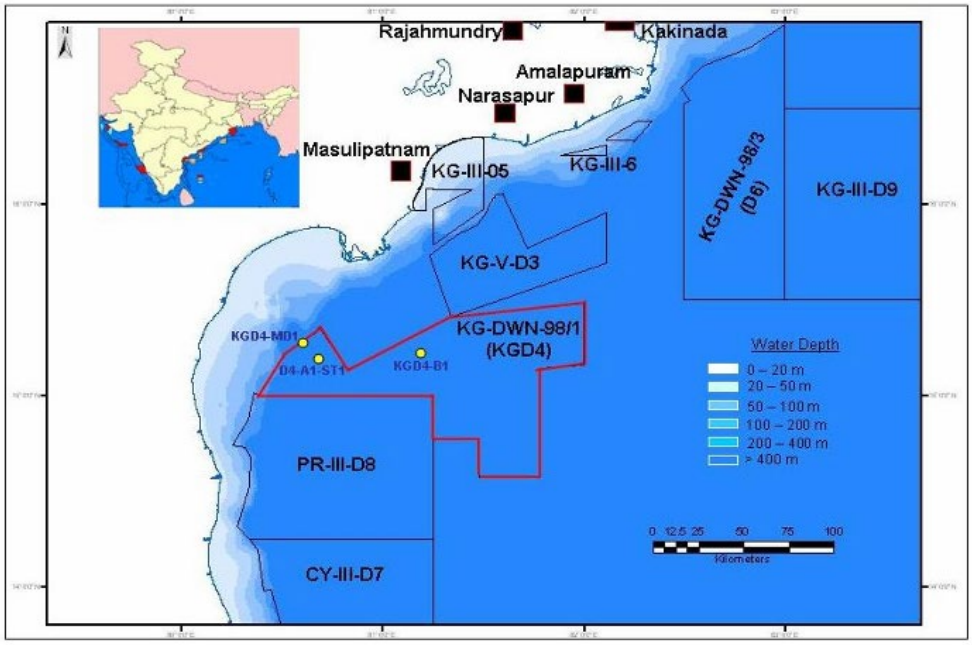
The KG-D4-MD1 well, the third exploratory well in the deepwater KG-DWN-98/1 block (Krishna-Godavari Basin, offshore Andhra Pradesh, India), was drilled by Reliance Industries Ltd (RIL), operator with 100% participating interest under the NELP-I round. The block covers 8,100 km² in Phase II, after partial relinquishment following Phase I. The well targeted a Mesozoic fluvial sand play within a fault trap and basement wedgeout configuration.

Located in a water depth of 562 m, the well was spudded on 16 July 2007 and drilled vertically to a total depth of 3595 m MDRT (3566.6 m TVDSS), terminating within Jurassic sediments. The operation used Transocean's Actinia semi-submersible rig. A comprehensive evaluation suite was employed, including mudlogging, geopressure services, LWD, wireline, and real-time gas analysis. Continuous data transmission to RIL's Real Time Operation Centre in Navi Mumbai allowed ongoing multidisciplinary monitoring and fast decision-making.

A significant oil-bearing interval was encountered in Jurassic stratigraphy, with the reservoir present from 3007.4 to 3027.6 m MDRT. The oil-water contact (OWC) was interpreted at 3030 m MDRT (3002.3 m TVDSS).

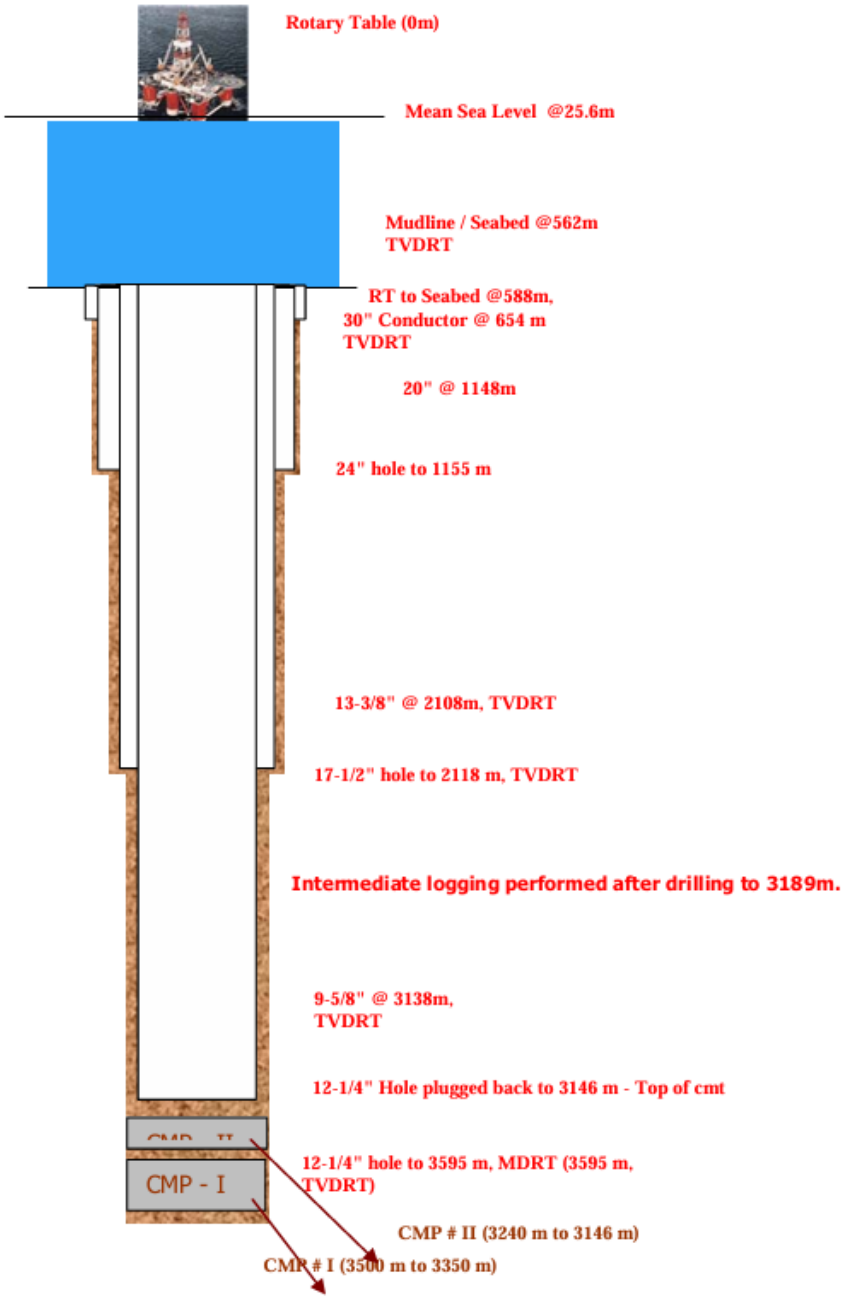
RCI formation testing confirmed five oil samples collected from 3008.4 to 3009.0 m MDRT, with a maximum pressure of 10.3 ppg EMW recorded at 3008.4 m MDRT (3007 m TVDRT). The well was tested through TCP-DST, flowing 596 BOPD on a 28/64" choke from the interval 3007 to 3028 m MDRT (3005.4 to 3026.4 m TVDSS). The oil was characterized by very low GOR (not measurable) and an API gravity of 44. Pressure transient analysis indicated a permeability of 10 md and a static reservoir pressure of 5208 psia at gauge depth.

The well was subsequently plugged back and declared as an oil discovery. The drilling rig was released on 10 September 2007.



5.3.1. Drilling and Well Completion

Key information regarding the drilled wells has been collated and presented herein. The adjoining figures, wherever shown, illustrate the well construction diagram and the litho-column information for key wells. Other well statics, such as kelly bushing reference depth, water depth, and drilled and logged depths (including well coordinates) are also provided.



5.3.2. Well Logging and Formation Evaluation

The well logs of all discovery wells as well as selected key wells in the contract area were reviewed. The logs recorded in various open-hole sections along with casedhole logs and information from conventional and other wireline formation test data are presented in this docket. The availability of key input reports, such as well completion reports (WCR) and formation evaluation reports (FER), was checked. Reservoir parameters of interesting zones and results of the tested zone(s) are included in this report. Log motifs of tested/interesting zones of key wells are also appended.

5.3.2.1. Well completion and log evaluation reports availability

WCR/FER availability	Spud date	KB	Drilled depth
Only WCR available	07.16.2007	25.6 m	3595 m MDRT

5.3.2.2. Well logs acquired

Drill hole size (inch) and well logs recorded

17.5 LWD (1148-2107m)
12.25 LWD (2107-3189m)
LWD (3189-3572m)
LWD (3572-3595m)
ZDN-CN-HDIL-XMAC-DSL-GR (2060-3189m)
RCI-GR (2995-3110m)
ZDN-CN-HDIL-XMAC-DSL-GR (3126-3189.5)
RCI (Single Probe)-GR (3454-3578m)
RCI (Straddler Packer)-GR (3013.6-3014.6m)
VSP-GR (1100-3570m)
SWC (2534-3590m)

5.3.3. Well Testing and Workover History

The D4-MD1 well, in the KG-DWN-98/1 block offshore Andhra Pradesh, targeted Jurassic hydrocarbon-bearing reservoirs at a final depth of 3600 m TVDSS (3593 m MDRT). A DST was conducted over the perforated interval 3013–3028 m MDRT (3005.48–3015.52 m TVDSS), later extended to 3007–3028 m MDRT (3005.48–3026.48 m TVDSS) through add-on perforations. The well flowed a maximum of 596 BOPD on a 28/64” choke with no sand production and very low GOR (not measurable). The produced oil had an API gravity of 44. Pressure transient analysis indicated 10 md permeability, a skin of –0.456, and a static reservoir pressure of 5208 psia.

The well was acidized with 5% HCl and initially flowed on a 12/64” variable choke, later increased to a 20/64” fixed choke for clean-up. Nitrogen was injected via CTU and fluids (diesel mixed with oil) were directed to a surge tank. Post-acidization, the well flowed for approximately 14 hours, but exhibited lower and unstable wellhead pressure and flow rate compared to pre-acid conditions, with final readings of 155 psia and 300–400 BOPD with no water cut (NIL BS&W).

Formation: Jurasic Top | Interval(m):3007-3028 | Flow period (hr): 8,1 | Bean (1/64 inch): 20 | FTHP: 206 psi FBHP: 3403 psi | Qgas: Not measurable | Qoil: 546 stbpd

Formation: Jurasic Top | Interval(m):3007-3028 | Flow period (hr): 12 | Bean (1/64 inch): 16 | FTHP: 262 psi FBHP: 3462 psi | Qgas: Not measurable | Qoil: 508 stbpd

Formation: Jurasic Top | Interval(m):3007-3028 | Flow period (hr): 6,25 | Bean (1/64 inch): 24 | FTHP: 129 psi FBHP: 3309 psi | Qgas: Not measurable | Qoil: 580 stbpd

Formation: Jurasic Top | Interval(m):3007-3028 | Flow period (hr): 0,85 | Bean (1/64 inch): 28 | FTHP: 96 psi FBHP: 3244 psi | Qgas: Not measurable | Qoil: 596 stbpd

Two pressure buildup tests (cleanup and main) were conducted during the DST. Pressure data, analyzed using Saphir, showed fluctuations and lacked stability, with a consistent rise of ~7 psi/hr, limiting reliable pressure transient interpretation. Wellbore storage effects were minimal due to downhole shut-in. Log-log analysis indicated three possible reservoir models: a single layer with intersecting faults, two layers with parallel faults, and two layers with intersecting faults. Final model selection was based on seismic and supporting data, the model with the best fit was: 2 layer intersecting faults.

5.3.4. Reservoir Engineering Studies and Analysis

Key reservoir engineering datasets, wherever available, were collated and are presented under various data genres. In a comprehensive data presentation, the results from well tests, formation dynamics tests, reservoir pressure buildup studies, and pressure-volume-temperature (PVT) data/results are included.

5.3.4.1. Formation dynamics tests

KG-D4-MD1 RCI PRESSURE SURVEY DATA

RTE (m) : 25.6
Water Depth (m) : 562.4

File No.	Time	Depth (mMDRT)	Depth (mTVDRT)	Depth (mTVDSS)	IMHP (psia)	IMHP (ppg)	Temp (degF)	FMHP (psia)	Formation Pressure Quartz (psia)	EMW w.r.t TVDRT (ppg)	Estimated Mobility (md/cP)	Sample Viewer Indication	Samples	Comments (drawdown @ pump stepper rate)	Remarks	Minimum Pressure (psia)	Maximum Drawdown w.r.t Hydrostatic (psia)
Open Hole 12.25", Date: 04th August 2007, Suite1-Run2							RTOC Observers: (No connectivity with rig)					Wellsite Observers: AS/SJ,		Tool Configuration: CB-EB-WA-IB-RB-OB-BB-MB-HA			
3	1:20	2995.5	2994.1	2968.5	5663.5	11.1	210.0	5670.0						3 @ 4000 +3 @ 4000	Tight	3800	1864
4	1:32	2997.0	2995.6	2970.0	5675.0	11.1	210.5	5674.0						3 @ 4000+2 @ 4000	Tight	3600	2075
5	1:42	3008.4	3007.0	2981.4	5703.0	11.1	216.5	5704.0	5277.50	10.3	121.4	OIL	1 SPT	3@4000 +5@ 5000+ PO	Good	5052	651
15	5:08	3008.4	3007.0	2981.4	5698.8	11.1	224.0	5690.0	5277.09	10.3				3@4000	Good	4668	1031
38	11:44	3008.4	3007.0	2981.4	5673.1	11.1	234.0	5688.0	5278.25	10.3	20.8			5 @ 5000 + PO + Reset	Good	5049	624
40		3008.4	3007.0	2981.4	5673.8	11.1	235.0	5688.0	5277.99	10.3	29.8	OIL	2 PVT + 1SPT	3 @ 4000 + PO	Good		
34	10:11	3009.0	3007.6	2982.0	5688.0	11.1	232.5	5689.2	5278.76	10.3	52.1	OIL	2 SPT	3 @ 4000 + PO	Good	5014	674
6	2:42	3009.8	3008.4	2982.8	5704.0	11.1	217.2	5698.0	5278.80	10.3	31.2			3 @ 4000+3 @ 4000	Good	4480	1224
7	2:48	3010.8	3009.3	2983.7	5701.5	11.1	217.8	5705.0						3@4000 +2@4000	Tight	3715	1987
33	10:06	3011.1	3009.6	2984.0	5690.0	11.1	232.0	5690.0						2 @ 4000 + 3 @ 4000	Tight	3631	2059
8	2:55	3012.8	3011.4	2985.8	5705.0	11.1	219.0	5703.0						3@4000	Tight	4475	1230
9	3:25	3014.0	3012.5	2986.9	5710.0	11.1	220.4	5709.0						3@4000 + 2@4000	Tight	4508	1202
27	9:03	3014.0	3012.5	2986.9	5681.0	11.1	231.7	5686.0						3@ 4000 + PO	Tight on PO	2075	3606
28	9:13	3014.5	3013.1	2987.5	5687.5	11.1	231.6	5687.0						2 @ 4000 + 3 @ 4000	Tight	3425	2263
10	3:44	3015.4	3014.0	2988.4	5710.8	11.1	222.0	5709.2						3 @ 4000 + PO	Tight on PO	4683	1028
29	9:19	3016.2	3014.8	2989.2	5694.2	11.1	231.7	5694.0						2 @ 4000 + 1 @ 4000	Tight	4720	974
35	11:00	3016.2	3014.8	2989.2	5707.8	11.1	233.5	5706.5						2@4000+PO	Tight on PO	2015	3693
36	11:17	3016.7	3015.2	2989.6	5709.1	11.1	233.6	5709.0						3@4000+PO	Tight on PO	2035	3674
11	4:00	3018.2	3016.7	2991.1	5714.8	11.1	222.6	5715.0						2 @ 4000 + 1 @ 4000	Tight	4820	895
30	9:42	3018.2	3016.7	2991.1	5697.3	11.1	231.7	5697.0						1 @ 4000	Tight	2122	3576
12	4:19	3020.0	3018.6	2993.0	5725.0	11.1	223.0	5720.0						2 @ 4000 + PO	Tight on PO	2100	3625
31	9:47	3021.0	3019.5	2993.9	5709.0	11.1	231.8	5709.0						3 @ 4000	Tight	3436	2273
32	9:45	3022.0	3020.6	2995.0	5714.0	11.1	231.6	5714.0						4 @ 4000	Tight	3360	2354
13	4:46	3023.2	3021.8	2996.2	5731.0	11.1	224.0	5722.0						5 @ 4000	Tight	3725	2006
16	5:17	3026.8	3025.3	2999.7	5729.2	11.1	224.8	5728.0						6 @ 4000	Tight	4320	1409
14	4:54	3027.0	3025.6	3000.0	5734.0	11.1	223.0	5729.0						7 @ 4000	Tight	4794	940
17	5:25	3027.0	3025.6	3000.0	5727.8	11.1	225.0	5726.0						8 @ 4000	Tight	4110	1618
37	11:29	3027.0	3025.6	3000.0	5730.7	11.1	233.1	5725.0						9 @ 4000 + PO	Tight on PO	2147	3584
18	5:45	3032.7	3031.2	3005.6	5738.0	11.1	225.2	5737.0						10 @ 4000	Tight	3448	2290
19	6:02	3038.3	3036.8	3011.2	5749.0	11.1	225.3	5748.0						11 @ 4000	Tight	3342	2407
20	6:05	3043.3	3041.9	3016.3	5763.4	11.1	224.0	5760.0						12 @ 4000	Tight	3149	2614
22	6:25	3076.2	3074.7	3049.1	5808.2	11.1	225.2	5816.0	5274.50	10.1	52.5	Water	1 PVT	13 @ 4000	Good	4400	1408
23	8:00	3079.6	3078.1	3052.5	5826.0	11.1	227.0	5828.0						14 @ 4000	Tight	3305	2521
24	8:05	3094.5	3093.0	3067.4	5854.0	11.1	231.2	5854.0						15 @ 4000 + PO	Tight on PO	2308	3546
25	8:26	3098.0	3096.5	3070.9	5858.4	11.1	232.6	5860.0						16 @ 4000 + PO	Tight on PO	2279	3579
26	8:50	3110.5	3109.0	3083.4	5882.7	11.1	234.0	5884.7						17 @ 4000	Tight	3848	2035

KG-D4-MD1 RCI PRESSURE SURVEY DATA

RTE (m) : 25.6
Water Depth (m) : 564.2

File No.	Time	Depth (mMDRT)	Depth (mTVDRT)	Depth (mTVDSS)	IMHP (psia)	IMHP (ppg)	Temp (degF)	FMHP (psia)	Formation Pressure Quartz	EMW w.r.t TVDRT	Estimated Mobility (md/cP)	Sample Viewer Indication	Samples	Comments	Remarks	Minimum Pressure (psia)	Maximum Drawdown w.r.t
Open Hole 12.25", Date: 10th August 2007, Suite2-Run2 RTOC Observers: No connectivity Wellsite Observers: AS Tool Configuration: CB-EB-WA-IB-RB-OB-BB-MB																	
2	1:53	3454.0	3451.9	3426.3	6569.0	11.2	230.2	6565.0	5583.10	9.5	71.7	Water	1 PVT	3 + 2 + 2 @ 4000 + PO	Good	5366.0	1203.0
3	3:19	3487.7	3485.5	3459.9	6632.8	11.2	233.4	6628.0						3 + 3 + 2 @ 4000 + PO	Tight	2967.0	3665.8
4	3:40	3514.0	3511.6	3486.0	6685.0	11.2	234.1	6678.0						3 + 3 @ 4000 + PO	Tight	2875.0	3810.0
5	3:57	3527.3	3525.0	3499.4	6705.9	11.2	234.7	6701.0						3 + 2 @ 4000 + PO	Tight	3025.0	3680.9
6	4:10	3536.0	3533.7	3508.1	6720.0	11.1	235.2	6712.0	5703.16	9.5	14.4	Water		3 + 3 @ 4000 + PO	Good	4532.0	2188.0
8	4:47	3552.2	3549.8	3524.2	6740.7	11.1	236.8	6739.0						3 + 2 @ 3500	Tight	4570.0	2170.7
9	4:56	3557.0	3554.5	3528.9	6750.5	11.1	237.3	6747.0	5737.40	9.5	12			3 + 3 @ 3500	Good	4372.0	2378.5
10	5:07	3562.7	3560.3	3534.7	6762.5	11.1	237.4	6753.0						3 + 2 @ 3500	Tight	4492.0	2270.5
11	5:16	3570.2	3567.7	3542.1	6777.1	11.1	238.1	6773.0						3 + 2 @ 3500	Tight	4214.0	2563.1
12	5:23	3573.0	3570.5	3544.9	6780.2	11.1	237.7	6777.0						3 + 2 @ 3500	Tight	4059.0	2721.2
13	5:31	3578.0	3575.5	3549.9	6789.1	11.1	238.4	6782.0						3 + 2 @ 3500	Tight	4376.0	2413.1
Total = 11 Good = 3 Tight = 8																	
File No.	Time	Depth Interval (mMDRT)	Depth (mTVDRT)	Depth (mTVDSS)	IMHP (psia)	IMHP (ppg)	Temp (degF)	FMHP (psia)	Formation Pressure Quartz	EMW w.r.t TVDRT	Estimated Mobility (md/cP)	Sample Viewer Indication	Samples	Comments	Remarks	Minimum Pressure (psia)	Maximum Drawdown w.r.t
Open Hole 12.25", Date: 11th August 2007, Suite2-Run3 RTOC Observers: No connectivity Wellsite Observers: AS Tool Configuration: CB-EB-WA-IB-RB-OB-BB-DB																	
15	1:34	3013.6-3014.6	3012.6	2987.0	5749.0	11.2	214.7	5750.0							Tight	3700.0	2049.0
16	6:55	3021.8-3022.8	3020.9	2995.3	5755.0	11.2								Packer could not be inflated (suspected packer damage)			

5.3.4.2. PVT

Formation: ---| Interval(m.): --- m | Sample No.: Sample 1.01
C1: 60.11 %| C2: 10.35 %| C3: 10.26 %| iC4: 2.32 %| nC4: 3.68 %| iC5: 0.66 %| nC5: 0.49 %| C6+: 0.09 %|

Carbon-dioxide: 0.03 %| Nitogen+Oxygen: 12.12 %| Sp.Gr.: 0.864|Molar Mass: 25

Formation: ---| Interval(m.): --- m | Sample No.: Sample 1.02
C1: 44.55 %| C2: 13.08 %| C3: 16.68 %| iC4: 5.07 %| nC4: 8.668 %| iC5: 2.05 %| nC5: 1.93 %| C6+: 0.88 %|

Carbon-dioxide: 0.04 %| Nitogen+Oxygen: 7.08 %| Sp.Gr.: 1.106|Molar Mass: 32

Formation: ---| Interval(m.): --- m | Sample No.: Sample 1.04
C1: 57.51 %| C2: 13.81 %| C3: 13.44 %| iC4: 3.17 %| nC4:4.91 %| iC5: 1.09 %| nC5: 1.03 %| C6+: 0.83 %|

Carbon-dioxide: 0.68 %| Nitogen+Oxygen: 3.53 %| Sp.Gr.: 0.951|Molar Mass: 27.6

Formation: ---| Interval(m.): --- m | Sample No.: Sample 1.03
C1: 0 %| C2: 0.14 %| C3: 0.94 %| iC4: 0.69 %| nC4: 1.78 %| iC5: 1.17 %| nC5: 1.60 %| C6+: 93 %|

Carbon-dioxide: 0.00 %| Nitogen+Oxygen: 0.00 %| Liq.dens.: 0.803 g/cc at STP|Liq. Molecular Weight: 197.5 g/mol

Formation: ---| Interval(m.): --- m | Sample No.: Sample 1.05
C1: 0 %| C2: 0.06 %| C3: 1.06 %| iC4: 0.829 %| nC4: 2.25 %| iC5: 1.55 %| nC5: 2.13 %| C6+: 92 %|

Carbon-dioxide: 0.00 %| Nitogen+Oxygen: 0.00 %| Liq.dens.: 0.804 g/cc at STP|Liq. Molecular Weight: 174.7g/mol

5.3.5. Geology and Reservoir Description

The geology of the area was comprehensively reviewed using correlations, sections, and maps. The well correlation, seismic sections, top structure, seismic attribute/amplitude, and net sand/pay maps were used to illustrate the magnitude and distribution of key reservoir properties in and around the discovered gas pools (accumulations). The local tectonic setting and geological section of the area, wherever available, are also provided. These maps/sections are sequentially shown field-wise and reservoir-unit-wise on figures, each of which is appropriately titled and illustrated in the following section.

5.3.5.1. Geological description

The KG-DWN-98/1 block lies along India's passive eastern continental margin, underlain by Archean basement rocks. Rifting during the breakup of Gondwanaland created NE–SW trending pericratonic troughs and aulacogens, which were filled with Jurassic to Early Cretaceous fluvial sediments. These rift-related structures were later buried by widespread Late Cretaceous clastics.

Passive margin progradation began in the Late Cretaceous–Paleocene, initially sourced from the Indian craton and later from the uplifted Himalayas. Thick Neogene deltaic sequences accumulated offshore, driven by the proto-Krishna and Godavari rivers, with the modern delta system established during the Miocene.

Structurally, the basin is defined by NE–SW en-echelon horsts and grabens overprinted on the older NW–SE Pranhita–Godavari Graben. It is subdivided into Krishna, West Godavari, and East Godavari sub-basins, separated by structural highs such as the Bapatla and Tanuku horsts. These basement highs influenced sediment distribution, with thinner sequences over horsts and thicker fill in adjacent grabens.

Subsequent tectonic activity during the Late Cretaceous–Paleocene led to further faulting and subsidence. Growth faults, tilted fault blocks, and rollover structures are prominent, especially in post-Miocene strata. The sedimentary depocenter has shifted progressively basin ward, as reflected in the thickening Neogene and Quaternary deposits towards the southeast.

5.3.6. Reservoir Properties and OHIP

Estimates of in-place volumes presented in this section have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

The volumetric method was used to estimate the original oil in place (OOIP) of certain fields evaluated herein. Structure maps were prepared using the available data. Time-structure maps were created from the interpreted seismic data. These time maps were converted to depth-structural geological maps using velocity data acquired in wells in the fields. The 3–D seismic data were interpreted to analyze faulting and geological structural trends.

Wireline electrical logs, radioactivity logs, wireline formation pressure tests, wireline fluid sample tests, and other data were acquired in wells drilled in the evaluated fields. When available, drill cuttings, hole cores, and sidewall cores were analyzed. These combined analyses of the well-log data were used to establish petrophysical properties. Estimates of OOIP were made using net pay isopach maps. These isopach maps were constructed using geological depth structure maps and petrophysical analyses of the well-log data.

Following is the summary of the average reservoir parameters and estimates of OOIP. Seismic sections, log motifs, structure and isopach maps are in the annex bound with this information docket.

RESERVOIR PARAMETERS and ORIGINAL OIL in PLACE
as of
JANUARY 1, 2025
for the
KG-D4-MD1 DISCOVERY
of
KG/OSDSF/A3/2025 CONTRACT AREA

	Reservoir	Total
Low		
Area, acres	536	
Oil Formation Volume Factor, rbbl/bbl	1.18	
Average Thickness, ft	17.5	
Average Porosity, %	10.00	
Average Water Saturation, %	52.59	
Original Oil in Place, 10^6bbl	2.96	**2.96**
Original Oil in Place, 10^6eq ton	0.43	**0.43**
Best		
Area, acres	1,025	
Oil Formation Volume Factor, rbbl/bbl	1.18	
Average Thickness, ft	24.4	
Average Porosity, %	11.00	
Average Water Saturation, %	49.12	
Original Oil in Place, 10^6bbl	9.25	**9.25**
Original Oil in Place, 10^6eq ton	1.35	**1.35**
High		
Area, acres	1,500	
Oil Formation Volume Factor, rbbl/bbl	1.18	
Average Thickness, ft	27.1	
Average Porosity, %	11.99	
Average Water Saturation, %	46.01	
Original Oil in Place, 10^6bbl	17.32	**17.32**
Original Oil in Place, 10^6eq ton	2.53	**2.53**

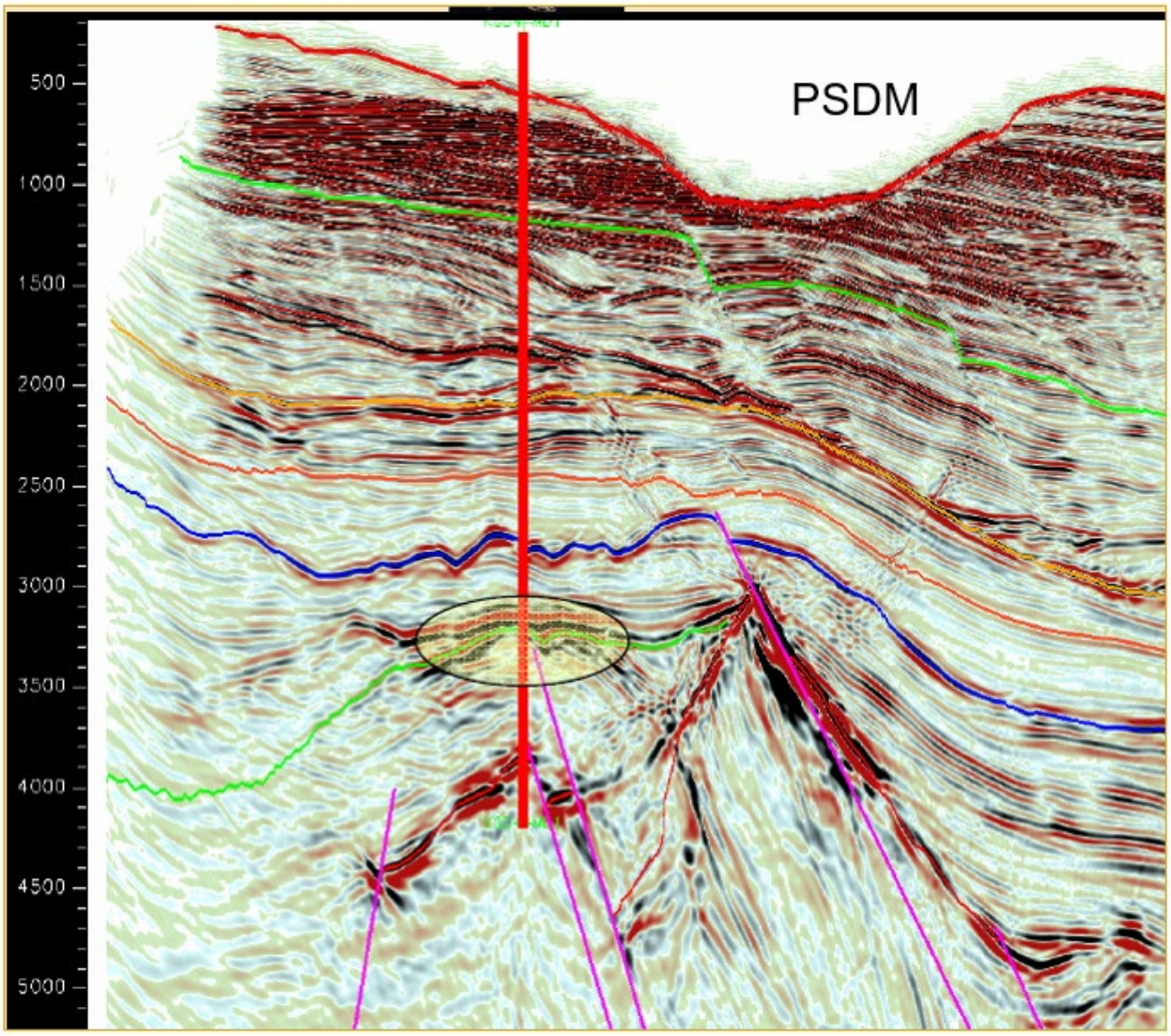
Note: Conversion used 10^6 bbl equal to 0.1461 10^6 eq tone.

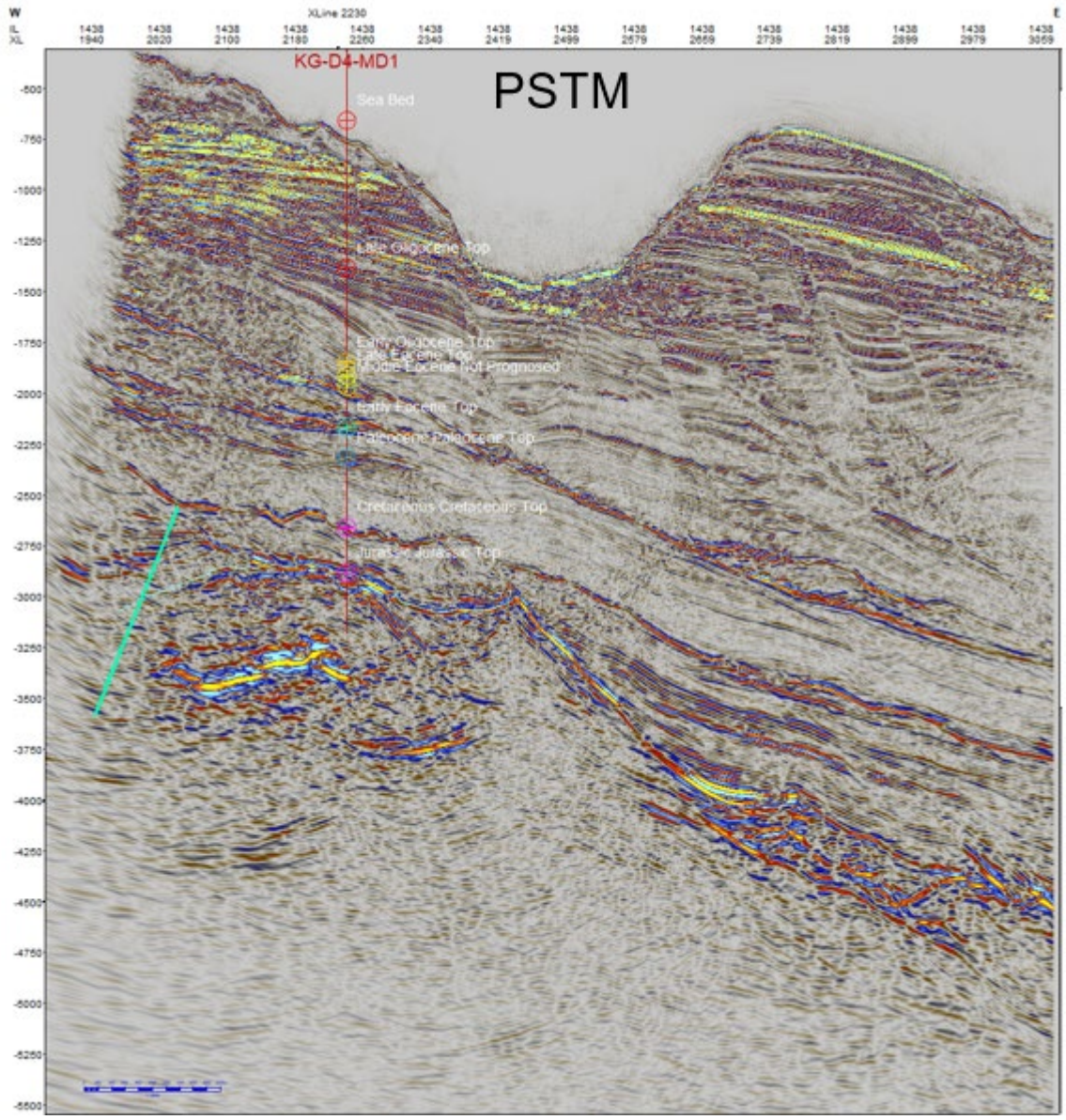
Volumes estimated by a Third Party

The operator has reported an in-place volume of 6.7 MMTOE (Best case).

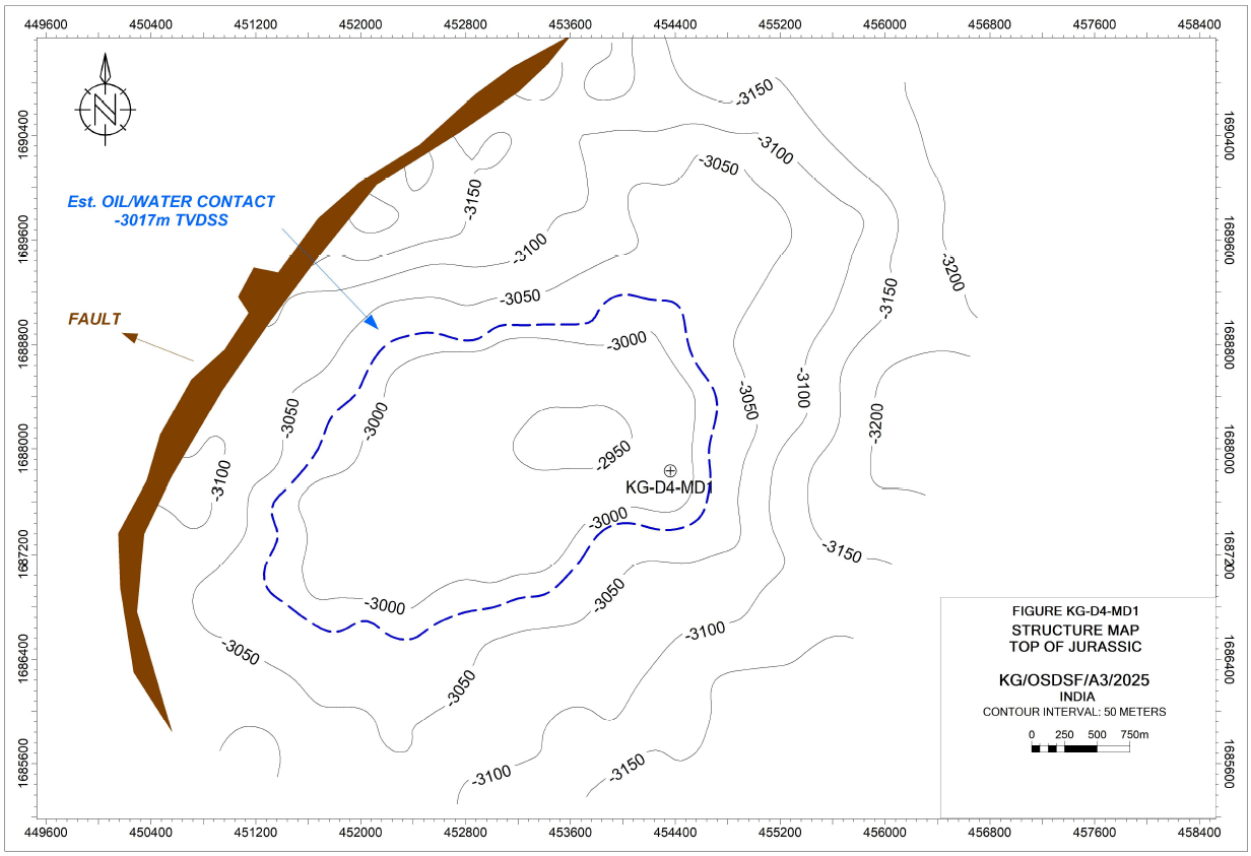
5.3.7. Annex

5.3.7.1. Seismic Sections

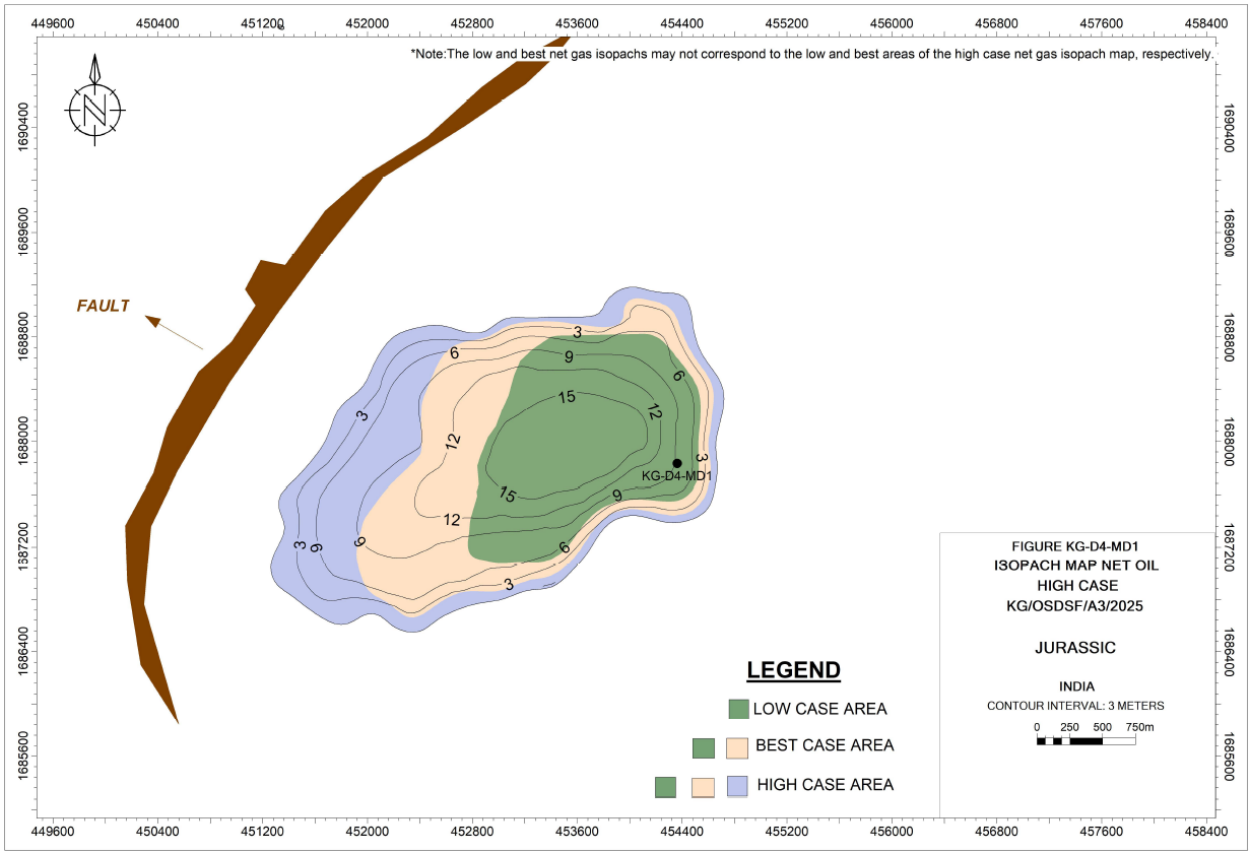



W
XLine 2230
E
IL
XL
KG-D4-MD1
PSTM
Sea Bed
Late Oligocene Top
Early Oligocene Top
Eocene Top
Middle Eocene Not Prognosed
Early Eocene Top
Paleocene Paleocene Top
Cretaceous Cretaceous Top
Jurassic Jurassic Top

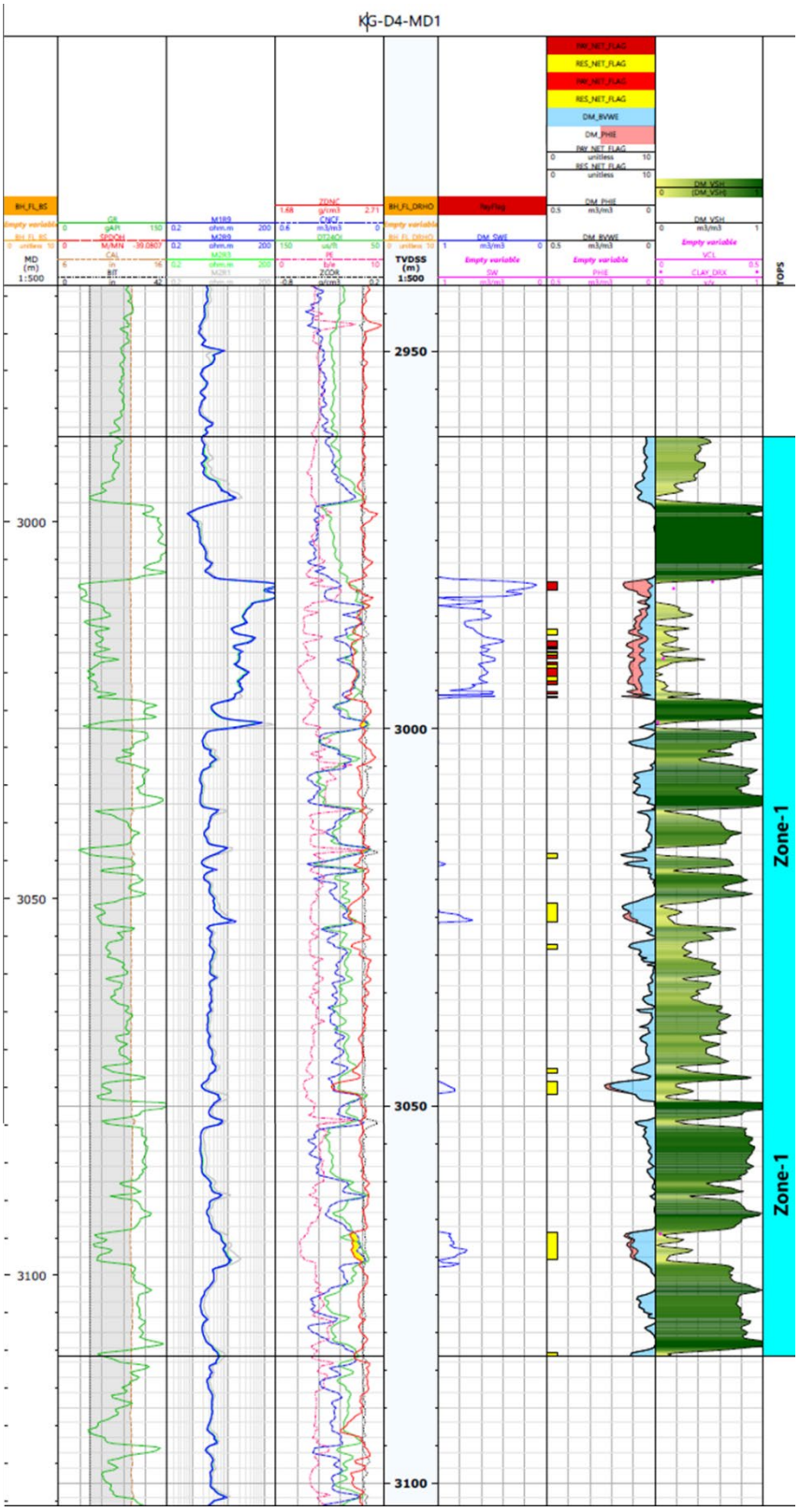
5.3.7.2. Structural Maps



5.3.7.3. Isopach Maps



5.3.7.4. Log Motifs



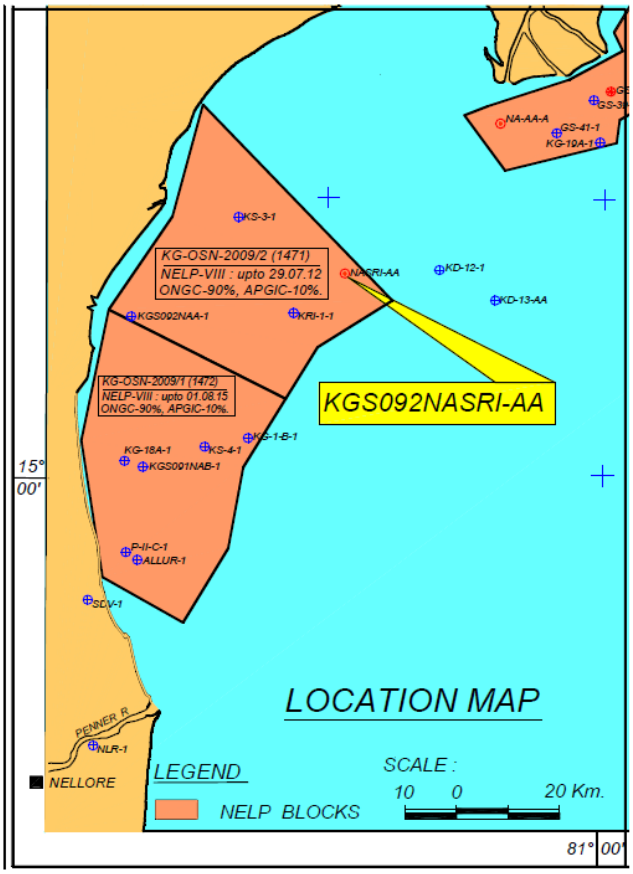
5.4. KGS092NASRI-1 DISCOVERY AND FIELD DISCRIPTION

The well KGS092NASRI-1 was spudded on December 15th, 2015 by the rig *Sagar Ratna* in the offshore NELP block KG-OSN-2009/2. It was drilled to test the Lower Cretaceous Rift fill sequence, with an initial target depth of 3700 m TVDSS. Based on VSP data interpretation, the target depth was later revised and extended to 4000 m to further assess the Rift fill sequence. The well was drilled vertically to 3786 m RKB, with casing strings set at 464 m (20"), 1803 m (13 3/8"), and 3150 m (9 5/8").

During drilling and log interpretation, direct hydrocarbon indications were observed, leading to the identification of three prospective reservoir zones. Object-I spans 3889–3882 m and 3866–3834 m, Object-II covers 3828–3820 m and 3813–3795 m, and Object-III includes 3791–3766 m and 3760–3750 m. In Object-I, production testing yielded oil at a rate of 32 barrels per day and gas at 820 cubic meters per day through a 12/64” choke, with unsteady bottomhole pressures ranging from 70 to 180 psi.

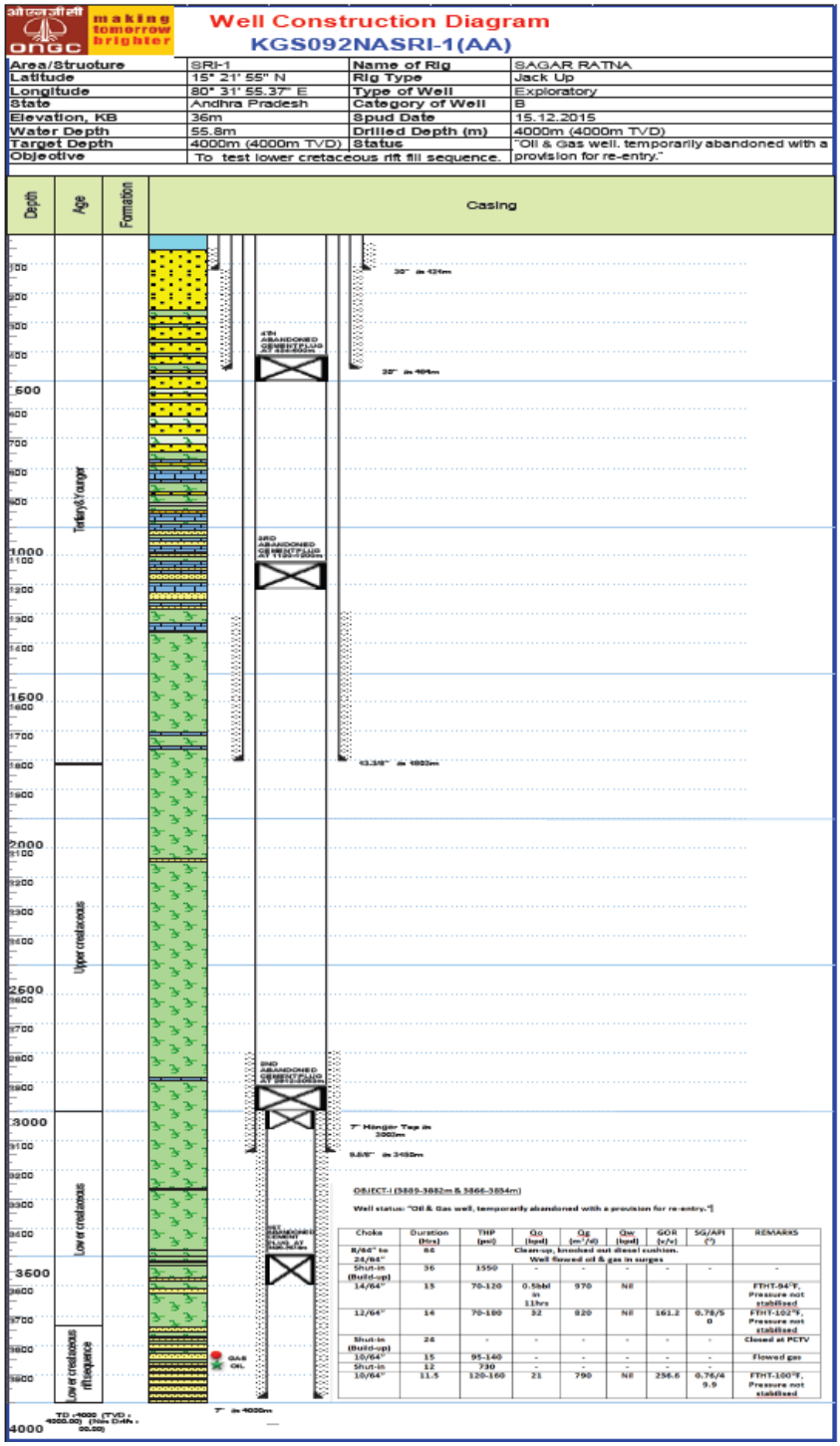
Although the flowing pressures were unstable, possibly due to the tight nature of the reservoirs. The reservoirs are located within the Rift fill sequence and are relatively tight in nature, making them good candidates for hydro-fracturing to enhance production.

The well KGS092NASRI-1 has been declared an oil and gas discovery and has been temporarily abandoned with a provision for re-entry.



5.4.1. Drilling and Well Completion

Key information regarding the drilled wells has been collated and presented herein. The adjoining figures, wherever shown, illustrate the well construction diagram and the litho-column information for key wells. Other well statics, such as kelly bushing reference depth, water depth, and drilled and logged depths (including well coordinates) are also provided.



5.4.2. Well Logging and Formation Evaluation

The well logs of all discovery wells as well as selected key wells in the contract area were reviewed. The logs recorded in various open-hole sections along with cased hole logs and information from conventional and other wireline formation test data are presented in this docket. The availability of key input reports, such as well completion reports (WCR) and formation evaluation reports (FER), was checked. Reservoir parameters of interesting zones and results of the tested zone(s) are included in this report. Log motifs of tested/interesting zones of key wells are also appended.

5.4.2.1. Well completion and log evaluation reports availability

WCR/FER availability	Spud date	KB	Drilled depth
WCR/FER available	12.15.2015	35.3 m	4000 m MDRT

5.4.2.2. Well logs acquired

Drill hole size (inch) and well logs recorded

17.25 AIT-PEX-GR-CALI (464 - 1793.6 m)
DSI-GPIT-GR (464 - 1790.9 m)
12.25 AIT-PEX-HNGS-GR-CALI (1803.5 - 3158.7 m)
DSI-GPIT-GR (1803 - 3153.9 m)
VSP-GR (20 - 3150 m)
MDT-LFA-GR (2146 - 3035 m)
SWC-GR (1819 - 3118 m)
VSP-GR (2938.3 - 3781 m)
8.5 AIT-PEX-HNGS-GR (3157 - 3789 m)
DSI-GPIT-GR (3157 - 3785 m)
MDT-LFA-GR (3510 - 3785 m)
PEX-HNGS-GR (3771 - 4006.2 m)
AIT-DSI-GR (3785 - 4003.5 m)
DSI-GPIT-GR (3157 - 3785 m)
MDT-LFA-GR (3510 - 3785 m)
PEX-HNGS-GR (3771 - 4006.2 m)
AIT-DSI-GR (3785 - 4003.5 m)
ECS-GR (3400 - 4002.8 m)
MSCT (SWC) - GR (3176 - 3972 m)
MDT-LFA-GR (3765 - 3973.5 m)
MDT (DP)-LFA-GR (3759 - 3899.52 m)
MDT (DP)-LFA-GR (3828.97 - 3886.5 m)
Dual OBMI-GR (3400 - 4000 m)
CBL-VDL-GR-CCL (3150 - 3970 m)
CBL-VDL-GR-CCL (3740 - 3970 m)
GR-CCL (3535 - 3763 m)

5.4.3. Well Testing and Workover History

Three objects were released for testing. Among the three, only Object-I (3834-3866m & 3882-3889m) was tested using brine with TCP-DST & DPC at 5 SPF. Object-I was found to be gas & oil bearing. Testing ofthe other two objects were not carried out at present and the well was temporarily abandoned with a provision for re-entry.

5.4.3.1. Drill Stem Test (DST)

Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 64 | Bean (1/64 inch): 8-24 | FTHP: --- | FBHP: --- | Qgas: --- m3/d | Clean Up
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 36 | Bean (1/64 inch): --- | THP: 1550 psi | BHP: 4253.4* psi | Build Up *Not stabilized
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 13 | Bean (1/64 inch): 14 | FTHP: 10-120 psi | FBHP: --- | Qgas: 970 m3/d | Qoil: 1 bpd | Flow *Not stabilized
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 13 | Bean (1/64 inch): 12 | FTHP: 10-180 psi | FBHP: 1781 psi | Qgas: 820 m3/d | Qoil: 32 bpd | Flow *Not stabilized
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 24 | Bean (1/64 inch): --- | THP: --- | BHP: 5022* psi | Build Up *Not stabilized
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 15 | Bean (1/64 inch): 10 | FTHP: 95-140 psi | FBHP: --- | Qgas: --- | Qoil: --- | Flow *Flowed gas
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 12 | Bean (1/64 inch): --- | THP: 730 psi| BHP: --- | Shut in
Formation: Lower Cretaceous Syn-rift Sequence | Interval(m): 3882-3889 m / 3834-3866 m | Flow period (hr): 11.5 | Bean (1/64 inch): 10 | FTHP: 120-160 psi | FBHP: --- | Qgas:790 m3/d | Qoil: 21 | Flow *Not stabilized

SL. No.	Dur. (Hrs)	Study	Choke	THP (ksc)	BHP (ksc)	Qg (m^3/d)	Qo (bpd)	Remarks
1	64	Clean up	8/64"-24/64"	-	-	-	-	Clean-up, knocked out diesel cushion, well flowed oil and gas in surges
2	36	Build-up	S/I	109	299	-	-	Well closed at choke manifold
2	13	Flow	14/64"	-	-	970	-	Pressure not stabilized
3	14	Flow	12/64"	-	125	820	32	Pressure not stabilized
4	24	Build-up	S/I	-	353	-	-	Well closed at bottom
5	15	Flow	10/64"	-	-	-	-	well flowed gas
6	12	Shut-in	S/I	51	-	-	-	
7	11.5	Flow	10/64"	-	-	790	21	Pressure not stabilized

- Gauge depth : 3783 m (TVD)
- Highest recorded shut-in BHP : 353 Ksc
- Maximum BHT : 313 ^{0}F
- Water production : Nil

5.4.4. Reservoir Engineering Studies and Analysis

Key reservoir engineering datasets, wherever available, were collated and are presented under various data genres. In a comprehensive data presentation, the results from well tests, formation dynamics tests, reservoir pressure buildup studies, and pressure-volume-temperature (PVT) data/results are included.

5.4.4.1. Formation dynamics tests

Sl. No.	MD (m)	TVD (m)	Temp (oF)	Mud Pressure (psi)		Formation Pressure (psi)	Formation Pressure Equivalent in ppg	Mobility (mD/cp)	Remarks
				Before	After				
1	3773.98	3773.98	293.7	7445.98	7448.53	6671.24	10.35	0.05	Very low mobility. Couldn't sustain pumping.
2	3775.50	3775.50	295.2	7450.40	7450.39	6703.64	10.40	0.02	Very low mobility. Couldn't sustain pumping.
3	3984.05	3984.05	288.2	7890.83	7889.25	7062.98	10.40	0.56	Good test
4	3766.49	3766.49	284.6	7433.15	7434.64	6641.21	10.34	0.16	Good test, Could not sustain pumping because of low mobility
5	3766.32	3766.32	286.4	7432.84	7435.85	6643.70	10.35	0.11	Good test, Could not sustain pumping because of low mobility
6	3826.71	3826.71	287.4	7589.36	7580.73	6832.71	10.47	0.04	Good test, Valid, low confidence
7	3855.51	3855.51	296.7	7616.75	7617.02	6634.80	10.09	0.06	Good test, Could not sustain pumping because of low mobility
8	3853.39	3853.39	297.5	7610.76	7610.08	6639.27	10.11	0.22	Good test, Could not sustain pumping because of low mobility
9	3973.03	3973.03	300.1	7868.25	7864.27	6789.71	10.02	0.10	Good test, Could not sustain pumping because of low mobility
10	3971.00	3971.00	303.8	7854.31	7852.60	6827.68	10.08	0.06	Good test, Could not sustain pumping because of low mobility
11	3968.00	3968.00	304.7	7843.08	7842.28	6957.20	10.28	0.18	Good test, Could not sustain pumping because of low mobility
12	3964.00	3964.00	305.3	7829.94	7830.24	6728.76	9.96	0.10	Good test, Could not sustain pumping because of low mobility
13	3955.00	3955.00	305.9	7805.22	7804.19	6976.35	10.35	0.15	Good test, Could not sustain pumping because of low mobility
14	3911.01	3911.01	306.0	7702.34	7712.41	7119.45	10.68	0.29	Good test, Could not sustain pumping because of low mobility
15	3909.38	3909.38	304.8	7712.13	7710.33	7105.38	10.66	0.58	Good test, Could not sustain pumping because
16	3899.50	3899.50	304.5	7688.90	7689.11	7527.07	11.32	7.38	FID; Pumped for 30mins, total-5.3lts; Conventional Sample taken in MRSC Lower-339
17	3886.52	3886.52	306.1	7659.55	7664.69	6708.37	10.12	0.30	Good test, Could not sustain pumping because of low mobility
18	3888.49	3888.49	306.2	7669.82	7669.35	6729.54	10.15	0.04	Good test
19	3882.49	3882.49	305.7	7653.94	7656.75	6749.99	10.20	0.10	Good test
20	3874.49	3874.49	305.0	7638.00	7641.06	6714.63	10.16	0.08	Good test

5.4.4.2. Gas composition analysis

Formation: Lower Cretaceous Syn-rift Sequence| Interval(m.): 3889 - 3834 m| Sample No.: Sample G/067/16-17
C1: 56.16 %| C2: 13.73 %| C3: 10.83 %| iC4: 2.57 %| nC4: 6.53 %| iC5: 1.97 %| nC5: 2.57 %| C6+: 2.80 %| Carbon-dioxide: 1.14 %| Nitogen+Oxygen: 1.70 %| Sp.Gr.: 1.03|Molar Mass: N/A

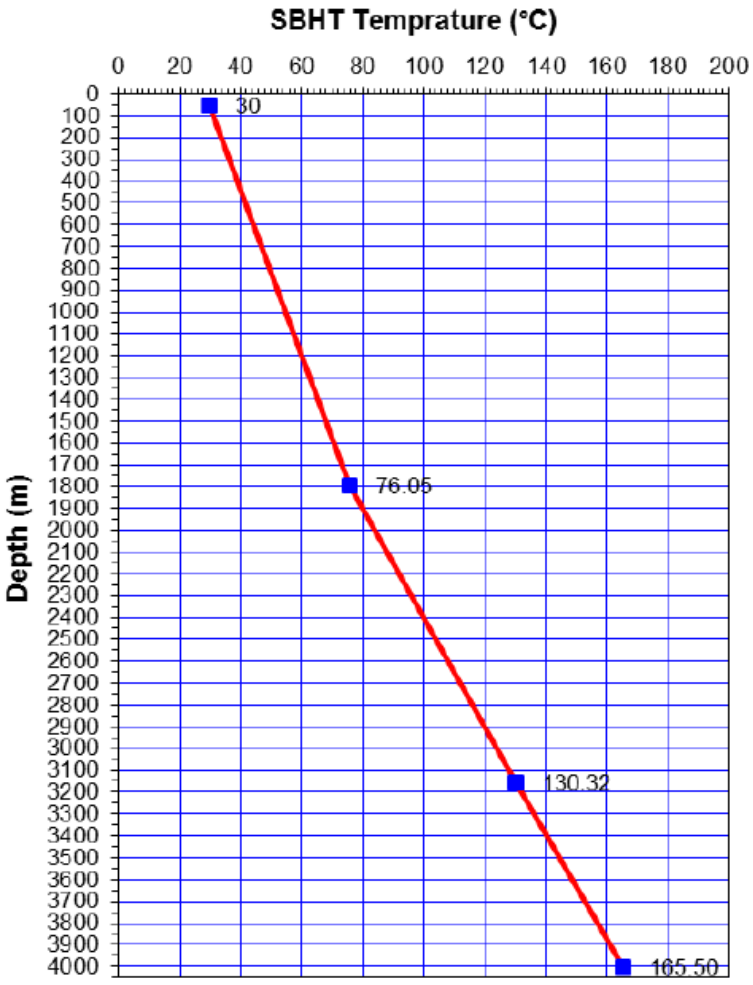
5.4.4.3. Geothermal gradient (from wireline logs)

See annexure section.

5.4.4.4. Other reservoir studies

Reservoir report.

5.4.4.5. Annexure to Reservoir Engineering studies/analysis



5.4.5. Geology and Reservoir Description

The geology of the area was comprehensively reviewed using correlations, sections, and maps. The well correlation, seismic sections, top structure, seismic attribute/amplitude, and net sand/pay maps were used to illustrate the magnitude and distribution of key reservoir properties in and around the discovered gas pools (accumulations). The local tectonic setting and geological section of the area, wherever available, are also provided. These maps/sections are sequentially shown field-wise and reservoir-unit-wise on figures, each of which is appropriately titled and illustrated in the following section.

5.4.5.1. Geological description

The KG-OSN-2009/2 block is structurally defined by several tectonic features, including the Bapatla horst to the northwest and the Nayudupetta-Krishna high to the southeast. The Nellore-Kavali ridge acts as a median high separating the Pennar graben to the east from the Nizampattinam graben to the west. The Nizampattinam graben extends both north and south of the Krishna high. Adjacent to the area, the KG-OSN-2009/1 block lies within the Pennar depression and is bordered by the Nellore-Kavali horst and Nayudupetta ridge.

Structurally, the region is dominated by NE-SW trending major faults, with some NW-SE oriented faults within the half grabens. A prominent cross fault with a NW-SE trend intersects both blocks.

The exploration focus is on Rift fill and Pre-rift sequences, as the overlying Tertiary sequence is thin and lacks exploration interest. Cretaceous and older Mesozoic formations host good quality source rocks, as confirmed by drilling. The geological complexity of the area is marked by uplift and tilting, which led to erosion of older sediments, particularly in the northwest and southeast.

Gas shows have mainly been observed in the Cretaceous and older sections of the Pennar graben, while occurrences of tar/asphalt are reported in Eocene limestones on the Nayudupetta high. The proposed hydrocarbon plays target the syn-rift fill sequences of the Lower Cretaceous in favorable structural settings.

5.4.6. Reservoir Properties and OHIP

Estimates of in-place volumes presented in this section have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

The volumetric method was used to estimate the original oil in place (OOIP) of certain fields evaluated herein. Structure maps were prepared using the available data. Time-structure maps were created from the interpreted seismic data. These time maps were converted to depth-structural geological maps using velocity data acquired in wells in the fields. The 3–D seismic data were interpreted to analyze faulting and geological structural trends.

Wireline electrical logs, radioactivity logs, wireline formation pressure tests, wireline fluid sample tests, and other data were acquired in wells drilled in the evaluated fields. When available, drill cuttings, hole cores, and sidewall cores were analyzed. These combined analyses of the well-log data were used to establish petrophysical properties. Estimates of OOIP were made using net pay isopach maps. These isopach maps were constructed using geological depth structure maps and petrophysical analyses of the well-log data.

Following is the summary of the average reservoir parameters and estimates of OOIP. Seismic sections, log motifs, structure and isopach maps are in the annex bound with this information docket.

RESERVOIR PARAMETERS and ORIGINAL OIL in PLACE
as of
JANUARY 1, 2025
for the
KGS092NASRI-1 DISCOVERY
of
KG/OSDSF/A3/2025 CONTRACT AREA

	Reservoir	Total
Low		
Area, acres	635	
Oil Formation Volume Factor, rbbl/bbl	1.28	
Average Thickness, ft	62.8	
Average Porosity, %	11.00	
Average Water Saturation, %	58.96	
Original Oil in Place, 10^6bbl	10.91	**10.91**
Original Oil in Place, 10^6 eq ton	1.59	**1.59**
Best		
Area, acres	687	
Oil Formation Volume Factor, rbbl/bbl	1.30	
Average Thickness, ft	71.6	
Average Porosity, %	12.01	
Average Water Saturation, %	57.06	
Original Oil in Place, 10^6bbl	15.14	**15.14**
Original Oil in Place, 10^6 eq ton	2.21	**2.21**
High		
Area, acres	769	
Oil Formation Volume Factor, rbbl/bbl	1.32	
Average Thickness, ft	80.7	
Average Porosity, %	13.01	
Average Water Saturation, %	54.97	
Original Oil in Place, 10^6bbl	21.35	**21.35**
Original Oil in Place, 10^6 eq ton	3.12	**3.12**

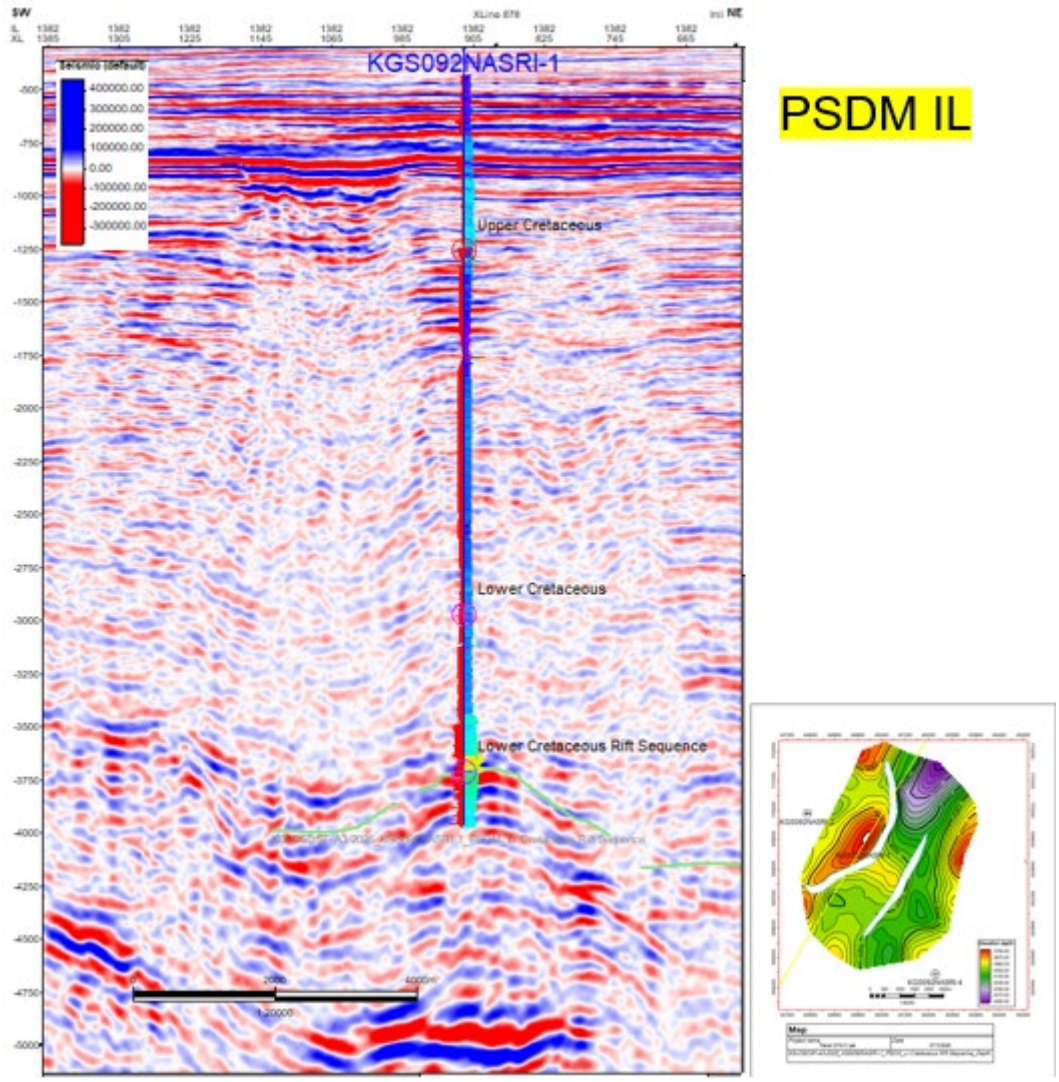
Note: Conversion used 10^6 bbl equal to 0.1461 10^6 eq tone.

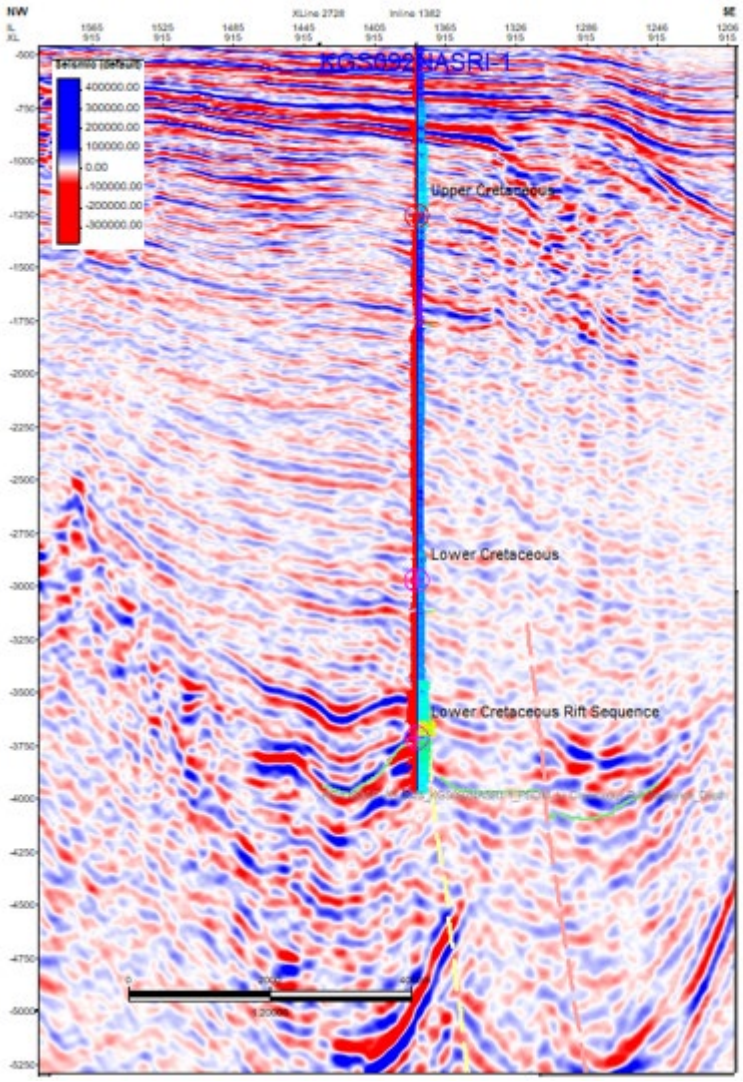
Volumes estimated by a Third Party

The operator has reported an in-place volume of 6.4 MMTOE (Best case).

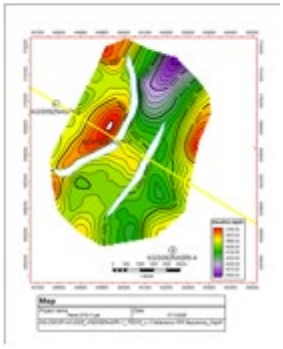
5.4.7. Annex

5.4.7.1. Seismic Sections

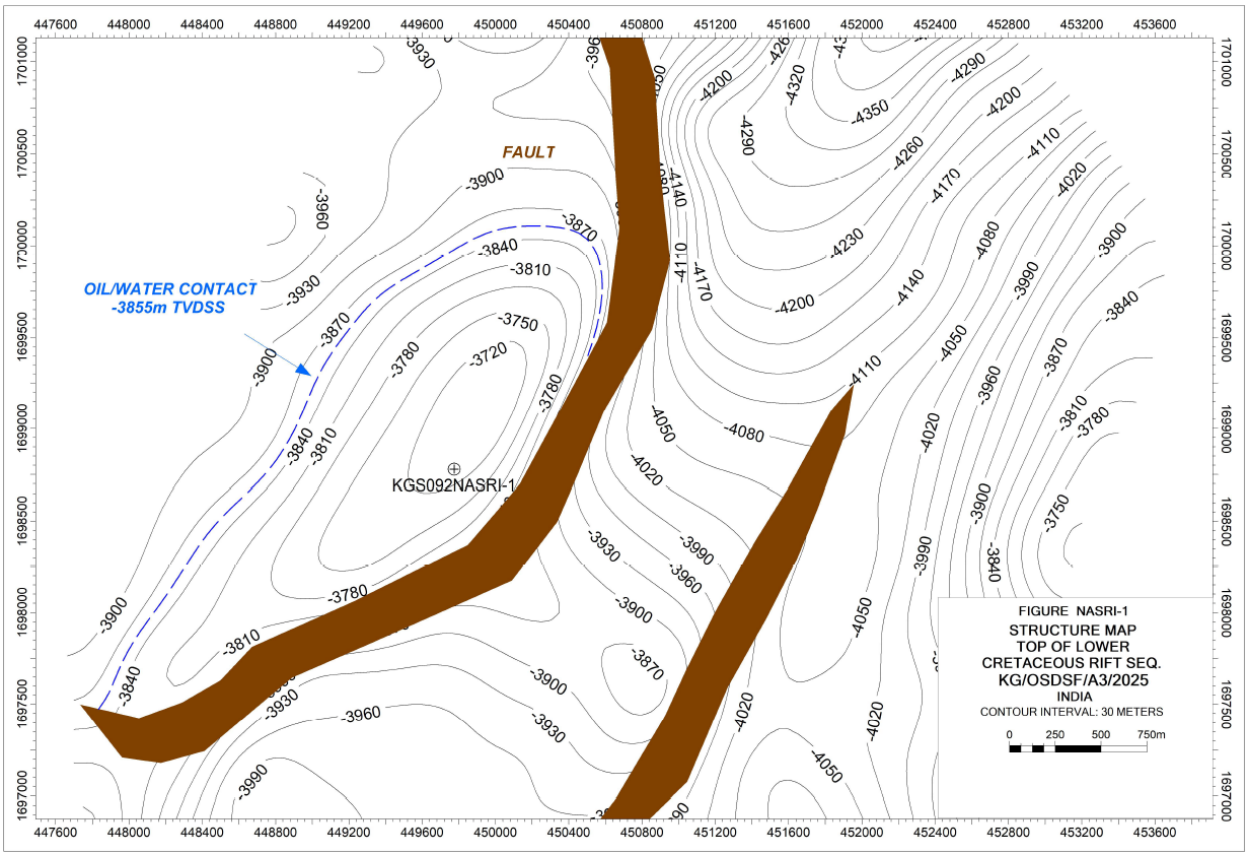



NW
SE
XLine 2728
Inline 1382
Upper Cretaceous
Lower Cretaceous
Lower Cretaceous Rift Sequence

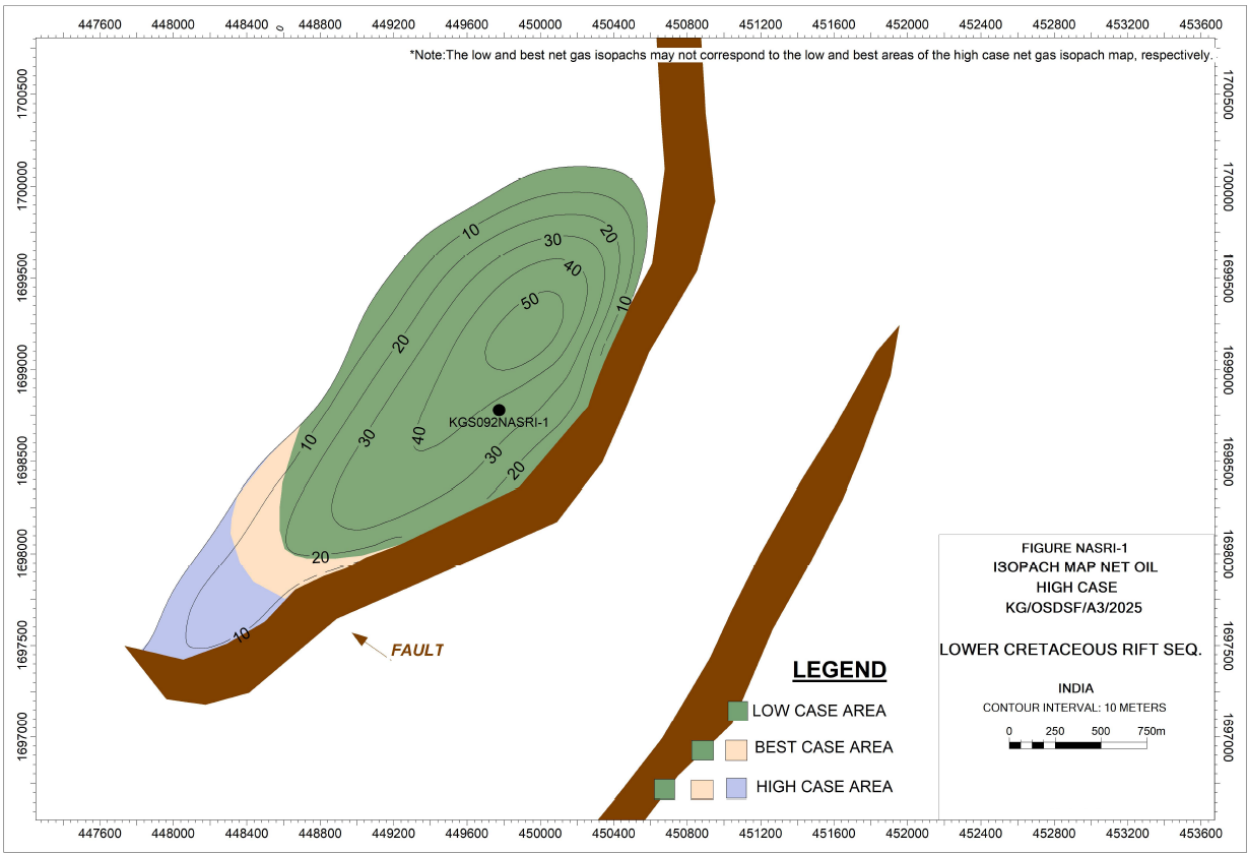
PSDM XL



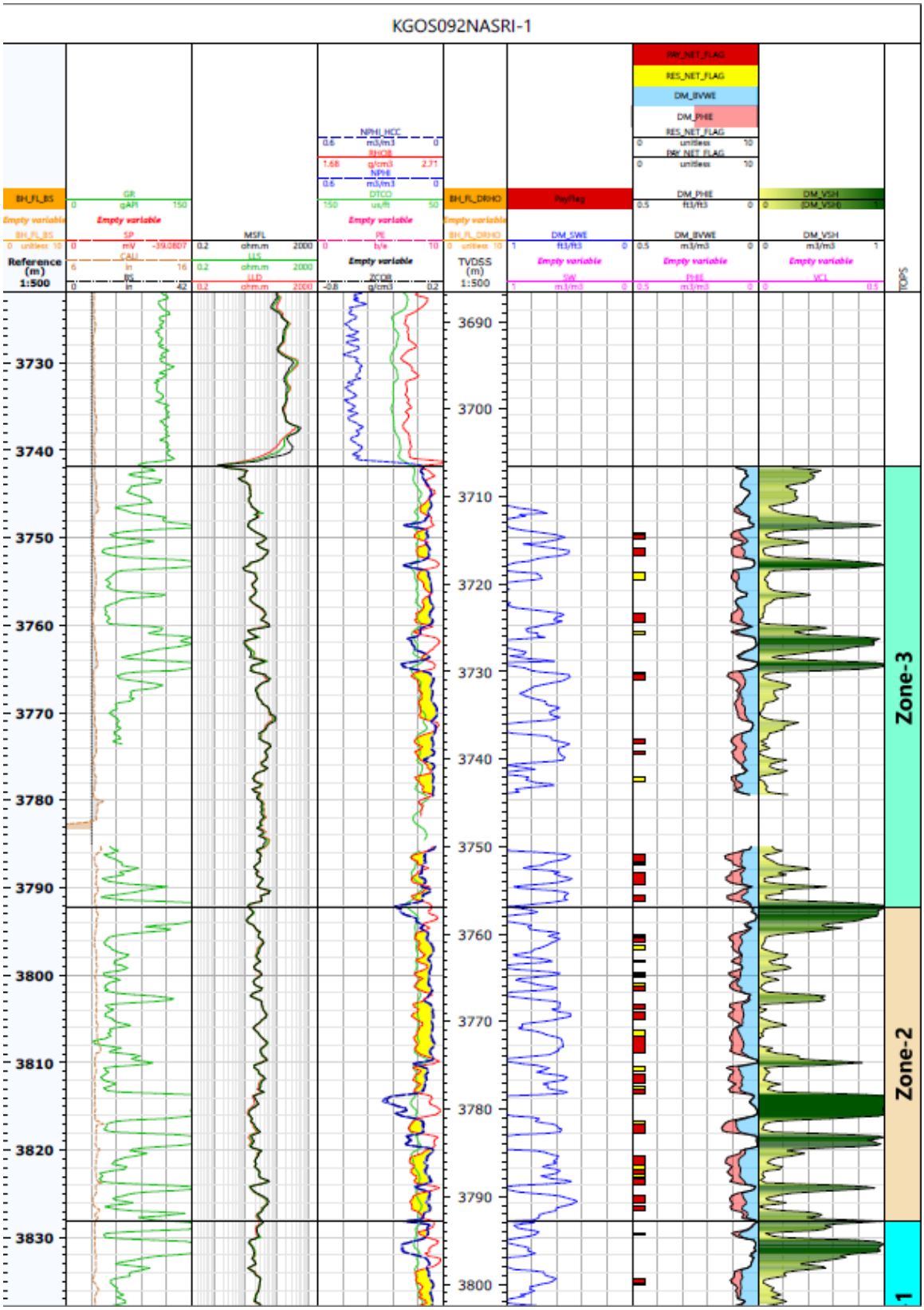
5.4.7.2. Structural Maps

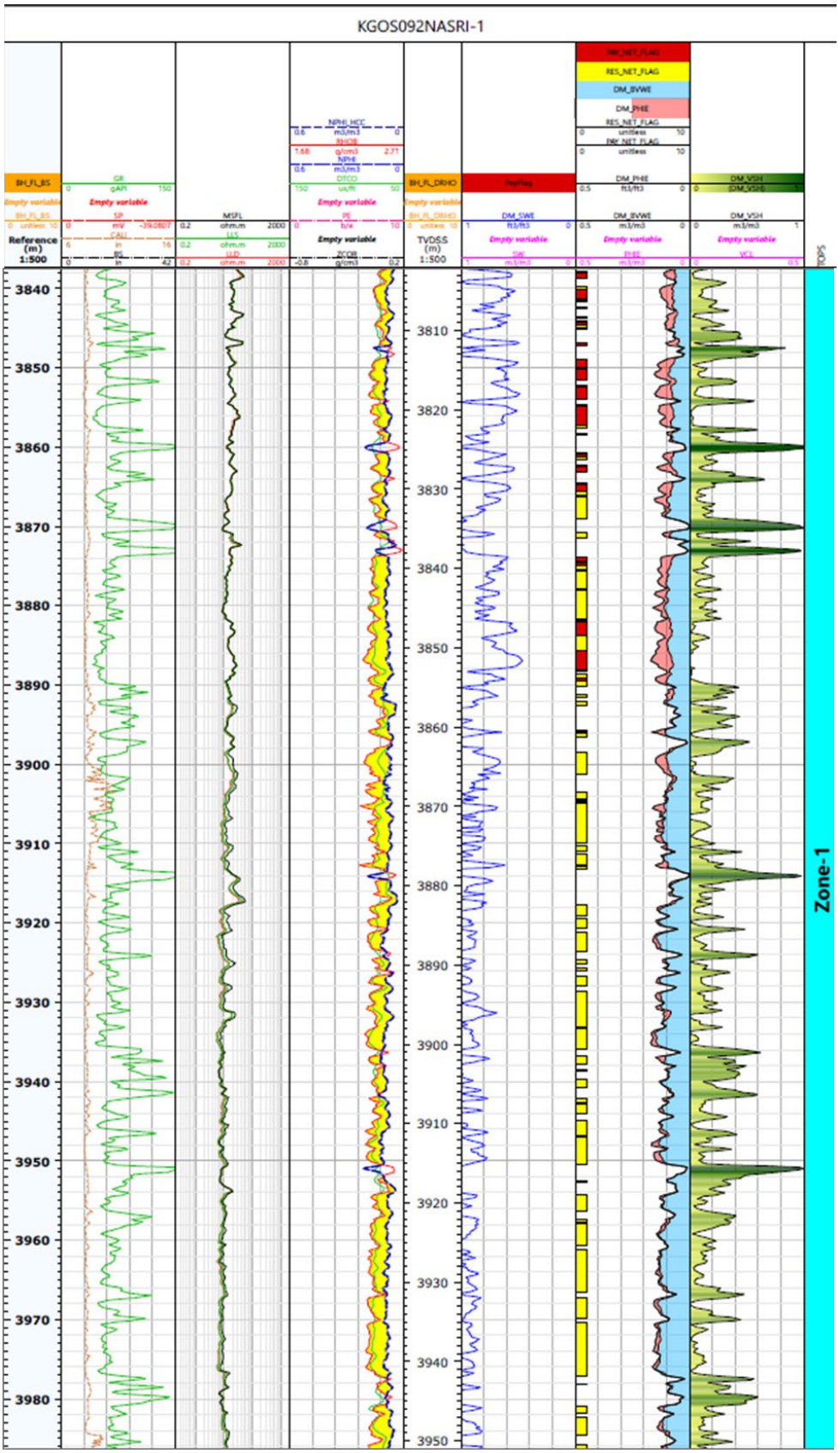


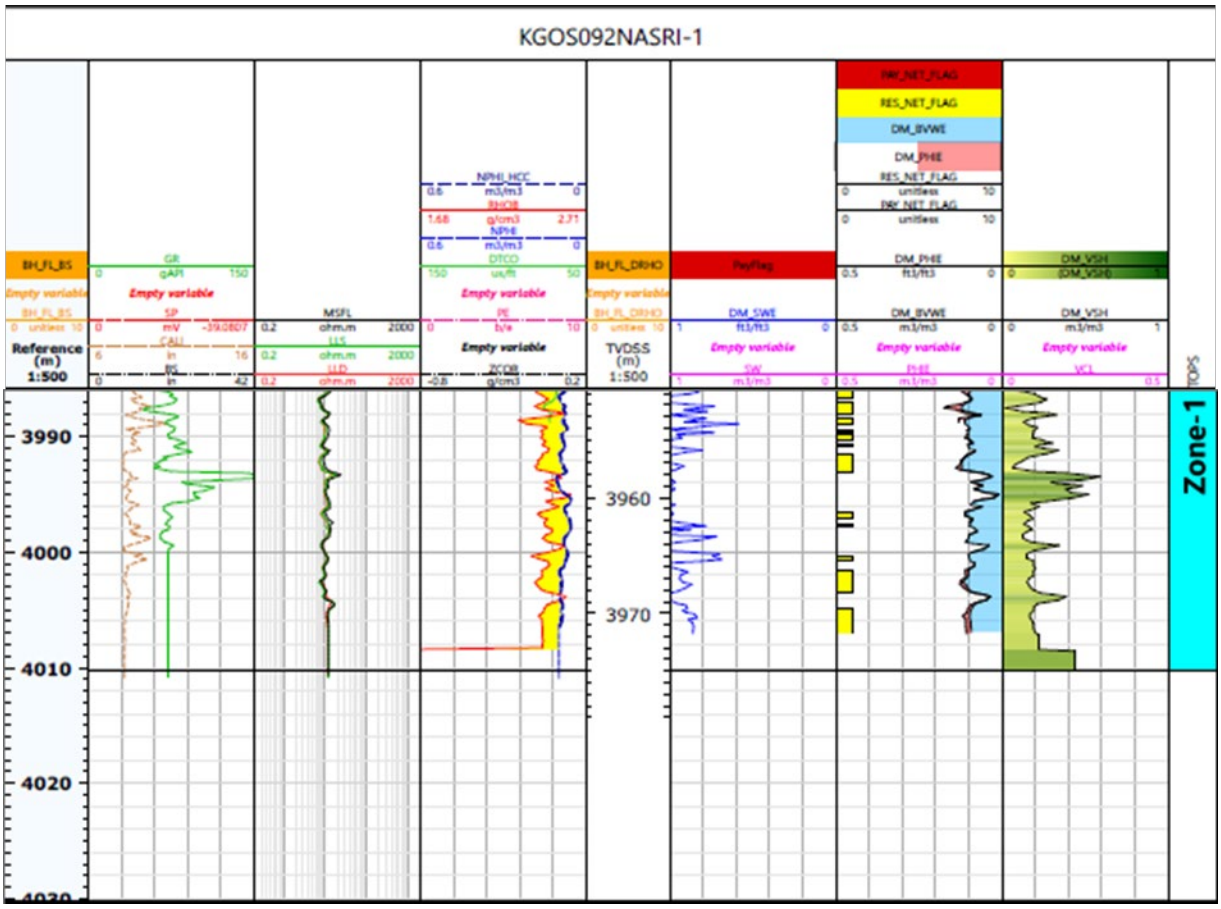
5.4.7.3. Isopach Maps



5.4.7.4. Log Motifs




KGOS092NASRI-1
Reference (m) 1:500
TVDSS (m) 1:500
Zone-1


KGOS092NASRI-1
Reference (m) 1:500
TVDSS (m) 1:500
3990
4000
4010
4020
3960
3970
Zone-1

5.5. STATUS OF ADDITIONAL WELLS IN THE AREA

The contract areas include three areas with 4 discoveries in total, KGOSN-2009/3 (A3-2-H2), KG-DWN-98/1 (KG-D4-MD1) and KG-OSN-2009/2 (KGS092NASRI-1). Also, there are 4 additional wells drilled. The status of these additional wells is described in the corresponding field sections.

KG-OSN-2009/2

KRI-1-1	The KRL-1-1 well was drilled to evaluate hydrocarbon potential within Tertiary and Cretaceous sediments. The well reached basement at 1076 m. The sedimentary sequence comprised approximately 525 m of Miocene and Post-Miocene units, about 100 m of Paleocene, and a thin veneer (~45 cm) of Late Cretaceous sediments. The Miocene and Post-Miocene intervals consisted primarily of sand with minor interbedded shale and limestone. The Eocene section included an upper arenaceous-carbonate unit overlying a lower carbonate sequence (biomicrite). The underlying Paleocene and Cretaceous units were mostly argillaceous with limited sand content. No significant oil or gas shows were observed while drilling. However, a limestone interval at 639 m indicated the presence of asphalt/residual oil. RFT tests conducted at 711.2 m, 720.9 m, and 921.8 m confirmed only saline water. Four zones were tested between 1075–1085 m, 891–976 m, 811.2–819.5 m, and 631.5–637.5 m. Of these, only Object II yielded water with salinity of 27.7 g/l; the rest were dry. The well was abandoned with cement plugs at 500–600 m and 250–150 m. The encountered sedimentary section was thin and likely reflects structural highs along the basin margin. Reservoir and source rock development is inferred to be poor in this area.
KGS092NASRI-4	The KGS092NASRI-4 (AD) well was drilled in 2017 to evaluate hydrocarbon potential within the syn-rift sequence (SRI-1 pay equivalent). The objective was to establish the extension of SRI-1 further east in a different fault block. The planned TD was 4325 m MD KB (4300 m TVDSS), later revised to 4510 m MD KB (4476 m TVDSS) to probe the entire syn-rift section. The well was spudded on 07 September 2017 in a water depth of 175 m by rig Essar Wildcat and drilled vertically to 4510 m MD. Casings were set at 293 m (30”), 642 m (20”), 1838 m (13⅜”), 3489 m (9⅝”) and 4165 m (7”). Based on hydrocarbon shows, log interpretation, and MDT results, three intervals were approved for production testing: Object I (4067–4072 m, 4074–4078 m, 4082–4085 m, 4096–4111 m), Object II (4002–4010 m), and Object III (3600–3618 m). Due to unavailability of SSTT services, the well was temporarily abandoned on 16 December 2017 with re-entry planned. The rig returned and resumed operations on 09 April 2018. Object-I was tested conventionally with no influx. Object-II was tested via TCP-DST and showed minor influx. Acid stimulation and mini-frac/main frac jobs (54 T) were performed, followed by flowback. Diesel spotting studies showed no results. Low deliverability was attributed to poor permeability and tight reservoir facies. No hydrocarbon evidence was confirmed during testing of Objects I and II. Object III was not tested. The well was declared dry and permanently abandoned on 29 July 2018. The Essar Wildcat was released at 0130 hrs and moved to G-1-NW-AA in the G-1 PML block.

KGS092NASRI-3 The KGS092NASRI-3(AC) well was drilled in 2017 to evaluate hydrocarbon potential within rift fill and syn-rift sequences, reaching a final depth of 3756 m MDRT. The well was drilled in four phases.
Phase-I involved drilling a 17½″ pilot hole and 26″ enlarged hole to 505 m, encountering total mud loss at shallow depths. Multiple cement plugs and LCM spotting were required before setting the 20″ casing at 501 m.
Phase-II involved drilling a 17½″ hole to 1650 m. After successful LOTs and formation evaluation, a 13⅜″ casing was set at 1645 m and cemented.
Phase-III extended the 12¼″ hole to 2851 m. MDT and VSP logs were acquired, and a 9⅝″ casing was set at 2847 m. Moderate mud losses occurred during this phase.
In Phase-IV, the 8½″ hole was drilled to TD (3756 m). Severe mud losses and multiple tool sticking events complicated MDT logging operations. Despite extensive sampling and testing, only mud filtrate was recovered, and no hydrocarbons were identified.
The well was declared dry and permanently abandoned without running the 7″ casing. Three abandonment plugs were placed and pressure-tested as per standard procedure.

KGS092NASRI-2 The KGS092NASRI-2 well was drilled vertically in 2016 to a total depth of 4131 m MDRT to evaluate the syn-rift sequence (SRI-1 pay equivalent) in the KG-OSN-2009/2 block. The well encountered 827 m of Rift fill sediments before terminating, and casing was set at 99 m (30″), 600 m (20″), 1803 m (13⅜″), 3452 m (9⅝″), and 4130 m (7″). The well was hermetically tested on 31 March 2017.
Six objects were approved for testing, of which five were conclusively tested. Objects I, II, III, and VI showed no hydrocarbon activity. Object V produced oil and gas at 94 BPD and 4258 m³/day, though with unstable pressure (160–210 psi). However, due to poor deliverability, it was deemed not commercially viable in the offshore setting.
The well was declared dry and permanently abandoned. Re-entry was ruled out due to low MLS and cement set between 30″ and 20″ casing. The rig was released on 17 July 2017.

6. DATA PACKAGE INFORMATION

This information docket for the contract area, titled KG/OSDSF/A3/2025 is available with Data Package, which includes seismic data, well data and well completion and other reports. Given below is the detail of datasets that are available in the Data Package.

6.1. Well, Seismic Data and Reports availability

There are a total of 8 wells available near the discoveries. Well coordinates are shown in the table below.

Well Name	Latitude	Longitude	Easting	Northing	CRS
A3-2	15°27'26.3938"N	80°31'42.0686"E	449403.24	1708965	WGS 84, UTM44
H2	15°21'40.2901"N	80°34'59.3800"E	455262.47	1698319	WGS 84, UTM44
KG-D4-MD1	15°15'58.9421"N	80°34'29.8646"E	454361.98	1687833	WGS 84, UTM44
KGS092NASRI-1	15°21'54.8899"N	80°31'55.2698"E	449774.52	1698779	WGS 84, UTM44
KGS092NASRI-2	15°22'31.4429"N	80°30'51.6449"E	447880.21	1699906	WGS 84, UTM44
KGS092NASRI-3	15°14'37.8010"N	80°25'40.6520"E	438570.67	1685376	WGS 84, UTM44
KGS092NASRI-4	15°19'34.6688"N	80°33'17.8420"E	452227.37	1694465	WGS 84, UTM44
KRI-1-1	15°17'39.0001"N	80°26'31.9999"E	440116.67	1690939	WGS 84, UTM44

Seismic 2D Data:

Line segment name	Processing type	FSP/CDP	LSP/CDP	Length (Km)	CRS
A-30	REPROCESSED_RAW_MIGRATION_STACK	1	1297	15.5871	WGS84/44N
A-34	REPROCESSED_RAW_MIGRATION_STACK	1	1048	18.8844	WGS84/44N
A-113	REPROCESSED_RAW_MIGRATION_STACK	1	1844	14.7159	WGS84/44N
A-117	REPROCESSED_RAW_MIGRATION_STACK	1	2092	33.7227	WGS84/44N
A-119	REPROCESSED_RAW_MIGRATION_STACK	1	1900	22.025	WGS84/44N
A-121	REPROCESSED_RAW_MIGRATION_STACK	1	1690	13.0502	WGS84/44N
I-88-004	REPROCESSED_RAW_MIGRATION_STACK	1	3040	22.779	WGS84/44N
I-88-006	REPROCESSED_RAW_MIGRATION_STACK	1	1412	10.4507	WGS84/44N

I-88-008	REPROCESSED_RAW_MIGRATION_STACK	1	3576	19.4771	WGS84/44N
I-88-010	REPROCESSED_RAW_MIGRATION_STACK	1	5440	18.7177	WGS84/44N
I-88-013A	REPROCESSED_RAW_MIGRATION_STACK	1	4796	14.9609	WGS84/44N
A-115	REPROCESSED_RAW_MIGRATION_STACK	1	2399	39.889	WGS84/44N
INE1-1000	FINAL_PSTM_STACK	5772	39784	10.2008	WGS84/44N
INE1-2000	FINAL_PSTM_STACK	4936	99876	20.325	WGS84/44N
DWD42001-01	FINAL_POSTM_STACK	6517	12876	10.6765	WGS84/44N
DWD42001-08	FINAL_POSTM_STACK	6517	15000	6.8396	WGS84/44N
ANEW-34	RAW_PSTM_STACK	1	1037	1.7964	WGS84/44N
ANEW-36	RAW_PSTM_STACK	1	1969	30.3082	WGS84/44N
KG19-03-06	RAW_PSTM_STACK	1	6348	17.1358	WGS84/44N
KG19-03-10	RAW_PSTM_STACK	1	6692	15.4654	WGS84/44N
KG19-03-12	RAW_PSTM_STACK	1	6880	15.4015	WGS84/44N
KG19-03-20	RAW_PSTM_STACK	1	4476	8.3729	WGS84/44N
KG19-03-22	RAW_PSTM_STACK	1	4692	7.4785	WGS84/44N
KG19-03-53	RAW_PSTM_STACK	1	4380	26.2037	WGS84/44N
KG19-03-55	RAW_PSTM_STACK	1	6512	23.5149	WGS84/44N
KG19-03-57	RAW_PSTM_STACK	1	4884	19.3945	WGS84/44N
KG19-03-59	RAW_PSTM_STACK	1	5024	14.8869	WGS84/44N
KG19-03-61	RAW_PSTM_STACK	1	5032	8.2759	WGS84/44N
KG19-03-63	RAW_PSTM_STACK	1	5096	3.0972	WGS84/44N
KG_005_068P2	FINAL_PSTM_STACK	513	5869	21.4195	WGS84/44N
KG_013_071P1	FINAL_PSTM_STACK	513	5068	15.4481	WGS84/44N
KG_017_067P1	FINAL_PSTM_STACK	250	4695	10.9781	WGS84/44N
KG_021_069P1	FINAL_PSTM_STACK	513	4166	9.4833	WGS84/44N

KG_025_072P1	FINAL_PSTM_STACK	250	3286	6.4863	WGS84/44N
KG_057_008P1	FINAL_PSTM_STACK	512	5191	22.7748	WGS84/44N
KG_085_025P1	FINAL_PSTM_STACK	960	6665	2.3228	WGS84/44N
KG_089_011P1	FINAL_PSTM_STACK	519	6355	10.0767	WGS84/44N
KG_093_024P1	FINAL_PSTM_STACK	750	7282	12.4601	WGS84/44N
KG_097_009P1	FINAL_PSTM_STACK	514	3882	16.3012	WGS84/44N
KG_101_059P1	FINAL_PSTM_STACK	750	7905	16.7966	WGS84/44N
KG_105_061P1	FINAL_PSTM_STACK	500	7700	19.2496	WGS84/44N
KG_109_062P1	FINAL_PSTM_STACK	750	7877	23.1257	WGS84/44N
KG_115_063P1	FINAL_PSTM_STACK	515	5594	24.4563	WGS84/44N
KG_121_006P2	FINAL_PSTM_STACK	1740	3467	3.9152	WGS84/44N
KG_121_007P3	FINAL_PSTM_STACK	2359	6758	24.4877	WGS84/44N
KG_127_004P1	FINAL_PSTM_STACK	514	8338	26.2403	WGS84/44N
KG_257_077P1	FINAL_PSTM_STACK	512	15282	2.8868	WGS84/44N
KG_265_003P1	FINAL_PSTM_STACK	801	14386	10.7308	WGS84/44N
KG_269_001P1	FINAL_PSTM_STACK	512	14938	20.6477	WGS84/44N
KG_273_078P1	FINAL_PSTM_STACK	750	14601	24.835	WGS84/44N
KG_277_002P1	FINAL_PSTM_STACK	801	14226	26.1997	WGS84/44N
TIELINE-K-N	FINAL_MIGRATION	96	2045	17.2619	WGS84/44N
KG-15-N-KH	DECON_STACK	96	1898	13.4957	WGS84/44N
KG-15-H-028	Final Migration	96	549	2.8604	WGS84/44N
KG-15-H-030	Final Migration	96	549	2.8612	WGS84/44N
KG-15-H-32	Final Migration	96	549	2.8571	WGS84/44N
KG-15-H-034	Final Migration	96	549	2.8578	WGS84/44N
KG-15-H-036	Final Migration	96	554	2.948	WGS84/44N

KG-15-H-038	Final Migration	96	549	2.8572	WGS84/44N
KG-15-H-040	Final Migration	96	549	2.8582	WGS84/44N
KG-15-H-042	Final Migration	96	554	2.9239	WGS84/44N
KG-15-H-044	Final Migration	96	549	2.8564	WGS84/44N
KG-15-H-046A	Final Migration	96	554	2.9317	WGS84/44N
KG-15-H-048	Final Migration	96	554	2.9188	WGS84/44N
KG-15-H-050	Final Migration	96	549	2.857	WGS84/44N
KG-15-H-052	Final Migration	96	549	2.8575	WGS84/44N
KG-15-H-054	Final Migration	96	549	2.8732	WGS84/44N
KG-15-H-056	Final Migration	96	453.43	2.2566	WGS84/44N
KG-15-H-058	Final Migration	96	549	2.8591	WGS84/44N
KG-15-H-060	Final Migration	96	545	2.8353	WGS84/44N
KG-15-H-062	Final Migration	96	549	2.8574	WGS84/44N
KG-15-H-064	Final Migration	96	549	2.8689	WGS84/44N
KG-15-H-066	Final Migration	96	549	2.8562	WGS84/44N
KG-15-H-070	Final Migration	96	549	2.8565	WGS84/44N
KG-15-H-072	Final Migration	96	554	2.917	WGS84/44N
KG-15-H-74	Final Migration	96	549	2.8563	WGS84/44N
KG-15-H-076	Final Migration	96	549	2.858	WGS84/44N
KG-15-H-078	Final Migration	96	549	2.8566	WGS84/44N
KG-15-H-080	Final Migration	96	549	2.856	WGS84/44N
KG-15-H-082	Final Migration	96	549	2.8605	WGS84/44N
KG-15-H-084	Final Migration	96	549	2.8869	WGS84/44N
KG-15-H-086	Final Migration	96	549	2.8606	WGS84/44N
KG-15-H-088	Final Migration	96	549	2.8566	WGS84/44N

KG-15-H-001	Final Migration	96	949	5.3769	WGS84/44N
KG-15-H-002	Final Migration	96	549	2.863	WGS84/44N
KG-15-H-003	Final Migration	96	954	5.4386	WGS84/44N
KG-15-H-004	Final Migration	96	549	2.8631	WGS84/44N
KG-15-H-005	Final Migration	96	954	5.4603	WGS84/44N
KG-15-H-006	Final Migration	96	549	2.8708	WGS84/44N
KG-15-H-007	Final Migration	96	954	5.4484	WGS84/44N
KG-15-H-008	Final Migration	96	549	2.8732	WGS84/44N
KG-15-H-009	Final Migration	96	949	5.365	WGS84/44N
KG-15-H-010	Final Migration	96	549	2.857	WGS84/44N
KG-15-H-011	Final Migration	96	949	5.3583	WGS84/44N
KG-15-H-012	Final Migration	96	549	2.8646	WGS84/44N
KG-15-H-013	Final Migration	96	954	5.4185	WGS84/44N
KG-15-H-014	Final Migration	96	549	2.8588	WGS84/44N
KG-15-H-015	Final Migration	96	949	5.3626	WGS84/44N
KG-15-H-016	Final Migration	96	549	2.8717	WGS84/44N
KG-15-H-017	Final Migration	96	954	5.4185	WGS84/44N
KG-15-H-018	Final Migration	96	549	2.8574	WGS84/44N
KG-15-H-019	Final Migration	96	947	5.3548	WGS84/44N
KG-15-H-020	Final Migration	96	549	2.8561	WGS84/44N
KG-15-H-21	Final Migration	96	954	5.4315	WGS84/44N
KG-15-H-022	Final Migration	96	549	2.8576	WGS84/44N
KG-15-H-023	Final Migration	96	949	5.3597	WGS84/44N
KG-15-H-024	Final Migration	96	549	2.8577	WGS84/44N
KG-15-H-026	Final Migration	96	549	2.8589	WGS84/44N

H2NE00_151	FINAL_POSTM_STACK	53	366	1.9566	WGS84/44N
H2NE00_51	FINAL_POSTM_STACK	53	334	1.7508	WGS84/44N
H2NE01_50	FINAL_POSTM_STACK	53	334	1.7646	WGS84/44N
H2NE02_46	FINAL_POSTM_STACK	53	328	1.7141	WGS84/44N
H2NE03A_52	FINAL_POSTM_STACK	53	328	1.7133	WGS84/44N
H2NE04_30	FINAL_POSTM_STACK	53	330	1.7311	WGS84/44N
H2NE05_31	FINAL_POSTM_STACK	53	328	1.7155	WGS84/44N
H2NE06_44	FINAL_POSTM_STACK	53	330	1.7239	WGS84/44N
H2NE07_45	FINAL_POSTM_STACK	53	336	1.7204	WGS84/44N
H2NE08_48	FINAL_POSTM_STACK	53	330	1.7305	WGS84/44N
H2NE09_35	FINAL_POSTM_STACK	53	328	1.7097	WGS84/44N
H2NE10_37	FINAL_POSTM_STACK	53	328	1.7157	WGS84/44N
H2NE11_40	FINAL_POSTM_STACK	53	328	1.7174	WGS84/44N
H2NECLA_47	FINAL_POSTM_STACK	53	492	2.7277	WGS84/44N
H2NW00_151	FINAL_POSTM_STACK	53	366	1.9566	WGS84/44N
H2NW01_13	FINAL_POSTM_STACK	53	360	1.9107	WGS84/44N
H2NW02_15	FINAL_POSTM_STACK	53	360	1.9193	WGS84/44N
H2NW03_17	FINAL_POSTM_STACK	53	366	1.9251	WGS84/44N
H2NW04_19	FINAL_POSTM_STACK	53	364	1.942	WGS84/44N
H2NW05_21	FINAL_POSTM_STACK	53	332	1.7416	WGS84/44N
H2NW06_23	FINAL_POSTM_STACK	2	346	2.1399	WGS84/44N
H2NW07_18	FINAL_POSTM_STACK	53	364	1.942	WGS84/44N
H2NW08_14	FINAL_POSTM_STACK	53	364	1.9352	WGS84/44N
H2NW09_12	FINAL_POSTM_STACK	53	362	1.9278	WGS84/44N
H2NW10_41	FINAL_POSTM_STACK	53	346	1.8299	WGS84/44N

H2NW11_39	FINAL_POSTM_STACK	2	346	2.1489	WGS84/44N
H2NWCLA_16	FINAL_POSTM_STACK	53	684	3.9374	WGS84/44N
AD-097	FINAL STACK	1	2136	11.4749	WGS84/44N
AD-099	FINAL STACK	1	2396	16.6083	WGS84/44N
AD-101	FINAL STACK	1	2256	18.5464	WGS84/44N
AD-103	FINAL STACK	1	2176	12.3853	WGS84/44N
AD-016	FINAL STACK	1	7722	18.9107	WGS84/44N
AD-018	FINAL STACK	1	6680	4.8491	WGS84/44N
AD-020	FINAL STACK	1	9968	32.0998	WGS84/44N
D1-NE00-23	FINAL_POSTM_STACK	53	330	1.7286	WGS84/44N
D1-NE01-22	FINAL_POSTM_STACK	53	332	1.7436	WGS84/44N
D1-NE02-30	FINAL_POSTM_STACK	53	332	1.7261	WGS84/44N
D1-NE03-20	FINAL_POSTM_STACK	53	332	1.7422	WGS84/44N
D1-NE04-19	FINAL_POSTM_STACK	53	332	1.7462	WGS84/44N
D1-NE05-18	FINAL_POSTM_STACK	53	330	1.7122	WGS84/44N
D1-NE06-16	FINAL_POSTM_STACK	53	334	1.7514	WGS84/44N
D1-NE07-15	FINAL_POSTM_STACK	53	350	1.8525	WGS84/44N
D1-NE08-14	FINAL_POSTM_STACK	53	334	1.7475	WGS84/44N
D1-NE09-13	FINAL_POSTM_STACK	53	332	1.738	WGS84/44N
D1-NE10-12	FINAL_POSTM_STACK	53	332	1.739	WGS84/44N
D1-NE11-29	FINAL_POSTM_STACK	53	332	1.7385	WGS84/44N
D1-NECL-17	FINAL_POSTM_STACK	53	492	2.7391	WGS84/44N
D1-NW00-02	FINAL_POSTM_STACK	53	346	1.8305	WGS84/44N
D1-NW01-04	FINAL_POSTM_STACK	53	346	1.8223	WGS84/44N
D1-NW02-06	FINAL_POSTM_STACK	53	343	1.8121	WGS84/44N

D1-NW03-08	FINAL_POSTM_STACK	53	334	1.7568	WGS84/44N
D1-NW04-25	FINAL_POSTM_STACK	53	346	1.8314	WGS84/44N
D1-NW05-27	FINAL_POSTM_STACK	53	348	1.844	WGS84/44N
D1-NW06-03	FINAL_POSTM_STACK	53	350	1.8545	WGS84/44N
D1-NW07-05	FINAL_POSTM_STACK	53	346	1.8319	WGS84/44N
D1-NW08-07	FINAL_POSTM_STACK	53	346	1.8279	WGS84/44N
D1-NW09-28	FINAL_POSTM_STACK	53	346	1.8299	WGS84/44N
D1-NW10-26	FINAL_POSTM_STACK	53	346	1.8278	WGS84/44N
D1-NW11-24	FINAL_POSTM_STACK	56	330	1.7107	WGS84/44N
D1-NWCL-01	FINAL_POSTM_STACK	53	668	3.8358	WGS84/44N
A6EW00_8	POSTSTM	53	346	1.828	WGS84/44N
A6EW02_11	POSTSTM	53	348	1.839	WGS84/44N
A6EW03_06	POSTSTM	53	346	1.83	WGS84/44N
A6EW04_04	POSTSTM	53	348	1.844	WGS84/44N
A6EW05_02	POSTSTM	53	346	1.829	WGS84/44N
A6EW06_13	POSTSTM	53	346	1.822	WGS84/44N
A6EW07_09	POSTSTM	53	344	1.815	WGS84/44N
A6EW08_07	POSTSTM	53	350	1.852	WGS84/44N
A6EW09_05	POSTSTM	53	346	1.826	WGS84/44N
A6EW10_03	POSTSTM	53	348	1.841	WGS84/44N
A6EW11_30	POSTSTM	53	346	1.828	WGS84/44N
A6EWCL_15	POSTSTM	53	668	3.833	WGS84/44N
A6NS00_20	POSTSTM	53	346	1.814	WGS84/44N
A6NS01_12	POSTSTM	53	346	1.831	WGS84/44N
A6NS01_22	POSTSTM	53	346	1.814	WGS84/44N

A6NS02_25	POSTSTM	53	346	1.831	WGS84/44N
A6NS03_27	POSTSTM	53	348	1.83	WGS84/44N
A6NS04_29	POSTSTM	53	336	1.776	WGS84/44N
A6NS05_17	POSTSTM	53	340	1.784	WGS84/44N
A6NS06_31	POSTSTM	53	348	1.842	WGS84/44N
A6NS07_28	POSTSTM	53	346	1.816	WGS84/44N
A6NS08A_26	POSTSTM	53	346	1.8274	WGS84/44N
A6NS09_24	POSTSTM	53	346	1.831	WGS84/44N
A6NS10_19	POSTSTM	53	342	1.795	WGS84/44N
A6NS11_16	POSTSTM	53	338	1.786	WGS84/44N
A6NSCL_21	POSTSTM	53	666	3.831	WGS84/44N
A3-2NE00-11	POSTSTM	50	344	1.8077	WGS84/44N
A3-2NE01-1	POSTSTM	50	344	1.8375	WGS84/44N
A3-2NE02-3	POSTSTM	50	344	1.835	WGS84/44N
A3-2NE03-5	POSTSTM	50	344	1.834	WGS84/44N
A3-2NE04-7	POSTSTM	50	344	1.831	WGS84/44N
A3-2NE05-9	POSTSTM	49	342	1.83	WGS84/44N
A3-2NE06-4	POSTSTM	50	344	1.8307	WGS84/44N
A3-2NE07-29	POSTSTM	50	342	1.8072	WGS84/44N
A3-2NE08-28	POSTSTM	50	342	1.8227	WGS84/44N
A3-2NE09-30	POSTSTM	50	344	1.8354	WGS84/44N
A3-2NE10-12	POSTSTM	50	344	1.8337	WGS84/44N
A3-2NE11-14	POSTSTM	50	338	1.7912	WGS84/44N
A3-2NECL-13	POSTSTM	50	666	3.7649	WGS84/44N
A3-2NW00-15	POSTSTM	50	330	1.7497	WGS84/44N

A3-2NW01-16	POSTSTM	50	330	1.7476	WGS84/44N
A3-2NW02-17	POSTSTM	50	330	1.7465	WGS84/44N
A3-2NW03-18	POSTSTM	50	330	1.7479	WGS84/44N
A3-2NW04-19	POSTSTM	50	328	1.7335	WGS84/44N
A3-2NW05-20	POSTSTM	50	328	1.7344	WGS84/44N
A3-2NW06-22	POSTSTM	50	328	1.7326	WGS84/44N
A3-2NW07-23	POSTSTM	50	330	1.7404	WGS84/44N
A3-2NW08-24	POSTSTM	50	328	1.7362	WGS84/44N
A3-2NW09-25	POSTSTM	50	326	1.7263	WGS84/44N
A3-2NW10-26	POSTSTM	50	326	1.7231	WGS84/44N
A3-2NW11-27	POSTSTM	50	326	1.7272	WGS84/44N
A3-2NWCL-21	POSTSTM	50	492	2.7567	WGS84/44N
		Total		**1370.734**	

Seismic 3D Data: KG/OSDSF/A3/2025 contract area is covered with PSTM seismic data as shown below:

00001.KG-DWN-98_1_3D_PSTM_FINAL_PSTM_STACK_.sgy
3D bin centre corner points - all traces

3D bin centre corner points - all traces : 00001.KG-DWN-98_1_3D_PSTM_FINAL_PSTM_STACK_.sgy

Point	Inline	Crossline	Easting	Northing
1	985	1700	451803.00	1700825.00
2	1690	1700	445914.00	1684213.00
3	1690	3080	462173.88	1678449.75
4	985	3080	468061.91	1695060.62

00002.KG-OSN-2009_2_PSTM_STK_FINAL_PSTM_STACK_.sgy
3D bin centre corner points - all traces

3D bin centre corner points - all traces : 00002.KG-OSN-2009_2_PSTM_STK_FINAL_PSTM_STACK_.sgy

Point	Inline	Crossline	Easting	Northing
1	1045	510	459597.28	1698776.88
2	1605	510	447597.00	1705988.00
3	1605	2424	435274.66	1685479.88
4	1045	2424	447274.66	1678269.12

00003.KG-OSN_3D_2014_MERGE_BROADBAND_FINAL_KIRCHHOFF_PSTM_STACK_.sgy
3D bin centre corner points - all traces

3D bin centre corner points - all traces : 00003.KG-OSN_3D_2014_MERGE_BROADBAND_FINAL_KIRCHHOFF_PSTM_STACK_.sgy

Point	Inline	Crossline	Easting	Northing
1	1980	1217	461471.38	1685668.38
2	3870	1217	478750.09	1701780.75
3	3870	4238	452996.84	1729398.12
4	1980	4238	435717.91	1713285.88

6.2. Data Package Cost

The Data Package contains seismic (2D and/or 3D) and well data along with reports. The cost of the Data Package of this information docket (KG/OSDSF/A3/2025 contract area) comes to be USD 10,100. This cost is as per the current data policy of NDR at the time of writing this report and subject to changes if data rates or policy framework are revised.

7. CONTRACT AREA SUMMARY

Contract area name: KG/DWDSF/A3/2025

Number of field(s)/discoveries: 4

Number of well(s): 8

Total area: 890.94 Sq. Km.

Seismic 2D data: 1370.73 Sq. Km.

Seismic 3D data: 768.67 Sq. Km.

Report(s) available: 34

Hydrocarbon in-place: 70.5 MMTOE (Best case Operator Estimate)

: 10.3 MMTOE (Best-case Third-Party Estimate)

NIO map reference no.: S-2

Geographical area: KG OFFSHORE

Data package cost: 10,100 USD

8. CONCLUSION

The Contract Area KG/DWDSF/A3/2025 in KG Deepwater, covering an area of 890.94 sq km, comprises four discoveries.

A quantum of 1370.73 LK of 2D seismic data and 768.67 SKM of 3D seismic data are available and a total number of 8 wells have been drilled inside the contract area.

This information docket has been compiled utilizing geoscientific and engineering datasets, including reports, analyses, and results available in the NDR. Such data serves as a valuable reference, but those data should not be solely relied upon without independent verification. This information is intended to serve as a supplementary document that provides additional context and insights to the bidder.

The four discoveries are currently not licensed to any operator despite containing discovered hydrocarbon accumulations and present potential opportunities for further development and potential commercial production.

The four discoveries are envisaged to hold a best-case Original Hydrocarbons In-Place of 70.5 MMTOE as per the previous Operator’s estimate and 10.3 MMTOE as per the estimates of Third Party.

Although this information docket highlights estimated hydrocarbon quantities, it primarily indicates the approximate extent and size of the hydrocarbon pools. In preparing these estimates, the Third Party employed the necessary assumptions, procedures, data, and methods considered appropriate given the timeframe available for evaluation. However, it is important to clarify that the Third Party relied on the available information and those data were accepted as represented.

Given these limitations, it is strongly recommended that all bidders conduct their own independent due diligence evaluations and independent assessments of the resource base in preparation for well-informed bidding decisions.

सत्यमेव जयते

पेट्रोलियम एवं
प्राकृतिक गैस मंत्रालय
MINISTRY OF
PETROLEUM AND NATURAL GAS

DGH

DIRECTORATE GENERAL OF HYDROCARBONS
(Ministry of Petroleum & Natural Gas,Government of India)

OIDB Bhawan,
Tower A, Plot No 2, Sector 73, Noida,
Uttar Pradesh, 201301
INDIA