



# ENTREPOSE DRILLING

OVER A HALF CENTURY OF EXPERIENCE

# Entrepose Drilling is part of VINCI group, a global player in concessions and construction



Global player in concessions and construction, employing close to 185,000 people in some 100 countries for a global turnover of €38.5 billion in 2015



# We have built a compelling expertise over a long history of drilling, workover, P&A services through the world



# We build our development on 4 pillars



We are committed to delivering customized solutions capitalizing over a half century of experience, professional people, leading-edge technologies and uncompromising HSE standards

# Entrepose rig fleet allows us to support our clients in taking up today challenges up to 4500-5000 m depth

## Workover Rigs

## Conventional Double Drilling Rigs

## Super Single Hydraulic Rigs

SK 11

SK12

SK 7

Cabot  
200

Cabot  
500

Mogul  
42

Cabot  
750

Cabot  
900

IRI  
900

DUKE  
1000

MR  
8000

Barber  
DR24

HH  
102a

HH  
102b

HH  
220

HH  
300

Profondeur  
d'intervention

1 000

2 000

3 000

4 000

5 000

Hook Load

45 T

45 T

75 T

63 T

63 T

119 T

135 T

137 T

176 T

200 T

200 T

30 T

100 T

100 T

200 T

272 T

Drawworks

270 HP

270 HP

450 HP

326 HP

355 HP

445 HP

710 HP

800 HP

1000 HP

1000 HP

1000 HP

200 HP

575 HP

575 HP

1340 HP


1540 HP

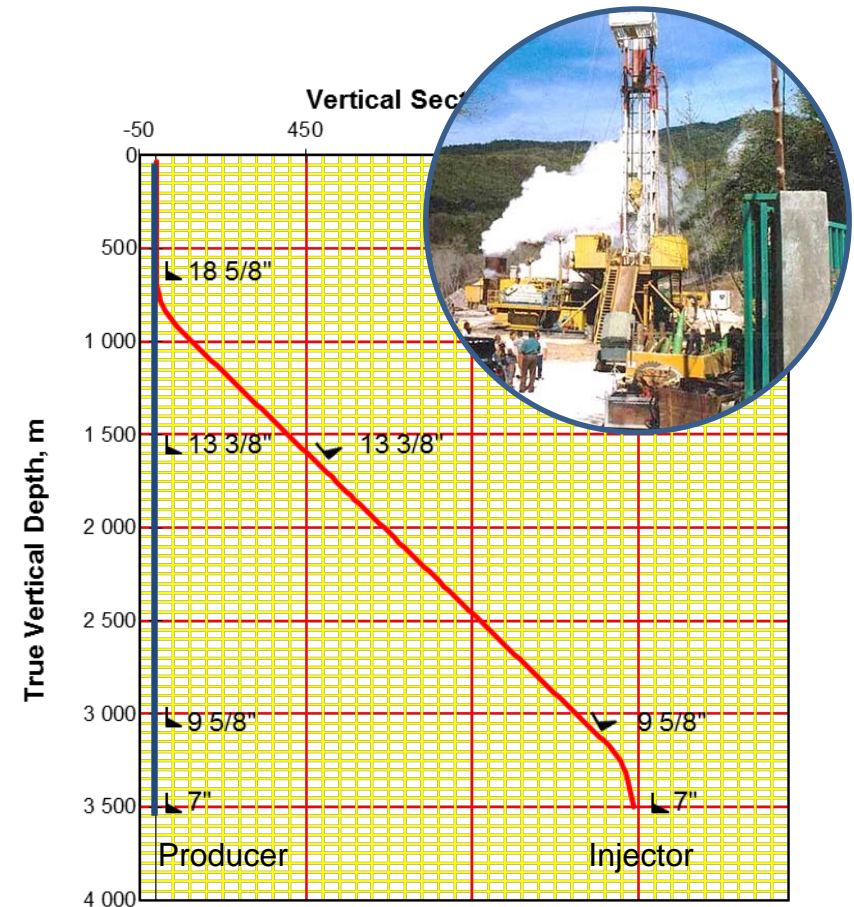


# In the field of geothermal energy, our clients benefits from one of the largest experience in Western Europe

## Deep Geothermal Drilling

- Dozens of geothermal projects carried out developing new well architectures and pump installation solutions
- Projects carried out both in remote areas or in urban environment
- over 280°C bottom hole temperature
- Dedicated equipment, drilling fluids cooling towers etc.
- Integrated services solutions from well design to well stimulation and production tests

 **over 280°C**  
**Bottom hole temperature**



# We capitalize on an unmatched knowhow in France to realize geothermal wells following state-of-the-art rules

## Recent key geothermal projects

- **CORIANCE** : production and injection wells in Ris-Orangis and in Blanc-Mesnil
- **SEMHACH** : casing fiber installation in 4 wells in Chevilly-Larue and l'Hay-les Roses (premiere in Europe)
- **DALKIA** : production and injection wells in Tremblay
- **COFELY** : production and injection wells in Villepinte
- **CORIANCE** : deep wells abandonment Blanc-Mesnil
- **DALKIA** : production and injection wells in Bagneux
- **IDEX** : heavy workover in Vigneux
- **Eau de Paris** : production and injection wells in Asnières
- **ÉCOGI** : high enthalpy well at 3600m in Rittershoffen
- **SEMHACH** : production and injection wells in Villejuif
- **SMIREC**: Injection well in La Courneuve
- **IDEX**: New doublet in Vigneux / Seine

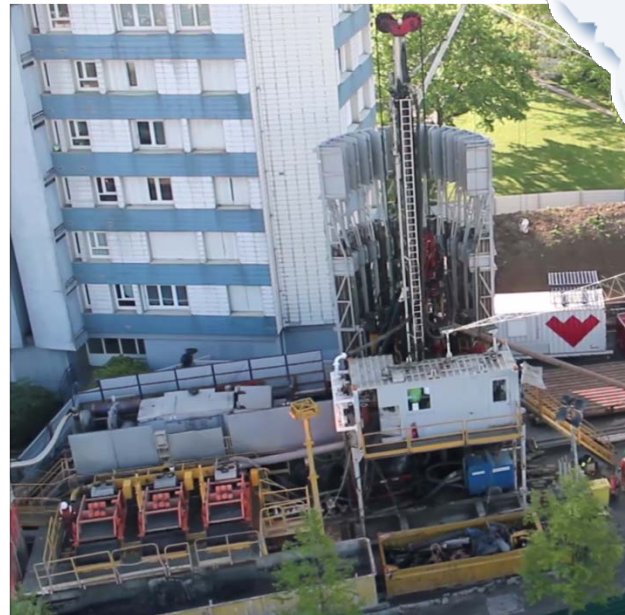
## Recent Drilling References

Ref.	Appareil	Client	Lieu	Puits	Profondeur	Déviations	Services Intégrés ou Forfait
1	MR 7000	BRGM	Bouillante (Guadeloupe)	BO-5	1198 m		SI
2	MR 7000	BRGM	Bouillante (Guadeloupe)	BO-6	1248 m		SI
3	MR 7000	BRGM	Bouillante (Guadeloupe)	BO-7	1400 m		SI
4	MAS 3000	OPAC 94	Orly (94)	Gory 5	1855 m	40°	F
5	MAS 3000	OPAC 94	Orly (94)	Gory 6	2107 m	40°	F
6	MAS 3000	SOGESUB	Sucy en Brie (94)	GSUC3	2150 m	40°	SI
7	MR 7000	CPCU	Paris 19e (75)	GPNE1	2100 m	40°	SI
8	MR 7000	CPCU	Paris 19e (75)	GPNE2	2100 m	40°	SI
9	MR 7000	ADP	Paray Vieille Poste (91)	GADP1	1950 m	40°	SI
10	MR 7000	ADP	Paray Vieille Poste (91)	GADP2	1918 m	40°	SI
11	MR 7000	GEOSTAR	Lognes (77)	GMV-1	2098 m	35°	SI
12	MR 7000	GEOSTAR	Lognes (77)	GMV-2	2048 m	35°	SI
13	MAS 3000	SMGC	Coulommiers (77)	GCO - 3	2083 m	35°	F
14	MAS 3000	SMGC	Coulommiers (77)	GCO - 4	2203 m	35°	F
15	HH102	DALKIA	Le Plessis Robinson (92)	LPR1	791 m	vertical	SI
16	HH103	DALKIA	Le Plessis Robinson (92)	LPR2	1039 m	30°	SI
17	MR 8000	EPCG	Chennevières S/Marne (94)	GCHM-3	2160 m	40°	SI
18	MR 8000	ÉCOGI	Rittershoffen (67)	GRT1	2499 m	vertical	SI
19	MR 8000	IDEX CGCU	Le Mée Sur Seine (77)	GLMS 3	2010 m	40°	F
20	MR 8000	IDEX CGCU	Le Mée Sur Seine (77)	GLMS 4	2010 m	40°	F
21	MR 8000	IDEX SGRM	Neuilly sur Marne (93)	NSM 1	2100 m	35°	SI
22	MR 8000	IDEX SGRM	Neuilly sur Marne (93)	NSM 2	2030 m	35°	SI
23	MR 8000	SEMACH	Villejuif (94)	GVIL 2	2305 m	40°	SI
24	MR 8000	SEMACH	Villejuif (94)	GVIL 1	2115 m	40°	SI
25	HH102b	Eau de Paris	Paris (75)	P2	755 m	17°	F
26	HH102b	Eau de Paris	Paris (75)	P1	760 m	18°	F
29	MR 8000	DALKIA	Bagneux (92)	GBA 2	1940 m	37°	SI
30	MR 8000	DALKIA	Bagneux (92)	GBA 1	1910 m	40°	SI
31	MR 8000	GEOPICTA	Villepinte (93)	GVIL-1	2100 m	40°	F
32	MR 8000	GEOPICTA	Villepinte (93)	GVIL-2	2100 m	40°	F
32	MR 8000	DALKIA	Tremblay (93)	GTR 2	1950 m	40°	SI
33	MR 8000	DALKIA	Tremblay (93)	GTR 1	1950 m	40°	SI
32	MR 8000	CORIANCE	Ris-Orangis	GR-03	2200 m	40°	F
34	MR 8000	CORIANCE	Blanc-Mesnil	GBMN4	2200 m	40°	F
35	MR 8000	CORIANCE	Blanc-Mesnil	GBMN3	2200 m	40°	F

# Our last generation rig fleet has allowed us to drill deep wells in urban environment

## Rig fleet advantages

- Modern rig fleet with low noise level and limited visual impact to drill in urban environment
- Compact footprint
- Flexible backyard configuration to adapt site constraints



## Paris area recent projects





# CONTACTS



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# APPENDIX 1

## Rig fleet highlights

# Our conventional rig fleet offers our clients a wide variety of solutions for drilling and workover operations

## ENTREPOSE DRILLING Fleet - Conventional Rigs



### MR 8000

Hook Load: 200 T  
Rated power: 1080 HP  
TDS: max torque 26 550 ft.lbs  
max rpm 180  
Mud pumps: 2 x 1000 HP  
Mud system: 200 m<sup>3</sup>  
Manifold: 3" 5000 psi  
BOP: 13 5/8" 3000 psi annular  
13 5/8" 3000 psi double



### SK 7

Hook Load: 95 T  
Rated power: 368 HP  
Mud pump: 420 HP  
Mud system: 90 m<sup>3</sup>  
Hydril GK or GKM and Trojan  
7-1/16"-PSI (annular and double  
rams)



### SK 12

Hook Load: 73 T  
Rated power: 350 HP  
Mud pump: 360 HP  
Mud system: 90 m<sup>3</sup>  
Hydril GK or GKM and  
Trojan 7-1/16"-3000 PSI



### Cabot 750

Hook Load: 135 T  
Rated power: 710 HP  
Mud pumps: 2 x 750 HP  
Mud system: 154 m<sup>3</sup>  
Manifold: 3" 5000 psi  
BOP: 13 5/8" 3000 psi annular  
11" 5000 psi annular  
13 5/8" 3000 psi double  
11" 5000 psi double



### SK 11

Hook Load: 45 T  
Rated power: 225 HP  
Mud pump: 360 HP  
Mud systems: 70 m<sup>3</sup>  
BOP: from 4 1/16" to 13 3/8"

If required, we can mobilize drilling rigs from our sister company UGS to meet our clients need

## UGS<sup>1</sup> Fleet [ENTREPOSE DRILLING sister company]



### Crown Duke 1000 SD

Hook Load: 200 T  
Rated power: 1000 HP  
TDS: max torque 21 000 ft.lbs  
max rpm 170  
Mud pumps: 2 x 1000 HP  
Mud system: 200 m<sup>3</sup>  
Manifold: 3" 5000 psi  
Modular BOP stack<sup>2</sup>



### Mogul 42

Hook Load: 119 T  
Rated power: 445 HP  
Mud pump: 1 x 1000 HP  
Mud system: 120 m<sup>3</sup>  
Manifold: 3" 3000 psi  
Modular BOP stack<sup>2</sup>



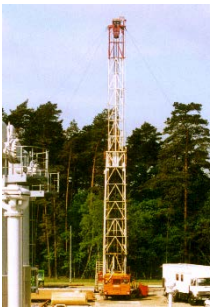
### IRI Cabot 900

Hook Load: 176 T  
Rated power: 1000 HP  
Mud pumps : 2 x 1000 HP  
Mud system : 180 m<sup>3</sup>  
Manifold: 3" 5000 psi  
Modular BOP stack<sup>2</sup>



### Cabot Franks 200

Hook Load: 63 T  
Rated power: 326 HP  
Mud pumps: 326 HP  
Mud system: 54 m<sup>3</sup>  
Manifold: 3" 3000 psi  
Modular BOP stack<sup>2</sup>



### Cabot Franks 500

Hook Load: 63 T  
Rated power: 355 HP  
Mud pump: 570 HP  
Mud system: 90 m<sup>3</sup>  
Manifold: 3" 3000 psi  
Modular BOP stack<sup>2</sup>



### Cabot Franks 900

Hook Load: 137 T  
Rated power: 800 HP  
Mud pump: 2 x 1000 HP  
Mud systems: 180 m<sup>3</sup>  
BOP: from 4 1/16" to 13 3/8"  
Manifold: 3" 5000 psi  
Modular BOP stack<sup>2</sup>

Note 1: UGS is a subsidiary of Geostock, ENTREPOSE branch specialized in underground storage

Note 2: available BOP sizes:

Annular BOPs: 7 1/16" – 13 5/8" 5000 psi / 7 1/16" – 13 5/8" 3000 psi / 21 1/4" 2000 psi

Double BOPs: 7 1/16" – 13 5/8" 5000 psi / 7 1/16" – 20 3/4" 3000 psi

# Aside from conventional rigs, we have developed a unique expertise in operating automated modern hydraulic rigs

## ENTREPOSE DRILLING Fleet - Hydraulic Rigs



### HH300

Hook Load: 272 T  
HPU: 1540 HP  
TDS: max torque 38500 ft.lbs  
max rpm 200  
Mud pumps: 2 x 1600 HP  
Mud system: 210 m<sup>3</sup>  
Manifold: 3" 5000 psi  
BOP: 13 5/8" 5000 psi annular  
13 5/8" 5000 psi double



### HH102a

Hook Load: 100 T  
HPU: 575 HP  
TDS: max torque 26400 ft.lbs  
max rpm 154  
Mud pumps: 2 x 600 HP  
Mud system: 100 m<sup>3</sup>  
Manifold: 2" 5000 psi  
BOP: 11" 3000 psi annular  
11" 3000 psi double



### HH220

Hook Load: 200 T  
HPU: 1340 HP  
TDS: max torque 26500 ft.lbs  
max rpm 200  
Mud pumps: 2 x 1000 HP  
Mud system: 210 m<sup>3</sup>  
Manifold: 3" 5000 psi  
Diverter: 21 1/4" w/ 10" lines  
BOP: 13 5/8" 5000 psi annular  
13 5/8" 5000 psi double



### HH102b

Hook Load: 100 T  
HPU: 575 HP  
TDS: max torque 26400 ft.lbs  
max rpm 154  
Mud pumps: 2 x 600 HP  
Mud system: 100 m<sup>3</sup>  
Manifold: 2" 5000 psi  
BOP: 13 5/8" 3000 psi annular  
13 5/8" 3000 psi double



# APPENDIX 2

## QHSE management highlights

# A comprehensive framework supports people development and safety culture instillation in the company DNA



# HSE is our key priority and strong efforts are made to embed the HSE culture within the organization

## Entrepose Drilling HSE backbone

### Communication



Communicated on all sites, theme of regular safety meetings

### Awareness



HSE passport distributed to all employees to support HSE awareness

### Formal Training



Training by theme (PPE, working at height, lifting operations, confined spaces etc ...)

# We heavily invest in training as we are convinced that safety and environmental protection depend on competencies

- ✓ Class time and rig time to demonstrate competence before being assigned to a given position
- ✓ Training on cyber-simulators that replicate actual drilling conditions for Drillers and Assistant Drillers
- ✓ Mentoring system for new employees
- ✓ Record of all employee trainings and additional training identification with rig management whenever required



Drill Floor operations training on cyber-simulator

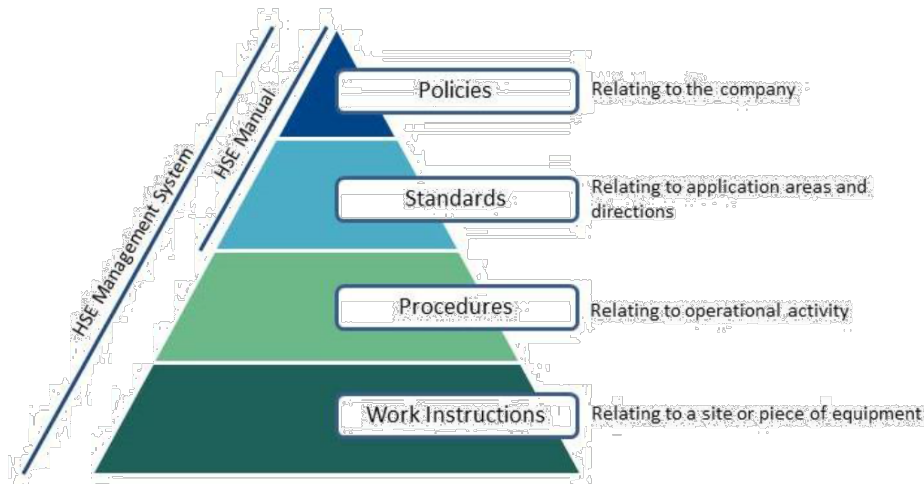
IWCF systematic certification of rig senior crews members (Senior Toolpusher, Night Toolpusher, Driller, Assistant Driller)



Regular staff trainings at French Institute of Petroleum

# The approach is supported by a documented referential in terms of procedures, risk analysis and manuals

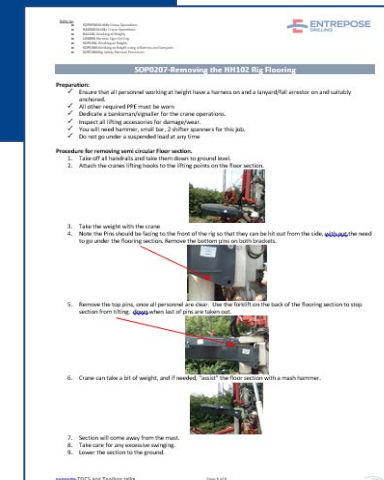
## Supporting documentation



**HSE manual:**  
HSE policies and standards



**Risk register:** Systematic analysis of operational risks with standard mitigating actions



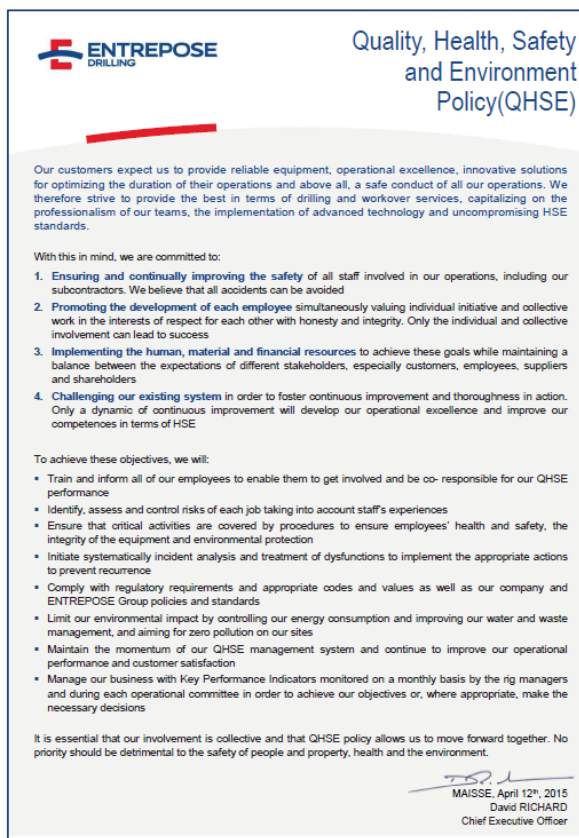
**Work Instruction:**  
Relating to a site or an equipment



# Entrepose Drilling Quality Management System is certified as per ISO 9001, ISO 14001 and OSHAS 18001



## Quality management system





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find more on  
[www.entrepose-drilling.com](http://www.entrepose-drilling.com)

