

# OIL News

DULIAJAN VOL-35 NO-9 The Trilingual Bi-Monthly Journal of OIL INDIA LIMITED





# COVER:

*Seasonal flowers and orchids in and around OIL's operational area in Assam captured in the lens of Shri Nagen Baruah create a riot of colours to be cherished for a lifetime.*

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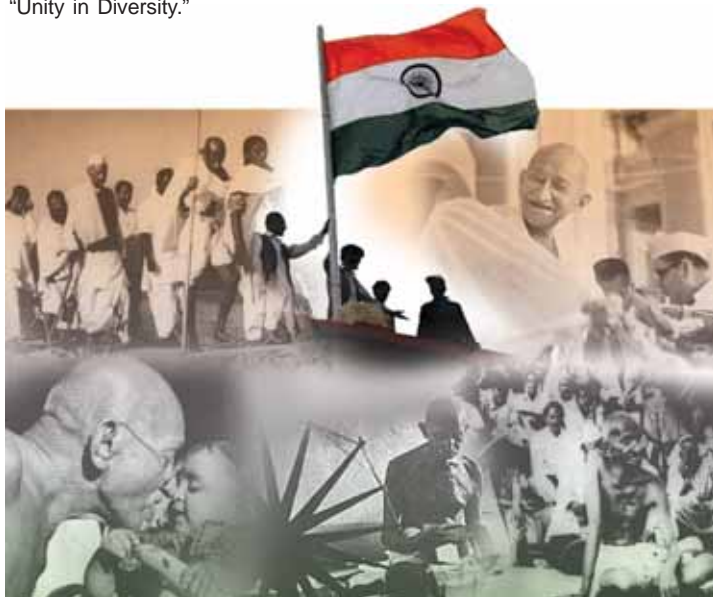
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*Jai Hind*

## Indians celebrate the 60<sup>th</sup> year of India's Independence

OIL News pays a pictorial tribute to the father of the nation, Mahatma Gandhi who best understood the inimitable Indian spirit, which has enabled the citizens of this great country to firmly believe and practice the mantra: "Unity in Diversity."



## EDITORIAL

*Dear Reader,*

As India celebrates the 60<sup>th</sup> year of her Independence, we thought it prudent to salute the inimitable spirit of an incredible country which has time again proved to the whole world that despite great diversity in culture, religion, language, customs, traditions, ideologies, caste, and creed, India continues to breathe in unison, a strong feeling of patriotism that helps her citizens to overcome all difference. This unique character of India is best reflected in moments of crisis, when every Indian cutting across political and ideological differences speak in one common language – the language of love, fellow-feeling and pride of being an Indian.

In its own way the news items and articles in this house journal reflect the individual talent and collective brilliance of Indians and more specifically the members of the extended family of a premier national oil company – OIL - achievements that amply reiterates the great potential of OIL and her extended family to achieve many more milestones of all-round success.

I am sure the feature article on Chemical Department, a reports on the maiden OIL customer meet, fourth OIL-ONGCL Meet, an absorbing article on economic development of the North East, an informative write-up on the global hydrocarbon industry besides the regular features and articles in the Assamese and Hindi section would provide enough food for thought to our valued readership.

I take this opportunity to wish you and your dear ones good health and happiness in the festive season.

Signing off, I would like quote the following pearls of wisdom from *Gandhiji*:

*"The truest test of civilization, culture, and dignity is character, not clothing."*

*Tridiv Hazarika*

## Corrigendum

In the last issue, Shri Paresch Chandra Khaund, GGM (SB)'s date of appointment was wrongly printed as 1<sup>st</sup> July, 2007 instead of 1<sup>st</sup> July, 2006. We regret the inadvertent error.

-Editor, OIL News

## From the Group General Manager (SS)



*Dear Oilindians,*

The spiraling crude oil price is making a severe impact on the world economy and more so in a country like India, which imports more than 70% of its crude oil. With the country achieving an annual GDP growth rate of 7-8%, there is a huge demand on the oil sector to sustain this high growth rate. Against a backdrop of the ever-widening demand-supply gap, which stood at 70 per cent, boosting the domestic oil and natural gas production, increasing refining and pipeline capacities and expanding the marketing infrastructure was urgently needed to meet the increasing energy demand to help sustain the momentum of the country's economic growth.

As an upstream Public Sector Unit, it is our prime responsibility to augment production and contribute our share towards increasing domestic production of crude oil and natural gas. In this connection, we have set ourselves very high targets which call for a whole-hearted, concerted and committed effort from each and every Oilindian.

We have to be prepared to confront various challenges both technical and non-technical in nature. On one hand we have to drill in geologically and logistically difficult areas, increase production in depleting reserves and strike oil in new areas. On the other hand, we have to be able to respond to ever increasing developmental demands from the residents of our operational areas. The Management has taken up the issues with the highest Government authorities and is holding regular dialogue with the public organizations to work out a win win solution.

I am convinced that there will always be a solution to the most vexed issues, provided we work as a team and take up innovative strategies to deal with such issues. A department cannot overcome all its challenges by working in isolation. It needs the support of every other department. We must also appreciate the ground realities; appreciate each others' difficulties; extend unconditional support and volunteer to take up higher responsibilities.

I am sure Team Oil India as always will rise to the occasion. As the festive season makes its much awaited presence, I take this opportunity to wish you and your family a very happy *Durga Puja, Dussera & Navaratri*.

*With warm regards,*

**(S N Borah)**  
Group General Manager (SS)

*"A strong positive  
mental attitude will  
create  
more miracles  
than any  
wonder drug."*

**- Patricia Neal**



## FOURTH OIL-ONGC MEET HELD AT DULIAJAN (9TH & 10TH JULY, 2006)

**O**il India Limited hosted the 4th OIL-ONGCLL meet at Duliajan on 9th and 10th July, 2006. The ONGCLL delegation, led by Shri B M Singh, ED & AM, Assam Asset had a detailed interaction with various senior officers of OIL on a number of issues of mutual interests. In the inaugural function, Shri RK Sachdeva, GM(BD & TPP), convenor of the Meet welcoming all the delegates mentioned that the much awaited Meet has happened due to the persistent prodding of Shri JK Talukdar, Director (HR&BD) and kind support of Shri B. M. Singh, ED & AM, Assam Asset.

In his welcome address, Shri SN Borah, GGM(SS), OIL mentioned that besides discussions on technical issues, the common issues/problems faced by both the organisations would also be discussed. He desired to have this interactive meet twice a year as per originally proposed and wished the meet all success. Impressing upon the need to plan for two such meetings in a year he pointed out that both the Organisations will be benefited immensely by such interactive meets. ONGCL being a global giant, it is at an advantageous position because of its All India status. OIL, which is primarily known as a North-East Company, is now trying to spread its wings far and wide.

"It is a great day", remarked, Shri B M Singh in his address to the delegates, "...when the two National Oil Companies are meeting to discuss their common problems and to find out common solutions." He was, in fact, eagerly waiting for this meet as both the organisations were having similar problems and issues to be addressed. In the long run, both the organisations have to maximize production and at the same time reduce the overheads. Besides technical problems, we have to address the environmental and safety issues as well. Of late ONGCL's production was coming down, whereas it was going up in case of OIL. Assam Renewal Project was one of the various projects undertaken by ONGCL with the sole aim of arresting the declining trend in production. He added that ONGCL engaged Consultants like, GCA, Halliburton etc. for this purpose. He hoped to have good interactive sessions, on a



Shri J K Talukdar and Shri B M Singh pose for a photograph during the OIL-ONGCLL Meet

common platform for the mutual benefit of both the organisations and assured that the next Meet will be held timely- in the coming winter, at Nazira.

In his concluding remarks Shri B. M. Singh, ED-ONGCL mentioned that there are innumerable problems common to both. Till the other day, OIL and ONGCL were thinking that they were the best in their own fields. However, the scenario changed all of a sudden with

the arrival of private players, which made both the NOCs to sit up and think of improving their production and at the same time reducing the cost. In spite of being in the business for last 50 years both the organizations have only recently started interacting. Though belated it was a good sign. During the interaction it was found that there were too many common problems and jointly we could solve many of them; both can take advantage of the best practices being followed by each other by sharing their knowledge, wisdom, experience and expertise in their particular areas of operation. He concluded his address by



Shri RK Sachdeva lights the ceremonial lamp during the inaugural function while Shri B M Singh, Shri S N Borah and Shri J K Talukdar looks on

saying that time has come when both these organisations should work together for a common purpose/goal.

Lively technical discussions were held in 3 parallel sessions on topics that ranged from Drilling & Associated Services, Geocisince activities, Production and R&D activities, and HR and related issues.

## OIL'S MAIDEN CUSTOMER MEET HELD AT GUWAHATI

"AS OUR CUSTOMERS' PREFERRED PROVIDER, WE SHALL BE THE INDUSTRY LEADER. THIS IS OUR MISSION"

**O**il India Limited held its maiden customer meet at hotel Landmark in Guwahati on 24th June, 2006. The concept of holding such a meet emerged from the collective thought-process of the Cross Functional Team (vision 3) which is working to realize the co-created vision "OIL delights the Customers with Quality Products & Services at Competitive prices." Shri M R Pasrija,



Shri M R Pasrija, CMD, OIL delivers the Key Note address during the Customer Meet

CMD, OIL, all the functional directors and senior officers of the Company participated in this immensely benefiting interactive Meet. For Shri G C Baruah, General Manager (P-Oil), Convener, Coordination Committee of the Meet, the active participation of all the major customers of OIL in itself reflected the resounding success of this maiden venture. All the major customers of OIL namely Numaligarh Refineries Ltd; Bongaigoan Refinery and Petrochemical Ltd; Guwahati Refineries Ltd.; ONGCL; NTPS, ASEB; Assam Petrochemicals Ltd., Namrup; Gas Authority of India Ltd.; Assam Power Generation Co., ASEB; Brahmaputra Valley Fertiliser Corporation Limited, Namrup; Assam State Electricity Board, Namrup; North East Electric Power Corporation, Kathalguri; Indian Oil Corporation (AOD),



Interactive session in progress during the Customer Meet.

Digboi; Tea Grids / Tea Gardens; Assam Gas Company Limited, Duliajan and Rajasthan Rajya Vidyut Utpadan Nigam participated in the Meet.

Fully aware that its Oil & Gas Customers have different problems which need to be addressed suitably for mutual benefits and smooth running of the day-to-day business

activities, OIL felt the need of creating a platform to address the issues of its customers. Further, OIL is also committed to sail along with its Customers for achieving the desired objectives of manifold growth with diversified activities and become the leading player in E&P Sector. The Customers appreciated OIL's efforts towards orienting the entire organizational processes to become a Market-Driven Organisation by bringing

awareness across the entire organization regarding the Business of OIL and how to share & care Customers' concerns.

While OIL envisions to be a fastest growing 'Energy Company' with highest profitability by 2008-09, it firmly believes that, OIL has to care for its long standing business partners for their simultaneous sustainable growth to achieve the mission. In accordance of its primary objectives, OIL co-created a vision to deliver its best of the 'Products & Services' to the Customers with consistent endeavours of the OIL's Team through induction of 'State-of-The-Art Technology' and prompt actions to attend Customer's problems and needs by the competent groups of OIL's Technocrats. Thus, OIL look forward to achieve the vision in reality - "OIL delights the Customers with Quality Products & Services at Competitive prices"

Since OIL's efforts to care for the Customer's needs and problems shall be a continuous process, this maiden initiative for organizing the Customer Meet would continue to remain as the appropriate platform for all to sort out individual organization's requirements for all time to come. The overwhelming response and success of the first ever 'Customer Meet' thorough active participation of its valued Customers has enhanced the sense of mutual trust and transparency between OIL and its valued customers.

OIL view Customers as partners and business assets for long term profit and simultaneously endeavors to integrate all functions and activities for serving the needs of the Customers. Accordingly, concerned functions will schedule regular visits and shall actively solicit Customer's feed back on its products & services being delivered/rendered. Respective functions will carry out post audits after every service rendered and the lessons learnt thereof for improvement will be circulated for implementation/adoption across the functions.

# OIL's Chemical Department

A chemistry that cements a bond beyond business



for transportation of the waxy crude oil to the refineries situated at Guwahati, & at Barauni in Bihar. Accepting the challenges, scientists of Chemical Department, working and experimenting day and night with exemplary devotion & dedication, discovered the device of crude oil conditioning process for thermal treatment of the waxy crude oil to make it suitable for transportation through the long 1157 km cross country pipeline. It was the first and only plant of its kind in the whole world.

## Prologue

**I**n the book "The Two Faces of Chemistry (The MIT Press, Cambridge, Massachusetts, 1985), author Luciano Caglioti, says: "Chemistry...is one of the broadest branches of science, if for no other reason that, when we think about it, everything is chemistry....Chemistry has invaded our lives, has provided us with new foods and new materials, has replaced wood and metal with less expensive products, has enabled low-income classes to acquire things that otherwise would have been inaccessible." There is not an iota of doubt that for those who belong to the upstream hydrocarbon industry or is well acquainted to its nitty-gritty, it wouldn't need much of an effort to fully appreciate the wisdom of Caglioti's words.

However if the above thought raises any semblance of doubt or plain simple indifference, then the following article which is based on a lively interaction with Shri Uday Shankar Sengupta, the Head of OIL's Chemical Department at Field Headquarters, Duliajan and the senior officers of his Department would surely reveal the many facets and perspectives of the indispensable role and overwhelming contribution of the Chemical Department, that touches many a significant aspects of the industry. Be it the mud engineers at the drilling locations or those who are working at the sophisticated laboratories, OIL's chemists work relentlessly throughout the entire gamut of the Company's key operations – exploration, Drilling, Production, transportation & transaction of crude oil. The Mission of Chemical Department is to support the Company's pioneering role towards achieving self sufficiency in production of crude oil and natural gas by providing knowledge based and competent drilling fluid engineering services and laboratory services adopting state of the art technology and caring for the environment.

## The genesis

Elaborating on the Department's evolution and current role and contribution, Shri Sengupta said: "The existence of Chemical Department has come into effect way back in 1952, when commercial hydrocarbon was discovered in Naharkatiya oil field. Starting with native Powai clay drilling fluid, required for drilling operations, the Department was started with only a few people and a very minimal infrastructure in a small bunk house in B.O.C camp. After commercial production of crude oil in Naharkatiya oilfield within few years the challenge has come

## The evolution

Since then, the department has been gradually upgrading its functioning in the field of drilling fluid engineering, laboratory services and R&D activities to keep pace with the fast growing global technology in the field of E & P activities of Oil Industry viz. exploration and drilling, production exploitation, transportation and transaction of crude oil and natural gas. Till



Shri Sengupta, Head of OIL's Chemical Department along with his colleagues in conversation with Editor, OIL News.

1987, extensive R&D activities in the field of enhanced oil recovery, development of flow improvers, deoilers, oilfield chemicals and the Department also carried out other production related activities and geochemical studies. Thereafter the R&D section of the Department was bifurcated and a new R&D Department came into existence due to diversification of various activities.

Shri U S Sengupta, Head-Chemical informed that the activities of today's Chemical Department is mainly divided into two broad categories viz Fields Services which includes Drilling Fluid Engineering & Workover fluid Engineering & Laboratory Services which includes Central laboratory consisting of Oil, Gas, Analytical, Cement & Mud laboratories & Reservoir Physics laboratory encompassing PVT, BHP & Core laboratories.

## The tradition of excellence

Sharing his experience as an Oilindian Chemist, a visibly emotional Chief Chemist (Lab), Shri H K Sharma, recounted those yearly years when the pioneering fathers of the



Solid control system – in a Drilling well

Department displayed great passion and talent. He mentioned about OIL's foray into the geophysical challenging operational areas in Manabhum, Arunachal Pradesh, where OIL had drilled the then deepest on-shore well in Kumchai in 1978-80 despite the fact that OIL's mud engineers were not exposed to working in such staggering depth of 5459 metres with tremendous pressure and complicated down-hole pressures. "Led by our seniors, we took a challenge and prepared an oil-based mud system instead of water-based mud to counter the pressure till 6000m. A team also went to Mumbai to develop a chemical to reduce the viscosity of the oil-based mud...although due to extreme down hole complications, we had to abandoned the well, it taught us many a lessons and helped us to gain confidence in our in-house abilities...The sight of our senior officers crying at the well plinth after the well was abandoned, was a sight that taught us what devotion and dedication was all about...thankfully, the tradition still continues and the same culture has enabled us to achieve success in various areas, today," he said.

**Shri Sengupta mentioned that in early eighties, during OIL's first offshore venture in Bay of Bengal, where all drilling related services were outsourced through international service companies, Chemical Department took up the challenge of providing mud engineering services in offshore well inhouse, saving a huge out flow of precious foreign exchange. The same tradition continued in Rajasthan Project as well where all chemical services were provided by the department through inhouse expertise. Citing another example of glorious contribution of Chemical Department, Shri H K Sharma mentioned the incident of Dikom well no. 15 blow out, resulting in a catastrophic disaster then brought attention of the whole nation and world. When all attempts to kill the well by normal fluids (water and salt solution) as per advise of M/s Boots and Coots failed, Chemical Department took the challenge to supply specially designed fluids which ultimately brought the well under control bringing a smile to the faces of all Oilindians and the experts who worked relentlessly day and night for about three weeks.**

Highlighting the Department's continued success in responding to the challenging situations, Shri S K Mishra, Chief Chemist (Moran) mentioned that although OIL was facing problems in drilling deeper horizon wells in Moran, the Company's Chemist never gave up and took over the

responsibility of ensuring that target depth is reached in location MEO after foreign experts didn't get desired results using new FLC 2000. The well was a success and is currently producing around 90 klpd of crude. Shri A N Singh, Dy.Chief Chemist (Fields) mentioned that in-house efforts have led to change of Company's policy and the Company could drill till target depth in locations MEP and MEQ with good casing and cementing.

#### Quality control and pricing of crude oil

The revenue earnings of the company come mainly from selling of crude oil along with some contribution from selling of Natural gas & LPG. Highlighting the impact and implications of the post APM era, Shri H K Sharma elaborated the tremendous role played by the Chemical Department in ensuring the quality of OIL's crude oil and in getting the best price for the same. The price is determined based on its quality as obtained during Crude oil Assay determination. The job of the Assay determination and quality monitoring of the crude oil has been entrusted to Laboratory division of Chemical Department. Moreover, Chemists have been posted at different refineries for monitoring the point to point delivery of crude oil to the refineries. Today, the efforts of the Department have earned its dividends for the Company as OIL's crude oil is getting high standard of international crude oil price based on benchmarking with Nigerian Bonny light crude.

Oil India is transporting crude oil through its pipeline to various refineries. Also ONGCL's crude from their producing fields is being transported through OIL's Pipeline from Moran & Jorhat. The quality of the crude mainly in terms of water content, density & sediment content are determined for OIL & ONGCL crude separately at the intake points and for the composite crude at the refinery ends at the time of custody transfer through close monitoring, supervision & joint testing. The significance of accurate determination mainly of water content, is that even a slight variation of the water content in crude oil effects the crude oil volume and also invites payment of penalty as per the Crude Oil supply Agreement (COSA) and can cause severe monetary loss to the company.

#### Chemical Department – some pertinent perspectives

Shri Rupankar Borkotoky, Deputy Chief Chemist mentioned that "...in field we say proudly mud is the blood of the well..."



Mud system – in a Drilling well

just like a patient whenever he feels sick he has to visit the doctor...similarly when a well falls sick, we have to play the role of the doctor.

Airing similar views Shri Rajeev Lochan Sharma, Dy Chief Chemist (Workover) felt that his Department can be compared with blood, the presence of which is felt only when there is a cut. He added that whenever there is a crisis especially well blowout or similar situation, the Chemical Department always play a vital role in controlling the situation. He lamented that at times deserving recognition ceases to come the way of the Department. Mentioning about the work-over section, he informed that the Department is inducting new technology to increase production from depleting fields.

The discussion then took a turn towards HR issues with focus on the recent trend of officers of the Chemical Department leaving OIL and joining multinational companies. Sharing his thoughts on this issue Shri Dipu Hazarika, Dy Chief Chemist (Fields) remarked that Chemists of OIL are getting attractive offers in MNCs abroad which reflects the good brand image and talent of the OIL's Chemists. Adding that higher remuneration need not necessarily be the only reason for the Chemists leaving OIL, he mentioned that lack of desired career growth in the Company is one of the prime factors for such decisions. Shri D Upadhyaya, Dy. Chief Chemist (P&A) also mentioned about the positive impacts from a possible meaningful remerger of the R&D Department with Chemical Department.

Shri L K Saikia, Dy Chief Chemist (Fields) made a mention of the innovating power and team spirit – two significant qualities of OIL's Chemical Team. Emphasising his point he mentioned that in moments of crisis even the contractors' drivers rise to the occasion and gives their best as an integral member of the Chemical family.

Sharing his views on the high potential of his Department in earning revenue for OIL as a service provider, Shri M M Samal, Chief Chemist (Business Dev) informed that the Department has already provided services to M/s Canoro and M/s Geo Enpro in North East. He also mentioned that the Department is capable of extending various services to upstream oil companies operating in the North East but for that the manpower requirement needs to be looked into critically.

Mentioning that the Chemical Department always stays ready to meet any challenges arising in the crisis situation Shri Sengupta informed that one of the officers of the Department is at present actively involved in 'Crisis Management Team' set up by OIL for formulating the 'Crisis Management' Policy of the Company. Referring to the growing concern for the protection of the environment, Shri S Duttgupta, Dy Chief Chemist (Fields), informed that Chemical Department has responded to this challenge by following the internationally practiced green-mud policy and using new environment friendly mud in drilling operations. The Chemical Department is in the



Crude oil testing - with HSE consciousness

process of introducing an environment friendly revolutionary solid free Formate brine drill-in fluid system. As the system is free from solids, solid invasion into formation and subsequent formation damage by solid blockade is prevented thereby minimising skin effect. OIL is planning to introduce this system in two selected Eocene wells on experimental basis.

### A glance at some of the Department's significant achievements

#### ISO CERTIFICATION FOR CHEMICAL LABORATORY:

Discussing on the Department's response to technology up-gradation and commitment to adopting best practices, Mrs Debajani Bose, Deputy Chief Chemist (Lab) who was actively associated with the ISO certification process mentioned that the Laboratory division of the department has obtained ISO 9001:2000 system certification. Implementation of ISO 9001:2000 was initiated to achieve multifarious benefits like Establishing documented systems and procedures, Effective fulfilment of customer requirements, Effective utilisation of resources, Enhancing teamwork of employees, Improve morale & motivation of employees and Enhancing customer satisfaction with overall organisational performance improvement.

#### DRILLING FLUID SERVICES:

Shri U S Sengupta mentioned that the introduction of Super Heavy Weight Oil Base Mud in oil well drilling was conceived in 1972-73 due to its numerous advantages over water base mud. This in-house OBM technology had left a mark on the Department's capability of developing a system of international standard. As time passed, due to stringent environmental regulations and the Department's commitment to nature the OBM technology had to be abandoned and the Department developed a new system to drill hydratable shales and clay zones using Partially Hydrolysed Poly Acrylamide (PHPA). This was followed by the introduction of XCP - Resinex – PAC - Gilsonite System which helped in overcoming the drilling



The newly renovated Analytical laboratory – busy in pollution monitoring



### Reservoir fluid study in progress

problems in the fragile kopili and Prang succession of Eocene formations. The system is presently being used to drill medium depth Eocene wells with high success rate.

#### HORIZONTAL DRILLING :

Shri Hemanta Baruah, Suptdg. Chemist highlighting the Department's contribution in OIL's quest for optimizing production of crude oil from old fields mentioned about the recently introduced high end technology like horizontal drilling.

He said that Chemical Department played a major role in horizontal drilling project right from conception, planning, till successful execution of fast phase of drilling. A very important factor for successful drilling of these high tech wells is appropriate drilling fluid (mud). After careful study of various options available, Chemical Department successfully selected glycol-amine-PHPA mud system for drilling high angle curved section of horizontal wells and NDDF using micronised calcium

carbonate for production hole section. It is worthwhile to mention here that, amine based mud system, which is a very latest entrant in drilling fluid industry, was used for the first time in India in our Makum and North Hapjan areas. Three horizontal wells have been completed so far using this mud system and all of them are prolific producers of clean oil.

#### LABORATORY SERVICES:

Shri H K Sharma elaborated on the role of the Laboratory Service and mentioned that the Department has undertaken adequate steps to upgrade its laboratory facilities to meet the challenges arising out of dismantling of APM and possible impact of globalisation. The new look laboratories of the Department speak volumes about the Department's concern for quality. Mrs Debajani Bose informed that The Chemical laboratory at Duliajan is engaged in rendering services for various E&P activities of the Company. The laboratory is also

providing its services to other E&P Companies operating in the north-east part of India. Under Central laboratory division, sections like **Drilling Fluid Testing Laboratory; Analytical Laboratory Natural Gas analysis Laboratory Crude oil quality monitoring Laboratory; Cement Laboratory** are operating to take care of the diverse activities of the Department.

#### RESERVOIR PHYSICS SECTION:

Shri Anup Gogoi, Chief Chemist (Reservoir) comparing his Department to an iceberg said that just like the tip of an iceberg only a small part of the Department's multidimensional activities are visible. Shri Bora mentioned that people tend to associate the Chemical Department with mostly its mud engineering services. The Reservoir Physics section of Chemical Department plays a very vital role in the proper management of our reservoirs. This section generates the basic input data which enables our Reservoir Engineers to properly evaluate, manage and describe our reservoirs. Out of the five major inputs required for reservoir evaluation, management and description, viz, geological model, production data, pressure-temperature data, reservoir fluids data and petrophysical data, the last three are generated in the reservoir physics laboratories. He added that lot of reservoir geo-chemical studies are going on to find innovative ways to extract more oil from the depleting reservoirs.

#### Epilogue

As the interaction approached its end, the Head of the Department was asked to reflect on the origin, purpose and present status of the Weekly Saturday get-together- a unique tradition of the Chemical Department wherein serious presentations on important issues in an informal setting followed by a sumptuous lunch provides enough food for thought to all. For the next few minutes, every body present in the Head's chamber spontaneously reacted to this query and a flurry of perspectives and anecdotes

created a momentary cacophony...but those few moments of verbal commotion amply reflected the inimitable passion, professional fervour, unbridled enthusiasm, sense of pride and commitment and camaraderie – qualities that create a '**perfect chemistry**' amongst the members of OIL's Chemical Department...a bond, a culture, a philosophy that is best evident in the following words that are displayed on the table of the leader of OIL's Chemical Team, Shri Sengupta:

*Think big.*

*Think beyond "I."*

*Think in terms of "we & us."*

*There is a joy in sharing,*

*And also an advantage in sharing,*

*So dare to share.*



Marching ahead with ISO quality certificate from BVQI

# Towards Economic Development of the North East

— N K Bharali, Senior Advisor (Strategic Planning)

— Jayanta Singh, Member - ERP

**I**n spite of its abundant natural resources, the North Eastern region has not been able to keep pace with the national average of economic and industrial growth since independence and the region's disadvantageous geographical location is cited as a major reason for this. However if one looks back to history, it will be interesting to observe that trade relationships between the region and the neighbouring foreign countries were stronger in the pre-independence era than they are now. The famous Silk Route passing through this region reminds us of the Golden Period of international trade in India, particularly in the NE region.

## Border Trade

It is reported that this isolated, landlocked region of NE shares less than 2 per cent of its borders with the rest of the country, and the rest with Bhutan, Bangladesh, Myanmar, Tibet and China. And for security reasons, either real or perceived, the Central Government has either closed this long stretch of international border or restricted trade thorough it, significantly affecting economic development of the region. On the other hand despite considerable efforts from the Government, it has not been possible to reduce large scale illegal infiltration of people from neighbouring Bangladesh, Nepal, Myanmar etc, pushing the regional economy further downward.

In recent times there appears to be a growing appreciation of the large scale benefits of free trade through the North East border. In the International Conference held in Kunming, China in 1999 to promote a growth quadrangle between India, China, Myanmar and Bangladesh it was decided to create a Forum for Regional Co-operation between the four countries. The forum would facilitate interaction among academics, governments and leaders of business and industry with the basic objective to strengthen regional economic co-operation among contiguous regions of eastern / north eastern India, Bangladesh, China and Myanmar. The recent decision by the Central Government to reopen border trade with China through the Nathu-la pass may have been encouraged by the Kunming initiative. Historically this Pass links India and China as a part of the (old) Silk Route and the significance of this linkage is revealed by the fact that 300 years ago, India and China were together responsible for 57 per cent of the world's manufacturing output. The Kunming initiative also specifically called for the revival of the ancient Southern Silk Route between Assam & Yunnan as also the Stilwell Road, from Ledo in Assam to Myanmar and then to China.

The Stilwell Road stretches from Ledo in Assam to Myanmar across the Phangsua pass and joins Bhamo in Myanmar and then extends to Yunnan province of China. This road, with two broad segments - Ledo road (from Ledo to Bhamo) and Burma Road (connecting Yunnan town in Kunming to Bhamo), covers a total distance of 1,043 miles. Constructed at a cost of around US \$ 150 million along the edges of mountainous defiles, through deep gorges, raging rapids and some of the worlds most impenetrable, this road must stand as one of the greatest, but sadly unrecognised, engineering feats of World War II. The road was practically in use for only about seven months up until September 1945 when the Japanese surrendered and hostilities ceased. No longer required, the \$150 million jungle track was abandoned, and subsequently reclaimed by the jungle.



## THE STILLWELL ROAD

- Top left : The Stilwell road
- Top right : The pipelines along the Stilwell road.
- Bottom : The Stilwell road from Ledo to Bhamo and to Kunming.

While Stilwell road is generally well known, very few are aware of the fact that there was also a pipeline connecting Calcutta to Kunming running for most part along the Stilwell road. It was believed that the "main advantage" of the Stilwell Road lay "not in the actual tonnage the road would carry, but in greatly increased supplies of petrol (gasoline) which a pipe line, running parallel with the road, would bring to the air forces based at Kunming, China. Completed in November 1944, this pipeline between India and China (along the Stilwell road) transported gasoline, aviation fuel and diesel. The pumping operation was supported by a number of pumping stations enroute, constructed under extreme logistic conditions. This pipeline, built at a huge cost of money and lives, with enormous effort and excellent workmanship also remained operational for only a few months; finally losing any relevance as the Second World War was over.

Potential for border trade is enormous if infrastructure across the border can be improved. The Stilwell Road, closed since 1947, links Assam's tea plantations and rich oil fields with China's Yunnan province through Myanmar. Reopening this historic road currently lying unused, can lead to significant cross border trade and access to the vast Southeast Asian and Chinese markets with North East as the hub. Revamping this road from Ledo in Assam to Myitkina in Myanmar and extending the same to the Moreh (India) - Kalewa (Myanmar) crossing on the Chindwin River and finally providing a bridge across the river, it will be possible to connect Assam to Mandalay, which is on the Myanmar railway system.

Similarly, Mizoram, which has around 700 km of border with Bangladesh and Myanmar, offers excellent possibilities for enhancing cross border trade. Mizoram if connected to Sittwe in Myanmar can offer a cheaper and faster alternative to the narrow Siliguri corridor in the northern part of West Bengal,

which is currently utilized by India as the corridor for sending goods to the northeast India. India and Myanmar are presently working on another project along the Kaladan River that separates Mizoram and Myanmar. With the up-gradation of port facilities at Sittwe (Myanmar), which is about 250 km from the Mizoram-Myanmar border and where Kaladan flows into the Bay of Bengal, development in maritime trade in the region can be expedited.

In similar lines, connecting Agartala to Chittagong in Bangladesh will open up the entire northeastern region of India, making it the commercial outlet for eastern trade.

#### **Natural Gas and the North East**

The natural gas production in India is only around 32 bcm whereas the projected demand is soon expected to reach around 120 bcm in next couple of years. This demand is fueled by increasing demands for cheaper fuel in the fertiliser sector (currently operating with naphtha and/or fuel oil), the power sector, other industrial sectors (including tea); use of environment friendly CNG as vehicular fuel and growing use of natural gas in the retail sector (in homes and in commercial establishments). The North East produces around 2.77 billion standard cubic metres of gas per annum with Assam contributing around 80 percent of this production and the rest coming from Tripura. Although geological reserves for natural gas are available, till recently exploration focus in the region has been primarily for crude oil. Two major reasons can be attributed to this factor; a) lack of adequate demand due to inadequate number of industries and reluctance of business houses to invest in the Northeast and b) the subsidized price at which gas has to be sold by the producers in line with Government's policy. However over the last five years there has been a gradual increase in demand for natural gas in the region forcing the upstream companies to bring about more focused attention to exploit natural gas potentials. Infrastructural advantages also indicate that if this gas could be made available in and around Guwahati, the pace of industrialization in the region would improve.

#### **Natural Gas from Myanmar and NE Development**

Of late there have been plenty of discussions about import of natural gas from the gas rich neighbouring countries of Myanmar and Bangladesh to India through pipeline transportation. The recent discovery of an estimated 20-trillion-cubic-foot gas reserve in Myanmar offshore, south of Mizoram is of considerable significance for a natural gas deficit nation like ours. Further, the common border shared by the two countries (Myanmar and Northeast India) makes Myanmar an attractive source for import of natural gas. This fact also makes it difficult to visualize a policy of import of gas from that country without keeping the interests of the Northeast in mind. Currently two options for the route to be followed for transportation of this gas are being debated. The first option is to lay a pipeline from Myanmar via Bangladesh to Calcutta involving a tripartite agreement. From all reports Bangladesh seems to be at best a reluctant partner to the entire proposal and has demanded a heavy price for allowing the pipeline to transgress that country. More importantly such a pipeline would deprive the states of the Northeast and the other parts of West Bengal, which are relatively less developed, the benefit of having a gas highway passing through it and the associated development potentials.

The second option is to have a pipeline from Myanmar through the Northeast - going through Mizoram, passing very near to the borders of Manipur and Tripura and going up to Guwahati to cross the mighty Brahmaputra and move into West Bengal. While this will be a longer route entailing higher investments, the advantages are two fold: one, this can be done through a bipartite agreement between two willing partners and two, this will also provide the benefits of a gas highway and associated development potential to a very large part of the country's under developed region.

We would like to propose a third alternative may be to follow

the ABC pipeline route (Ledo to Kunmin in Yunnan province in China via Kachin province in Myanmar called the Assam Burma China (ABC) pipeline - discussed earlier) - an alternative with a historical significance. On the face of it routing a pipeline through this difficult and much longer route may not look a pragmatic proposition. However there are certain advantages of strategic importance that need to be looked into while evaluating this alternative. Myanmar's hydrocarbon potentials are generally located in the central (Central Subsalin Basin) and south (Gulf of Martaban) of the country. The country's economic development activities are also more confined to the central and southern region with the northern region lagging behind. The northern part of the country has the Kachin province known for its insurgency problems and not fully within the control of the ruling Military regime. This insurgency in Myanmar has significant influence over the roles of the insurgent groups in the North East and the best interest of India can be served by supporting and participating developmental activities in Myanmar. A gas highway from the central Myanmar region to transport gas up north and then to India along the Stillwell road, may be a step in the right direction. Currently Myanmar government suffers economic and political sanctions imposed by the United States and the European Union with no aids. Logically under this situation Myanmar Government looks for economic cooperation and support from the Indian Government. Historically also Burma played a major role in emerging Asian solidarity and relations between Delhi and Rangoon (now Yangon) were strong. This provides an opportunity to strengthen these ties again.

Next, a gas pipeline starting from Ledo in Indian side will cover the entire range of oil and gas fields in the state of Assam, the major producing state of the region, and this line can get easily coupled to the pipeline being built from Duliaganj to Numaligarh and the proposed pipeline from Numaligarh to Guwahati. Beyond Guwahati the line can follow the same route as the second alternative above and move to West Bengal to connect to the national gas grid. Abundance of gas can only lead to new gas based industries and entrepreneurship in the region and hence development.

More significantly, there have also been reports of China also showing interest in import of gas from Myanmar. China has proved to have a competitive advantage over us in global hydrocarbon property acquisition activities in recent times. For China to import this gas the most likely route would be to lay a line from central / south west Myanmar to Bhamo in Myanmar - China border and then cross over to Yunnan province along the Stillwell road. This will further strengthen Chinese hold over Myanmar; a situation that may not be to the best interest of India.

#### **In Conclusion**

Geographically within India the northeastern region will ever remain an isolated outpost. However, with opening of the Stillwell road, although the northeastern region will continue to be a corner of India, it can at the same time become the gateway of India to the East and, thereby, the hub of international commerce between India and the fastest-growing economies of the world.

Some experts suggest that Free Trade zones should be created around the relevant border crossing points to facilitate legalisation of existing illegal trades. This will help bring the black money in to the economy along with other associated benefits - a win win situation for the Government as well as hundreds of law breakers and insurgents involved. Coordinated effort by the Union Ministries of Home-External-Finance-Commerce and the State Governments of the North East can definitely help the North East to become a major fixture in the Nation's Commercial Map.

The article was published in a special souvenir brought out on the occasion of the Mid-term Convocation of All Assam Journalist Association at Margherita held from 28-30th August 2006.

## HSE Standardisation : Matching our practices with the best in the world



Arindam Bhattacharyya

**D**uliajan Power Station has been awarded the ISO\* 14001:1996 certificate on 3rd March 2005, and the OHSAS\* 18001:1999 certificate on 8th March 2005, in recognition of its environmental, and safety & occupational health management systems, which conform to international standards. This was complementary to the previous year's achievement of ISO,9001:2000 certificate, granted in recognition of the quality management system. The environmental management system has been since upgraded to match the new set of standards, namely ISO 14001:2004, issued by the international body. We present below a short glimpse of Duliajan Power Station's journey into the exciting new world of health, safety and environmental (HSE) standardisation.

The term "management system" is a combination of organizational structure, responsibilities, objectives & targets, practices, procedures, processes and resources for determining and implementing the policy.

### Why is certification required?

Certification is a voluntary process, whereby companies / organisations benchmark their environmental performances against a set of international standards. The benefits from this standardisation include:

- Better Environmental / Safety performance of the Station
- Avoidance of unforeseen / potential environmental or safety disasters
- Raises general awareness - The certification process stipulates that all people involved shall be made aware about the environment, as well as occupational health and safety at the workplace. This awareness has a spill over effect - better informed people are better-motivated people.
- Better waste management
- Future business opportunities - Good environmental management is increasingly seen as a pre-requisite for doing business. Sound environmental practice also lays a base for sustainable development.
- Strict compliance with existing legislation
- Prestige - the certificate vouches that our practices are in-line with the best in the world

### Requirements of certification

The certificate has certain basic requirements:

- Policy (Environmental / Safety and Occupational health)
- Determination of significant environmental aspects and health/safety hazards
- Manuals (indicating the structure of the management systems)

*"ISO" stands for Organisation for International Standards, an institute that drafts various standards that are followed internationally. "OHSAS" stands for Occupational Health and Safety Assessment Series, another widely followed, international set of standards on occupational health and safety.*

- Procedures (What are the management systems' goals & how to achieve them)
- Programmes (Plans for the future)
- Audits (Periodical Checks to determine if the systems still conform to the standards)

### Policy

At the core of the management systems is the Health, Safety and Environmental (HSE) policy. The Policy is an important document in that it gives a direction to the process, as well as demonstrates top management commitment to the process.

The HSE policy of Oil India Limited is quite comprehensive, covering the aspects of employee safety, occupational health and the environment. We reproduce it below:

OIL INDIA LIMITED is committed to be a vibrant, responsive, knowledge based competitive Exploration and Production Company with a global presence, and a selective presence across hydrocarbon value chain in India & abroad with highest concern for preservation of Environment, sustainable development, safe work practices, better health care facilities and enrichment of quality of life of employees, customers and the community around our operational areas.

We at OIL INDIA LIMITED strongly believe that Safety, Health and Environment Management performances are integral part of our business and accordingly consider the same as part of our corporate objective.

### In pursuance of the above policy we shall -

- Ensure a safe and sound working environment at all our workplaces.



- Comply with all rules and regulations on Safety, Occupational Health and Environment Protection stipulated by statutes besides our own policies & manuals
- Adopt and promote safe & eco-friendly technology and review the performance of the systems in line with the changing needs.
- Continuously work towards mitigation of adverse environmental impacts, if any of our operations on air, water & land.
- Prevent mishaps, minimize risk & hazards and remain trained, equipped and ready for effective & prompt response to emergencies including disasters and accidents.
- Promote resource conservation and recycle options.
- Prevent occupational diseases and accord due concern for the employees health as well as the community around our operational areas.
- Encourage external audit of our H, S & E standards so that stakeholders and public confidence is safeguarded.
- Encourage knowledge up-gradation & promote safety, Health and Environmental awareness amongst all the employees.
- Remain committed for continual improvement and achievement of highest Safety, Health and Environmental protection standards of the company leading towards sustainable development.
- Work towards preserving ecological balance & heritage in our operational areas.

**The HSE policy adopted by Duliajan Power Station is akin to this policy.**

#### **The certification process**

The process of certification begins with the policy. Once it is formulated, published and widely circulated, the next task is to carry out a hazard-risk analysis, and aspect-impact analysis.

All the activities, routine as well as non-routine, are analysed for possible hazards to life and property. These are then graded according to severity. The same exercise is carried out to determine the impact of our activities on the environment also.

After the detailed analysis is done, and significant risks to humans & environment determined, the next step is to chalk out plans and programmes to minimise or eliminate these risks.

#### **Procedures and Programmes**

There are certain mandatory procedures stipulated by the standards that have to be fulfilled. Apart from these, the requirements of the organisation (as determined by the risk / impact analyses) demand certain procedures. In our case, to give an example, we developed safe work procedures at Duliajan Power Station to reduce the risks faced during certain activities. For targets that cannot be met immediately (for example, those that involve installation of new devices) the standards require that time-based “programmes” be initiated.

#### **Manuals**

The process of implementation also required the development of two manuals (one each for the two systems), namely “Environment Manual (EM)” and “Occupational Health and Safety Manual (HM)”. Both these manuals were derived from the HSE policy. The EM deals with the steps undertaken to protect and preserve the environment (including the procedures and programmes referred to above), while the HM covers the safety and occupational health efforts at Duliajan Power Station.

#### **Audits**

All well laid out plans would remain on paper without proper monitoring. The standards therefore lay great emphasis on continuous audits, both internal and external. Trained internal auditors monitor the systems for conformity to the provisions of the standards. Once a year, external, third party auditors come and carry out a detailed check of the entire system. The continuation of the certificates is dependant on the satisfactory report of external auditors.

#### **The Road Ahead**

Certification is not a target in itself. Exposure to international “best practices” (practises that are universally followed for optimum results) as a result of certification has given us the confidence to aim for better performance. Our team of dedicated professionals are better trained and motivated to face all future challenges to serve Oil India and fulfil all its requirements of quality power, while at the same time, ensuring that it is done in a safe manner, without harming the environment.

Author is Superintending Engineer, Electrical Dept., OIL

## Naharani Public Health Centre and Rajgarh College - OIL supported community driven CSR initiatives -

"when inspired people transform lives and achieves the apparently impossible."

**I** There was a time when community development projects by Corporate Social Responsibility initiatives were guided by the welfare approach, where the Corporate House took the onus of deciding what and how to help the needy, the concept then changed to the empowerment approach, wherein the community plays a significant role in identifying and prioritizing the developmental needs. In recent years experts have advocated the new participative approach wherein community not only identifies their developmental needs but also participates in the projects.

Oil India acknowledges the merit of this new approach and gives due priority to such CSR projects which also attracts the active participation of the community. In the recent few years, two CSR projects in OIL's operational areas in Tingkhong and Rajgarh in Dibrugarh District have amply proved the overwhelming success of such participative projects where the community itself acts as the main driving force. The following is an overview of the two projects in reference:

### Naharani Public Health Centre (Tingkhong)

Naharani Public Health Centre, located under Tingkhong Revenue Circle of Dibrugarh District is the one and only 30-bed referral hospital in this thickly populated revenue circle, catering to the medical needs of the residents of over hundred odd villages from the greater Tingkhong area. However, due to its poor infrastructural facilities and dilapidated condition, Naharani P.H.C. had over the years failed to serve its purpose and to respond to even basic health care need of the people of the area. This created tremendous problems for the patients, as the nearest health centre is miles away.

Couple of years back, led by popular social worker of the area, Shri Moni Manik Gogoi and his friends, the people of the area



Naharani Public Health Centre

decided to take up the enormous task of injecting new life into the Naharani PHC and improve its condition. What followed was an unbelievable display of selfless service from people from all age groups and economic background. Those who were economically better-off contributed in cash and kind, others volunteered free physical labour. It was no less than a silent revolution, where the positive power of a conscious, responsible and united community proved that led by inspired leadership, people can overcome all odds and make things happen.

Moni Manik and his friends approached OIL as they did various

othe organizations like the Tea Gardens, local businessmen, Member of Parliament, Member of the State Legislative Assembly and the State Government. After due inspection of the Naharani PHE and the unprecedented participation of the community, Oil India Limited extended a financial assistance of Rs 10 lakhs towards infrastructure development of the PHE like construction of a new male ward, operation theatre, Pathology Room Baby Room etc. The state government has also responded and extended financial support and also has elevated its status as a referral hospital, which will go a long way in serving the people of the region. The total cost incurred for revamping the Naharani PHE is around Rs 25 Lakhs.

### Rajgarh College (Rajgarh)

This was a longstanding need of the people of the greater Rajgarh area. Here also led by the whole-hearted commitment of the local social workers, the people of the Rajgarh area came forward to support the project of constructing a permanent premises for the College, which was being run in the borrowed space of a local high school. The growth of population and increasing number of matriculates in the area



Rajgarh College

has created a demand for a local college. With the vision of providing avenues for higher education to the students of over 50 villages within greater Rajgarh area, the group of local social workers approached each and every member of the community as well as nearby Tea Gardens, businessmen, local MP and MLA and OIL.

After evaluating various ground realities and on finding that a local land-lord has already donated necessary land for the project, OIL agreed to extend a one time financial aid of Rs 5 lakhs of the total project cost of around Rs 20 Lakh for the project. The College Premises has been successfully constructed and classes have also started in the well constructed new premises of the Rajgarh College. People of the area came out with a big heart and contributed according to their economic condition towards setting up of the new premises of the Rajgarh College. The overwhelming response of the local people towards this noble cause and the commitment of the members specially constituted to supervise the construction works enabled the construction committee to even build a bigger college than as planned.

Today, the Naharani PHC and the Rajgarh College has become a symbol of collective enterprise, with various organizations and local people extending all possible help towards the all round development of the "Hospital and College".

## 'Oil' - A Brief Traverse Through Present and Future

**I**n my previous article, entitled, "Beware! Titans are Falling", I mentioned that though "Titans" and many giant oilfields are falling, it does not necessarily mean that the world is running out of oil, on the contrary it underscores the need to step-up exploration activity throughout the hydrocarbon world. I also advocated strongly for the use of other sources of energy, keeping in mind that this will reduce India's import burden as well as our dependency on the politically unstable regions of the globe, with uncertain future.

As the production from world's old super giant and giant oil fields are declining naturally or having their premature death due to bad reservoir management practices, as the size of new discoveries are diminishing, and demand for oil is growing, the search for oil in frontier basins and deep seas are also growing. High oil prices may be hurting the economy and forcing us to dig deeper into our pockets to drive our cars, but higher prices are also encouraging companies to invest in projects to boost oil and gas production capacities across the world. As per Citigroup Research, rewards from high oil prices combined with high service and hardware costs will push exploration and production spending more than 22% higher - to US\$253.02 billion in 2006, from the planned expenses a year earlier and this trend is likely to continue in 2007. Besides going to deep seas, where drilling cost is several times more than on land and shallow water, we are now exploiting more extensively non-conventional and costly oil sources like oil sands, heavy oil, oil shale etc.

As per the Cambridge Energy Research Associates (CERA), due to the new initiatives, global world oil supply can hit 110 million barrels a day in 2015, from the present 81 million barrels per day. It is estimated that Canada's oil sands (also known as tar sand or bitumen) alone will give around 3.5 million barrels a day by 2015. Its proved reserves, as estimated by Alberta Energy Utility Board (AEUB) are 175 billion barrels of bitumen (Till now only a fraction of it is included in Canada's proved reserves account by B.P.) AEUB also reckons that an additional 315 billion barrels could be recovered given the right technological advances. Companies like Syncrude Canada Ltd, Suncor Energy, Imperial Energy, Shell Canada, Canadian Natural Resources Ltd, Petro-Canada are investing billions of dollars in oil sands production. China is already in to get a slice of the pie, knowing fully well that Canadian oil sands may become one of the world's most valuable energy

sources and it lies in politically one of the most stable region of the world, with easy access for outsiders. Although cost of extraction of exposed and mine able bitumen is low, to make it refinery acceptable grade by adding upgraders is a costly affair. Extracting deep-seated, underground bitumen is still a technological challenge.



**B. N. Sharma**

According to USGS, world is having 429 billion barrels of recoverable bitumen and 650 billion barrels of heavy oil. Orinoco region of Venezuela contains 90% of extra-heavy oil in-place reserves of the world. PDVSA, Statoil, Total, BP, Exxon Mobil, Conoco Phillips, Chevron, CNPC are some of the companies involved in heavy oil projects in Venezuela. Venezuelan President Hugo Chavez and Chinese counterpart Hu Jintao recently signed a JV agreement whereby it has been agreed that China's CNPC and Venezuela's PDVSA could produce on an average of 200,000 barrels a day of extra heavy crude from Orinoco oil belt. OVL is also getting closer to Venezuelan opportunities. In India, ONGC is producing heavy oil from Lanwa, Santhal and Balol fields of Gujarat, while OIL is trying to produce the same with the help of PDVSA from Baghewala field of Rajasthan. Cairn Energy has also discovered heavy oil in Rajasthan in substantial quantity.

There are proven reserves of oil shale in countries like USA, Brazil, Jordan, Morocco, Australia, China, Estonia, Israel, Russia, Canada etc. Some of them are producing. Increase in crude oil price has encouraged many countries of the world, including India, to tap this least recognized source of oil. There are reports, which suggest that Colorado of USA is sitting on more oil than Middle East. The estimated recoverable oil from oil shale reserves in this region is around 1000 billion barrels, which is several times more than Saudi Arabia. In India, DGH has already started making a systematic effort to tap oil shale.

There are several new deepwater oil discoveries particularly in the Gulf of Mexico, Brazil, Nigeria, Angola etc which are not only adding reserves, but many of them have started adding production as well. Deepwater is producing much more than shallow water in some of these places.

It thus appears that in future new oil will mostly come from deepwater, oil sands, heavy oil and oil shale. Other sources of oil like condensate, NGL, GTL, CTL etc (which I have not discussed in this article) may also play a significant role in the future.

New discoveries, new technologies, upward revision of geological model of a field etc are constantly adding reserves and production, at whatever price it may be. And thus, oil is flowing. As such, we are not running out of oil, but running out of cheap and "easy" oil and unless there is slowdown of economies, no disruption of supply, no geopolitical influence, compliance of strict conservation norms or using of other sources of energy like gas, coal, nuclear, hydro, geothermal, solar, wind etc., oil price is unlikely to go down below US\$ 50 / barrel in near future. One thing we may remember that although we will continue to get oil, it may not be sufficient to meet the demand as it is also growing rapidly. Moreover, to achieve the production as predicted by CERA (i.e. 110MMbbls/day by 2015) may be a Herculean task, considering the fact that the production from world's existing oilfields are declining at the rate of around 5% per annum and reserves added from new discoveries per annum are no match to oil consumption, as on today.

While the future of oil business is always full of confusion and uncertainty with lots of presumptions, let us now discuss about the present and find out who are the top 10 countries in the world during 2005 in terms of proved reserves, production and consumption of oil. As Oil India Ltd. is going ahead with its overseas campaign vigorously, this information may be useful.

### World's proved reserves of oil

At the end of 2005, world's total proved reserves stood at 1200.7 billion barrels with average reserves to production ratio of 40, which means that unless this proved reserves is replenished and consumption remain the same, oil will last for another 40 years.

Saudi Arabia has always been, and still is, the champion in terms of proved reserves. Its proved reserves at the end of 2005 stood at 264.2 billion barrels which is almost double than the second best Iran. World's proved reserves of top 10 countries are shown in Table-1.

Sl. No.	Country	At the end of 1985	At the end of 1995	At the end of 2005	Share of world's total in 2005	R/P Ratio at the end of 2005
1	Saudi Arabia	171.3	201.5	264.2	22.0%	63.8
2	Iran	59.0	83.7	137.5	11.5%	93.0
3	Iraq	63.0	100.9	115.9	9.6%	173
4	Kuwait	82.5	96.3	101.5	8.5%	105
5	UAE	33.0	98.1	97.8	8.1%	97.4
6	Venezuela	54.5	66.3	79.7	6.6%	72.6
7	Russian Federation	N.A.	N.A.	74.4	6.2	21.4
8	Kazakhstan	N.A.	N.A.	39.6	3.3%	79.6
9	Libya	21.3	29.5	39.1	3.3%	63.0
10	Nigeria	16.6	20.8	35.9	3.0%	38.1

### World's oil production:

World's total oil production during 2005 was around 30 billion barrels. Saudi Arabia was the best producer, with average per day production of 11 million barrels. It is followed closely by Russia, with 9.55 million barrels per day. (The present trend (2006) is such that Russia may topple Saudi Arabia.) World's top 10 oil producers of 2005 are shown in Table-2.

Sl.No.	Country	As in 1995	As in 2005	Share of world's total in 2005
1	Saudi Arabia	9.127	11.933	39.3%
2	Russian Federation	6.288	9.351	31.1%
3	USA	8.322	6.836	22.8%
4	Iran	3.744	4.949	16.1%
5	Mexico	3.065	3.756	12.5%
6	China	2.889	3.627	12.1%
7	Canada	2.402	3.047	10.1%
8	Venezuela	2.959	3.007	10.0%
9	Norway	2.903	2.969	9.9%
10	UAE	2.362	2.751	9.2%

### World's oil consumption

World consumed around 30 billion barrels of oil during 2005. The highest guzzler was USA, with 24.6% of world's total. 300 million Americans consumed more oil than 3 billion Asians. The average mileage of 211 million cars run on American street is around 5 km / liter. Imagine how much oil they can save if these cars are replaced with ones that give 20 km / liter with comfort.

China occupied the second position in terms of consumption. China is the only country in the world whose consumption rose to more than double within the last ten years due to economic, population and industrial boom. It surpassed Japan, who is now occupying the third position. India also made a big leap and was the 6th highest consumer of oil during 2005. World's top 10 consumers of oil are shown in Table-3.

Sl.No.	Country	As in 1995	As in 2005	Share of world's total in 2005
1	USA	17.755	19.655	24.6%
2	China	3.191	6.882	6.3%
3	Japan	5.794	5.168	6.4%
4	Russian Federation	3.823	2.753	3.4%
5	Germany	2.882	2.586	3.2%
6	India	1.588	2.485	3.0%
7	South Korea	2.009	2.208	2.7%
8	Canada	1.776	2.241	2.6%
9	Mexico	1.658	1.978	2.4%
10	France	1.893	1.961	2.38%

Source: - Basic data for the Tables are from British Petroleum.

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## Farewell to Shri R K Sachdeva, GM (BD and TPP) and Shri V P Sharma, GM (BD)



Shrimati and Shri S N Borah, GGM (SS) present a memento to Shrimati & Shri R K Sachdeva, GM (BD & TPP) during the farewell function

Officers of the Company bade an emotional farewell to Shrimati & Shri R K Sachdeva, General Manager (BD & TPP) and Shrimati & Shri V P Sharma, General Manager (BD), who retired from the services of the Company after the close of working hours on 31st. August, 2006 at a farewell function organized at Zaloni Club in Duliajan on 26th August, 2006.

### Excerpts of a farewell letter from Shri R K Sachdeva

#### *Kabhi Al Vida Na Kahana*

My dear Friends and Colleagues,

On the eve of my superannuation we honestly feel total vacuum today. Parting with great OIL Family, nostalgic memories of Duliajan, Moran, Ningru Camps and BEP, where practically I spent my entire active life, over three and half decades. The Nostalgia of being a part of great Institution, called Zaloni Club, shall I say my first home, of spending evenings with dear Zalonians, of playing Billiards, Table Tennis, Tennis, Bridge/cards and the "GOLF" in the lush greens all around upper Assam.

I have had a wonderful experience of working with great OIL INDIANS. With wonderful support on all fronts from my colleagues have risen up the ladder from a mere Trainee to a General Manager.

**What a beautiful company to work for, wonderful people to work with and greatest place on earth to stay.**

My wife and family have all been well received and have spent glorious time here in the company of all you friends and your families. We will cherish the memories of this place forever.

Only the other day, I still very vividly remember, I landed in Duliajan, which was the Dawn of my inning in OIL or shall I say my life "**Aur Dekhete Hi Dekhete**, pata hi na chala kab shaam ho gayi". KOYI LOTA DE MERE BITE HUE DIN.

While bidding ADIUE I remember the song always sung by my great friend Utpal "Kabhi Al Vida Na Kahana".

So friends we are not saying "*Alvida*" but "*Phir Millenge*"

May Almighty Shower all his blessings to OIL INDIA, OIL INDIANS and their families!

### Excerpts of a farewell letter from Shri Ved Prakash Sharma

Dear Colleague,

Today after 38 years of service, when I am leaving OIL on superannuation, there are mixed emotions.

A few years back I was asked as to which is the saddest word in English dictionary. My answer was 'Goodbye'. The Goodbye from OIL on superannuation does evoke a feeling of sadness and separation. For the benefit of younger colleagues I had joined OIL in 1968 as a young engineer in age, green in knowledge and the last thirty eight years of journey commencing from Pipeline to Production to Exploration Project to Business Development has been a very rewarding learning experience and there are no regrets. It was a full and enjoyable life in all aspects of fun and richness.

While over the years there has been a change in the company, some good and some fair. The change is inevitable as it has to face the competition building around us. There have been major initiatives too in form of ERP, BP, BUSINESS DEV etc. Some distortion have too crept in, highly subjective ones. But these are cobwebs which will clear away once we are alert and not swayed by petty gains. Minor players in totally different fields, even totally new players have today transformed themselves into successful E&P entities and are vying with OIL. At this juncture, it is vital that OIL lives as a vibrant and growing E&P organization. This is only possible if all of us put our thoughts and hands together in an aligned manner; what the Breakthrough Performance effect is striving for. This also requires our commitment, total commitment. Then only OIL will grow and continue to exist nurturing the hope of all those to whom it belongs and who belong to it. Then only we shall hand over the heritage to the next generation. With an image makeover of an old Pipeliner's code of belief into 'once an Oilindian, always an Oilindian, with this belief as I walk into the sunset, I extend my best wishes to all of you to prosper and grow in future, do better than what we did and enjoy your work, enjoy your life to the hilt and have full complete life. ...While I am uncertain about my future at present, it is certain that it will be a purposeful and productive work which will also permit me to give something back to the Industry.

A big Thank you to you and your family who had showered so much affection and goodwill on us during our stay in Pipelines at Duliajan and at Jodhpur.



Shri S N Borah, GGM (SS) presents a memento to Shri V P Sharma, GM (BD) during the farewell function

### Shri J. K. Talukdar, Director (HR&BD) felicitated by ER Department



Shri J. K. Talukdar, Director (HR&BD) was felicitated by Shri V. K. Verma, Head(ER) during his visit to the ER Department on 23rd August 2006. During his visit, Shri Talukdar and Shri S. N. Borah, GGM (SS) planted trees in the campus of the Department. Director (HR&BD) also addressed the employees of the Department.



### New Conference Room in LPG Department

Shri U. Bora, GM(P&BD) inaugurates the new Conference Room in the LPG Department.

### Inter-Departmental Football Tournament



Inter-Departmental Football Tournament 2006 was held from 19th July to 1st August 2006 at at Nehru Maidan, Duliajan. A total of six groups participated in the tournament. In the final match, Fields Engineering group defeated Production group (2-1). Shri Prabin Sonowal and Shri Rajani Phukan of Field Engg. group were declared as best player and best scorer respectively. Shri Utpal Bora, GM (P&BD) was invited as Chief Guest alongwith Guest of Honour, Shri M. J. Bordoloi, GM ( Engg.), Shri N.J. Bhuyan, Head-Fields Engg., Shri Bimal Dutta, Head-Prod. (O), Shri Ruhini Kalita, President, IOWU and Shri N. Vashisht, Chief Manager (ER) to witness the final match on 01.08.2006 and distribute the winner, runners-up, best player and best scorer prizes.

## KOLKATA NEWS



Mrs. Manjula Das, President, Mrs. Kameshwari Murty, Hony. Secretary and other Members of the Metro Ladies Club on the occasion of the Annual General Meeting held on 30th July, 2006.



Presentation on "Health Awareness Programme for Prevention of Heart Disease" conducted by Dr. D Kahali of BM Birla Heart Research Centre to all Employees & Executives of Calcutta Office on 4th August, 2006.



Celebration of Independence Day organized by Metro Club on 15th August, 2006.



Chess Team of OIL participated in the XVII Inter Unit Chess Tournament held at Tollygunge Club Ltd., Kolkata from 21st-25th August, 2006 & won the 3rd Prize.

## DULIAJAN DIARY



Cake cutting ceremony of Ladies Club of Duliajan during the Annual General Meeting



A Skit being performed during the Annual General Meeting



Students of Kendriya Vidyalaya, Duliajan, who won the Regional Title in the 18th Youth Parliament Competition, organized by Kendriya Vidyalaya Sangathan under the auspices of Ministry of Parliamentary Affairs, Govt. of India are seen with the dignitaries in the prize distribution ceremony held recently at Malabankar Hall, New Delhi. (L to R Sitting) Arundhuti Ghose, Shyamalima Kashyap, Paromita Saha, Pawan Singh, Randip Nath and Sekhar Maharaj.



Dr. Udayan Barua, Head - Health & Hygiene, was awarded 'Distinguished Service Award' on Doctor's Day [1st July '06] for his outstanding contribution to the medical profession and society at large by 'Delhi Medical Association'.

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(Β<sup>ο</sup>Ε. ΒλΕ. ΕΕΕ)

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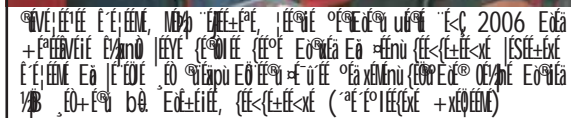
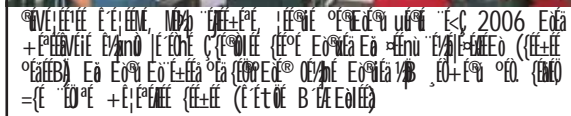
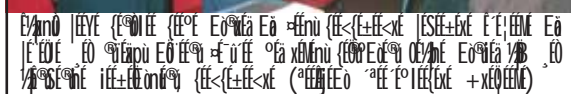
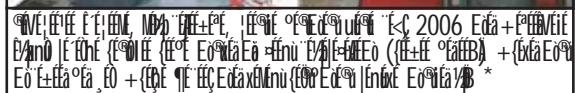
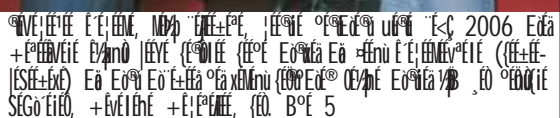
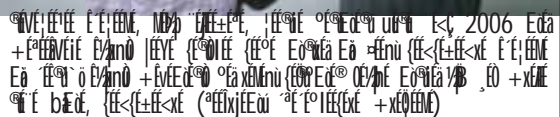
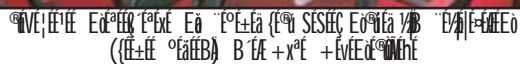
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Ενέχο



# অইল নিউজ

পঞ্চ ত্ৰিংশতিতম বছৰ, সংখ্যা : ০৯— দুলীয়াজান, জুলাই- আগষ্ট, ২০০৬

## সমূহ মহাপ্ৰবন্ধক(এছ এছ)ৰ দুআষাৰ ...



প্ৰিয় সহকৰ্মীসকল,

খাৰুৱা তেলৰ ঘূৰ্ণায়মান দামে বিশ্বৰ অৰ্থনীতিক ভীষণভাৱে প্ৰভাৱান্বিত কৰাৰ ফলত আমাৰ ভাৰতবৰ্ষৰ অৰ্থনীতিৰ ওপৰতো তাৰ প্ৰভাৱ পৰিছে, কিয়নো দেশখনে ৭০ শতাংশ খাৰুৱা তেল আমদানি কৰে। ঘৰুৱা উৎপাদনৰ পৰিমাণ ৭ - ৮ শতাংশ হাৰত বৃদ্ধি পাইছে আৰু এই ধাৰাবাহিকতা বাহাল ৰাখিবৰ কাৰণে তৈলখণ্ডৰ ওপৰত প্ৰচণ্ড চাপৰ সৃষ্টি হৈছে। চাহিদা আৰু যোগানৰ মাজৰ তাৰতম্য ক্ৰমাৎ বৃদ্ধি পাই ৭০ শতাংশ হোৱাৰ পৰিপ্ৰেক্ষিতত ঘৰুৱা তেল আৰু প্ৰাকৃতিক গেছৰ উৎপাদন বৃদ্ধি, শোধন বৃদ্ধি, পাইপলাইনৰ ক্ষমতা বৃদ্ধি, বজাৰৰ পৰিসৰ বৃদ্ধি ইত্যাদি বিষয়বোৰত জৰুৰীকালীন ক্ষিপ্ৰতাৰে ব্যৱস্থা হাতত লোৱা দৰকাৰ।

আপষ্ট্ৰীম পাৱাৰ চেক্টৰ গোট হিচাপে উৎপাদন বৃদ্ধি কৰা আৰু ঘৰুৱা তেল-গেছ উৎপাদন বৃদ্ধিৰ দিশত অৰিহণা যোগোৱা আমাৰ প্ৰতিষ্ঠানৰ অন্যতম দায়িত্ব। এই দিশত আমি অতি উচ্চ লক্ষ্য নিৰ্ধাৰণ কৰি লৈছো যাৰ কাৰণে প্ৰতিজন অইল কৰ্মচাৰীৰ আন্তৰিকতাপূৰ্ণ, একনিষ্ঠ আৰু উৎসৰ্গিত প্ৰয়াসৰ প্ৰয়োজন আছে।

টেকনিকেল আৰু নন-টেকনিকেল সকলো প্ৰকাৰৰ প্ৰত্যাহ্বানৰ সন্মুখীন হ'বলৈ আমি প্ৰস্তুত থাকিব লাগিব। ভূ-তাত্ত্বিক ভাৱে জটিল আৰু যাতায়তৰ সূচলতা নথকা বিপদসংকুল অঞ্চলত খনন চলোৱাৰ লগে লগে আমি ক্ৰমাৎ হ্ৰাস হৈ অহা ভাণ্ডাৰৰ পৰা উৎপাদন বঢ়াব লাগিব আৰু নতুন অঞ্চলতো তেলৰ অনুসন্ধান চলাব লাগিব। একে সময়তে অপাৰেচনেল এৰিয়াৰ ৰাইজৰ ক্ৰমবৰ্দ্ধমান উন্নয়নমূলক দাবীসমূহৰ প্ৰতি সঁহাৰি জনাবলৈ আমি সক্ষম হ'ব লাগিব। এই সন্দৰ্ভত কোম্পানী কৰ্তৃপক্ষই উচ্চ স্তৰৰ চৰকাৰী কৰ্তৃপক্ষৰ সৈতে নিয়মীয়াকৈ যোগাযোগ চলাই আছে আৰু দুয়ো পক্ষ লাভান্বিত হোৱাকৈ এটা সমাধানৰ সূত্ৰ উলিয়াবৰ কাৰণে বিভিন্ন ৰাজহুৱা সম্ভাৰ সৈতে আলাপ-আলোচনা চলাই আছে। ন ন কৌশল অৱলম্বনেৰে দল হিচাপে কাম কৰিলে অতি কঠিন সমস্যাবোৰো সমাধা কৰিব পৰা যাব বুলি মই নিশ্চিত। কোনো বিভাগেই অকলে কাম কৰিলে প্ৰত্যাহ্বানক জয় কৰিব নোৱাৰে— এই ক্ষেত্ৰত সকলো বিভাগৰ সহযোগৰ প্ৰয়োজন আছে। বাস্তৱ সত্যক আমি বুজি পাব লাগিব, ইজনে সিজনৰ অসূয়া-অসুবিধাক উপলব্ধি কৰিব লাগিব, নিঃচৰ্ত্ত সহযোগ আগবঢ়াব লাগিব আৰু গধুৰ দায়িত্ব কান্ধ পাতি ল'বলৈ আগবাঢ়ি আহিব লাগিব।

টীম অইল ইণ্ডিয়াই কাংখিত স্থানলৈ উন্নতি কৰিব পাৰিব— এই বিষয়ত মই নিশ্চিত। উৎসৱৰ বতৰত মই আপোনালোকৰ আৰু পৰিয়ালবৰ্গলৈ দুৰ্গা পূজা, দসেৰা আৰু নৱৰাত্ৰিৰ শুভেচ্ছা জ্ঞাপন কৰিলো।

৭৫ ৭২ স্বাক্ষৰ

(সত্যেন্দ্ৰ নাথ বৰা)

সমূহ মহাপ্ৰবন্ধক (শ্বেয়াৰ্ড চাৰ্ভিছ)

## অইলৰ সমাজ কল্যাণৰ দুখৰীয়া ছবি



নাহৰণি প্ৰাথমিক স্বাস্থ্যকেন্দ্ৰ

কিছুদিনৰ আগলৈকে সমাজ কল্যাণ শিতানত কৰা উন্নয়ন মূলক কাম-কাজৰ লক্ষ্য আছিল জনগণৰ উন্নয়ন সাধন। সদ্যহতে এই খাৰণা সবলীকৰণৰ সদিচ্ছালৈ পৰ্যবসিত হৈছে। ইয়াৰ আগলৈকে কাৰ্য্যকাৰী সম্ভাটোৱে কাৰ প্ৰতি কেনেদৰে সহায় আগবঢ়াব ইত্যাদি বিষয়ত সিদ্ধান্ত গ্ৰহণ কৰাৰ কৃতিত্ব নিজৰ হাতত ৰাখিছিল যদিও এই নতুন খাৰণাটোৰ অধীনত জনসাধাৰণে নিজ নিজ অঞ্চলৰ উন্নয়ন আৰু বিকাশৰ ক্ষেত্ৰত অংশগ্ৰহণৰ সুযোগ লাভ কৰিছে।

জনসাধাৰণৰ এনে অংশগ্ৰহণেৰে অইল ইণ্ডিয়াই দুটা বৃহৎ সমাজ কল্যাণ আঁচনি ৰূপায়ন কৰিছে। টিংখং ৰাজহ চক্ৰৰ অধীনৰ নাহৰণি পাব্লিক হেলথ চেণ্টাৰখন ঘন জনবসতিপূৰ্ণ অঞ্চলটোৰ একমাত্ৰ ৩০ খন বিছনায়ুক্ত হস্পিতাল যি নেকি কাষৰীয়া গাওঁসমূহৰ স্বাস্থ্য বিষয়ক প্ৰয়োজন পূৰণ কৰি আহিছে। কিন্তু দুৰ্বল আন্তঃগাঁথনি তথা ভগ্ন প্ৰায় অৱস্থাৰ কাৰণে নাহৰণি প্ৰাথমিক স্বাস্থ্যকেন্দ্ৰই ৰাইজৰ আশা-আকাংক্ষা পূৰ্ণ কৰিবলৈ সক্ষম হোৱা নাছিল। ফলত অঞ্চলটোৰ জনসাধাৰণে নানান অসুবিধা ভোগ কৰিব লগা হৈছিল। কেবা কিলোমিটাৰৰ দূৰত্বত আনখন স্বাস্থ্য কেন্দ্ৰ থকাত তেওঁলোকৰ সমস্যা সমাধানৰ বিকল্প নাছিল।

এনেসময়তে উদ্যমী, উদ্যোগী, পৰিশ্ৰমী যুৱক শ্ৰীমণি মানিক গগৈৰ নেতৃত্বত এটা দল আগবাঢ়ি আহে স্বাস্থ্য কেন্দ্ৰটিৰ উন্নয়নৰ হকে কাম কৰিবলৈ। স্বাস্থ্য কেন্দ্ৰটিৰ বিকাশ সাধন কৰিবলৈ তেওঁলোকে কৃতসংকল্প লয় আৰু অঞ্চলটোৰ জনসাধাৰণে মুক্তহস্তে তেওঁলোকলৈ সহযোগিতা আগবঢ়ায়। সক্ষম ব্যক্তিসকলে ধন-বিত্তেৰে সহায় কৰাৰ বিপৰীতে অক্ষমসকলে দিয়ে শাৰীৰিক শ্ৰমদান।

মণি মানিকৰ দলে এইবাৰ অইলৰ কাষ চাপে আৰ্থিক সাহায্য বিচাৰি।

বিভিন্ন চাহবাগিছা, ব্যৱসায়ী, লোকসভা / বিধানসভা সদস্যৰ পুঁজি আৰু ৰাজ্য চৰকাৰৰ পৰাও তেওঁলোকে এই বৃহৎ কাৰ্য্যৰ বাবে অৰ্থ সংগ্ৰহ কৰে। নাহৰণি স্বাস্থ্যকেন্দ্ৰ, পৰিদৰ্শন কৰি আৰু অঞ্চলটোৰ জনসাধাৰণৰ অভূতপূৰ্ব যোগদান প্ৰত্যক্ষ কৰি অইল ইণ্ডিয়াই এই মহান কাৰ্য্য সমাপনৰ দিশত ১০.০০ লাখ টকাৰ সাহায্য আগবঢ়ায়। উক্ত ধনৰাশিৰে হস্পিতালখনত পুৰুষ ৰোগীৰ বাবে এটা নতুন কক্ষ, শল্য চিকিৎসা কক্ষ, পেথলজী কক্ষ, নৱজাতকৰ কক্ষ ইত্যাদি নিৰ্মাণ কৰি উলিওৱা হয়। ৰাজ্য চৰকাৰেও নাহৰণি স্বাস্থ্য কেন্দ্ৰৰ উন্নয়ন সাধনৰ অৰ্থে আৰ্থিক বৰঙণি দিয়ে আৰু হস্পিতালখনক referral hospital ৰ মৰ্য্যদা প্ৰদান কৰে। স্বাস্থ্য কেন্দ্ৰটিৰ মেৰামতি আৰু পুনৰ্নিৰ্মাণত কাৰ্য্যত ব্যয় হয় মুঠ ২৫.০০ লাখ টকা।

ৰাজগড় কলেজখন স্থানীয় স্কুল এখনৰ পৰা ঋণ হিচাপে লোৱা মাটি এডোখৰত চলি আছিল। বৃহত্তৰ ৰাজগড় অঞ্চলৰ প্ৰায় ৫০ খন গাঁৱৰ শৈক্ষিক চাহিদা পূৰাবলৈ এইখনেই একমাত্ৰ উচ্চ শিক্ষা প্ৰতিষ্ঠান। অঞ্চলটোত হাইস্কুল শিক্ষান্ত পৰীক্ষাত উত্তীৰ্ণ হোৱা ছাত্ৰ-ছাত্ৰীৰ সংখ্যা ক্ৰমাৎ বৃদ্ধি পাই অহাত ৰাজগড় মহাবিদ্যালয়খনক এটা স্থায়ী ভৱন দিয়াৰ কথা চিন্তা কৰি স্থানীয় সমাজ সেৱকৰ দল এটাই সমাজৰ প্ৰতিজন



ৰাজগড় মহাবিদ্যালয়

ব্যক্তি, চুবুৰীয়া চাহ বাগিছা, ব্যৱসায়ী, স্থানীয় লোকসভাৰ সদস্য/বিধান সভা সদস্য আৰু অইল ইণ্ডিয়াৰ কাষ চাপে অৰ্থ সাহায্য বিচাৰি।

বিষয়টো অধ্যয়ন কৰাৰ পিচত আৰু স্থানীয় ব্যক্তি এজনে সেই উদ্দেশ্যত মাটি দান দিছে বুলি জানিব পাৰি অইল ইণ্ডিয়াই প্ৰকল্পটোৰ হকে পাঁচ লাখ টকা দান দিয়ে। মুঠ ২০ লাখ টকা ব্যয়েৰে অৱশেষত ৰাজগড় কলেজৰ নিজস্ব সুন্দৰ ভৱন এটা নিৰ্মাণ হ'ল আৰু ইতিমধ্যে তাত শিক্ষা প্ৰদান কাৰ্য্য আৰম্ভ হৈছে।

পি, এছ-৩ যোৰহাটৰ ডায়েৰী :-

### ‘এই গধূলি-মিলিজুলি’

যোৰা ২ জুলাই দেওবাৰে সন্ধিয়া সাত বজাৰ পৰা অইলৰ তিনি নং তেল সৰবৰাহ কেন্দ্ৰৰ “ভোগদৈ ক্লাব”ৰ প্ৰেক্ষাগৃহত ক্লাবৰ সাংস্কৃতিক বিভাগৰ উদ্যোগত ‘এই গধূলি-মিলিজুলি’ নামৰ এটি অগতানুগতিক অনুষ্ঠান অনুষ্ঠিত হৈ যায়। “বিশ্ব পৰিবেশ মাহ”ৰ লগত সংগতি ৰাখি সেইদিনা পুৱাবেলাতে ক্লাবৰ উদ্যোগত ক’লনিবাসীৰ দ্বাৰা বৃক্ষৰোপণ কাৰ্য্যসূচী সম্পন্ন কৰা হয়।

গধূলিৰ অন্তৰঙ্গ অনুষ্ঠানটিৰ উদ্দেশ্য ব্যাখ্যা কৰে সাংস্কৃতিক শাখাৰ সম্পাদক ৰাজীৱ লোচন মহন্তই। অইল ক’লনি, যোৰহাটৰ আবাল-জ্যেষ্ঠ বনিতা সমূহ আবাসীয়ে আশাসুখীয়া মনেৰে সহযোগ কৰা এই অনুষ্ঠানটিৰ আঁত ধৰে সুগৃহিণী ড. মধুমিতা দাস বৰুৱাই।

অনুষ্ঠানৰ আৰম্ভণিতে পুলক জ্যোতি শৰ্মাৰ পৰিচালনাৰে কণ কণ শিশুসকলে পৰিবেশন কৰে, প্ৰকৃতি-পৰিবেশ সম্পৰ্কীয় হিন্দী নাটক “হামাৰা সংকল্প”। কণ কণ শিশুৰ পৰা গৃহিণী পৰ্য্যন্ত বিভিন্নজন শিল্পীৰ কণ্ঠৰ গীত, কবিতা পাঠ। আবৃত্তি, কথিকা, একক অভিনয়, খোল বাদন, নৃত্য আদি ভিন ভিন ললিতকলাৰ প্ৰদৰ্শন আছিল গধূলিটোৰ বিশেষ আকৰ্ষণীয় কাৰ্য্যসূচী। এই উপভোগ্য অগতানুগতিক অথচ ঘৰুৱা অনুষ্ঠানটিৰ জৰিয়তে অতি কমেও দুই-তিনি ঘণ্টা সময়ৰ বাবে ক’লনিৰ কলামোদী ৰাইজে সদাব্যস্ত যান্ত্ৰিক জীৱন সূচীৰ একঘেয়েমীৰ পৰা নিজেই নিজক আৰু কাষৰজনক আঁতৰাই ৰাখি এক বিমল আনন্দৰ পৰিবেশত বিলিন হবলৈ সুবিধা পাইছিল।

ভৱিষ্যতেও যোৰহাট অইলৰ ক্ষুদ্ৰ তেল সৰবৰাহ কেন্দ্ৰটিয়ে কাষৰীয়া ৰাইজকো সামৰি এনে কিছু সুখভোগ্য অনুষ্ঠান কাৰ্য্যক্ৰম কৰাৰ পৰিকল্পনা হাতত ৰাখিছে, যাৰ দ্বাৰা এক অনাবিল আনুভূতিক পৰ্য্যাবৰণৰ সূচনা কৰাত সমৰ্থ হ’ব।

দীপক দাস  
পি, এছ-৩, যোৰহাট

### অভিনন্দন



সদ্য ঘোষিত ডিব্ৰুগড় বিশ্ব বিদ্যালয়ৰ স্নাতক তৃতীয় বৰ্ষৰ পৰীক্ষাত দুৰ্লীয়াজান ছোৱালী মহাবিদ্যালয়ৰ পৰা শ্ৰীমতী ফুলমণি দাসে ৰাজনীতি বিজ্ঞানত প্ৰথম শ্ৰেণীৰ তৃতীয় স্থান অধিকাৰ কৰিছে। তেওঁ অইল ইণ্ডিয়াৰ টি. এছ. ড্ৰিলিং বিভাগৰ কৰ্মচাৰী শ্ৰীমনমোহন দাস আৰু শ্ৰীমতী দিপালী দাসৰ প্ৰথম কন্যা।

দুৰ্লীয়াজান সঙ্গীত কলা একাডেমীৰ ১২৬ জন ছাত্ৰ-ছাত্ৰীয়ে ২০০৫-২০০৬ বৰ্ষৰ সঙ্গীত পৰীক্ষাত অৱতীৰ্ণ হৈ ৮ জন বিশেষ খ্যাতিৰে, ২৫ জন প্ৰথম বিভাগ, ৪৭ জন দ্বিতীয় বিভাগ আৰু ৪৬ জন তৃতীয় বিভাগত উত্তীৰ্ণ হৈছে ইয়াৰে শ্ৰীমতী স্তুতি খাটি (পিতা: বসন্ত সোনাৰ) আৰু শ্ৰীমতী অনামিকা গোস্বামীয়ে (পিতা: স্বৰ্গীয় প্ৰসন্ন গোস্বামী) কথক নৃত্যত বি-মিউজ ডিগ্ৰী লাভ কৰিছে।

### অইল ইণ্ডিয়াৰ সমাজ কল্যাণ আঁচনি আৰু জন সাধাৰণৰ ভূমিকা

৬ জুলাই ২০০৬ পৰা ৮ জুলাই ২০০৬ লৈ উষাপুৰ মাজবাম গাৱঁৰ সোণাপুৰ ভ্ৰূজনদীপ সামূহিক কেন্দ্ৰত “পঞ্চায়ত আৰু যুৱশক্তি শিতান”ৰে এখনি কৰ্মশালাৰ আয়োজন কৰা হয়। অইল ইণ্ডিয়াৰ ৰসায়ন বিভাগৰ কৰ্মচাৰী শ্ৰীৰূদ্ৰেশ্বৰ বেজবৰুৱাৰ উদ্যোগত আৰু ডিব্ৰুগড় জিলা নেহেৰু যুৱ কেন্দ্ৰৰ সৌজন্যত এই কৰ্মশালাত দুৰ্লীয়াজান, ভাদৈ পাঁচ আলি, উষাপুৰ, টিপাম, জালনী, পদুমণি আদি অঞ্চলৰ ৬০ জন যুৱ আৰু মহিলা প্ৰতিনিধিয়ে যোগদান কৰে।



শ্ৰীত্ৰিদিৰ হাজৰিকা

এই কৰ্মশালাত অইল ইণ্ডিয়াৰ জন-সম্পৰ্কৰক্ষী বিভাগৰ জ্যেষ্ঠ প্ৰবন্ধক শ্ৰীপ্ৰশান্ত বৰকাকতি উপস্থিত থাকে। তেখেতে ভাষণ প্ৰসঙ্গত অসমৰ প্ৰাকৃতিক সম্পদক ব্যৱহাৰ কৰি আত্ম সংস্থাপনৰ পথ মুকলি কৰি বিশ্ব দৰবাৰলৈ কুটিৰ শিল্পৰ লগতে অন্যান্য থলুৱা উদ্যোগক আগবঢ়াই নিবলৈ আহবান জনায়।

এই কৰ্মশালাত জ্যেষ্ঠ জন-সম্পৰ্কৰক্ষী বিষয়া শ্ৰীত্ৰিদিৰ হাজৰিকাই অইল ইণ্ডিয়াৰ সমাজ কল্যাণ আঁচনি আৰু জন সাধাৰণৰ ভূমিকা শীৰ্ষক বক্তৃতাৰে কৰ্মশালাৰ সৌষ্ঠৱ বঢ়ায়। উল্লেখযোগ্য যে এই কৰ্মশালাত সদৌ অসম ছাত্ৰ সংস্থাৰ ডিব্ৰুগড় জিলা সমিতিৰ বিষয় ববীয়া সকল উপস্থিত আছিল।



যোৰা ১৫ আগষ্ট, ২০০৬ তাৰিখত, স্বাধীনতা দিৱস উপলক্ষে, অইল ইণ্ডিয়ান অইল ৱাৰ্কচ ইউনিয়নৰ দুৰ্লীয়াজানস্থিত ইউনিয়নৰ মুখ্য কাৰ্যালয়ত ইউনিয়নৰ কৰ্মকৰ্তাৰ দ্বাৰা জাতীয় পতাকা উত্তোলনৰ মুহূৰ্ত্ত।

## চাকি

\* নীলকান্ত শইকীয়া

অহংকাৰৰ আন্ধাৰত আমি কোনেও কাকো দেখা নাই  
চাওঁ, চাকি এগছি জ্বলাই দিওঁ উপলব্ধিৰ ।

দেখা পাইছানে, পাইছানে দেখা  
আমি কিমান তুচ্ছ, কিমান ক্ষুদ্ৰ  
কিমান চাপৰ, কিমান ঠেক  
কিমান অগভীৰ অথচ গভীৰ বুলি জহাই থকা ।

দেখা পাইছানে বিল গেটছক, বেহেলামগ্ন আইনষ্টাইনক  
অগাধ ধন অপাৰ জ্ঞান তেও নাই আন্ধাৰ  
দেখা পাইছানে শংকৰদেৱৰ হুইটমেন ৰবীন্দ্ৰনাথক  
জাতি একোটাৰ আত্মাৰ গৰাকী  
অথচ অহং শূন্য আকাশত বিচৰণ কৰি আছে চিৰকাল ।

## আমাৰ কোম্পানীটো

দুই-চাইটা কবিতাৰ কবি আমি  
দুই-চাৰি পইচা থকা মানুহ তুমি  
অথচ ইমান আন্ধাৰ  
আকাশৰ সীমা বান্ধি লৈছো মাত্ৰ তিনি ফুটত ।

তিনিফুটীয়া মন লৈ তিনিশ কোটি মাইল দূৰৰ তৰাক  
কেনেকৈ দেখিম  
কেনেকৈ ভাবিম তিনি ফুট মাটিয়ে  
নিৰন্তৰ মাটি আছে আমাক ।

চাওঁ, চাকি এগছি জ্বলাই দিওঁ আত্মশুদ্ধিৰ  
ইজনে সিজনক দেখা পাবৰ বাবে ।

\* ভূতত্ত্ব বিভাগ, অইল ইণ্ডিয়া লিমিটেড

## স্থলনমুখী মানৱতা

\*অজিত ৰাজকোঁৱৰ

মানৱতাৰ শিকলি চিঙি  
বিচ্ছিন্ন আজিৰ মানৱ শৃঙ্খল,

নাই নীতি ধৰম  
নাই যে ঐক্যতা,  
বৰ্বৰতাৰ পিশাচেষে  
ৰক্তাক্ত আজিৰ মানৱ সভ্যতা ।

নিঃচিহ্নৰ পথত  
অন্তৰীক্ষত অৱতৰণ কৰা  
জীৱ শ্ৰেষ্ঠতাৰ মুখা পিন্ধা  
আজিৰ মানৱ সভ্যতা ।  
হে দয়াময় ! সিহঁতৰ মগজু  
মানৱতাৰ জ্ঞানেৰে উপচাই তোলা,  
সিহঁতৰ অন্তৰৰ স্নেহৰ ভড়াল  
আকুলতাৰে পৰিপূৰ্ণ কৰা ।  
মাতৃস্নেহ দিয়া পিশাচৰূপী  
বৰবৰ সন্তানৰ বজ্ৰসম অন্তৰত,  
সিহঁতৰ চিন্তাৰ বিশাল সাগৰ  
ন্যায়-ধৰ্ম, সত্য-সুন্দৰৰ  
মুকুতাৰ মালাৰে ৰসাল কৰা ।

\* উৎপাদন বিভাগ (তৈল শাখা)  
অইল ইণ্ডিয়া লিমিটেড, দুলীয়াজান

## ভাষাবোৰ খবলৈ

\*দময়ন্তী বৰা

অন্তহীন বেদনাৰে ভৰা তোমাৰ হিয়াত  
মোৰ ভাষাবোৰ খবলৈ ঠাই নাইকিয়া  
শুনিও নুশুনাৰ ভাও ধৰি তুমি  
মোঁলে চাই হাঁহি মাৰিছা ।

শৰতৰ সৰা পাতৰ সৈতে  
মোৰ ভাষাবোৰ মিলি যাব  
তোমাৰ আৰু মোৰ হাঁহিৰ মিলনত  
ভাষাবোৰ নদী হৈ ৰব  
আৰু নদীৰ টোৰে উটুৱাই নিব  
তোমাৰ বেদনাবোৰ ।

তুমি বুজিবা তেতিয়া  
তোমাৰ বেদনাৰ শিপাডাল উভালি পৰিছে  
আছে মাথো সুখৰ নিজৰা  
যিবোৰ তোমাৰ বাবে মাথো হাঁহি  
আৰু হাঁহি ।

\* চিকিৎসা বিভাগ, অইল ইণ্ডিয়া লিমিটেড

## জ্ঞানৰ মন্দিৰ আমাৰ বিদ্যালয়



\* বিউতি লাহন

আমাৰ বিদ্যালয়খনক  
মই বৰ ভাল পাওঁ,  
সকলোৰে মিলি-জুলি  
পঢ়িবলৈ যাওঁ ।  
প্রার্থনা কৰি আমি পাঠ আওৰাওঁ,  
দৈনিক ৰাটিনমতে কাম কৰি যাওঁ ।

আমাৰ প্ৰিয় সকলো  
বাইদেউ আৰু চাৰ ;  
তেওঁলোকে বিলাই আমাক জ্ঞানৰ  
সম্ভাৰ ।  
ৰাতিপুৱাৰ প্ৰাৰ্থনা সভাত  
বৰ ভাল লাগে ।

স্কুল বন্ধ বুলি ক'লে  
খং উঠি আহে ।

\* পিতৃ -শ্ৰীদিপু লাহন, পৰিবহন বিভাগ, অইল ইণ্ডিয়া লিমিটেড

## আজৰিৰ পত্ৰ



\* অনুপমা বড়া

কিহক বুলিবা আজৰি বন্ধু  
কিহক বুলিবা কাম,  
আজৰি পৰত লিখা পঢ়া শিকি  
কৰিছোঁ আচল কাম ।  
লিখা পঢ়া শিকা কাম নে ধেমালি  
নাভাবো সেইবোৰ একো,  
আগতে নজনা জানিও পাহৰা  
কিমান যে কথা শিকোঁ ।  
শ্ৰীমন্ত শংকৰে বাৰ বছৰীয়া  
হোৱাৰ পিছতহে হেনো,  
লিখা-পঢ়া শিকি জগত জিনিলে  
সকলোৰে মুখে শুনো ।  
সেইবাবে জানো আমাৰো শিকাত  
হোৱা নাই একো বেলি,  
জ্ঞানৰ বাটেৰে যাম আগবাঢ়ি  
অজ্ঞান আন্ধাৰ ঠেলি ।

\* পিতৃ - শ্ৰীধনীৰাম বড়া  
নৱম শ্ৰেণী, অইল ইণ্ডিয়া উঃ মাঃ বিদ্যালয়

## সৎসংগ



\* আৰিফা বেগম

ৰাজীৱ আৰু পিংকু দুয়ো নলে-গলে লগা বন্ধু আছিল ।  
ৰাজীৱ দুখীয়া আৰু পিংকু ধনী ঘৰৰ ল'ৰা আছিল ।  
দুয়ো পঢ়া-শুনাত ভালেই আছিল । দুয়োজনৰ মাক  
দেউতাকে সিহঁতক ভালদৰে চাইছিল । কিবা কাৰণত  
হঠাৎ দুয়োৰে এদিন কাজিয়া লাগিল । সিহঁতৰ মাজত  
বন্ধুত্বৰ জৰী ছিঙি গ'ল । সেইদিনাৰ পৰা ইজনে-  
সিজনক দেখিলে নেমাতিছিল । কেই দিনমানৰ পাছত ৰাজীৱৰ দেউতাক  
ঢুকাল । দেউতাকৰ মৃত্যুৰ পাছত তাৰ আপোন বুলিবলৈ কোনো নাছিল ।  
উপায় নাপাই ৰাজীৱৰ মাকে ওৰে দিনটো কাম কৰি যি পাইছিল তাৰে  
এসাজ খাই এসাজ নেখাই পেটৰ ভোক দূৰ কৰিছিল । মাকৰ কষ্ট দেখি  
ৰাজীৱে বেছিকৈ পঢ়িবলৈ আৰম্ভ কৰিলে । ইফালে মাক দেউতাকৰ  
মৰম পাই আৰু বেয়া লৰাৰ সংগ পায় পিংকু দিনে দিনে বেয়া হৈছিল ।  
কিছুমান দিনৰ পাছত সিহঁতৰ পৰীক্ষা আৰম্ভ হ'ল । পিংকুৰ বেয়া লৰাৰ  
সংগত পৰি নপঢ়াকৈয়ে পৰীক্ষাত বহিল ।

সিহঁতৰ পৰীক্ষাৰ ফলাফল ওলাল । ৰাজীৱে কিন্তু ফলাফল আনিবলৈ  
নগ'ল । ফলাফল ঘোষণাৰ পাছত সকলোৰে আহি ক'লে ৰাজীৱ তই  
অঞ্চলটোৰ সুনাম কঢ়িয়াই আনিছ । কিন্তু ৰাজীৱে এই কথা বিশ্বাস কৰা  
নাছিল । পিছত সকলোৰে কোৱাত সি চাবলৈ গ'ল আৰু বিশ্বাস কৰিলে ।  
কিন্তু তাৰ বেজাৰো লাগিছিল । কাৰণ সি দেউতাকক এনেকুৱা ফলাফল  
দেখুৱাব পৰাহেঁতেন, নিশ্চয় দেউতাক আনন্দিত হ'লহেঁতেন । কিন্তু সি  
কি কৰিব ভগৱানে এনেকুৱা কৰিলে বুলি ভাবি মনতো আকৌ আনন্দিত  
কৰিলে । কিন্তু পিংকুৰে ভাল ফলাফল দেখুৱাব নোৱাৰিলে বাবে মাক-  
দেউতাকে তাক গালি দিলে । সি বৰ লাজ পালে আৰু নিজে নিজে  
অনুতপ্ত হ'ল । পিংকুৰে ভাবিবলৈ ধৰিলে মই যদি ৰাজীৱৰ লগ  
নেৰিলোহেঁতেন তেতিয়াহলে আজি মই এনেকুৱা লাজ পাব লগা  
নহ'লহেঁতেন । সিদিনাই পিংকুয়ে বেয়া ল'ৰাৰ সংগ এৰি ৰাজীৱৰ ঘৰলৈ  
গ'ল আৰু ৰাজীৱক ক্ষমা খুজিলে ।

সেই দিনাৰ পৰা দুয়ো আকৌ বন্ধু হ'ল । এই কথা শুনি ৰাজীৱৰ মাক  
আৰু পিংকুৰ মাক দেউতাক আনন্দিত হ'ল । সিহঁতে যেন এটা নতুন  
জীৱন পালে । গতিকে সদায় ভাল মানুহৰ সংগ লোৱা উচিত । ভালৰ  
সংগ ললে নিজৰ চৰিত্ৰ ভালৰ ফালে আগুৱাই যায় ।

\*\* পিতৃ - শ্ৰীআমিৰ হুচেইন  
সামগ্ৰী বিভাগ, অইল ইণ্ডিয়া লিমিটেড



“তুলসীৰ তলে তলে কত চাকি জ্বলিলো .....”

ফটো- শ্ৰীনগেন বৰুৱা

## “শতফুল”ৰ দেশ শদিয়াত এবাতি কটাবা”

অইল ইণ্ডিয়াই শতফুলৰ দেশ শদিয়াত তৈল অন্বেষণৰ উদ্দেশ্যেৰে প্ৰবেশ কৰিবলৈ সাজু হৈছে। তাৰ আধাৰতে এই লিখনিটি আগবঢ়োৱা হ’ল আমাৰ পঢ়ুৱৈ সমাজক শদিয়াৰ আৰ্থ-সামাজিক স্থিতিৰ এটি পৰিচয় দিবলৈ। ‘মা’ এটি বে-চৰকাৰী স্বেচ্ছাসেৱী সন্থা।

শদিয়া। দিবাং, কুণ্ডিল আৰু লুইতৰ স্পৰ্শত থকা প্ৰকৃতিৰ অপৰূপ সৌন্দৰ্য্যই সজাই তোলা ভূ-খণ্ডই হৈছে শদিয়া। তিনিচুকীয়া জিলাৰ পূৰ্ব প্ৰান্তৰ ‘শদিয়া’ ৰাজ্যখনৰ এক বিচ্ছিন্ন এলেকা হৈ পৰিছে। বৰ্হি জগতৰ পৰা বিচ্ছিন্ন শদিয়ালৈ যোৱা মানে বহুতৰ ধাৰণা কলীয়াপানীলৈ যোৱা। যদিও বৰ্হিজগতৰ পৰা বিচ্ছিন্ন তথাপি শদিয়া ক্ৰমাগত জনসাধাৰণৰ এক আকৰ্ষণৰ কেন্দ্ৰ হৈ পৰিছে।



‘শদিয়া’ৰ আটাইতকৈ প্ৰধান সমস্যাটো হৈছে যাতায়াত ব্যৱস্থা। অতি অনুন্নত যোগাযোগ ব্যৱস্থাই শদিয়াবাসীক জিলাখনৰ অন্যান্য প্ৰান্তৰ পৰা বিচ্ছিন্ন কৰি ৰাখিছে।

‘চাপাখোৱা’ শদিয়াৰ প্ৰাণকেন্দ্ৰ। তাতেই আছে স্কুল, কলেজ, চিকিৎসালয় আৰু নানা ব্যৱসায়িক প্ৰতিষ্ঠান সমূহ। দুৰ্গম গাওঁ সমূহৰ পৰা ৰাইজে এই ‘চাপাখোৱা’তেই বজাৰ-সমাৰ কৰিবলৈ আহে।

নানা সমস্যাবে ভাৰাক্ৰান্ত শদিয়াবাসীৰ মৰ্মবেদনা সঁচাই মৰ্মান্তিক। ‘অমৰপুৰ’ শদিয়াৰ অন্যতম অতি পিছপৰা অঞ্চল। দিবাং আৰু দেওপানীৰ কোবাল সোঁতৰ মাজেৰে পাৰ হৈ গ’লেই মিছিং জনগোষ্ঠীৰ এই ‘অমৰপুৰ’ পাবগৈ পাৰি। সহজ আৰু সৰলতাৰ মাজেৰে আগবঢ়া মিছিং ৰাইজৰ অকৃত্ৰিম মৰম ইয়াতেই বিচাৰি পোৱা যায়। ঠিক সেইদৰে অম্বিকাপুৰ শদিয়াৰ অন্য এক দুৰ্ভাগীয়া অঞ্চল। য’ত আছে বড়ো, মিছিং, আহোম, নেপালী আদি লোকসকল। অম্বিকাপুৰৰ বাট-পথৰ অৱস্থা অতি জৰাজীৰ্ণ। বোকা-পানীৰে লুটুৰি হৈ হৈ অম্বিকাপুৰৰ মাদকতা লাভ কৰিব পাৰি। ইয়াতেই আকৰ্ষণীয় বড়ো গাভৰুৰ সুন্দৰ দৰ্শনাৰে ‘বাগৰুয়া’ই সাৰ-পাই উঠে। আকৌ আনফালে মিছিং গাভৰুৰ ঐনিতমে দুভাগ ৰাতিও হাত বাউলি মাতে।

অৱহেলিত শদিয়াৰ ৰাইজ সদায়েই অতিথি পৰায়ণ। অঞ্চলটোৰ অন্যতম প্ৰধান জনগোষ্ঠী ৰূপে পৰিচিত ‘দেউৰী’ সকলে শদিয়াক যেন সুকীয়া মৰ্যদা দিছে। বুঢ়া-বুঢ়ীশালৰ পৰা আৰম্ভ কৰি তাম্ৰেশ্বৰী মন্দিৰ, কেঁচাই খাইটি থান ইত্যাদি ঐতিহাসিক ধৰ্মীয় পৰম্পৰা সন্নিবিষ্ট কীৰ্ত্তিচিহ্ন সমূহে শদিয়াক পৰ্যটন কেন্দ্ৰৰ অন্যতম আকৰ্ষণ বিন্দু কৰিছে। বহু সম্পদত চহকী ‘শদিয়া’ৰ সংৰক্ষণৰ আৱশ্যকতা আহি পৰিছে। দুই-এক স্বেচ্ছাসেৱী সংগঠনে শদিয়াক জীপাল কৰিবলৈ অহোপুৰুষাৰ্থ প্ৰচেষ্টা চলাই আহিছে।

গৰাখহনীয়া আৰু বানপানীৰ লগত শদিয়াবাসীৰ আজন্ম সম্বন্ধ। বহুলোকৰ সপোনৰ ঘৰখন, তেওঁলোকৰ হেঁপাহৰ গাওঁখন লুইত, কুণ্ডিল, দিবাং, দৃটং আৰু দেওপানীৰ বুকুত কাহানিবাই হেৰাই গ’ল। জীয়াই থকাৰ তাড়নাত নতুনকৈ গৃহস্থীন বহুলোকে ‘বগৰীবাৰী’ত আশ্ৰয় লৈছেহি। হাজিৰা আদি কৰিয়েই জীয়াই থাকিবলৈ চেষ্টা কৰা মানুহখিনিৰ কণ-কণ শিশুবোৰৰ উলংগ দেহা আৰু অসহায় মুখবোৰ দেখিলে ভাব হয়-এওঁলোক আমাৰেই নহয় জানো? এই শিশুখিনিৰ শিক্ষালাভৰ অধিকাৰো নাই নেকি? তেনে এগৰাকী মিছিং কিশোৰী পাইছিলো ‘বগৰী বাৰী’ত। আঠ বছৰীয়া পাণ্ডমতী দলে নামৰ কিশোৰী গৰাকীয়ে ঘৰৰ সমস্ত কামতেই ব্যস্ত। পঢ়িবলৈ বৰ আশা থকা এই কণমানিজনীয়ে ভাত বনোৱাৰ পৰা আৰম্ভ কৰি সকলোবোৰ কৰি ঘৰৰ কেঁচুৰা ৰাখিব লাগে। কিয়নো মাক-বাপেক যে হাজিৰালৈ যাব লাগে। এওঁলোকৰ কথা কোনোবাই ভাবিবনে?

‘শদিয়া’লৈ আহিলে পাৰঘাটৰ ঝাউবন বোৰ ভালকৈ চাব লাগে। কিয়নো শতফুলৰ দেশ শদিয়া। শাৰী-শাৰী ঝাউবনবোৰত ‘অনুৰাধাৰ দেশ’ত লগ পোৱা প্ৰেমৰ সুবাস এই ঝাউবনতো সিঁচৰিত হৈ আছে।

অখিল চন্দ্ৰ বৰুৱা  
সঞ্চালক, ‘মা’



অসম নাট্য সন্মিলন আৰু অইল ইণ্ডিয়া লিমিটেডৰ যুটীয়া প্ৰচেষ্টাত ২৭ জুলাই তাৰিখৰ পৰা দুলীয়াজানত অনুষ্ঠিত ‘মঞ্চ মৈত্ৰী’ৰ দুটি দৃশ্য।



বিশ্ব পৰ্য্যাবৰণ দিৱসত সঞ্চালক  
(মানৱ সম্পদ ও বাণিজ্যিক উন্নয়ন)ৰ বৃক্ষ ৰোপণ



এই গধূলি মিলিজুলি

## ছবিত বাতৰি



অইলৰ ভ্ৰাম্যমান চিকিৎসা সেৱা



অইলৰ ধাত্ৰীসকলে ১২ মে' তাৰিখে আয়োজন কৰিছিল  
“বিশ্ব ধাত্ৰী দিৱস”



বিশ্ব পৰ্য্যাবৰণ দিৱস উপলক্ষে ৰচনা প্ৰতিযোগিতা



বিহুতলীত আয়োজিত শ্ৰীশ্ৰী গণেশ পূজা

## “চাৰোন”

\* অৰিজিতা ঘোষ

টিভি বা ৰেডিও চলাই দিয়াৰ লগে লগে চাবোনৰ অসংখ্য বিজ্ঞাপন আমি দেখিবলৈ নাইবা শুনিবলৈ পাওঁ । বাটে-স্বাটে কিতাপ-পত্ৰ আদি সকলো জনমাধ্যমত চাবোনৰ বিজ্ঞাপন বোৰে প্ৰধান ঠাই দখল কৰি আছে । আমি প্ৰায়ভাগেই চিনেমাৰ তাৰকা সকলক অনুসৰণ কৰি (বিজ্ঞাপন চাই) কিমান মৰমেৰে নিজৰ দেহাত, মুখত চাবোন ঘাঁহি থাকোঁ । চাবোনৰ সুগন্ধ আৰু শুদ্ধতাৰ বিজ্ঞাপনৰ বাবে কোটি কোটি টকা প্ৰতি বছৰে খৰচ কৰা হয় । কিন্তু চাবোন কিমান শুদ্ধ ? চাবোন আকৌ অশুদ্ধ কেনেকৈ হ'ব । এইষাৰ কথা ভাবিবলৈ কাৰো সময় আছেনে ? মোৰ দৰে প্ৰতিজন গৃহিনীৰ এইটো প্ৰধান দায়িত্ব যে তেওঁলোকে ঘৰৰ ব্যৱহাৰৰ বাবে কিমান শুদ্ধ বস্তু কিনিছে। আহকচোন, আমি চাবোনৰ আচল ৰূপটোৰ লগত চিনাকি হওঁ ।

পশুচৰ্ৰী দুই প্ৰকাৰৰ। প্ৰথম ধৰণৰ চৰ্ৰী পশুৰ কিডনী (Kidney) আৰু শৰীৰৰ আন আন অঙ্গবোৰৰ পৰা পোৱা যায়। এনে ধৰণৰ চৰ্ৰী পশু বধ কৰি সংগ্ৰহ কৰিবলগীয়া হয়। আনটো ধৰণৰ চৰ্ৰী অকল পশু শৱদেহৰ পৰা সংগ্ৰহ কৰা হয়। পশুৰ মৃতদেহবোৰ প্ৰথমতে সিজোৱা হয়। তাৰ পাচত কৃত্ৰিম পদ্ধতিত চৰ্ৰী বনাই বিভিন্ন বস্তু যেনে মোম, মুখৰ অসংখ্য প্ৰসাধন সামগ্ৰী আদিত ব্যৱহাৰ কৰা হয়। চাবোনত ৭৫ ৰ পৰা ৮৫ শতাংশ চৰ্ৰী মিহলি হৈ থাকে। কিছুমান তৈলযুক্ত চাবোনত চৰ্ৰীৰ পৰিমাণ অলপ কম থাকে। আজিকালি আয়ুৰ্বেদিক কিছুমান চাবোন বজাৰত ওলাইছে যিবোৰ চৰ্ৰী অবিহনে বনোৱা হয় আৰু ইয়াৰ মূল উপাদান সমূহ সম্পৰ্ণৰূপে বনস্পতিৰ ওপৰত নিৰ্ভৰশীল।

১৯৩৮ চনত ইউৰোপৰ এটি বিখ্যাত কোম্পানীয়ে এনে এটি বৈজ্ঞানিক উপায় আৱিষ্কাৰ কৰিছিল যিটোৰ সহায়ত কিছু ঘণ্টাৰ ভিতৰতে পশুচৰ্বীৰ পৰা চাবোন তৈয়াৰ কৰিব পৰা যাব। বৰ্ত্তমান চাবোন কোম্পানীবোৰে বছৰি প্ৰায় ৫০,০০০ (পঞ্চাচ হেজাৰ) পশু হত্যা কৰি চৰ্বী সংগ্ৰহ কৰে। পশুৰ পৰা চৰ্বী ওলোৱাৰ পদ্ধতি বৰ দুখলগা। যেনে কুকুৰৰ ক্ষেত্ৰত ইয়াৰ বাক্যন্ত্ৰ প্ৰথমতে কাটি পেলাই দিয়া হয়। তাৰ পাচত ইহঁতক বিষাক্ত ৰসায়ন পান কৰোৱা হয়। বাক্যন্ত্ৰ নথকাৰ বাবে সেই কুকুৰবোৰৰ কৰুণ আতঁনাদ কোনেও শুনি নাপায়। শহাপশুৰ চকুত, গাহৰিৰ গাত একে ধৰণে বিষাক্ত ৰসায়ন লগাই দিয়া হয়। এই সকলোবোৰ কাম কৰোতে অচেতন হোৱাৰ ঔষধ প্ৰয়োগ কৰা নহয়। চাবোন প্ৰস্তুত কৰোত এনে ধৰণৰ পদ্ধতিক এল-ডী ৬০ (LD-60) বুলি কোৱা হয়। কিন্তু আজি কিছুদিন আগতে, ইউৰোপত এনে নিৰ্মম কাৰ্য্য প্ৰণালীৰ ওপৰত নিষেধাজ্ঞা জাৰি কৰা হৈছে। আচৰিত কথা, ভাৰতত আজিলৈকে এনেধৰণৰ কোনো আইন নাই। ইয়াৰ বাবে মানুহে দাবীও জনোৱা দেখা নাযায়। চৰকাৰ আৰু আমি, পশুৰ ওপৰত হৈ থকা এনে নিৰ্মম কাৰ্য্য বন্ধৰ অকনো আৱশ্যকতা আছে বুলি নাভাবো।

ধনী-দুখীয়া সকলো মানুহে চাবোন ব্যবহাৰ কৰে, সেয়েহে ইয়াৰ নিৰ্বাচনৰ ক্ষেত্ৰত আমি সকলোৰে সজাগ আৰু সচেতন হোৱা উচিত। যিবোৰ চাবোন আমি সদায় ব্যৱহাৰ কৰোঁ সেই চাবোনবোৰৰ নিৰ্মাতা কোম্পানীক

চিঠি লিখি সুখিব পাৰো যে, কি কি পদার্থ উক্ত চাবোনবোৰত মিহলি কৰা হৈছে। এই অধিকাৰ সকলো উপভোক্তাৰ আছে।

কিছুদিন পূর্বে “পিপলচ্ ফর এনিমেল” (Peoples for Animal) নামক প্রতিষ্ঠান এটিয়ে জনগণের সুবিধার বাবে ভারতের উচ্চতম ন্যায়ালয়ত (Supreme Court) এটি কেচ্ দাখিল কৰিছিল। ন্যায়ালয়ে বায় দিছিল এনেদৰে— সকলো নিৰ্মাতাই বিশেষকৈ চাবোন, ক্রীম, প্রসাধনৰ আন সামগ্রীৰ ওপৰত যেন লিখি দিয়া হয় কোনবোৰ চৰ্বীযুক্ত আৰু কোনবোৰ চৰ্বীমুক্ত। চৰ্বীযুক্ত বস্তুৰ ওপৰত বঙা আৰু চৰ্বীমুক্ত বস্তুৰ ওপৰত সেউজীয়া চিন দিব লাগিব।

গতিকে, মই শেষত এইটোৱে কব বিচাৰো, উপৰোক্ত বিখ্যাত ৰায়দানৰ পিচৰ পৰা এতিয়া সকলো চাবোন আমাৰ সন্মুখত আচল ৰূপত আছে। সকলো মানুহৰ এতিয়া কৰ্তব্য হ'ল পৰিয়ালৰ বাবে প্ৰকৃত নিভাঁজ আৰু শুদ্ধ চাবোন পছন্দ কৰা।

(প্রাক্তন সংসদ সদস্য আৰু বন মন্ত্রী মেনকা গান্ধীৰ মূল ইংৰাজী ভাষণৰ  
পৰা অনুবাদ কৰা হৈছে)

\*প্রযত্নে : শ্রীমনোদীপ ঘোষ  
উৎপাদন তেল বিভাগ



## মিতালী মহন্ত

অইল ইণ্ডিয়া লিমিটেডৰ গবেষণা আৰু উন্নয়ন বিভাগৰ কৰ্মচাৰী শ্ৰীৰঞ্জন মহন্তৰ পত্নী শ্ৰীমতী মিতালী মহন্ত এগৰাকী ব্যস্ত বোৱাৰী যদিও তেখেতে নিয়মিত ভাৱে গল্প, কবিতা, প্ৰবন্ধ, ব্যঙ্গাত্মক লিখনীৰে ছাত্ৰী অৱস্থাৰ পৰাই সাহিত্য চৰ্চা কৰি আহিছে। তেখেতৰ বিভিন্ন লিখনি প্ৰিয় সখী, অন্তৰা, প্ৰান্তিক আদিত প্ৰকাশ হৈছে আৰু পঢ়ুৱৈৰ যথেষ্ট সমাদৰ পাইছে।

দুলীয়াজান সাহিত্য সংস্কৃতিৰ সমাজ খনৰ এগৰাকী সক্ৰিয় সদস্যা মিতালীয়ে উত্তৰণ কবি চক্ৰ, জোনালী চ'ৰাত নিয়মিত অংশ গ্ৰহণ কৰি আহিছে। ডিগবৈ মহাবিদ্যালয়ৰ স্নাতক মিতালী বৰ্তমান দুটা সন্তানৰ মাতৃ হিচাপে, ব্যস্ত ঘৰখনৰ বোৱাৰী হিচাপে, কৰ্ম ব্যস্ত স্বামীৰ আউল মাৰি বিভিন্ন সামাজিক কাম কাজৰ মাজত ব্যস্ত থাকিও সাহিত্যৰ সাধনা চলাই গৈছে।



## বীণা বেজবৰুৱা

এই সংখ্যাৰ

## কৰ্মচাৰীৰ অৱসৰ



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