



Hydrocarbon Resources Development Co (P) Ltd

in association with Well Flow Drilling Services

Contact :

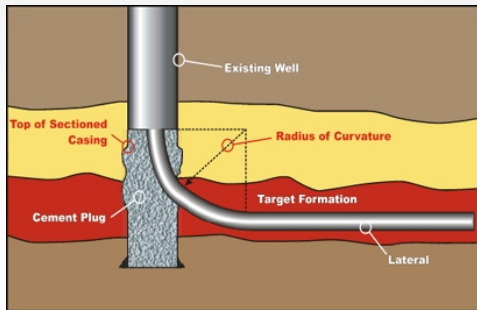
4123, D-Wing, Oberoi Garden Estates,
Chandivalli, Andheri (East),
Mumbai - 400072

Phone: 022 28470971

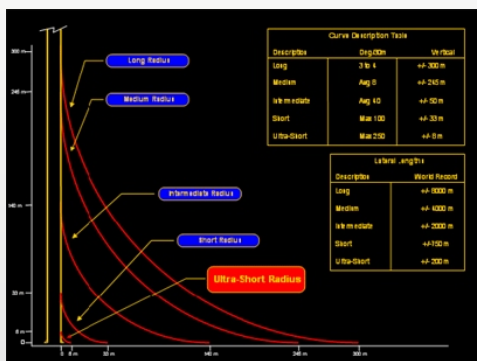
Fax: : 022 28470232

E-mail : contact@hrd-company.com

Web : www.hrd-company.com

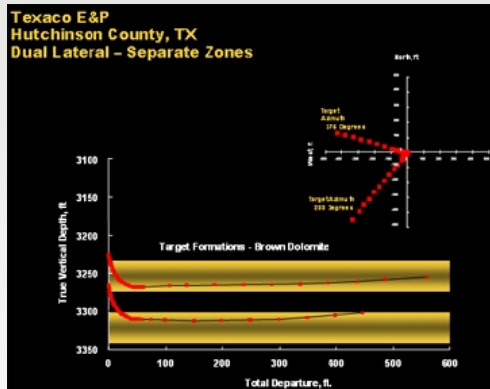


Increase Your Production...



An Inexpensive, Low Risk Technology...

A proven, reliable and cost-effective Ultrashort radius horizontal drilling technology...



USRD Value Adding Technology:

- ▶ Improve Ultimate Recovery
- ▶ Accelerate Production
- ▶ Expose Additional Reservoir in Tightly Spaced Fields
- ▶ Improve Production in Poor Producers
- ▶ Recover Left Behind Oil in Shut-in wells
- ▶ Decrease drilling costs by Avoiding Drilling Problems



USRD - Ultra Short Radius Drilling

What ?

By Definition :

Build up rate: 100 deg/30m to 250 deg/30m

Vertical Section of Curve :

Min : 8m Max : 33m

Where ?

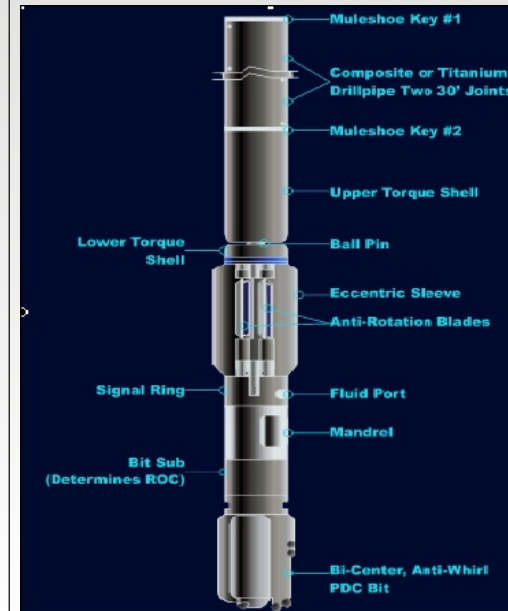
- ▶ Vertical wells in tightly spaced fields
- ▶ Vertical wells with water coning
- ▶ Channel sands with Surrounding shale
- ▶ Exploitation of Attic oil
- ▶ Exploitation of Low Producing Vertical Wells
- ▶ Exploitation of Slim Hole Vertical Wells

Advantages :

- ▶ Low cost to manufacture and operate
- ▶ Utilizes workover type rig, smaller pumps and circulating systems
- ▶ Kickoff points can usually be set below problematic shales
- ▶ Continuous pipe rotation:
 - ▶ Enhances hole cleaning
 - ▶ Improves penetration rates
 - ▶ Provides a smoother straighter well bore
- ▶ Reduces well path tortuosity

Capabilities of USRD System :

- ▶ Works inside 4 1/2" casing or larger
- ▶ Drill radii as short at 8m
- ▶ Drills 50 – 250 m laterals
- ▶ Drills multiple curves from vertical wellbore
- ▶ Compatible with any drilling medium



This Rotary Steerable Technology is used in many wells around the world. Some are mentioned below :

- ▶ Texaco E&P, Hutchinson & Panola County, TX
- ▶ Oxy USA, Seward County, KS
- ▶ Oklahoma Natural Gas, Creek County, OK
- ▶ Trueblood Resources, Beaver County, OK
- ▶ J.B. Drilling,, Leflore County, OK
- ▶ AMOCO, Teapot Dome, WY
- ▶ Chevron USA, Kern County, California
- ▶ Phillips Petroleum Company, Ector County, Texas
- ▶ Petroleum Development, OMAN
- ▶ ONGC, India