1. **Block**: DEOCHA-PACHAMI- DEWANGANJ- HARIINSINGHA, BHIRBHUM COALFIELD, DISTT.- BIRBHUM, WEST BENGAL

2. **Area**: 9.7 Sq. km. (DEOCHA-PACHAMI) + 2.6 Sq. Km (DEWANGANJ- HARIINSINGHA)

3. **Location and Communication**: Deocha-Pachami block is located in the south western part of Birbhum Coalfield (adjoining Dewanganj Block). The nearest approach road is Panagarh-Mourgram Road & nearest Railway Station is Mallarpur (Bardhaman-Kiul loop of E.R Railway).

   Dewanganj Harinsingha block is located in the western fringe of Birbhum coalfield (bordering Jharkhand). The nearest approach road is Panagarh-Mourgram road and nearest railway station is Mallarpur (on Bardhaman-Kiul loop of Eastern Railway).

   The limiting coordinates of the blocks are

   Latitude: 24°01’45”-24°05’30”N (Approx)
   Longitude: 87°34’15”-87°37’39”E (Approx)
   Toposheet no-72 P/12

4. **Status of Exploration**: Regionally Explored

<table>
<thead>
<tr>
<th>Block</th>
<th>Agency</th>
<th>No. of borehole</th>
<th>Meterage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deocha-Pachami</td>
<td>GSI</td>
<td>21</td>
<td>11326.15m</td>
</tr>
<tr>
<td>Dewanganj Harinsingha</td>
<td>GSI</td>
<td>15</td>
<td>3830.45</td>
</tr>
<tr>
<td>Total</td>
<td>GSI</td>
<td>36</td>
<td>15156.60</td>
</tr>
</tbody>
</table>

5. **Structure**: Strike: NNW-SSE
Dip: 5°-10° easterly
Faults: Area is dissected by three systems of normal faults. NNW-SSE trending boundary fault having easterly throw defining western limit.

6. **Sequence of Coal Seams**: Four coal seam zones have been identified. The details are given below:

(a) DEOCHA-PACHAMI

<table>
<thead>
<tr>
<th>Seam/Zone</th>
<th>Thickness of coal seam zones (i.e. cumulative thickness of coal seams &amp; partings (m))</th>
<th>Depth Range (m)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>8.98-30.77 (4.1-20.9)</td>
<td>135-355</td>
<td>Seams occur in a number of sections. Coal seams are concealed by a thick cover of Trap, Laterite and Dubrajpur formation.</td>
</tr>
<tr>
<td>Parting</td>
<td>100-122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>17.32-42.66 (6.7-40.4)</td>
<td>280-500</td>
<td></td>
</tr>
<tr>
<td>Parting</td>
<td>30-122</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>40.69-58.88 (15.2-53.6)</td>
<td>350-580</td>
<td></td>
</tr>
<tr>
<td>Parting</td>
<td>87-200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>41.61-79.89 (5.2-63.4)</td>
<td>510-850</td>
<td></td>
</tr>
</tbody>
</table>

**Note**: *Figures in bracket indicate cumulative thickness of coal sections.*

(b) DEWANGANJ-HARINSINHA

<table>
<thead>
<tr>
<th>Seam Zone</th>
<th>Zone thickness (m)</th>
<th>Depth Range (m)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>107-138</td>
<td>12-96</td>
<td>There are 5-22 sections in seam zone. The total thickness of coal sections varies from 5.30-38.63 m</td>
</tr>
<tr>
<td>Parting</td>
<td>47-63</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>25-74</td>
<td>204-284</td>
<td>There are 6 to 16 sections in seam zone. The total</td>
</tr>
</tbody>
</table>
7. **Quality**

(a) **DEOCHA-PACHAMI**

<table>
<thead>
<tr>
<th>Seam zone</th>
<th>M%</th>
<th>Ash%</th>
<th>Class @ Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>3.0-6.6</td>
<td>18.5-48.8</td>
<td>B-G</td>
</tr>
<tr>
<td>III</td>
<td>1.2-7.5</td>
<td>20.3-47.8</td>
<td>C-G</td>
</tr>
<tr>
<td>II</td>
<td>2.3-6.3</td>
<td>18.2-52.4</td>
<td>B-G</td>
</tr>
<tr>
<td>In some thick section of II</td>
<td>3.3-5.9</td>
<td>18.9-24.9</td>
<td>B-D</td>
</tr>
<tr>
<td>I</td>
<td>2.0-4.8</td>
<td>22.9-51.9</td>
<td>C-G</td>
</tr>
<tr>
<td>Lower part of seam-I</td>
<td>2.2-4.1</td>
<td>15.4-28.4</td>
<td>A-D</td>
</tr>
</tbody>
</table>

(b) **DEWANGANJ-HARINSINHA**

<table>
<thead>
<tr>
<th>Seam zone</th>
<th>M%</th>
<th>Ash%</th>
<th>UHV Kcal/kg</th>
<th>Class @ Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>4.0-6.9</td>
<td>27.1-50.6</td>
<td>2662-4525</td>
<td>D-F</td>
</tr>
<tr>
<td>II</td>
<td>2.5-7.2</td>
<td>18.7-50.9</td>
<td>1365-5519</td>
<td>C-G</td>
</tr>
<tr>
<td>I</td>
<td>3.6-5.6</td>
<td>28.9-40.7</td>
<td>1300-4332</td>
<td>D-G</td>
</tr>
</tbody>
</table>

@ - The grade of the coal in present report has been given as per old classification prevailing before UHV based grade classification

8. **Reserves**

(a) **DEOCHA-PACHAMI**: An indicated reserve of 2025.62m.t has been reported in Deocha-Pachami & adjoining eastern sector of Birbhum coalfield.
The depth-wise break-up of the reserves are given below:

<table>
<thead>
<tr>
<th>Depth Range (m)</th>
<th>Reserves (Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-300</td>
<td>152.20</td>
</tr>
<tr>
<td>300-600</td>
<td>1078.39</td>
</tr>
<tr>
<td>600-1200</td>
<td>795.03</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2025.62</td>
</tr>
</tbody>
</table>

(b) DEWANGANJ-HARINSINHA: Out of 38.693 mt. of net reserve, proved reserve of 28.093 & indicated reserve of 10.600 mt. has been reported. Horizon-wise reserve of Coal seams is given below:

<table>
<thead>
<tr>
<th>Horizon (Seam zone)</th>
<th>Proved reserve</th>
<th>Indicated</th>
<th>Net Total (In Million Tonne)</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>12.014</td>
<td>1.797</td>
<td>13.811</td>
</tr>
<tr>
<td>Local</td>
<td>1.513</td>
<td>0.825</td>
<td>2.338</td>
</tr>
<tr>
<td>II</td>
<td>11.128</td>
<td>6.333</td>
<td>17.461</td>
</tr>
<tr>
<td>I</td>
<td>3.438</td>
<td>1.645</td>
<td>5.083</td>
</tr>
<tr>
<td>Total</td>
<td>28.093</td>
<td>10.600</td>
<td>38.693</td>
</tr>
</tbody>
</table>

GSI has estimated ‘Proved’ reserves in the Dewanganj-Harinsinha block as per the earlier practice of taking 200m influence from boreholes. However, in view of very limited data, the entire reserves are being reported as Indicated. Additional drilling would be required to prove the reserves.

Note:
1. Salient features, Block boundary plan & lithologs are based on GSI report on Regional Exploration of the Pachami Sector, Birbhum Coalfield.
2. Block boundary shown in the plan is approximate.
3. Forest cover details are not available with CMPDI.
4. Infrastructure details are not available with CMPDI.

Bibliography:
Report on Exploration for coal in the Pachami Sector, Birbhum Coalfield, Birbhum District, West Bengal, Coal wing, GSI 1992