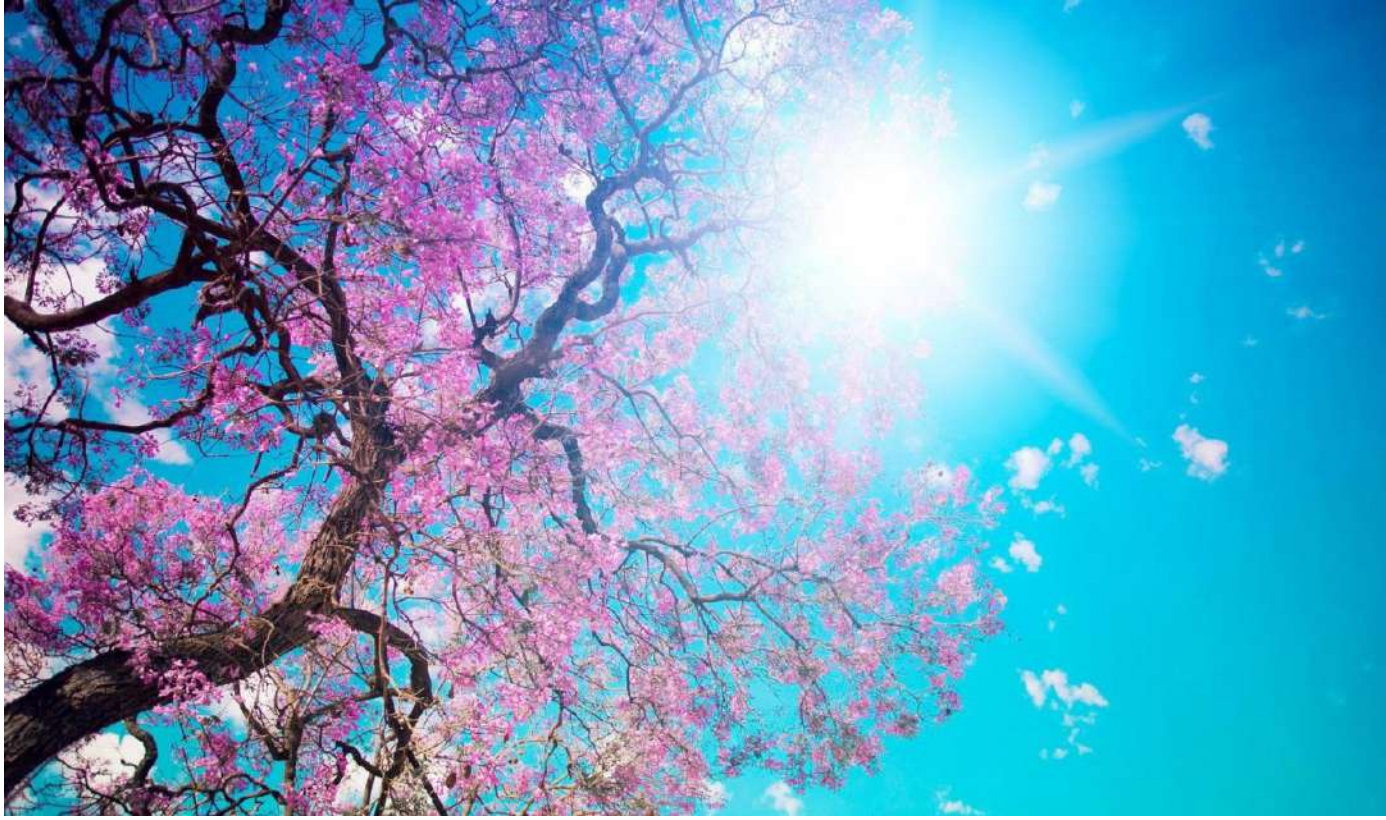
Well Services of Iran
(Schlumberger Methods)



ISSUE 10

February 2021

Insight

NEW YEAR:

In a year unlike any other, we would like to thank our colleagues, partners, suppliers, and clients for pulling together as a business community. 1399 has taught us that every moment is an opportunity to learn something new and to thrive in a dynamic business environment.

While the situation is unpredictable, our business performance is on track for recovery. Last year we have continued to invest in our facilities to improve our value creation process and hopefully this year will see the introduction of new capacities and systems for facilitating systematic interaction with our partners and clients.

Nowrooz is about the celebration of new life and rejoicing in the birth of hope. We hope Nowrooz 1400 puts an end to a very difficult period and offers hope, prosperity and businesses flourish again.

We wish all of you the very best as we begin the new year of 1400.

WSI Board of Management

Out of Gas: The End of the Age of Oil

Author: David Goodstein

Science tells us that an oil crisis is inevitable. Why and when? And what will our future look like without our favorite fuel?

"Our rate of oil discovery has reached its peak and will never be exceeded; rather, it is certain to decline—perhaps rapidly—forever forward. Meanwhile, over the past century, we have developed lifestyles firmly rooted in the promise of an endless, cheap supply. In this book, David Goodstein, professor of physics at Caltech, explains the underlying scientific principles of the inevitable fossil fuel shortage we face. He outlines the drastic effects a fossil fuel shortage will bring down on us. And he shows that there is an important silver lining to the need to switch to other sources of energy, for when we have burned up all the available oil, the earth's climate will have moved toward a truly life-threatening state.

With its easy-to-grasp explanations of the science behind every aspect of our most urgent environmental policy decisions, Out of Gas is "a handbook for the future of civilization"

#1 Best Seller in Oil & Energy Industry, Amazon

Publication date: February 17, 2005

If you know a good book, please introduce it:

newsletter@wsi-oilfield.com

What's going on in WSI!

➢ WSI 2020 Business Review!

On February 2nd, board of directors, advisory committee along with operation and location managers gathered in Tehran office to review WSI's performance in 2020. Various parameters were evaluated including financial objectives and HSE culture. The marketing manager then reported WSI's success in securing the contracts in the past year and presented the future potentials in 2021. The meeting was followed by a discussion about each segment's requirements in terms of human resources, equipment and investment. At the end, board of directors announced the objectives for the next year. The managing director requested all personnel particularly the managers to plan accordingly and report any challenges in achieving the objectives in time.

➢ Congratulations to Wireline Logging Team!

Congratulations to WSI WL team on being awarded the Electrical Logging Services for South Pars Gas Field Development Phase 11 project.
Best wishes in your future endeavors. We are confident that you will continue performing greatly.

➢ PIA ISO 9001:2015 Official Surveillance Audit by QS, A Zurich Based International Certification Body!

PIA ISO 9001 surveillance audit is an annual assignment that is scheduled by QS on Sunday, March 7, 2021 for this year. In principle, it is to re-evaluate PIA qualification to renew the ISO 9001 certification that the company obtained last year.

The official audit will be performed department by department, and with the presence of all PIA process owners and department's managers. The audit will essentially target the previously identified and developed processes along with their corresponding procedures that were submitted to QS last year. QS Auditor(s) will be looking for information and records to verify compliancy to the approved, submitted, and implemented process procedures. As a licensee, PIA is obligated to follow procedures that are specific, achievable, and measurable to be able to identify deficiencies and abnormalities to mitigate and improve processes. Lack of compliancy to such requirements could lead to minor and/or major non-conformities.

In preparation for the official audit, S&M/QA department has performed a full internal audit within PIA to identify potential non-conformities within departments to endure compliancy to all ISO requirements and regulations, and to prevent potential failures during the audit. With the collaboration and dedication of all ISO team members, we believe PIA is confidently prepared to face the official audit to renew its ISO 9001 certification for another year.

GOOD NEWS

➢ Happy Birthday!

We would like to extend our congratulations and birthday wishes to the following colleagues for having birthdays in January, February and March. May this year be so much better than the last for you in every walk of life.

- Ali Nouraei (T)
- Keyvan Miladi (T)
- Sima Gharibi Varzaghani (T)
- Masumeh Kazemi (T)
- Mohsen Kordavani (A)
- Shahram Masrouri (A)
- Naser Shirouni (A)
- Hamid Heidari Ghoolanloo (A)
- Sheila Sharifi (A)
- Khalil Heidari Soodjani (A)
- Alireza Zangeneh (A)
- Saeid Khalilavi (A)
- Alborz BabaAhmadi Karimi (A)
- Bahram Kaviani (A)
- Mohammad Salamati (K)
- Danial Haeri Mehneh (K)
- Jafar Rabeeifar (K)
- Saeid Nikikahrizi (K)
- Ali Rahimi Moghadam (K)
- Hassan Soltani (K)
- Saghar Khatibi (K)
- Ali Kayed Abbasi (T)
- Faranak Asadi (T)
- Rasool Dadkhah Hosseini (K)
- Alireza Mohammadpour (K)
- Moosa Delshadi Gabrani (K)
- Babak Komayezi (K)
- Morteza Papir (K)
- Abbas Taheri (K)
- Hamid Reza Bagherchimeh (T)
- Shahrokh Soltani Solgani (T)
- Rostam Fazli Havadarag (T)
- Mahsa Ebrahim Bakhtiari (T)
- Mohammad Saki (T)
- Saeed Teimori (T)
- Behshad Azhdarian (T)
- Adel Eisa Asl (A)
- Mojahed Hamid (A)
- Taher Zergani (A)
- Ramin Rezaei (A)
- Farzad Sadeghpur (A)
- Mehdi Chaabavi Jafaripour (A)
- Mostafa Mortezapourkhedri (A)
- Alireza Karimipour (A)
- Saleh Sorkheh (A)
- Seyed Meisam Hoseininejad (A)
- Jalil Abbas Nejad (A)
- Poriya Ghanbarzad Abkenar (K)
- Jalil Samiey (K)
- Mohammad Taheri (K)
- Ali Jenadeleh (K)
- Hojatollah Jalali (K)
- Yaghoub Raeesi Mirshekar (K)
- Karim Soltani pour (K)
- Abbas Mirdadi Pour (K)
- Mokhtar Ekhlasi (K)
- Adnan Vaziri (K)
- Ali Ramezan Karim (K)
- Mohammad Ziaee (K)

"Excellent firms don't believe in excellence - only in constant improvement and constant change"

Tom Peters

➢ Congratulations for New Born Babies!

Dear Mahsan Hamoonnavard (T), Congratulations on your son's birth, Afran.

Dear Hassan Moharami (K), Congratulations on your daughter's birth, Maedeh.

So many happy and wonder-filled times ahead for you…

➢ Congratulations for Academic Achievements!

Dear Amin Harivandi (T), Congratulations on your MSc graduation and best wishes for your next adventure!

➢ New Colleagues Welcome!

Welcome to WSI! We are thrilled to have you on our team. You're going to be a valuable asset to our company and we can't wait to see all that you accomplish.

- Erfan Hosseini (T)
- Amin Amin (T)
- Shirin Ebrahimi (T)
- Fatemeh Mohseni (T)
- Behshad Azhdarian (T)
- Yasamin Karimi (K)
- Niloufar Mashak (A)
- Mehrnia Lak (A)
- Niloufar Bina (A)
- Seyyed Ehsan Mousavi (A)
- Seyyed Meisam Hosseininezhad (A)
- Ali Hajari (A)
- Mohammad Soufivand (A)
- Ali Armand (A)
- Mohsen Hashempour (A)
- Amir Mohammad Behvandi (A)

➢ Congratulations to Our Newly Couple!

Dear Mohammad Tajlili (K), May the love and happiness that you feel now never leave you and keep enlightening your life path through the years.

Live HSE!

➢ Ionizing radiation:

Ionizing radiation (ionizing radiation) consists of subatomic particles or electromagnetic waves that have sufficient energy to ionize atoms or molecules by detaching electrons from them.

➢ Occupational Exposure:

Occupationally exposed individuals are controlled within the regulatory framework of the country they work in, and in accordance with any local nuclear license constraints. These are usually based on the recommendations of the ICRP. The International Commission on Radiological Protection recommends limiting artificial irradiation. For occupational exposure, the limit is 50 mSv in a single year with a maximum of 100 mSv in a consecutive five-year period.

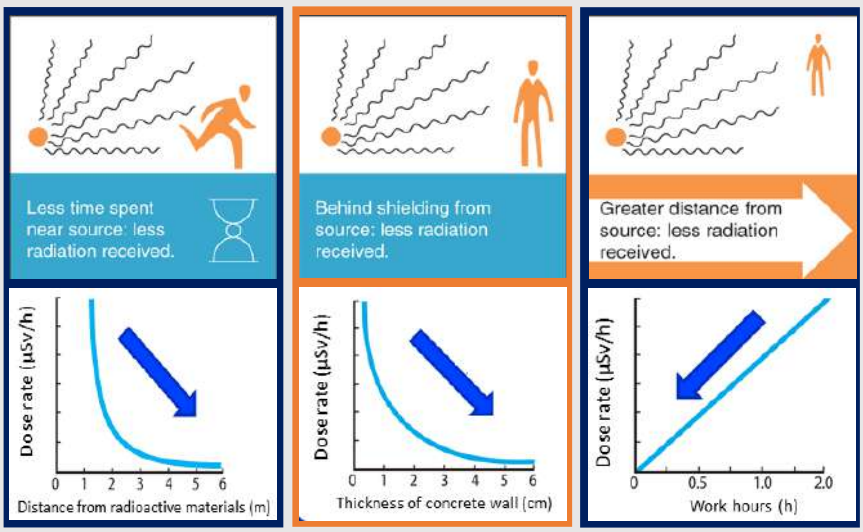
➢ Hazards:

Extreme doses of radiation to the whole body (around 10 sievert and above), received in a short period, cause so much damage to internal organs and tissues of the body that vital systems cease to function and death may result within days or weeks. Exposure to ionizing radiation causes cell damage to living tissue and in high acute doses will result in radiation burns and radiation sickness, and lower level doses over a protracted time can cause cancer.

➢ Ionizing Radiation Protection:

Biological protection lies in the improvement of nutrition and nonspecific mechanisms of improving the immune system as a whole. This for example achieved by increasing the intake of vitamins and antioxidants.

Physical protection against external exposure uses three main factors: distance, time and shielding.



Success Stories on WSI!

➢ SXE Emulsified acid:

SXE emulsified acid improves your matrix acidizing and acid fracturing treatments in high-temperature reservoirs. This viscous, highly retarded HCl system is designed to overcome acid penetration problems in reservoirs above 250°F [121°C].

Standard hydrochloric (HCl) acid reacts very rapidly in carbonate formations. The reaction is so rapid at high temperature that it is impossible for acid to penetrate, or wormhole, more than a few inches into the formation. As a result, the reservoir is not stimulated. SXE acid delivers deep, live-acid penetration by retarding the acid reaction.

This oil-external emulsion is formed with a 70:30 HCl-to-oil ratio, stabilized with an emulsifier. HCl concentrations ranging from 7.5% to 28% may be used in either a batch or continuous mix system.

Laboratory core flow test results showing branching wormhole created in a limestone core using SXE acid.

SXE acid is significantly retarded with respect to HCl. The retardation depends on temperature, acid concentration, flow regime (laminar, transitional, or turbulent) and type of rock (dolomite or limestone). Between 250 and 350°F [121 and 177°C] the HCl-limestone and HCl-dolomite reactions are mass-transfer controlled.

"Success is the sum of small efforts, repeated day-in and day-out."

Robert Collier

➢ Successful TCP Perforation in Land by WCP Team!

Providing a solution is one of the most important marketing flags of Well Services of Iran. Our customers are sometimes unable to receive a service with conventional methods due to various limitations.

In some land fields especially in highly deviated wells it is not possible to perform the perforation operation with wireline.

For such kind of wells, WCP segment offering TCP solution to our client to perforate the target zone and prepare the well for flowing.

After a long time, WCP segment performed two successful perforation with TCP method for NISOC and PGFK. This will be a good start and potential business opportunity for WSI to enter the land perforation market.