



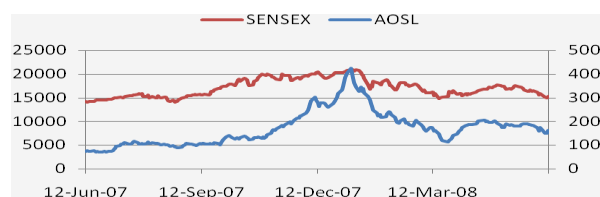
# ASIAN OILFIELD SERVICES LIMITED

On Higher Growth Trajectory



<b>Recommendation</b>	<b>BUY</b>
<b>CMP</b>	<b>Rs.164.0</b>
<b>Sector</b>	<b>Oil Exploration &amp; allied services</b>
<b>Stock Details</b>	
BSE Code	530355
NSE Code	-
Market Cap (Rs. Cr.)	171.54
Free Float (%)	89.8%
52- wk HI/Lo	446/71
Avg. volume BSE (2 Week)	80205
Face Value	10
Dividend (FY07)	Nil
Shares o/s (No.)	1.046 crs

<b>Relative Performance</b>	<b>1Mth</b>	<b>3Mth</b>	<b>1Year</b>
<b>AOSL</b>	-10.5%	-6.92%	117%
<b>Sensex</b>	-9.94%	-5.82%	7.46%



<b>Shareholding Pattern as on 31<sup>st</sup> March, 2008</b>	
Promoters	10.62%
FII	2.31%
Institutional	33.94%
Others & Public	53.60%
<b>Shyam Kabra</b> (+91 22 3027-2035) shyam.kabra@nirmalbang.com <b>Ashish Goenka</b> (+91 22 3027-2066) ashish.goenka@nirmalbang.com	

Year (consolidated)	Sales (Rs. cr.)	Growth	EBIDTA (Rs. cr.)	EBIDTA Margin	PAT (Rs. cr.)	PAT Margin	EPS (Rs.)	P/E(x)	P/BV
2007	27.3	164%	8.7	32%	5.1	18%	7.3	22.6	7.5
2008E*	46.3	34%	17.7	38%	10.1	22%	7.7	21.2	4.1
2009E	83.3	81%	34.7	41%	19.8	24%	12.9	12.7	2.2
2010E	123.6	48%	52.5	42%	30.2	24%	19.7	8.3	1.8

\*EPS and sales growth figures for FY 2008 are annualized for comparison purpose

### Snapshot:

Asian Oil Field Services Ltd (AOSL) is a Baroda based Company incorporated in 1992. It is engaged into the business of providing shot hole drilling & Seismic Data Services to Oil Exploration & Production (E&P) Companies. The company has rich experience in working in harsh terrains of North East and has experience of working with diverse set of clients including both PSU's and private companies.

### Key Drivers for AOSL

- **Strong Order Book Position with 138 Crs. of orders to be executed over the next two years**
- **AOSL is building capabilities in 3D seismic & drilling, which will enhance its margins**
- **Limited players exist in seismic survey Industry**
- **Technical Collaboration with Geophysical Institute of Israel**
- **Strong demand for seismic services in India**

### Outlook & Valuation

We expect Asian Oil Field Services Ltd to report a CAGR of 65.0% during FY07 to FY10E in net sales on the back drop of strong order book position and significant expansion plans of the company. These coupled with unprecedented demand for seismic survey on the back of boom in oil & gas exploration sector, will drive growth for the company going forward. We expect AOSL to report net profit CAGR of 81.0% during FY07 to FY10E. It has an order book position of 3.72 times its annualized FY08E sales providing earnings visibility going forward. At CMP of Rs. 164.0 the stock is trading at 21.2X and 12.7 its FY08E and FY09E diluted earnings. At current levels the stock looks undervalued and holds strong potential for upside. **Therefore based on our DCF valuation method we assign a buy rating on the stock with the target price of Rs. 251.3 implying an upside of 53.2% from current levels.**

### **Background of the company**

Asian Oil Field Services Ltd Incorporated in 1992 is the first private sector company to successfully complete seismic survey activities in harsh terrains of Nagaland and Tripura. The company is engaged in the business of Seismic data acquisition, processing and interpretation services, which helps Oil and Gas Exploration (E&P) Companies to locate precisely where the oil deposits may lie below the earth surface. This critical service helps E&P Companies to locate deposits with speed & accuracy, strengthen their return on Capital and in turn, India's Quest for hydrocarbons.

### **AOSL provides the following range of services for 2-D & 3-D Seismic Surveys**

- Survey Pre-Planning & Design
- Survey line positioning and alignment
- Pre Shot Depth determination
- Geodetic Positioning
- Shot hole drilling
- Data Acquisition
- Data Quality Control
- Seismic Data Processing & Interpretation

AOSL has emerged as one of the leading provider of these services in India over the last few years. It is aiming to increase its market share in the coming years and is expected to grow faster than the industry growth rate on the back of strong order book position and expansion plans of the company. AOSL is pioneer in carrying out seismic services in the geographically rough terrain of north East and has build experience working in Arunachal Pradesh, Assam, Gujarat, Tamil Nadu and Uttaranchal. The company has a diverse set of customers which include both leading private and public sector companies. ONGC is one of the leading customers of the company and contributes approximately 28% to the top line of the company.

### **Company's Customers includes following:-**

- ONGC
- Oil India
- Jubilant Energy
- Canoro Resources
- RITES
- GAIL
- Premier Oil plc.
- Selan Exploration
- Great Eastern Energy
- L&T

**Key Investment Arguments**

➤ **Strong Order Book Position**

Asian Oil Field Services Ltd has a strong order book position of Rs. 138 Cr. which will be executed over a period of two years. Out of this total order book position, Rs. 133 Cr. orders will be executed as a direct contractor, while the remaining orders of Rs. 5 Cr. will be executed as a sub-contractor.

**Current order book**

Client	Location	Kind of work	Contract Revenue	Contract starting date	Expected completion date
OIL INDIA	Mizoram	2D	72 Cr	Jan-2008	Jun-2009
ONGC	Nagaland	2D	45 Cr	Dec-2007	Apr-2009
Not disclosed	Andhra Pradesh	2D	2 Cr	Mar-2008	Apr-2008
ONGC	Gujarat	2D	14 Cr	Dec-2007	Feb-2009
Not disclosed	Arunachal Pradesh	3D	5 Cr	Feb-2008	May-2008

Source: Company Data, Nirmal Bang Research

Furthermore, the company has bid for more contracts and is confident of winning orders worth approximately Rs. 50-100 cr in the coming 6-9 months. The company is also planning to bid for contracts in the Geo chemical surveys and Drilling. AOSL is also looking to expand into areas like CBM drilling, Offshore Seismic, Data processing as well as bidding for marginal fields.

We believe the company would continue to witness strong order book growth primarily due to significant capital expenditure plans of the company as well as due to expected strong demand scenario for seismic services which will drive top line growth and earnings of the company going forward.

➤ **AOSL is building capabilities in 3D seismic & drilling, which will increase its margins**

Given the huge opportunity lying before AOSL, it has undertaken aggressive expansion plans. AOSL currently owns four 2D crews and has one 3D crew which has been taken on lease from its technical partner Geophysical Institute of Israel (GII). Going forward, as crew counts are a key measure of seismic data acquisition activity. AOSL has plans to upgrade its existing 2D crew into a 3D crew. During FY-09 it is planning to further acquire two more 3D Crews and an offshore seismic vessel. The company is planning to incur a capital expenditure of Rs. 25 crs in FY 2008 and of approximately Rs. 40-50 crs in FY 2009 in this regards.

Particulars	EBIDTA Margins
As a Direct Contractor	36-45%
As a Sub-Contractor	25-26%

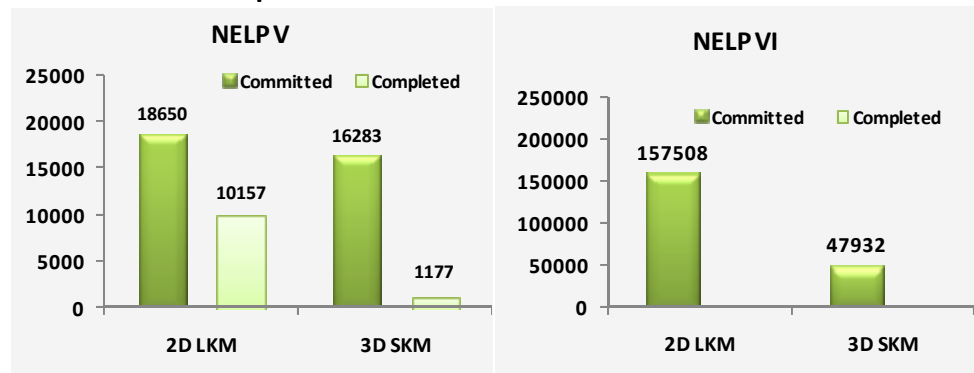
Source: Company Data

In the business of Seismic Data acquisition in India, there is a larger outlay of contracts being given out by ONGC, OIL and other private sector companies. However, these contracts come with a condition that only companies with a minimum net worth can qualify for these projects. In order to increase its net worth AOSL roped in a strategic investor Consolidated Securities Ltd, as a result of which it can bid for bigger orders.

Furthermore, in order to fund its expansion initiatives the company has issued 15 lakhs equity shares at a price of Rs.190 per share to Samara Capital Partners Fund I and 12 lakhs convertible warrants to non promoters. This issue of shares and convertible warrants is in addition to the convertible warrants issued by the company to promoters as well as non promoters. Based on this, we expect the equity capital of the company to go up too Rs. 15.34 crores from current Rs. 10.46 crores.

We believe the planned capital expenditure will enhance the margins of AOSL, since investment in its own equipment will help reduce their subcontracting costs. We believe, with increasing crew counts the company would be in a strong position to bid for bigger contracts. Furthermore, with huge spillover of seismic survey work both from NELP V and NELP VI AOSL would stand to benefit tremendously from the increased capacity going forward.

#### Spill over work from NELP V and VI



Source : Directorate General of Hydrocarbons

#### ➤ Limited competition exist in seismic services Industry in India

The Indian market size of Seismic services is estimated to be over Rs. 8,000 Crs which is to be executed over the next 4-5 years and it is expected to grow by 50% once the NELP VII projects are awarded in this year. Out of this over 55% will be through captive in-house crews of ONGC (current count of about 32 crews) and OIL India (current count of 4 crews) while the remaining part will be executed by private third party crews like Asian Oil Field Services Ltd.

- Currently seismic data acquisition market has 4 main players Geophysica Turin, Shiv-Vani Oil & Gas, Asian Oil Field Services, and Alpha Geo (India) Ltd.
- The government has made it mandatory for all oil and gas E&P companies to carry out minimum 2D surveys for their NELP blocks.
- Foreign companies which operate into the business of seismic survey find it difficult to operate inside India because of low cost structure & difficult logistics.

➤ **Technical Collaboration with Geophysical Institute of Israel**

AOSL has technical collaboration with Geophysical Institute of Israel (GII), an Israeli state owned geophysical company since 2002. It has expertise in seismic services. In addition, it provides a full range of related geophysical services, such as innovative seismic processing services and software development to companies, institutions and countries in the Mediterranean, Asian and African areas.

- Both AOSL and GII have worked together on multiple seismic contracts. Between AOSL and its partner GII they have an experience over 2000 GLKM (Ground Line Kilometer) of 2D surveys and over 1400 Sq. KM of 3D surveys.
- This collaboration has helped AOSL to exchange knowledge with GII, which strengthens the Company's insight into the 3D technology. Along with technical assistance, GII also provides state of art equipment to AOSL to carry out the seismic survey.

➤ **Huge Potential for seismic services in India**

With the introduction of NELP in 1999, investments in the seismic survey industry have shown tremendous increase from earlier US\$ 782 mn to US\$ 1,840 mn. Furthermore, work for both 2D and 3D seismic surveys increased tremendously thereby opening huge window of opportunity for companies like AOSL.

According to DGH, seismic survey industry is expected to generate Rs. 8,000 cr of business in the next 4-5 years. Out of which approximately 55% of the jobs are expected to be done by captive in-house crews of ONGC (current count of about 32 crews) and OIL India (current count of 4 crews). Whereas 45% of the work will be outsourced to players like AOSL, Shiv Vani Oil, AlphaGeo etc. Furthermore, the government has now made it mandatory for all oil and gas E&P companies to carry out minimum 2D surveys for their NELP blocks.

Going forward, under NELP VII round approximately 57 additional blocks will

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be offered to carry out exploration activities, which will further boost the already strong demand for seismic services in India. According to DGH, investments in the E&P industry will reach approximately US\$ 5,000 mn over the next five years which will lead to increased volume of work which will be outsourced to companies like AOSL, Shiv Vani Oil, AlphaGeo etc.

**Expected increase in Data input**

	Old regime	NELP	Anticipated next 5 years
2D Seismic (LKM)	24091	123247	263692
3D Seismic (SKM)	5304	86672	108232
Exploratory Wells (No.)	167	193	459
Discoveries (Nos.)	22	49	-
Investments (US\$ mn)	782	1840	5000

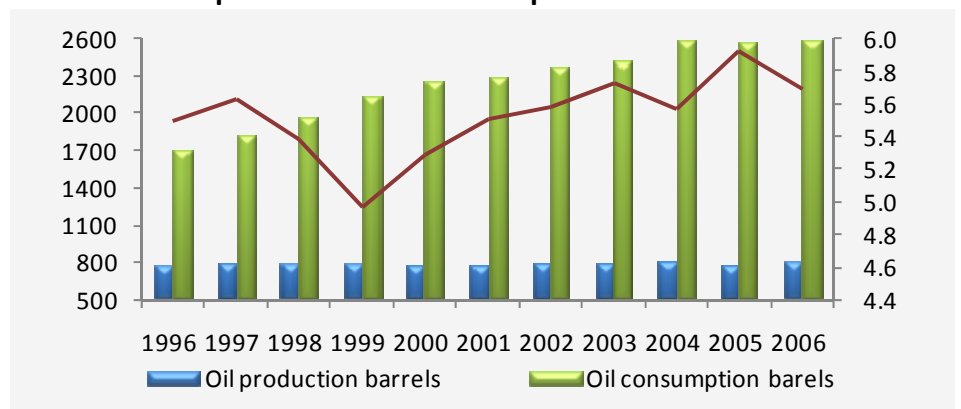
Source: Directorate General of Hydrocarbons

**Industry Analysis**

➤ **India currently imports approximately 70% of its crude oil requirement**

India currently consumes approximately more than 120 million metric tons (MMT) of crude oil and 179 Million Metric Standard Cubic Meter Per Day (MMSCMD) of gas annually. However, it produces only 34 MMT of crude oil and 88 MMSCMD of gas annually. The balance requirement of crude oil & gas is met through imports. According to India Hydrocarbon Vision 2025, demand for crude oil in India is expected to go up to 199.6 MMT by 2011-12 and 376.5 MMT by 2024-25. However according to Ministry of Petroleum and Natural gas, average crude oil production in the XI plan (2007-2012) period is expected to be approximately 41.35 MMT a growth of approximately 24% from X plan period (2002-2007).

**Oil production and consumption trend**



Source : BP Statistical review of world energy-June 2007

**Expected crude oil production (MMT)**

	2007-08	2008-09	2009-10	2010-11	2011-12	Total
ONGC	27.16	28.00	29.00	28.53	27.37	140.06
OIL	3.50	3.55	3.75	3.91	4.30	19.01
Pvt/JV	10.57	10.78	9.76	8.75	7.85	47.71
<b>Total</b>	<b>41.23</b>	<b>42.33</b>	<b>42.49</b>	<b>41.19</b>	<b>39.51</b>	<b>206.75</b>

Source: Ministry of Petroleum and Natural Gas

In order to fulfill its requirement for energy security and reduce its dependence on oil & gas imports. Government launched the New Exploration Licensing Policy (NELP) to give a boost to the Exploration and Production sector in India. Uptill now Directorate general of Hydrocarbon (DGH) has awarded 199 oil and gas blocks in the previous six NELP rounds combined. Whereas in the NELP- VII round, it aims to cover 3, 52,000 Sq. km by offering 57 Oil and Gas blocks.

**NELP round allotments**

Rounds	Year	Onshore	Shallow water	Deep Water	Total Blocks Offered
NELP-I	1999	1	16	7	24
NELP-II	2000	7	8	8	23
NELP-III	2002	8	6	9	23
NELP-IV	2003	10	0	10	20
NELP-V	2005	12	2	6	20
NELP-VI	2006	25	6	24	55
NELP-VII	2008	29	9	19	57
<b>Total</b>		<b>92</b>	<b>47</b>	<b>83</b>	<b>222</b>

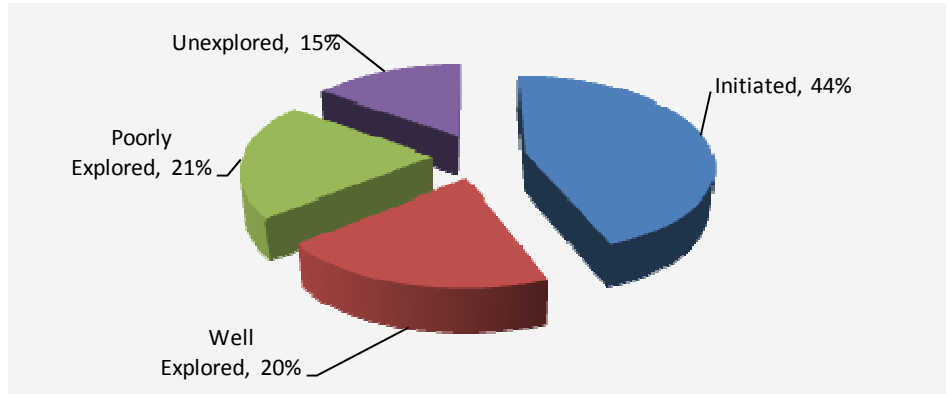
Source: Directorate General of Hydrocarbons

➤ **Significant increase in exploration activities to drive future growth**

Out of the total 26 sedimentary basins spread across 3.14 mn sq. Km of area. Only 20% of the area has been well explored, thus creating huge opportunities for players like AOSL. We believe with the spillover work from NELP V and NELP VI and new blocks offered under NELP VII, the seismic survey industry in India is expected to continue to witness strong demand trends. Furthermore, limited players operating in this industry further increase the growth expectations for companies like AOSL, Shiv Vani Oil, AlphaGeo etc.



**Opportunities in Exploration of Hydrocarbons in India**

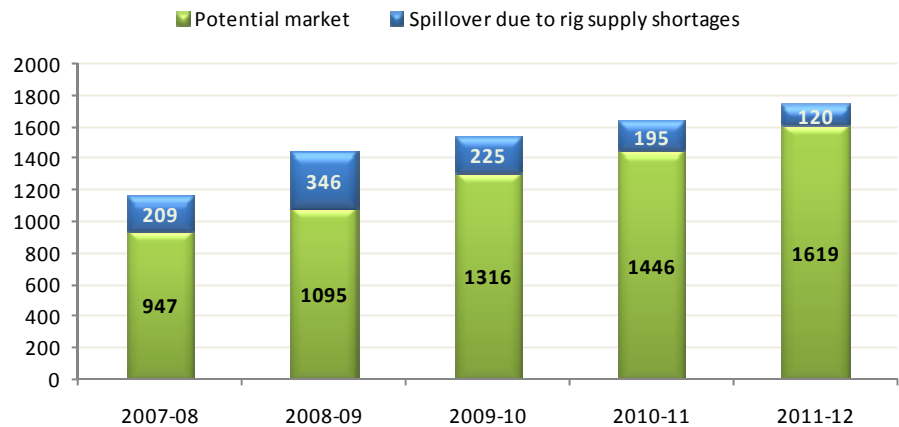


Source : Directorate General of Hydrocarbons

➤ **Increasing exploration & production activities to drive world oilfield services market**

The world oilfield service market is expected to touch US\$ 15 bn in the next five years, primarily driven by increased exploration & production activities around the world. The continued growth in oil and gas exploration & production activity is one of the primary drivers in the use of seismic surveys and seismic equipment. Companies in India are expected to benefit from the lower operating structures and increasing expertise.

**Onshore drilling market size (US\$ mn)**



Source : Company data, Nirmal Bang Research

### SWOT Analysis

#### Strengths

- Strong order book position of approximately 138 Crs. in hand to drive top-line growth, which in turn will help AOSL to bid for bigger orders.
- AOSL is purchasing its own 2D and 3D crew in the near future which will improve its margins.
- It has successful track record of having completed projects in Assam, Arunachal Pradesh, Nagaland and Tripura.
- It has diverse customer mix.
- Knowledge exchange with the Geophysical Institute of Israel, strengthening the Company's insight into 3D and tendering skills.

#### Weakness

- AOSL only operates in onshore segment, so fails to benefit from the increase in offshore oil and gas exploration activities.
- Over dependence on few big customers like ONGC and Oil India could lead to operational difficulties for the company going forward.

#### Opportunities

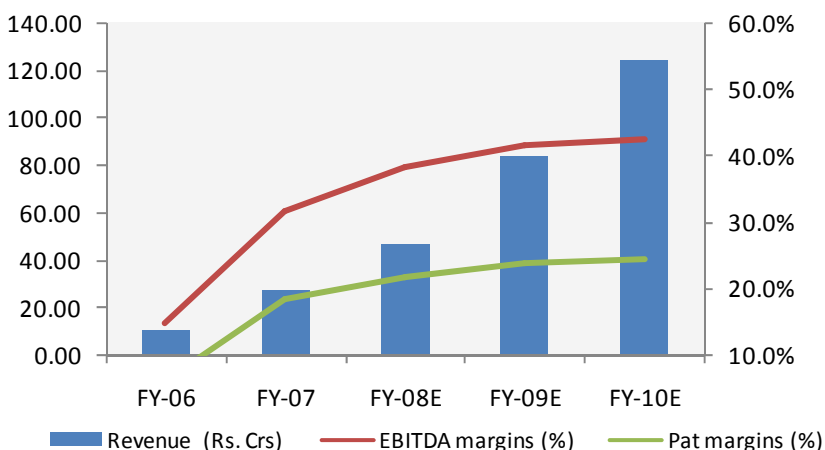
- According to DGH, approximately 263692 LKM of 2D seismic survey work and 108232 SKM of 3D seismic survey work is expected in the next 5 years.
- Currently the Seismic Data Acquisition Market has 4 main players in India, leaves tremendous scope for AOSL.
- Foreign companies find it difficult to operate inside India because of low cost structure & difficult logistics.
- Oil Exploration companies sitting with sufficient cash, which will drive exploration and production capital expenditure.

#### Threats

- If customer companies like ONGC, OIL etc integrates further backwards, this could lead to increased business risk for the company.
- AOSL faces competition from companies like AlphaGeo (India) Ltd, GT and Shiv-Vani oil & exploration Ltd.

### Financial Analysis

We expect the company to witness robust top line growth and steady improvement in margins on the back of expansion plans of the company. WE expect revenues to grow at a CAGR of 65.0% between FY 07-FY 10. We believe, AOSL would witness margin expansion and witness EBITDA CAGR growth of 81.9% between FY 07-FY 10.



### Peer Comparison

Particulars	AOSL	AlphaGeo	Shiv Vani Oil
<b>Equipments Owned</b>			
2D Crew	4	3	-
3D Crew	1 on lease from GII	5	10
Onshore rigs	-	-	27
Gas compressors	-	-	7
Drilling rigs	-	-	233
<b>Year</b>	<b>FY 09E</b>	<b>FY 09E</b>	<b>FY 09E</b>
Sales	83.57	125.30	835.00
EBITDA	34.67	55.90	351.00
EBITDA margin	41.5%	44.6%	42.0%
PAT	19.81	16.50	157.00
PAT margin	23.7%	13.2%	18.8%
EPS	12.91	30.00	35.61
<b>P/E</b>	<b>12.70</b>	<b>17.71</b>	<b>14.93</b>
P/BV	2.23	5.60	2.82
EV/EBITDA	6.84	4.98	9.37

Source: Nirmal Bang Research

## Valuation and recommendation

### DCF Assumptions

Using the DCF valuation method, we arrive at a fair value of Rs 251 per share for AOSL, which represents a potential upside of approximately 53.2% from the current levels.

We have based our valuation on the following assumptions:

Weighted Average Cost of Capital (WACC) of 11.39%: We have assumed a risk-free rate of 7.81% which is the current yield on the 10-year Government Treasury bond. We have derived the WACC by multiplying the cost of equity (which stands at 11.45%), tax-adjusted cost of debt (which stands at 8.54%) by their respective weights of 98.1% and 1.9%. This yielded a WACC of 11.40%.

Terminal growth rate: We have developed an explicit Free Cash Flow (FCF) estimates for FY 2007 to FY 2012. Thereafter, we have assumed a perpetual growth rate of 4%.

Particulars (Rs. Cr.)	FY 07A	FY 08E	FY-09E	FY-10E	FY-11E	FY-12E
Sales	27.60	46.32	83.57	123.87	173.31	242.52
EBIT	8.07	16.20	30.75	46.28	67.38	97.03
Less cash taxes	(2.64)	(5.35)	(10.15)	(15.27)	(22.24)	(32.02)
NOPLAT	5.43	10.85	20.60	31.01	45.15	65.01
Depreciation	0.66	1.47	3.92	6.27	7.81	9.35
Capital expenditure	(4.89)	(25.00)	(45.00)	(22.00)	(22.00)	(22.00)
Changes in working capital	(5.31)	(5.94)	(10.65)	(7.52)	(14.79)	(20.75)
FCF	(4.12)	(18.62)	(31.13)	7.75	16.16	31.61
Discounting factor		0.94	0.85	0.76	0.68	0.61
Present value of FCF		(17.54)	(26.33)	5.89	11.02	19.33
Net asset value	262.87					
Perpetual growth rate	4.0%					
WACC	11.4%					

Source: Nirmal Bang Research

The table below shows the sensitivity of our DCF valuation to changes in perpetual growth rate of FCF and WACC.

DCF sensitivity analysis						
		Terminal Growth Rate				
		3.0%	3.5%	4.0%	4.5%	5.0%
WACC	12.4%	185.10	197.04	210.41	225.47	242.57
	11.9%	200.64	214.22	229.52	246.89	266.79
	11.4%	218.11	233.66	<b>251.31</b>	271.52	294.89
	10.9%	237.88	255.82	276.36	300.11	327.89
	10.4%	260.42	281.29	305.43	333.66	367.13

Source: Nirmal Bang Research

### Comparative Valuation

When we consider the EV/EBITDA multiple, AOSL is currently trading at an EV/EBITDA multiple of 10.0X of its FY 08E EBITDA. Historically, the company has traded at a discount to its peers AlphaGeo India Ltd and Shiv Vani Oil. Going forward, we believe AOSL would enjoy higher EBITDA margins on the back of increase in the number of crews owned by the company. This will lead to reduction in sub contracting costs, resulting in higher margins.

Therefore, to value AOSL in this report we are assigning a multiple of 7.0x, which is lower than its current multiple. Employing this target multiple on our FY 2010 EBITDA estimate of Rs. 52.55 crs, we arrive at a target price of Rs. 253.8 per share implying upside of 54.8% from current levels.

EV/EBITDA valuation metrics-FY 2010E	
EV/EBITDA multiple	7.0
FY 2010E EBITDA	52.5
FY 2010E EV	367.8
FY 2010E Debt	9.8
FY 2010E Cash	31.2
FY 2010 minority interest and other provisions	0.0
FY 2010 market cap	389.3
No of shares	1.5
Target Price	253.8

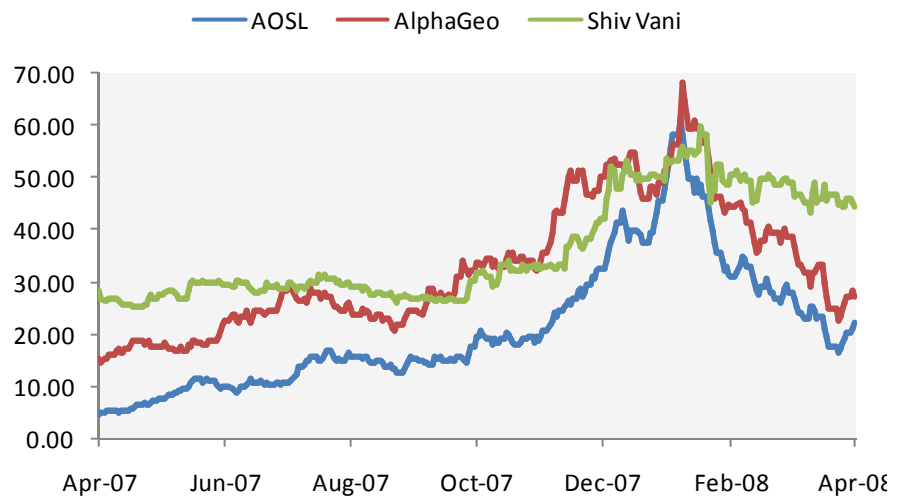
Source: Nirmal Bang Research

AOSL's is currently trading at a P/E multiple of 17X, In the last two years AOSL has traded in a range of 4.78X to 61.19X. However the company has traded at a TTM average multiple of 21.28X. We believe that the strong order book position of the company increases the earnings visibility for AOSL. Furthermore, the company is planning to increase its capacity by increasing its crew counts.

We believe AOSL would be a prime beneficiary of the huge opportunities in the Indian Seismic survey industry. We, therefore, assign a target P/E multiple of 13.0X on our FY 2010 earnings estimate of Rs. 19.67 per share and derive at a target price of Rs. 255.71 per share.

Given below is the historical P/E trend of AOSL, AlphaGeo and Shiv Vani Oil. The graph clearly suggests that AOSL is currently trading at a discount to its peers and has significant potential upside from the current levels.

**Historical P/E trend**



Source : Bloomberg, Nirmal Bang Research

**Risks and concerns**

- **Delay in capital expenditure plans could impact top line performance**  
AOSL has outlined significant expansion plans in order to cater to the strong demand for seismic services in India. The company plans to acquire 2 more 3D crews and also an offshore seismic vessel in FY 2009. Increase in crew counts would facilitate the company in bidding for larger projects. We believe, any delay on the expansion plans of the company could impact operational as well as financial performance of the company going forward.
- **Backward integration by Exploration & Production companies could lead to increase in competition**  
AOSL's major clients like ONGC and OIL currently have captive in-house crews of current count of about 32 crews and 4 crews respectively. Through these crews they are expected to execute approximately 55% of the Rs. 8,000 cr seismic survey industry. While the rest is expected to be outsourced to companies like AOSL. Therefore any increase in the crew counts by Exploration & Production companies could lead to decline in potential seismic survey market for the company.
- **Changes in government regulations related to NELP rounds could affect AOSL's business**  
Exploration and production industry is regulated by the Government of India, the government offers various incentives to companies wanting to invest in the E&P activities under NELP. The government in the Union Budget 2008-09 has proposed to withdraw a seven year tax holiday for oil exploration and production projects starting on or after 1<sup>st</sup> April 2009. We believe any withdrawal of incentives offered by the government to companies could lead to potential decline in the demand for seismic survey services in India.

**Financials**

**Income Statement**

Particulars (Rs. Cr.)	FY-06	FY-07	FY-08E*	FY-09E	FY-10E	FY-11E	FY-12E
<b>Sales</b>	<b>10.34</b>	<b>27.33</b>	<b>46.05</b>	<b>83.30</b>	<b>123.60</b>	<b>173.04</b>	<b>242.26</b>
Other Income	0.20	0.26	0.26	0.26	0.26	0.26	0.26
Total Income	10.54	27.60	46.32	83.57	123.87	173.31	242.52
(Increase)/Decrease in Stock	0.14	(0.09)	(0.14)	(0.25)	(0.37)	(0.52)	(0.73)
Operational Expenses	3.88	5.95	9.21	15.83	22.87	31.15	43.61
Contractual Expenses	3.96	11.36	16.58	27.49	39.55	53.64	72.68
Staff Cost	0.52	0.65	1.15	2.50	4.33	6.92	10.90
Administration & other expenses	0.47	1.00	1.84	3.33	4.94	6.92	9.69
<b>EBIDTA</b>	<b>1.57</b>	<b>8.73</b>	<b>17.67</b>	<b>34.67</b>	<b>52.55</b>	<b>75.19</b>	<b>106.37</b>
Interest	0.23	0.50	1.12	1.18	1.24	1.31	1.37
Depreciation	0.34	0.66	1.47	3.92	6.27	7.81	9.35
PBT	1.00	7.57	15.08	29.57	45.04	66.08	95.65
Tax	0.38	2.48	4.98	9.76	14.86	21.81	31.57
<b>PAT</b>	<b>0.62</b>	<b>5.09</b>	<b>10.11</b>	<b>19.81</b>	<b>30.17</b>	<b>44.27</b>	<b>64.09</b>
EPS (Rs) (Basic)	1.16	7.26	9.7**	12.91	19.67	28.86	41.78
EPS (Rs) (Diluted)	1.16	7.26	6.59	12.91	19.67	28.86	41.78

\* Figures for FY 2008 are for 15 months. Year ended changed from March to June , \*\*EPS Figure Annualised for comparison purpose

Source: Nirmal Bang Research



**Balance Sheet**

Particulars (Rs. Cr.)	FY-06	FY-07	FY-08E*	FY-09E	FY-10E	FY-11E	FY-12E
<b>Share Capital</b>	<b>5.36</b>	<b>7.01</b>	<b>10.46</b>	<b>15.34</b>	<b>15.34</b>	<b>15.34</b>	<b>15.34</b>
Reserves & Surplus	2.09	8.00	26.06	97.28	127.46	171.73	235.82
Share warrants	0.00	0.32	5.52	(0.00)	(0.00)	(0.00)	(0.00)
Net Worth	7.45	15.32	42.04	112.62	142.80	187.07	251.16
Total Debt	1.71	3.75	8.75	9.25	9.75	10.25	10.75
Deferred Tax Liability (Net)	0.19	0.13	0.13	0.13	0.13	0.13	0.13
<b>Total Liabilities</b>	<b>9.35</b>	<b>19.21</b>	<b>50.93</b>	<b>122.01</b>	<b>152.68</b>	<b>197.45</b>	<b>262.04</b>
Gross Block	6.97	8.55	33.55	78.55	100.55	122.55	144.55
Less: Depreciation	3.57	1.81	3.28	7.20	13.47	21.28	30.63
<b>Net Block</b>	<b>3.40</b>	<b>6.74</b>	<b>30.27</b>	<b>71.34</b>	<b>87.08</b>	<b>101.27</b>	<b>113.92</b>
Investments	0.11	0.01	0.01	0.01	0.01	0.01	0.01
Current Assets, Loans & Advances							
Inventories	0.01	0.09	0.09	0.09	0.09	0.09	0.09
Sundry Debtors	6.31	18.35	27.92	45.79	61.08	85.47	119.60
Cash and Bank Balances	0.89	2.21	4.46	23.81	31.23	47.01	78.20
Loans and Advances	0.81	1.38	2.15	3.67	5.35	7.36	10.21
Less: Current Liabilities & Provisions	2.18	9.57	13.96	22.70	32.16	43.76	59.99
Net Current Assets	5.83	12.46	20.65	50.65	65.60	96.18	148.11
Miscellaneous exp	0.02	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Assets</b>	<b>9.35</b>	<b>19.21</b>	<b>50.93</b>	<b>122.00</b>	<b>152.68</b>	<b>197.45</b>	<b>262.04</b>

\* Figures for FY 2008 are for 15 months. Year ended changed from March to June

Source: Nirmal Bang Research

**Cash Flow Statement**

Particulars (Rs. Cr.)	FY-06	FY-07	FY-08E*	FY-09E	FY-10E	FY-11E	FY-12E
<b>Net Profit before Tax</b>	<b>1.00</b>	<b>7.57</b>	<b>15.08</b>	<b>29.57</b>	<b>45.04</b>	<b>66.08</b>	<b>95.65</b>
Depreciation	0.34	0.66	1.47	3.92	6.27	7.81	9.35
Others	0.22	0.45	0.00	0.00	0.00	0.00	0.00
Operating Profit before WC Changes	1.56	8.68	16.56	33.49	51.30	73.88	105.00
Changes in Working Capital	(1.11)	(5.31)	(5.94)	(10.65)	(7.52)	(14.79)	(20.75)
Cash Flow Before Direct Tax	0.45	3.36	10.61	22.84	43.78	59.09	84.25
Income Tax Payment	(0.38)	(2.48)	(4.98)	(9.76)	(14.86)	(21.81)	(31.57)
<b>Cash generated from operations</b>	<b>0.07</b>	<b>0.88</b>	<b>5.64</b>	<b>13.08</b>	<b>28.92</b>	<b>37.29</b>	<b>52.69</b>
<b>Cash Flow From Investing Activities</b>							
Purchase of Fixed Assets	(0.19)	(4.89)	(25.00)	(45.00)	(22.00)	(22.00)	(22.00)
Others	0.20	3.39	0.00	0.00	0.00	0.00	0.00
<b>Net Cash used in Investing Activities</b>	<b>0.01</b>	<b>(1.50)</b>	<b>(25.00)</b>	<b>(45.00)</b>	<b>(22.00)</b>	<b>(22.00)</b>	<b>(22.00)</b>
<b>Cash flow from Financial Activities</b>							
Equity Raised	0.00	1.65	3.45	4.88	0.00	0.00	0.00
Proceed from warrants issued	0.00	0.32	5.20	(5.52)	0.00	0.00	0.00
Proceed from Borrowing (Net)	0.63	2.04	5.00	0.50	0.50	0.50	0.50
Share Premium received on conversion of warrants	0.00	0.00	7.96	51.41	0.00	0.00	0.00
<b>Net Cash flow from Financial Activities</b>	<b>0.63</b>	<b>4.01</b>	<b>21.62</b>	<b>51.27</b>	<b>0.50</b>	<b>0.50</b>	<b>0.50</b>
Net Increase / (Decrease) in cash & Cash Equivalents	0.71	3.39	2.25	19.35	7.42	15.79	31.19
Cash & Bank Balances (Opening)	0.40	0.89	2.21	4.46	23.81	31.23	47.01
<b>Cash &amp; Bank Balances (Closing)</b>	<b>0.89</b>	<b>2.21</b>	<b>4.46</b>	<b>23.81</b>	<b>31.23</b>	<b>47.01</b>	<b>78.20</b>

\* Figures for FY 2008 are for 15 months. Year ended changed from March to June

Source: Nirmal Bang Research

**Ratio Analysis**

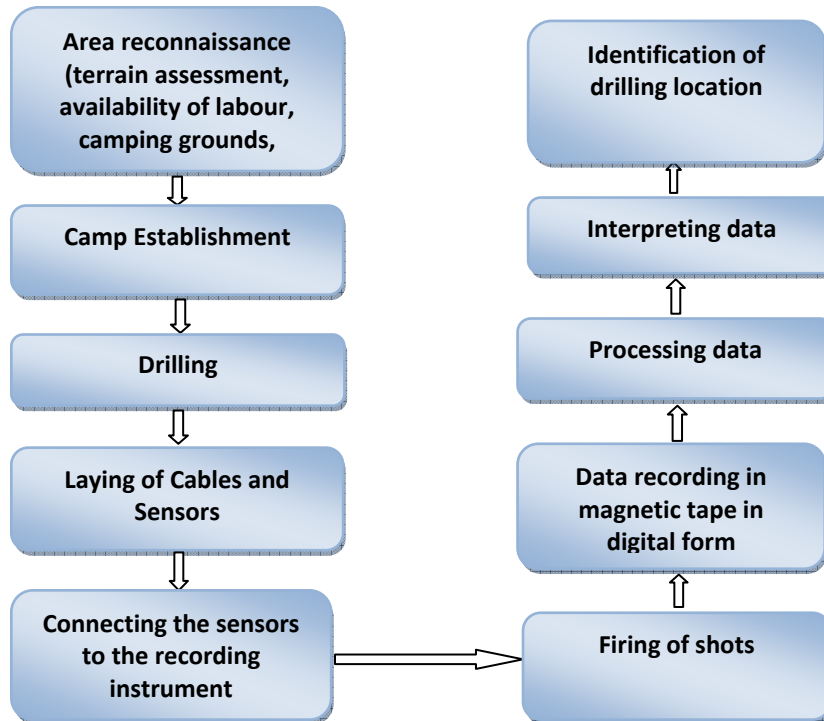
Particulars (Rs. Cr.)	FY-06	FY-07	FY-08E*	FY-09E	FY-10E	FY-11E	FY-12E
<b>Per Share Data</b>							
EPS (Rs) (Basic)	1.16	7.26	7.73	12.91	19.67	28.86	41.78
EPS (Rs) (Diluted)	1.16	7.26	6.59	12.91	19.67	28.86	41.78
CEPS (Rs)	1.79	8.20	8.86	15.47	23.76	33.95	47.87
Book Value (Rs)	13.91	21.87	40.20	73.42	93.09	121.95	163.73
<b>Profitability Ratios (%)</b>							
EBITDA Margin	14.9%	31.6%	38.2%	41.5%	42.4%	43.4%	43.9%
Net profit Margin	5.9%	18.4%	21.8%	23.7%	24.4%	25.5%	26.4%
ROE	8.3%	33.2%	19.2%	17.6%	21.1%	23.7%	25.5%
ROCE	17.1%	83.8%	35.1%	31.0%	38.4%	43.8%	48.0%
<b>Valuation Matrix</b>							
PE (x)	141.48	22.58	21.22	12.70	8.34	5.68	3.93
P/BV	11.79	7.50	4.08	2.23	1.76	1.34	1.00
EV/EBIDTA (x)	56.52	13.35	12.44	6.84	4.38	2.86	1.73
EV/Sales (x)	8.41	4.22	4.75	2.84	1.86	1.24	0.76
Mcap/Sales (x)	15.86	6.00	4.63	1.97	1.33	0.95	0.68
<b>Leverage Ratios</b>							
Debt/Equity	0.23	0.24	0.21	0.08	0.07	0.05	0.04
Interest coverage	5.41	16.18	14.51	26.06	37.21	51.54	70.76

\* Figures for FY 2008 are annualised

Source: Nirmal Bang Research

## Appendix: Seismic Survey

Service Flow Chart of AOSL



### ▪ Geological survey

The exploration typically begins with geologists examining the surface structure of the earth to determine possible petroleum or gas deposits. By surveying and mapping the surface and sub-surface characteristics of a certain area, geologists can extrapolate which areas are most likely to contain petroleum or natural gas reservoirs. Once a location is marked as a possible reserve, tests are carried out leading to a detailed study for enhanced potential.

### ▪ Seismic Survey

Seismic studies are based on measuring sound velocity travelling through rocks. Seismic surveys throw up useful representations of the earth's sub-structure like an underground geologic map. The data helps determine formations, depths and probable soil compositions, including the identification and location of structures that may potentially hold oil sands. Thereafter drilling is carried out to determine what exactly is located in those structures.

▪ **Onshore Seismology**

The use of seismology for exploring onshore areas involves the artificial creation of seismic waves, the reflection of which are then picked up by sensitive geophone embedded in the ground. The seismic waves are reflected at different layers of the earth to be picked up by the geophones on the surface and relayed to a seismic recording truck to be interpreted and logged. The sound waves are created through careful planning and small dynamite explosions. Geophones were used to catch the wave for interpretation by geophysicists, geologists and petroleum engineers.

▪ **Data processing and interpretation in a seismic survey**

The collected data is sent to seismic processors for analysis. The processors use high-capacity and high speed computers to convert the raw field data into digital format, which can be read by special presentation and interpretation programmes and software. The processed seismic data is then fed into software programmes that produce vertical and horizontal slice views of the earth. Dynamic cube views are formed by combining the 2D and 3D slices. A 4D capability allows the slices to be set in motion to view change over time.

▪ **2D seismic imaging**

Geophysicists use data collected from seismic exploration activities to develop a cross sectional picture of the underground rock formations. The process is called 2D seismic imaging. They interpret the seismic data obtained from the field, taking the vibration recordings of seismograph and using them to develop a conceptual model of the composition and thickness of the various rock layers. This process is normally used to map the underground formations and to make estimates based on the geologic structures to determine where deposits may exist.

▪ **3D seismic imaging**

This technology is used to identify different rock layers and structures by calculating the intensity of the reflected sound waves and the time they take to travel through the rocks and back to the surface. Processing the data creates a 3D image of the layers and the location of these structures. This technology has been successful in raising the success rate of exploration efforts by up to 50%. The basic reflection concepts in 2D and 3D are the same but the implementation of 2D and 3D in acquisition is different, requiring an increase in the number of channels from 250 to 3,000. Due to an increase in the number of channels, the volume of incoming data is significantly higher, warranting a specialized onsite quality control and onsite processing for quality control. The number of channels per square Km (sq.km) is far higher in 3D at 2,500 than the number of

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channels per line km (LKM) at 250 only in 2D. This translates into a more concentrated data per block and precise information mapping. More statistical methods can be applied to a 3D technique across multiple parameters to provide quantitative interpretation. Due to these evident advantages, 3D is preferred over the 2D alternative. Although the cost of 3D data acquisition is higher than the 2D alternative, the benefits more than counter the increased survey by reducing the dry holes. This means that while client companies need to pay more for 3D mapping. They are well placed to recover this incremental cost through a reduced number of dry holes, accelerating development.

- **4D seismic imaging**

One of the latest breakthroughs in seismic exploration and modeling of underground rock formations has been the introduction of 4D seismic imaging. This is an extension of the 3D imaging technology. Instead of achieving a simple static image of the underground in 4D imaging, the changes in structures and properties of underground formations are observed over time.

**NOTE**

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