



# **Alphageo India Ltd: Spearheading India's Search for Oil**



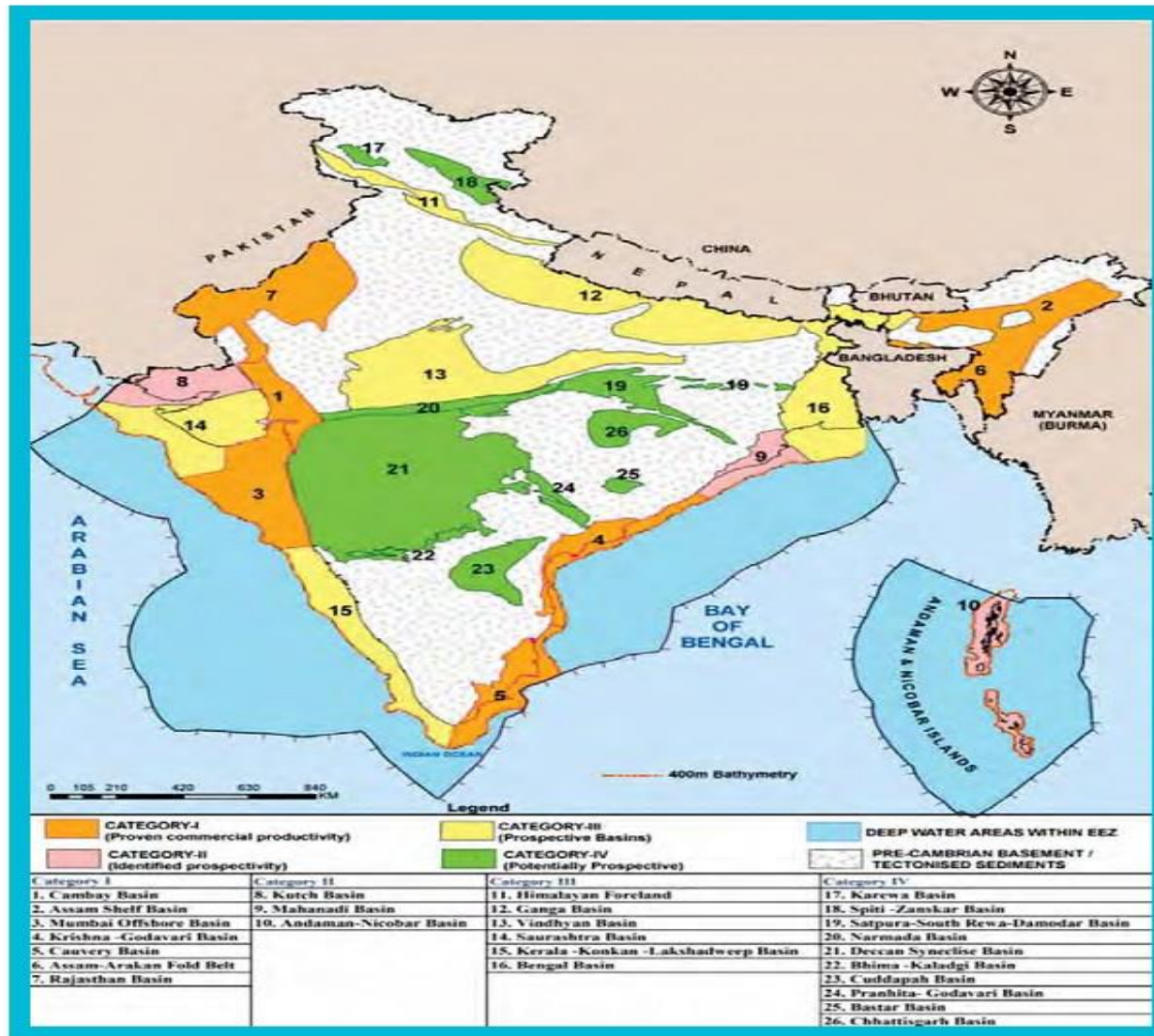


# AlphaGeo India - Introduction

- ❑ First Indian private company to commence seismic operations in India
- ❑ Providing integrated geophysical services covering onland seismic data acquisition, processing and interpretation, for over two and half decades
- ❑ Identifying subsurface conditions conducive to the accumulation of oil and natural gas
- ❑ Providing 2D and 3D seismic services through advanced state of art proven technology, knowledge
- ❑ 27 Years of experience working in areas of diverse cultures, extreme environmental sensitivity and areas with industrial variables
- ❑ Offering the most innovative, cost effective and efficient acquisition and processing solutions to clients
- ❑ Headquartered in Hyderabad, Listed in BSE and NSE



# Sedimentary Basins in India

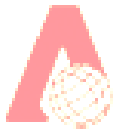




# Regional allocation of the sedimentary basins

Type of basins	Sq.km	Prospectivity	Basins
Category 1	518500	Commercial Production	Cambay, Assam Shelf, Mumbai Offshore, KG, Cauvery, Assam Arakan, Rajasthan
Category 2	164000	Known accumulation but no hydrocarbon	Kutch, Mahanadi-NEC & Andaman-Nicobar
Category 3	641000	Indicated hydrocarbon based on geological prospectivity	Himalayan Foreland, Ganga, Vindhyan, Saurashtra, Kerala-Konkan-Lakshadweep & Bengal
Category 4	461200	Uncertain potential	Karewa, Spiti-Zanskar, Satpura-South Rewa-Damodar, Narmada, Decan Syneclyse, Bhima-Kaladgi, Cuddapah, Pranhita-Godavari, Bastar, Chhattisgarh





# What is Seismic Survey?

- ❑ Reflection seismology (or seismic reflection) is a method of exploration geophysics that uses the principles of seismology to estimate the properties of the earth's subsurface from reflected seismic waves
- ❑ The method requires a controlled seismic source of energy, such as dynamite / specialized air gun
- ❑ The typical seismometer used in a reflection experiment is a small, portable instrument known as a geophone, which converts ground motion into an analog electrical signal. In water, hydrophones, which convert pressure changes into electrical signals, are used
- ❑ This reflection seismology is extensively used in exploration for hydrocarbons (i.e., petroleum, natural gas) and such other resources as coal, ores, minerals, and geothermal energy. It is commonly used to map the subsurface structure of rock formations
- ❑ 2D surveys are conducted by laying out a two dimensional array of geophones together with a two-dimensional pattern of source points. 3D surveys require higher number of channels to increase the volume and accuracy of incoming data



# Seismic Survey in India

- ❑ Oil PSUs have carried out 1161093.5 Line Kilometre (LKM) of 2D seismic survey, 286928 Sq. Km of 3D seismic survey and drilled 6501 Exploratory wells since inception as on 31.03.2016
- ❑ Indian Private Companies have carried out 114105.7 Line Kilometre (LKM) of 2D seismic survey, 107509.16 Sq. Km. of 3D seismic survey and drilled 347 Exploratory wells since inception as on 31.03.2016
- ❑ Foreign Companies have carried out 63,209 Line Kilometre (LKM) of 2D seismic survey, 21,709 Sq. Km of 3D seismic survey and drilled 249 exploratory wells since inception as on 31.03.2016.

Operators	2D Seismic (LKM)	3D Seismic (SQ.KM)	No of wells
Oil PSUs	1161094	286928	6501
Private Cos	114106	107509	347
Foreign Cos	63209	21709	249
<b>Total</b>	<b>1338409</b>	<b>416146</b>	<b>7097</b>



# **Industry Overview**

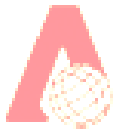
**All geared to capitalize on India's vision to  
reduce Energy import**



# Vision: Reducing import dependency...

- ❑ Prime Minister Narendra Modi had mentioned that around 77% of energy requirement in India is imported and he targets to reduce it by at least 10% by 2022
- ❑ As per DGH, India's 26 sedimentary basins have not been exploited to optimum levels. This led to various initiatives by the government in the interest of upstream oil & gas companies in order to encourage domestic as well as overseas players to explore further.
  - Initiation of “Discovered small field policy” to monetize marginal fields
  - New pricing guidelines for Domestic Natural Gas
  - Doing away with NELP and Initiation of Revenue Sharing Model through Hydrocarbon Exploration and Licensing Policy (HELP)
  - Clearing seven proposals for generation of ~107,386 LKM of 2d seismic data through Non-exclusive Multi-client Geo-scientific survey activities
  - Initiating reassessment of Prognosticated hydrocarbon resources of India
  - Appraise the unappraised sedimentary basins under National Seismic Program (NSP)
- ❑ With reduction in import bill due to reduction in crude oil price, petroleum ministry is enhancing its budgeted exploratory expenditure to monetize untapped basins





## ...Prominent role of Seismic Survey

- ❑ There are three ways to operationally reduce import dependency of India for oil and natural gas:
  - Enhance production from the producing fields
  - Reduce depletion rate in the producing fields which are ageing
  - Discover new basins by appraising the unexplored areas
  
- ❑ **Seismic survey is the one of the most essential determinant in three of the above processes in the following ways:**
  - 3D seismic survey helps the producer to monitor the quality of the producing reservoir and optimally produce oil/gas
  - Ageing fields could be monitored through carpet 3D seismic survey in order to avert dip in the production
  - The unexplored areas could be appraised through a 2D seismic surveys



# National Seismic Program (NSP)

- ❑ The National Seismic Program (NSP) aims to undertake a fresh appraisal in all sedimentary basins across India, especially where no/scanty data is available, to have a better understanding of the hydrocarbon potential of India
- ❑ Under this Program ONGC and Oil India have been entrusted to conduct 2D seismic Acquisition, Processing and Interpretation(API) across India
- ❑ The ONGC has been assigned to carry out the survey of 40,835 in 18 states and OIL has been assigned to carry out 2D seismic API of 7,408 LKM in North Eastern states
- ❑ The survey project will be completed by June 2019



# Open Acreage Licensing Policy(OALP) and National Data Repository(NDR)

- ❑ Government has launched India's maiden National Data Repository (NDR) that will assimilate, preserve and upkeep country's vast sedimentary data for future use in oil and gas exploration and production.
- ❑ This will open up 2.8 million sq. km of the country's sedimentary basins to be appraised
- ❑ Under the open acreage licensing policy (OALP), domestic as well as global O&G companies can visit NDR and look at vast seismic data of unexplored areas and bid for the potential areas to be explored further
- ❑ Explorers will be able to access sedimentary block-level data before seeking petroleum-production licenses
- ❑ OALP is covered under Hydrocarbon Exploration Licensing Policy (HELP) which has replaced New Exploration Licensing Policy (NELP)



# NDR & OALP to boost Onland Seismic Survey

- ❑ The last time that seismic data acquisition of the unapprised sedimentary basins was undertaken by the government was nearly 25 years ago resulting in tepid onland seismic activities
- ❑ Availability of seismic data acquired through NSP in National data repository and introduction of OALP will increase the scope of work for onland seismic companies immensely

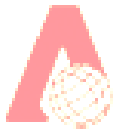
	FY11	FY12	FY13	FY14	FY15	FY16
<b>2D (LKM)</b>						
Onland	11115	7474	1104	675	1249	968
Offshore	29903	46835	3313	3128	4886	6847
<b>Total</b>	<b>41018</b>	<b>54309</b>	<b>4417</b>	<b>3803</b>	<b>6135</b>	<b>7815</b>
<b>3D (SKM)</b>						
Onland	7101	7762	3926	2964	2398	2101
Offshore	40015	46835	13984	9430	10949	4135
<b>Total</b>	<b>47116</b>	<b>54597</b>	<b>17910</b>	<b>12394</b>	<b>13347</b>	<b>6236</b>

Source : DGH



# **Company Overview**





# Company Profile

- ❑ Core Services includes:
  - ❑ Designing and preplanning of 2D/3D/3C surveys
  - ❑ Seismic data acquisition in 2D/3D/3C
  - ❑ Seismic data processing of 2D/3D data
  - ❑ Seismic data interpretation
  
- ❑ Acquired over 22000 LKM, Processed over 31000 LKM and Interpreted over 15000 LKM of 2D seismic data
  
- ❑ Acquired over 7000 SQ. KM of 3D seismic data in last 6 years
  
- ❑ 49 completed projects in 3 countries, 14 states and with 32 customers
  
- ❑ The company presently has 16 crews and a channel count in excess of 30000
  
- ❑ Multi-terrain capability across North-east, Western and Southern India



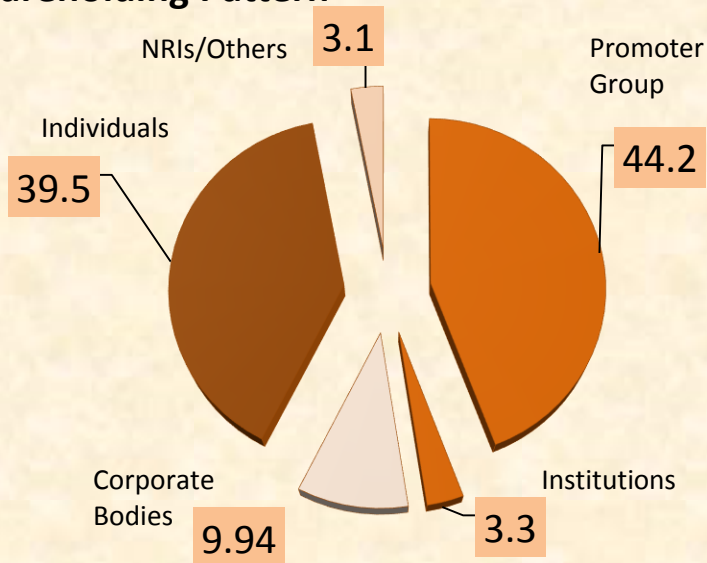
# Company Profile

- Headquartered in Hyderabad, India
- Incorporated in 1987, Public issue in 1994
- Engaged in onland seismic data acquisition, processing and interpretation for the last couple of decades

## Organization Structure

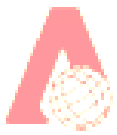


## Shareholding Pattern

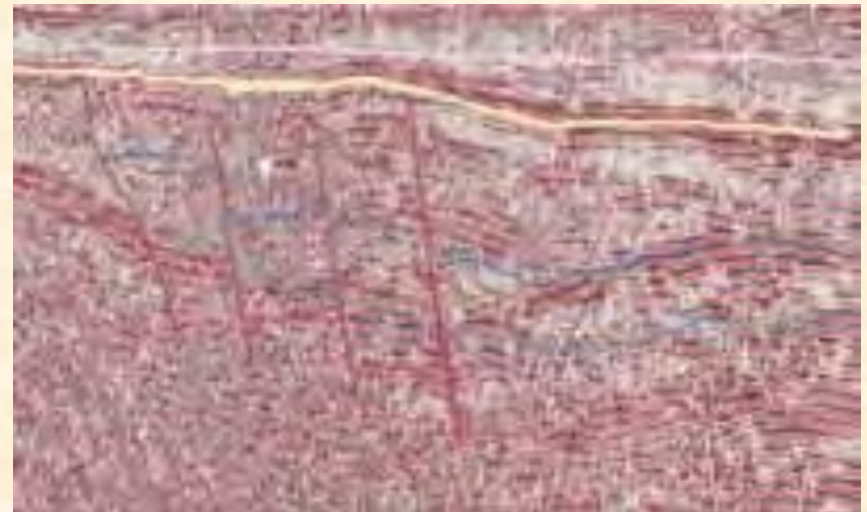


## Financials (Rs. Cr)

Particulars	FY13	FY14	FY15	FY16	FY17
Revenues	24	94	73	90	306
EBITDA	(2)	37	26	28	102
Margin (%)	-8%	39%	36%	31%	33%
PAT	-11	27	15	12	51
Net Worth	41	69	84	106	174
Borrowing	5	4	1	2	48



# Company Profile





# Milestones

1987

- Incorporation of company

1990

- Emerged as first player to commence seismic operations in India

1991

- First Indian Company to offer onsite processing leading to enhanced quality control

1994

- Acquisition of two state of the art 24 bit telemetry system ION System Two units

1997

- Only Indian geophysical seismic survey company

2006

- Acquired two state-of-the-art 24-bit delta sigma technology Input/Output System 4 units for 3D seismic surveys

2007

- Acquired an additional Input/Output SCORPION recording systems for 3D surveys. More than doubled revenues with increasing returns from 3D services.

2008

- Increased installed capacity by increasing channel count from 7500 to 10000 in Dec 2007. Top line grew by 50.25% due to concurrent management of multi-locational crews



# Milestones

2009

- Increase of channel count to 12500

2010

- First international contract in Republic of Georgia using Vibes & Explosives

2010

- Acquisition of AHV IV 62000 lbs Vibrators

2012

- Contract in Myanmar with Petronas

2013

- Acquisition of two Sercel 428 XL systems with 7000 channels

2015

- Largest 3D seismic survey order from ONGC of Rs. 242 Cr

2015

- 2D seismic survey order from Oil India of Rs. 102 Cr

2016

- Largest 2D seismic survey order from ONGC of Rs. 1482 Cr

2016

- Acquisition of 13 recording systems with 15000 channels





# Key Management

**Mr. Z. P. Marshall** - Chairperson and Independent Director on the Board of the Company. He is a Graduate in Engineering from Madras Institute of Technology. Held senior positions during his long career at DRDO and BDL, spanning 30 years.

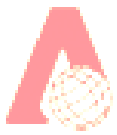
**Mr. Dinesh Alla**- Promoter Director and Managing Director of the Company. He is a post graduate from BITS, Pilani and has very rich experience and deep knowledge about seismic survey industry

**Ms. Savita Alla** - Joint Managing Director of the Company. She is a post graduate in Management studies from BITS, Pilani. She served in various Managerial positions in corporate sector

**Mr. Rajesh Alla** -Promoter Directors of the Company. He is a post graduate engineer from Carnegie Mellon University, Pittsburgh, USA . He has specialized in Image Processing, Computer Vision and Robotics.

**Mr. Mohan Krishna Reddy** – A finance professional with 3 decades of experience is the Non executive Director of the Company since last 3 years. He has a Master's Degree in Financial Management from Jamnalal Bajaj Institute of Management

**Mr. Ashwinder Bhel** – He is a Master in Business Administration from Case Western Reserve University, Cleveland, Ohio with over two decades of rich and varied experience in the Oil Industry



# Clientele





# Key Projects Executed

Client	Project	Year
<b>Rajasthan Basin</b>		
Oil India Limited	2D API	2004
<b>Ganga Basin</b>		
Oil India Limited	2D A	1999
DGH	2D API	1998
DGH	2D API	2002
Oil India Limited	2D A	2003
<b>Vindhyan Basin</b>		
DGH	2D API	1997
<b>Offshore Kutch</b>		
Tullow India Operation Limited	2D P	2000
<b>Assam Basin</b>		
Canora Resources Limited	2D A	2004
Oil India Limited	2D A	2004
Canoro Resources Limited	2D A	2005
HOEC Limited	2D A	2006
Canoro Resources Limited	3D A	2006
ONGC Limited	2D A	2008
Oil India Limited(PGS)	3D A	2008
Geopetrol International Inc	3D A	2008
HOEC Limited	3D A	2009
Essar Oil Limited	2D A	2010
NaftagaAdani	3D A	2010
Dart Energy(AS) Pte. Ltd	2D AP	2015
<b>Arunachal Basin</b>		
GeoEnpro Petroleum Limited	2D API	2001
Geopetrol International Inc	2D AP	2006
Geopetrol International Inc	2D AP	2006



# Key Projects Executed

Client	Project	Year
<b>Onshore Gujrat</b>		
GSPC Limited	2D P	2001
Essar Oil Limited	3D A	2008
Naftogaz-Adani	2D A	2008
Naftogaz Adani	3D A	2008
Interlink Petroleum Limited	3D A	2009
Selan Exploration Technology Limited	3D A	2010
<b>Cauvery Basin</b>		
ONGC Limited	3D A	2008
ONGC Limited	3D A	2009
SMNG – Center CJSC	3D A	2014
<b>Godavari basin</b>		
KEI-RSOS Petroleum and Energy Private Limited	3D AP	2011
<b>Onshore Gujrat</b>		
Mercator Petroleum Limited	2D AP	2012
Mercator Limited	3D AP	2012
NTPC Limited	3D A	2012
Bharat Petroresources Limited	2D & 3D A	2014
Gail (India) Limited	2D & 3D A	2014
Omkar Natural Resources Private Limited	2D & 3D AP	2014
NTPC Ltd	2D AP	2015
<b>Mizoram</b>		
Oil India Limited	3D A	2014
<b>International Projects</b>		
Jindal Petroleum Operating Company LLC Republic of Georgia	2D A	2011
Petronas Carigali Myanmar Inc, Republic of Myanmar	2D A	2013
Istech energy Ep-5 Pte.Ltd Republic of Myanmar	2D A	2014
CAOG Pte Ltd Republic of Myanmar	2D A	2015
Bashneft International BV Republic of Myanmar	2D A	2015



# Experience in difficult terrains

## Forested and hilly areas of Kharsang and Jairampur in Arunachal Pradesh-

Completed 102 Sq Kms of 3D data acquisition in thickly forested and hilly areas (elevation varying from 150 to 1000m)

## Rugged, steep hilly terrain with forested cover in Mizoram, India:

First company to complete seismic survey campaign in hilly and inaccessible terrain in Mizoram for ONGC using explosives as energy source. This area had thick vegetation and acute shortage of water

## Carpet 3D Survey in KG basin - Onland

Alphageo is nearing completion of Rs. 242 cr – largest ever 3D seismic survey order for 2010 sq.km, performing pilot project of carpet 3D survey for ONGC in KG basin

## Himalayan Terrain

As a part of National Seismic Program (NSP) for ONGC, Alphageo is performing 2D seismic survey in Himalayan Regions which includes areas from Uttarakhand, Himachal Pradesh and Kashmir





# Experience in difficult terrains





# Crews with unmatched expertise

- ❑ Multinational crew, drawn from countries such as India, US, Canada, Nigeria, Russia and Columbia comprises professionals who are experts in the field of geology & geophysics and unmatched expertise in reservoir & survey
- ❑ Operates 16 crews simultaneously at different project locations pan – India with a manpower strength of more than 180 people





## Strong Order Book – Ongoing Orders

**Rs. 1300 Cr  
order from  
ONGC**

- Acquisition of 2D Seismic Data in un-appraised on land areas of Indian Sedimentary Basins of India as a part of the National Seismic Program by June 2019
- The execution of the contract involves addition of 10 seismic crews to work in various sectors of India covering the states of Karnataka, Maharashtra, Gujarat, Rajasthan, MP, Uttarakhand, Himachal Pradesh, and Kashmir to acquire an estimated 26905 LKM of 2D seismic data

**Rs. 102 Cr  
order from  
Oil India**

- Provision of 2D seismic Acquisition services in the areas covering parts of Assam & Arunachal Pradesh for an estimated contract value of Rs. 102 Cr, under National Seismic Program to be executed by November 2018

**Rs. 242 Cr  
order from  
ONGC**

- Nearing completion of contract from ONGC for 3D Seismic Data Acquisition in the area of KG basin for an estimated contract value of Rs. 242 Cr



# Timely Execution: Key Strength

- ❑ AlphaGeo has the distinction of having worked in the most difficult and varied terrains and executing the contracts on time
- ❑ AlphaGeo earlier acquired 64-sq km 3D Canoro Resources Limited, a Canadian E&P Company, at Amguri within 75 days despite commencing work two weeks late. This was its first 3D contract.
- ❑ ONGC had taken up Largest 3D volume of on-land seismic data acquisition work -the pilot project of CARPET 3D to better understand basin reservoir characteristics. This order of Rs. 242 cr was won by AlphaGeo and nearing completion as scheduled
- ❑ Deployed 16 crews for executing contracts of Rs. 1402 Cr by ONGC and Oil India under National Seismic Program. All the crews were operational for the whole of Q4FY17 resulting in revenues of Rs. 166 Cr (Q4FY16 – 71 Cr) and net profit of Rs. 35cr (Q4FY16 – 19 Cr)

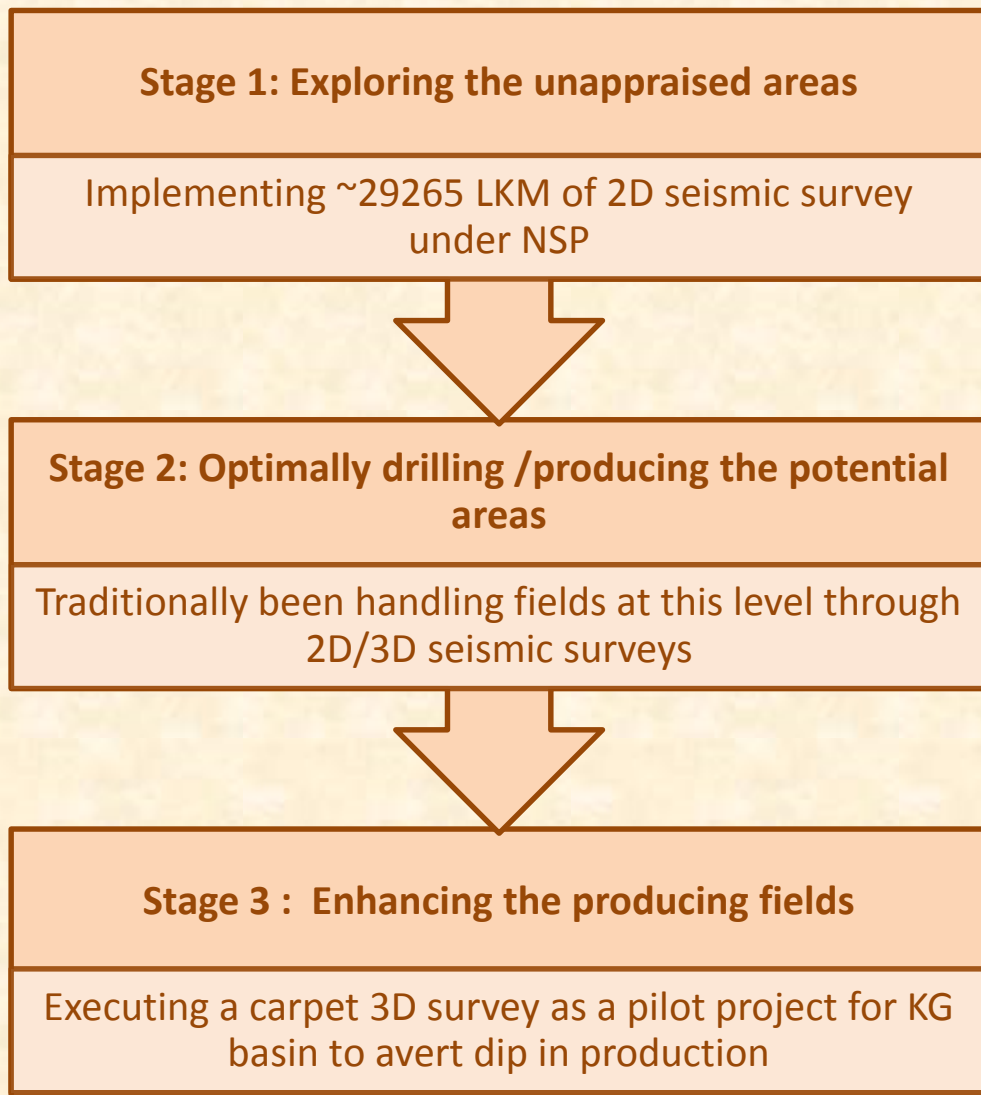


# **Promising Outlook**





# AlphaGeo across the production cycle



AlphaGeo is expected to benefit the maximum out of increasing initiatives towards exploratory activities by the government on account of the following reasons:

- ❑ It has presence in every stage of the production cycle of crude oil
- ❑ Only domestic player with relevant experience in each stage currently
- ❑ Ability to handle difficult terrains historically



# OALP a major growth driver!!!!

Post NSP (National seismic program) AlphaGeo aspires to be in line with global peers handling various seismic activities. Following are the prospective areas to look forward to, apart from Rs. 1300 + Rs. 102 Cr order under NSP:

- ❑ All data acquired under NSP will be stored in National Data Repository wherein explorers will be able to access sedimentary block-level data and bid independently through Open Acreage Licensing Policy (OALP).
- ❑ Further orders for 2D/3D seismic surveys expected in potential areas which are appraised by explorers under NSP.
- ❑ Relevant terrain experience puts AlphaGeo on a strong footing for bagging further data acquisition services orders in these fields



# NSP is just a beginning!!!!

Apart from NSP and consequently OALP, following are the potential growth areas for the company in next couple of years:

- ❑ Government has initiated 'Discovered Small Field Policy' with an objective to increase domestic production. This policy targets monetizing 67 small fields by providing incentives to the explorers/producers. This could require 3D Seismic services
- ❑ Further carpet 3D surveys (similar to KG basin - ONGC) for producing fields across India to avert drop in production likely to open up further onland seismic orders for the company
- ❑ Being a Prominent onland seismic service provider in Myanmar, company is likely to widen its presence in different geographies of the world through alliances and acquisitions
- ❑ Seismic survey in transition zone (the interface area between the sea and land) is expected to open up new avenue of business for AlphaGeo since coastal regions of India are under explored



# Financials



# Consolidated Financials – Profit & Loss

Paticulars (Rs. Crs )	FY13	FY14	FY15	FY16	FY17
<b>Total revenue from Operation</b>	<b>23.6</b>	<b>94.3</b>	<b>72.7</b>	<b>89.6</b>	<b>305.9</b>
<b>EXPENSES</b>					
Survey and survey related expenses	16.3	47	37.5	51.8	178.8
Employee benefits expense	4.2	4.3	5.3	6.1	17.13
Other Expense	5	6.3	4	3.9	8.43
Total Expense	25.6	57.6	46.8	61.8	204.3
<b>EBITDA</b>	<b>-2</b>	<b>36.6</b>	<b>25.9</b>	<b>27.8</b>	<b>101.6</b>
<b>Margin (%)</b>	<b>-8%</b>	<b>39%</b>	<b>36%</b>	<b>31%</b>	<b>33%</b>
Depreciation	7.7	8.8	10.7	12.3	23.72
<b>EBIT</b>	<b>-9.7</b>	<b>27.8</b>	<b>15.2</b>	<b>15.5</b>	<b>77.83</b>
Other Income	0.2	1.3	0.7	0.9	2.2
Interest Cost	0.5	0.7	0.8	0.7	4.1
<b>PBT</b>	<b>-9.9</b>	<b>28.4</b>	<b>15.1</b>	<b>15.6</b>	<b>75.9</b>
Tax	0.8	1.9	0.6	4	25.3
<b>PAT</b>	<b>-10.7</b>	<b>26.5</b>	<b>14.5</b>	<b>11.6</b>	<b>50.6</b>



# Consolidated Financials – Balance sheet

Particulars (Rs.in Crs)	FY13	FY14	FY15	FY16	FY17
Share Capital	5.4	5.6	5.6	5.6	6.1
Reserves & Surplus	35.3	63.4	78.2	90.8	164.6
Share Warrants	0.4	0	0	9.4	3.1
Long term Liabilities	0.2	0.9	0.4	2.7	14.6
Current liabilities	32.6	37.2	7.4	47.8	161.8
<b>Total</b>	<b>73.9</b>	<b>107.2</b>	<b>91.6</b>	<b>156.3</b>	<b>350.3</b>
Fixed Assets	33.2	64	54.2	77.5	140.3
CWIP	14.8	1	1	1	1
Other Non Current Assets	10.8	8.1	10.2	11.9	6.1
Current assets	15.1	34.1	26.2	65.9	202.9
<b>Total</b>	<b>73.9</b>	<b>107.2</b>	<b>91.6</b>	<b>156.3</b>	<b>350.3</b>





**Thank You**