New Delhi, the 26<sup>th</sup> of July, 2018

#### **DIRECTION**

Subject: <u>AMENDMENT TO</u> Direction No. DGH/NOC/Direction/Drilling/1/2017 dated 16<sup>th</sup> August 2017, issued under Government of India (Ministry of Petroleum and Natural Gas) notification No.S.O.1391(E) dated 1<sup>st</sup> September, 2006, issued in exercise of powers under section 8 of the Oilfields (Regulation and Development) Act, 1948 (53 of 1948) read with rule 32 of the Petroleum and Natural Gas Rules, 1959 - Submission of data to DGH by National Oil Companies (NOCs) in respect of Nomination Fields – Form and manner of submission of Data relating to Drilling Activities.

. . . . . . . . . . .

**No. DGH/NOC/Direction/Drilling/1/2017.** ----- In exercise of the powers conferred upon it under the Government of India (Ministry of Petroleum and Natural Gas) notification No.S.O.1391(E) dated 1<sup>st</sup> September, 2006, read with the Guidelines approved and conveyed by the Government of India (Ministry of Petroleum and Natural Gas) vide its communications dated 4<sup>th</sup> September, 2009 and 25<sup>th</sup> November, 2016, and in order to effectively discharge its functions under the Oilfields (Regulation and Development) Act, 1948 (53 of 1948) and the Petroleum and Natural Gas Rules, 1959 and under the aforesaid notification of the Central Government dated 1<sup>st</sup> September, 2006, the Directorate General of Hydrocarbons (DGH) hereby directs that the following amendments be made in the DGH Direction No. DGH/NOC/Direction/Drilling/1/2017 dated 16<sup>th</sup> August 2017 on the above subject, with immediate effect, namely:

- 1. For clause (b) of Para 5 of the said Direction, the following clause shall be substituted, namely:
  - " (b) NOCs shall submit to DGH in the format at <u>Annexure-5</u>, so as to ensure that the Essentiality Certificate (EC) is issued against approved work programme(s)
    - their respective Annual Plan of approved Drilling Activities (in respect of Nomination Fields), in the beginning of each Financial Year,
    - (ii) any subsequent change in approved drilling plan at least 15 days prior to commencement of drilling operations. "

2. For clause (c) of Para 5 of the said Direction, the following clause shall be substituted, namely:

" (c) NOCs shall also submit to DGH -

- a complete and detailed G&G report along with a copy of the Geo-Technical Order (GTO) regarding the exploratory and/or development locations drilled (to be submitted as per revised formats at <u>Annexure-6-R</u> and <u>Annexure-6A-R</u> within 15 days upon completion of the well or rig release, whichever is earlier).
- Well Completion Report (WCR) containing complete details regarding geological objective achieved, target depth reached (to be submitted within 45 days upon completion of the well). "
- 3. The footnote, following clause (c) of Para 5 of the said Direction, at the bottom of Page 2 shall be deleted.

(.....)

(HoD – Drilling)

Distribution:

- 1) CMD, ONGC
- 2) CMD, OIL
- 3) JS (Exploration), MoP&NG
- 4) DGH (website)

## FORMAT FOR SUBMISSION OF WELL DATA

# (I) GENERAL WELL DATA

| 1.  | General Information:   |   |  |  |
|-----|--|---|--|--|
| a)  | Well Name  | : |  |  |
| b)  | Equivalent name of its location/prospect                               | : |  |  |
| c)  | PEL/PML Information (Name of Area, Order No., Validity)                | : |  |  |
| d)  | Area (Onshore / Offshore)  | : |  |  |
| e)  | State  | : |  |  |
| f)  | District   | : |  |  |
| g)  | Basin/ Asset   | : |  |  |
| h)  | Well Category<br>(Exploratory/Appraisal/Development)                   | : |  |  |
| i)  | Objective (Primary and Secondary)                                      | : |  |  |
| j)  | Well Type<br>(Vertical / Inclined / Horizontal)                        | : |  |  |
| k)  | Rig Name   | : |  |  |
| 1)  | GL / KB / Water Depth (metres)   | : |  |  |
| m)  | Target Depth (mMDRT)   | : |  |  |
| n)  | Reference Wells (with distance and direction from this well)           | : | Horizontal / Vertical                    |  |
| 0)  | Well Chronology  | : | Date of spudding:<br>Date of completion: |  |
| 2.  | Details of the location :  |   |  |  |
|     | Seismic Reference Depth (mTVDSS)                                       | : |  |  |
|     | Spheroid (like WGS84)  | : |  |  |
|     | Projection (like UTM)  | : |  |  |
| 2A. | Surface Position   | I |  |  |
| i.  | Seismic Reference Line No.<br>(2D/IL/XL)                               | : |  |  |
| ii. | Geographical Coordinates (latitude-<br>longitude and easting-northing) | : |  |  |
| 2B  | Sub-surface Position   |   |  |  |
| i.  | Seismic Reference Line No.<br>(2D/IL/XL)                               | : |  |  |

| ii. Geographical Coordinates (latitude-<br>longitude and easting-northing) : |  |
|--|--|
|--|--|

## (II) STRATIGRAPHY & LITHOLOGY:

| Geological Age | Formation Name | Interval (m) | Gross Lithology |
|----------------|----------------|--------------|-----------------|
|                |                |              |                 |

## (III) TARGET/OBJECT:

| Target/Object | TWT  | Depth    | Lithology   | H/C   |
|---------------|------|----------|-------------|-------|
|               | (ms) | (mTVDSS) | Description | shows |
|               |      |          |             |       |

## (IV) TEMPERATURE:

| Depth (mTVDSS) | Temperature (°C) | Remarks |
|----------------|------------------|---------|
|                |                  |         |

## (V) FORMATION PRESSURE:

| Depth (mTVDSS) | Pressure (psi) | Remarks |
|----------------|----------------|---------|
|                |                |         |

# LIST OF G&G DOCUMENTS TO BE SUBMITTED WITH WELL DATA

### A. EXPLORATORY LOCATIONS:

#### 1. BASIC MAPS/SECTIONS

- Location map with all license boundaries and wells integrated with GIS detailing
- Seismic coverage map (2D and/or 3D)
- Maps at prospect-level (well objectives): o Two-way time and depth structure map
  - o Any seismic attribute map describing the prospect(s)
  - o Stratigraphic thickness map (depth and time)
  - o Isolith map superimposed over top structure map
- Well log correlation
- Seismic profiles and geological sections along drilled location and previously drilled wells

### 2. **REPORTS**

A report summarizing the following:

- Geological summary of tectonics, sedimentation and stratigraphy
- Depositional model
- Interpretation of seismic, gravity, magnetic and geochemical data
- Analysis of petroleum system elements with chance of success
- Prospectivity analysis
- Formation evaluation (drilled well and nearby wells)
- Well testing results (drilled well and nearby wells)
- Prognosticated hydrocarbon estimate with reservoir parameters

### B. APPRAISAL LOCATIONS:

#### 1. BASIC MAPS/SECTIONS

- Location map with all license boundaries and wells integrated with GIS detailing
- Seismic coverage map (2D and/or 3D)
- At prospect-level (well objectives):
  - $\circ$   $\;$  Two-way time and depth structure map delimiting the reservoir extent
  - Any seismic attribute map describing prospect
  - Stratigraphic thickness maps (depth and time)
  - Isolith map
  - Isopay map overlain with top structure map
- Well log correlation across the discovery well, drilled well and nearby wells
- Seismic profiles across drilled location and previously drilled wells

## 2. REPORTS

A brief report summarizing the following:

- Geological summary of tectonics, sedimentation and stratigraphy
- Depositional model
- Supporting details of the discovery well in the area
- Petrophysical evaluation (drilled and reference wells)
- Well testing results (drilled and reference wells)
- Hydrocarbon estimate with reservoir parameters

## C. <u>DEVELOPMENT LOCATIONS</u>:

## 1. BASIC MAPS/SECTIONS

- Location map with all lease boundaries and wells integrated with GIS detailing
- Seismic coverage map (2D and/or 3D)
- At reservoir-level (well objectives):
  - o Depth structure map
  - o Reservoir thickness map
  - o Seismic attribute map
  - o Reservoir property maps
  - o Net pay maps singly as well as superimposed over top structure map
- Well log correlation describing all reservoir units

### 2. REPORTS

A comprehensive report summarizing the following:

- Depositional model
- Petrophysical evaluation
- Well testing results
- Any static reservoir model if built
- Supporting field development scheme or plan
- Production performance review, if the field is producing
- Approved hydrocarbon estimate with reservoir parameters

#### NOTE:

- The required documents to be submitted along with Annexure-6-R (Format for Submission of Well Data) within 15 days upon completion of the well or rig release, whichever is earlier.
- Data/information to be given in both hard and soft copies and in complete set.
- All maps should be on a suitable scale (e.g. 1:50,000), appropriately annotated and legend given.
- Well log correlation (both structural and stratigraphic) should be on a suitable scale (e.g.1:500).
- All sections/profiles to be annotated for corresponding horizons, markers (formation/ reservoir) and faults.
- Well reference depth (KB) and geographic position (Latitude-Longitude/Easting-Northing) to be mentioned.
- All depth maps, depth sections/profiles to be expressed in TVDSS (true vertical depth scaled to subsurface or mean sea level).