



## MISSION STATEMENT

**Krod Energy Resources Ltd** is a surveying and civil engineering company. We specialize in providing quality expertise engineering surveying and civil engineering service to our clients without compromising set standards, achieving our goals efficiently, whilst maintaining the highest level of quality and client service.

Our intention is to be a major player and stake holder in the downstream sector of Oil, gas and construction industry by 2020 when Nigeria will be a global economic power. With the present local content policy of the federal government, our desire is to provide quality and competent man power through constant training and education of our personnel in modern surveying, engineering and Geospatial data management skill.

The success of our goal is will be directly influenced by our dedication to always improve the quality and service in every aspect of our operation.

**KROD ENERGY RESOURCES LIMITED:** is an indigenous company, was incorporated in Nigeria in 2012 with RC No. 1066563, with a vision to be a leading name in marketing and efficient service delivery in the oil and gas industry. Our main aim is to exploit technology as much as possible through well positioned and engineered time of incorporation. We invest our financial and technical resources in the development of high performance product and provide services that are of international standards, paying attention to the finest details of health, safety and environmental best practices.

**Krod Energy Resources Ltd** provides the platform for value addition to the Nigerian economy, through the deliberate utilization of Nigerian human and material resources and services. The vision of this company is in consonance with that of the Federal Government of Nigeria – To develop in-country capacity and indigenous capabilities of international standard to bridge the gap between business needs and local capabilities.

**Krod Energy Resources Ltd** technical capability is geared towards meeting the customers' needs in the Oil and Gas Industry while meeting environmental regulations requirements. Krod Energy Resources Ltd maintains a full staff of qualified Personnel in various disciplines, Design/Construction Engineers, Maintenance, Estimators, technical and commission service personnel and support staff to ensure the highest level of service from a single fully integrated resource base.

### Our Reputation

Our reputation is based on our capability to conceptualize, plan, design, construct and maintain a variety of projects to the satisfaction of our clients. It is also based on our ability to mobilize and start the required project in Nigeria in a record time supported by the commitment and strength of our personnel. To achieve our objective of customer satisfaction, Krod Energy Resources invests much on training of employees and maintenance of our equipment as well as promoting a conducive work environment for its personnel.

## STATEMENT POLICY

**Krod Energy Resources Ltd** is a dynamic registered surveying and Engineering Company in the Offshore Oil and Gas industry. To support our growing company and business, we have designed and operate an integrated quality management system for all our operations.

We are committed to providing our clients with a high quality service that not only meets our contractual requirements but add value to their projects, in a safe, cost effective and professional manner. Accordingly, we are committed to work with the following objectives.

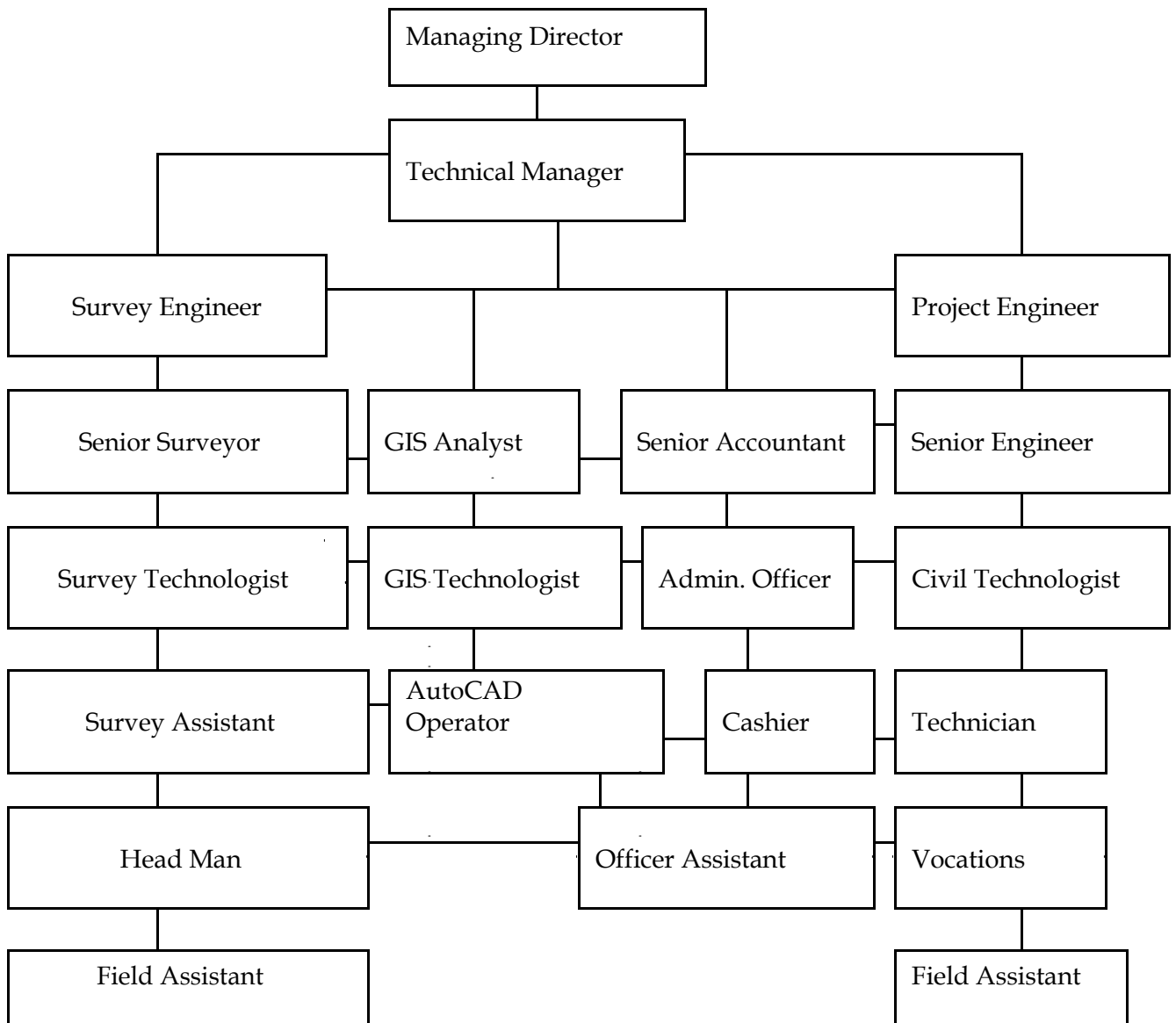
- ☐ To provide unrivalled surveying and engineering services to our clients, while maintaining a high professional standard.
- ☐ Continually improving on our techniques, staff and use modern equipment in meeting our clients' demands.
- ☐ To work within the stipulated laws of our country while observing all labour related issues.
- ☐ We always strive to contribute to the development of our host communities through employment of qualified personnel and offering opportunity for self development.
- ☐ To protect our environment, conserve the natural fauna and flora, while keeping a minimal damage to the vegetation.
- ☐ Aspiring to be a major surveying and engineering firm by 2020 when Nigeria will be a major economic power, contributing to the development of the downstream oil sector.

To achieve this laid down policies, we have put in place an organized management system to facilitate improvements and monitor adherence to these policies.

Kelvin Akaduchi Osilonya

Managing Director

COMPANY STRUCTURE AND  
ORGANIZATION



## SURVEYING

With our vast years of surveying and engineering knowledge and experience, we provide the following services but not limited to. Considering the importance of surveying as a technical profession in the engineering sector, we provide expert surveying in engineering, civil, hydrograph, GIS and Data base management.

We carry out various orders of traversing depending on clients' requirement to produce plans and maps using modern state of the art precise survey equipment with qualified personnel. In line with this, we are experienced in;

- **Topographic survey**



Using conventional survey method encompassing traversing, levelling and GPS control extension; we can provide 3-D topographic maps/ plans to meet our clients' requirement. We provide topographic maps depicting natural and made features in xyz format for all engineering and planning purpose.

- **Preliminary Investigation (P.I.) survey**

We carry out preliminary investigation survey for routes, pipe line, power lines and blue peg establishment for oil well locations.

- **Full Preparation survey**

Based on our experience in surveying, we undertake survey of full preparation survey for pipe line route, gas lines, delivery lines and oil blocks

- **As – built survey**

This type of survey involves showing actual position of man – made features as against the original design. These features include buildings, engineering structures, tanks, piles foundation positions. As the name implies, we actually show objects as the built on the ground.

- **Cadastral survey**

We specialize in cadastral survey for the purpose of land demarcation to show ownership, we also Undertake layout surveys, subdivision of parcel of land and additional acquisition survey of estate.

## GPS

Using Global Positioning System GPS and DGPS, we can establish monuments for precise surveying, position-fixing, control establishment, navigation and detail surveying.

To attain this, we employ GPS signals satellite from the orbit in collaboration with user segment equipment consisting of an antenna and receiver. Depending on our customer's requirement, we have the capability of giving coordinates at any point on the earth's surface to an accuracy of 3 meters to relative position of within a few millimetres.

## ENGINEERING SURVEY



We have the skill, equipment and personnel to provide the under listed unalloyed survey engineering services;

### ☐ **Setting out / Pipe Line Surveys**

Using total station, we have the skill to set out any structure based on coordinates or alignment. We versed in setting out of curves, foundations and piles positions for piling purpose.

Based on client requirement, we offer setting out of civil structures, bridge piers, high precision positioning for heavy machineries, bolt positioning for equipment base and other pre- fabricated installations.





### ☐ **Spirit Levelling for height determination and gradients**

With modern heighten equipment such as automatic and digital levels heights of any position on the earth surface can be determined by our surveyors relative to a datum. These elevations can be used by our clients for various engineering purpose and the final result produced as a profile or in longitudinal format.

### ☐ **Calculation of earth work volume**

Our company has the ability to calculate earth work volume for cuts, fills and earth haul works, and we employ elevation differences to arrive at the required volume of any earth work for costing and volume determination. We can also provide areas of any structure with irregular boundary. In sand filling projects, our surveyors can calculate to the nearest accuracy volume of earth.

### ☐ **Intelligent Pig survey i.e. underground pipe detection**

We have in our stock magnometer, i.e. pipe detector which can be employed to detect underground metals such as pipe route, buried cables and gas line. We provide the service for our clients to detect and map out underground features during construction and laying of new pipe lines. This service can be extended to depict existing pipe line routes, underground cables and buried metal debris.

### ☐ **Subsidence Monitoring Survey**

This service covers subsidence monitoring of all structural settlement using geodetic precise level. We have the skill to show movement/ settlement of tanks, dams, pile foundations, bridges and existing civil structures. We also use this same technique in deformation survey of defective civil structures, verticality of erect structures and tilt determination in tanks etc.

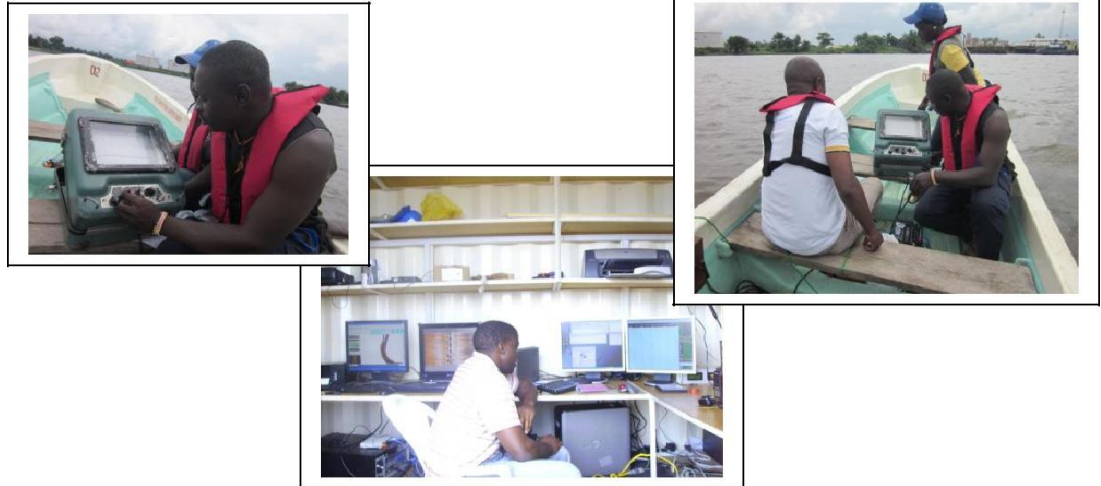
### ☐ **Pile Foundation Positioning And Monitoring**



In places where it is required to drive piles for foundation and other engineering purpose, we can position the piles to within a few millimetres accuracy. This feat can be achieved using total station with given coordinates to set out this position and we also monitor the piles for verticality during piling. We also provide survey service for shore protection piling and pile sheet monitoring.

### Hydro graphic Surveying

This service conventionally covers survey work for projects in civil engineering, adjoining bays, harbours, lakes, creeks, rivers, ocean, rig move and positioning and platform height determination. Based on our skills and man power, we provide the following hydro graphic services;



#### ☐ Pre and post dredging survey

In pre or post dredging operations, our company provides pre- dredging survey to determine the actual depth of the river/sea bed before dredging work commences. We also determine and carve out the area for spoil dump, position of water discharge box and direction of water flow. We also compute the volume of dredge spoils, post dredge water depth using modern equipments like Hydro track echo sounder in connection with GPS and DGPS. Using bathymetric sounding, we can produce charts showing river and sea beds depths for the purpose of volume computation and other works as our client may require.



- **Measurement of tides for coastal and shore protection works, jetties and dredging purposes.**

With the aid of water flow meter, velocity of tides and river flow can be established by our hydrographic surveyors. This knowledge also covers measurement of quantity of water flow and flow rate of water body for the purpose of harbour works, shore protection and construction on jetties. We can also install self reducing tide gauge and monitor tides for navigational and bathymetric purpose.

- **Sea bed survey and sea bed pipe line route survey.**

Using Side Scan Sonar (towing fish), magnometer and DGPS, we can carry out survey of seabed to show pipe line route, lost anchors, sea debris and wrecks on the sea floor. This advance and highly skilled survey is carried out on board a survey vessel.



- **Off shores positioning using DGPS for rig move, buoys, anchor, platforms and Rig positioning.**

We carry out positioning of Rigs, buoys, anchors, moles, platforms, oil well jackets etc. using DGPS and intersection method. We can attain high positioning accuracy depending on our clients demand and purpose of the job.





## **Geographic Information System (G.I.S.)**

We have an information managing system that is computer based, for organizing spatial related data so that it can be analysed, displayed and stored in a digital format. We employ qualified personnel with training in the field of GIS and AUTOCAD and they are skilled in the use of modern GIS tools is data transformation, presentation and analysis.

We present our data in;

- ☐ **AUTOCAD format, pdf, dgm**
- ☐ **Micro station**
- ☐ **ArcGIS**
- ☐ **Arc Info**
- ☐ **Arc view**
- ☐ **DTM (Digital Terrain Model)**
- ☐ **WGS 84**
- ☐ **National grid (MINNA grid)**
- ☐ **Conversion of coordinates from WGS 84 to MINNA user grid**
- ☐ **Data Base Management System.**
- ☐ **Map projection and Transformation**

## **Quality Control and Analysis.**

We provide quality control surveying service for project supervision, making survey procedures are followed and quality adhered to during any project. We add value to client's requirement through analysis and strict supervision in compliance with clients' specification, from start to end of the project.

## **Equipment and Personnel Hire**



We supply, lease survey equipments and Personnel;

- ☐ **Total stations**
- ☐ **Laser levels**
- ☐ **Digital levels; Leica and Wild**
- ☐ **Digital Theodolites**
- ☐ **Electro- Magnetic Distance measurement (E.D.M.)**

- ❑ **Echo sounder ; Raytheon and Hydrotrack**
- ❑ **Global Positioning System (GPS.) Trimble, South Instrument and Leica**
- ❑ **Surveyors; Registered, Survey Engineer, Hydrographers, Technologist and technicians**

### **CIVIL ENGINEERING WORK.**



We also specialize in civil engineering projects; we offer the following services;

- ❑ **Civil Construction**
- ❑ **Sand Padding**
- ❑ **Renovation work**
- ❑ **Road design**
- ❑ **Project planning and supervision**
- ❑ **Schematic plan interpretation**

## JOBS EXPERIENCE (NOT LIMITED TO)

<u>Project</u>	<u>Client</u>	<u>Year</u>
Geosite Survey (TOPW)	Preliminary Investigation (P.I) Survey, Pipeline Survey	1991
Surveying and Software Nig. Ltd., Warri {Chevron}	Quality Control Surveys	1993
Companie Generale De Geophyque (CCG)	3d Seismic Survey Data Acquisition on oml 32 for Shell Petroleum Dev. Company oml 63 for Nigeria.	1996-2001
Construction Kaiser Ltd.	Construction of gas turbine. Determination and setting out all relevant position and structures such as manhole, transformer, duct banks, CCB etc. Determine the level of excavation, blinding casting finished level.	2000-2002
Adeyemi Fajobi & Co.	Setting out, leveling and route survey of the proposed 4 <sup>th</sup> Main Express Road (Lagos)	2003-2005
Germen Nigeria Ltd.	Pipeline as-built survey (Chevron Texaco)	2004-2006
Chevron	Upgrade of Abiteye Drainage System (A&B)	2006-2007
Jemtech Nigeria Ltd.	Setting out of pipe position at Dibi Flow Station.	2007
Vicello Nig. Ltd	EGPL- 3 Project, construction of foundation and setting out (Chevron Escravos)	2008-2009
ABT Nigeria Ltd.	Setting out of buildings and plots at Okerenkoko layout plan	2009-2010
Jemtech Global Eng. Service Ltd.	Setting out of pipe position/ pipe line, leveling, construction of foundation of ABCD-2 and PPD-2, Structural/ piping survey (Chevron Escravos Gas Plant)	2010-2012

<b>FENOG NIG LTD</b>	<b>Setting out of pipe position and monitoring of 16" pig receiver, Escravos gas plant EGP Train 16" gas plant bypass pile location/ Abiteye esravos pipe line. (Chevron Escravos).</b>	<b>Aug 2012-Dec 2012</b>
<b>PINSSYL NIG LTD. 2013</b>	<b>Setting out of piles position/ Piles Monitoring  And concrete slab / Krebs (Chevron Escravos Satellite Fire station).</b>	<b>Mar 2012- Jan</b>
<b>NATONY NIG LTD</b>	<b>Re-establishment of the C 2 Colum of the Shell enclosed flare. @ Shell Yokri flow Station.</b>	<b>Dec 2012- Jan 2013</b>
<b>FENOG NIG LTD</b>	<b>setting out cofferdam and Fibro Harmer piles Monitoring @ OB/OB Kwale/River State River (River Niger) for the renovation of the Broken Pipe line of AGIP Oil Company Ltd OB/OB.</b>	<b>March 2013</b>
<b>DEMACK NIG LTD</b>	<b>Reparing of Chevron pipeline @ Alero</b>	<b>March 2013</b>
<b>BABLINK RESOURCESS NIG LTD. Onshore Asset Gas Management Project, June 2013-July 2013 Olero / Dibi Creek Restraining/Mourning Pilling job at North Compressor Station. (CNL)</b>		
<b>BABLINKRESOURCES NIG LTD. P.i survey,full preparation survey,topographical survey of The epcc of owa -Aladinma to Ogharefe pipeline 20km.(PAN OCEAN R.O.W) Jan 2013- Till Date</b>		

