

APPENDIX - I

CHRONOLOGY OF INDIA'S OIL STORY

=====

1825 : Earliest recorded reference to oil in Upper Assam in the despatches of Lieut R. Wilcox of the 46th Regiment Native Infantry.

1825-1845 : The era of individual intrepid explorers : C.A. Bruce, Major A. White, Lieut Bigge, Chapt. F. Jenkins, Capt. P.S. Hannay : Who stumbled upon oil in the course of their reconnaissance surveys.

1865 : H.B.Medlicott of the Geological Survey of India while visiting the coal areas of Assam observed the oil seepages at Makum Pani and recommended test drilling in the Makum-Namdang area.

1866-69 : The above drilling plus drilling of test wells in the Jaiur area were carried out by Mr.Goodenough of Mckillop, Stewart and Co., Calcutta. Drilling at Makum - Namdang was distinctly more encouraging than at Jaipur, but owing to transport difficulties the venture folded up.

- : One of the above wells at Makum drilled to a depth of 118ft. on 26 March, 1867, was Asia's first successful mechanically drilled oil well.
- 1881 : The Assam Railways and Trading Co. Ltd. (AR & T Co.) was registered on 30 July with objectives that included construction of railways and exploiting the natural resource of coal.
- 1889 : Spudding in of Digboi Well No.1 in September by the AR & T Co. : First gush of Oil struck on 19 October.
- 1890 : Completion of Digboi Well No.1 as producer in November.
- 1891-92 : Continued drilling in Digboi field with fair success.
- 1893 : A small refinery erected at Margherita where for about six years oil from Digboi was sent by rail.
- : The Assam Oil Syndicate was granted a mining lease over the northern Digboi Area.

- 1899 : The AR & T Co. forms a new company, the Assam Oil Company, to take over their oil interests.
- 1900 : Construction of Digboi Refinery begins.
- 1901 : Digboi Refinery commissioned with running of the first "still" in December.
- 1911-12 : The Burmah Oil Company Ltd (BOC) arrives on the Indian scene in the Surma Valley.
- 1915 : BOC acquires the Oil interests of the Budderpore Oil Company and starts exploration/development of the Badarpur structure.
- 1919 : AOC began drilling at Namchik and abandoned the well the following year at 592 ft.
- 1920 : BOC drilled Masimpur Well 2 and Hilara well No.1 in Surma Valley. Both abandoned on account of feeble shows.
- : AOC drilled a well upto 715 ft. at Baliyan, Upper Assam, with no success.
- 1921 : By arrangement with the AR & T Co. the Burmah Oil Company took over in a phased manner the control of the Assam Oil Company operations.
- 1922 : BOC encountered a succession of failures at Chhatachura, Masimpur and Kanchanpur in the Surma valley.

- 1923 : Wells drilled at Barjan and Namchik in Upper Assam Valley proved to be failures.
- : First well at Patharia in the Surma Valley was spudded in by the BOC in 1923 and finished in 1931. Recovered about 10,000 barrels of oil before abandoning well.
- : Digboi refinery entirely rebuilt and capacity enlarged.
- 1925 : Torsion balance survey in Bordubi area represented India's first attempt to use geophysics in the search for oil.
- : Drilling at Baragolai gave encouraging results, but the well at Dhekiajuli was a failure.
- : BOC's Masimpur well No.4 proved to be a dry hole.
- 1926 : AOC drilled two test wells at Dilli, Upper Assam to depths of 439 ft. and 328 ft. Unremunerative.
- : Two product pipelines were laid down from Digboi to Tinsukia.
- 1928 : Wax extraction plant installed in Digboi Refinery
- 1930 : BOC drilled a well to 2757 Ft. at Bandersulia and abandoned it the following year owing to disappointing results.

- 1931 : BOC's Well No.5 at Masimur encountered a high pressure gas sand at 5800 ft. capable of yielding 3000,000 cubic ft. a day.
- : Edcleneau Plant, and Dubbs cracking unit installed in Digboi Refinery.
- 1933 : Badarpur Field in Surma Valley abandoned.
- 1936 : Masimpur Well No.5 abandoned at a depth of 7685 ft.
- 1937-38 : Extensive programme of geophysical surveys implemented in Upper Assam.
- : Two cable-tool wells completed by AOC at Makum to depths of 685 and 837 ft. without success.
- 1939-1944 : War time regulations permitted only extension drilling to prove eastern limits of Digboi Field.
- 1945 : AOC drills 2 wells at Baliyan to depths of 2428 and 1324 ft.
- 1948 : Geological Survey of India starts geophysical surveys in the Cambay area and delineates the basin.
- 1949 : AOC abandons its efforts to develop the Makum-Namdang Field.
- : A geological and geophysical survey of the alluvial area of West Bengal and East Pakistan

begun by the Standard Vacuum Oil Company (SVOC).

- 1951 : On basis of earlier geophysical surveys, site for drilling selected on the south bank of the burhi Dihing River at Nahorkatiya.
- : AOC starts test drilling at Nichuguard in the Naga Hills.
- 1952 : Well No.1 at Nahorkatiya spudded in by AOC on 26 May.
- 1953 : Gasoline Extraction Plant commissioned in Digboi Refinery.
- : Nahorkatiya Well No.1 completed as producer at a depth of 11715 ft. in June.
- 1954 : Lube Oil distillation unit, first of its kind in India, installed in Digboi Refinery.
- : Favourable subsurface structures discovered by AOC at Rudrasagar and Geleki.
- : Second refinery in India owned by the Standard Vacuum Oil Company comes on stream at Trombay near Bombay.
- : Indo Stanvac Project for oil exploration in West Bengal formed between Govt. of India(GOI)and SVOC

- 1955 : The Oil and Natural Gas Division set up by the
GOI.
- : Third Refinery owned by Burmah-Shell Refineries
Limited set up at Bombay.
- 1956 : Discovery of Moran Field by the AOC. The first
well drilled up to 13,739 ft. deepest in Asia ;
struck oil in November.
- : Oil and Natural Gas Division converted into a
Directorate in may and later to a Commission in
August.
- 1957 : Fourth Refinery in India owned by Caltex Oil
Refinery (India) Ltd. comes to stream at
Visakhapatnam on 15 April.
- 1958 : Promotion Agreement signed between AOC/BOC and
GOI for formation of Oil India Private Limited to
exploit the oil resources found by AOC in
Naharkatiya and Moran.
- : Gas struck in Jwalamukhi.
- : Cambay Well No.1 (Lunej Structure) spudded in by
ONGC and completed as a producer.

- : Indian Refineries Limited, a Public Sector undertaking registered on 22 August.
- 1959 : Oil India Private Limited incorporated on 18.2.59 and registered at Shillong as a rupee company with two-third shares owned by AOC/BOC and one-third by the Government of India.
- : ONGC becomes a autonomous statutory body.
- 1960 : Oil Struck at Ankleswar in Gujarat and Rudrasagar in Assam by ONGC.
- : Indian Institute of Petroleum comes into being.
- 1961 : By a new agreement dated 27.7.61 GOI and BOC become equal partners in OIL. Completed 100th well in OIL areas.
- : India's first gas turbine for power supply commissioned at Duliajan.
- : Oil struck in Kalol by ONGC.
- 1962 : The first public sector refinery comes on stream at Guwahati.
- : Nahorkatiya-Guwahati pipeline commissioned on 26.4.62.

- : First Shipment of Ankleswar crude leaves for Bombay by tank wagons.
- : OIL Completes India's first dual completion well on 13.10.62 (NHK Well 117)
- 1963 : World's first crude oil conditioning plant commissioned at Naharkatiya.
- : OIL drills India's first deviation well (NHK 122)
- : Offshore seismic surveys started by ONGC in Gulf of Cambay.
- : Oil struck in Sanand and Nawagam in Gujarat by ONGC.
- 1964 : Guwahati-Barauni crude oil pipeline commissioned.
- : First long-distance product pipeline in India commissioned from Guwahati Refinery to Siliguri.
- : Indian Refineries Limited and Indian Oil Company merge to form Indian Oil Corporation Limited.
- : Oil discovered in Lakwa by ONGC.
- : Supply of gas from Cambay to Dhruvan Thermal Power Station starts.
- 1965 : OIL Pioneers gas injection for pressure maintenance in one of its Nahorkatiya reservoirs.

- : OIL starts gas supplies to ASEB on a regular basis.
- : ONGC's 16" dia pipeline from Ankleswar to Koyali Refinery commissioned.
- 1966 : For the First time in India AOC applies the technique of formation fracturing in its field to stimulate production.
- : Cochin Refinery comes on stream.
- 1967 : Water injection starts in Nahorkatia (OIL) and Ankleswar (ONGC).
- 1968 : Lubrizol India Limited starts production.
- : Oil discovered in Geleki by ONGC.
- : OIL starts drilling in Arunachal Pradesh at Kharsang, 9th May.
- 1969 : Madras Refinery comes on stream.
- : ONGC completes drilling of 700 wells.
- : Discovery of Oil in Kusijan by OIL.
- 1970 : After a lapse of 10 years AOC resumes drilling in the Digboi oilfield and 12 infiller shallow wells drilled using a light mobile rig.

- : India's first offshore well in the Gulf of Cambay spudded in on 14 March.
- 1971 : Several new structures discovered in Gujarat by ONGC.
- : 300 wells completed in OIL areas.
- 1972 : AOC starts water injection in Digboi Field.
- : OIL discovers oil in a new structure at Jorajan.
- : Highest Wax Production in Digboi Refinery : 45852 tonnes.
- 1973 : ONGC completes drilling of 1000th well.
- : OIL discovers gas in the Eocene at Tengakhat.
- 1974 : First offshore well on the Bombay High spudded in by the ONGC on 31.1.74 using the drill ship Sagar Samrat ; oil Struct on Feb. 19.
- : GOI takes over 74% shares in ESSO.
- 1975 : Fuel Sector of Maldia Refinery goes into commercial production.
- : OIL builds first aerial ropeway across the Noa-dehing in Arunachal pradesh and initiates India's first polymer flood project.

- 1976 : Bombay High put into commercial production by ONGC.
- : OIL spuds Manabum-1, the first well on the north bank of Noa-dehing river.
- : OIL strikes oil in Kharsang and puts Arunachal pradesh on oil map of India.
- : GOI takes over 100% shares in Burmah Shell Refineries which renamed as Bharat Refineries Limited and remaining 26% shares in ESSO which is renamed as Hindustan Petroleum Company Limited.
- 1977 : Bharat Refineries Limited renamed as Bharat Petroleum Corporation Limited.
- : OIL spuds Kumchai Well No.1 on north bank of Noa Dehing.
- 1978 : OIL steps out of Assam into Orissa onshore and offshore.
- : Gas supply from Bombay offshore for power generation and fertilizer manufacture starts.
- 1979 : ONGC starts oil production in Amguri.
- 1980 : OIL spuds in Offshore Mahanadi-1 on 29 January.

- : ONGC discovers oil in offshore Ratnagiri Structure and gas in Dahej.
- 1981-82 : OIL completes second well in Mahanadi off-shore.
- : Production in Assam Fields slowly picks up from adverse effects of the 1980 agitation.
- : SEDCO spuds first well in Godavari offshore under contract arrangement with ONGC.
- : Drilling begins in Barsilla where AOC had explored 30 years earlier.
- 1982-83 : OIL commissions LPG plant based on the cryogenic method of manufacture. Second phase of offshore drilling begins in Mahanadi Basin.
- : ONGC embarks on aggressive exploration policy and takes up 21 new structures for drilling.
- 1983-84 : OIL obtains lease and finalizes exploration programme for Rajasthan.
- : ONGC takes up 27 new structures for drilling.
- : Gas struck at Razole in Andhra Pradesh and Gotaru in Rajasthan. Water injection commences in Bombay High (North).

- 1984-85 : OIL starts Vibroseis surveys in its Rajasthan Concession through contractual arrangements with CGG of France. Arrangements finalized for Andaman exploration.
- : ONGC takes up 28 new structures for drilling. Oil struck in Kutch offshore, Godavari offshore and at Changmaigam in Assam.
- 1984-85 : Drilling commences at Narimanam in the Cauvery Basin.
- 1985-86 : OIL wins Corporate performance award given by the Harvard Business School Association of India and The Economic Times for the Best public sector unit in the country.
- : Three significant oil finds in the south bank of the Burhi-dehing between Naharkatiya and Moran.
- : First well commenced in Eastern Shelf of Andamans
- : ONGC strikes oil at Narimanam thus brightening the prospects of Cauvery basin.
- : LPG plant at Uran commissioned.
- 1986-87 : OIL starts onshore drilling in Mahanadi through contract arrangements with Richter Drilling of Australia.

- : Two more wells drilled in Andamans, one on the east and the other on the west shelf.
 - : ONGC strikes oil in the Tapti offshore area and in the Namti structure in Assam.
 - : Systematic development of Gandhar discovery begins.
- 1987-88
- : OIL pulls out of Andaman project temporarily.
 - : Reassessment of prospects in Mahanadi taken up.
 - : ONGC takes up 37 new structures for drilling.
 - : Bombay offshore gas charged into H B J pipeline.
 - : EOR caustic flood pilot project started in Sanand. GOI, ONGC and OIL signed 9 production sharing contracts with 4 foreign companies for offshore exploration.
- 1988-1989
- : OIL establishes commercial gas in its Rajasthan concession area, and acquires licence to explore over 24,900 sq. km. in Saurashtra offshore basin.
 - : ONGC discovers Nade field in Gujarat and establishes new resources near Thanjavur in the Cauvery Basin.