

# PIPELINE ROU MONITORING

THE FUTURE OF

### Comprehensive Surveillance and Monitoring through Very High-Resolution Satellite Imagery and AI Analytics



### SPACEAEYE OFFERINGS

SpaceAeye addresses the critical challenges in pipeline ROU monitoring with advanced and effective solutions :



### GEOSPATIAL

- Unauthorized Encroachment Detection: Continuous surveillance to identify unauthorized activities within the pipelines' ROU
- Damage Monitoring & Alerts due to thirdparty constructions, soil erosion, heavy rain, floods, creek area effects, muddy land, and riverbed movement
- **Pilferage Prevention:** Monitors, alerts, and predicts suspicious activities beyond ROU up to even 1 km (or more) within change observation area (COA) with AI contextual analytics

### GEOSPECTRAL

#### GEOHAZARD

- **Oil and Gas Leakage Monitoring** using high-resolution hyperspectral images & analysis
- Detecting and Alerting Earth Movements and Land Deformation using In-SAR interferometry for precise measurements and monitoring of land deformations & landslides





#### Conventional pipeline ROU monitoring (Helicopter, Drone Surveys, etc.) have limitations:

- Restricted by flight regulations, weather, terrain conditions and like
- Limited coverage per day
- Change detection & identification is subjective
- High costs

## SPACEAEYE: REVOLUTIONIZING PIPELINE ROU MONITORING









### **Advanced Satellite Imaging**

• Over 500 satellites, providing high-resolution images Multi-spectral, microwave SAR, and hyperspectral images In-SAR interferometry for land deformation measurements

### Enhanced Patrolling and Reporting

- **Ground Patrolling:** Mobile apps with geo-tagged photos and navigation
- Secure 24\*7 Access: Continuous access for authorized personnel
- Accurate Reporting: Legitimate reports within hours

### **AI and Machine Learning**

- Automated change detection
- Scalable cloud-based infrastructure

### **Cost-Effective:**

• More economical than aerial, helicopter, and drone surveys

### Advantages

- All-Weather Imaging: Daily, weekly, or monthly acquisition
- Rapid Analysis: Al-powered change detection
  within hours
- Extensive Coverage: Monitors hundreds of kilometers of pipeline daily
- **Terrain Flexibility:** Unaffected by terrain or weather conditions
- **Comprehensive Monitoring:** Detects physical changes and leaks
- **Predictive Analytics:** Observes beyond the ROU for suspicious activities
- **Seamless Integration:** High-resolution geospatial intelligence for surveillance



### **TEAM STRENGTH**

Our team comprises industry experts with extensive backgrounds in leading space and technology institutions such as ISRO, NASA, and IITs. Our experts hold patents for innovative oil and gas monitoring solutions, ensuring that SpaceAeye leverages the best minds and cutting-edge technology.



SpaceAeye's unparalleled

Accuracy, Efficiency, and Reliability



SpaceAeye.ai



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