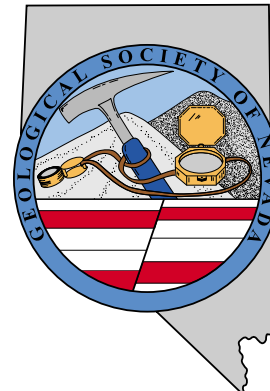


GSN NEWSLETTER



November 2004, Vol. 18, No. 9

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CALENDAR OF EVENTS

- ➔ **Nov. 10th Wednesday** GSN MEMBERSHIP MEETING: Reno Elks Lodge, Reno, NV. Speaker: R.W. Leonardson, "Back to Basics at Goldstrike." Social hour at 6 pm, dinner at 7 pm and talk at 8 pm. Contact Shannon Fitzpatrick for dinner reservations at 775/323-3500 or gsn@mines.unr.edu; deadline on Tuesday at 5 pm.
- Nov. 18th Thursday** SOUTHERN NEVADA CHAPTER MEETING: Room 102, Lily Fong Geoscience Building, UNLV, Las Vegas, NV. Speaker: Max Blanchard "Meteorite, Cosmic Dust & Their Parent Bodies." Social with food and drink at 5:30 pm; talk at 6:30 pm. Contact Melissa Hicks at 702/895-1162 or hicksm@unlv.nevada.edu.
- Nov. 18th Thursday** ELKO CHAPTER MEETING: Western Folklife Center, Elko, NV. Topic: Placer Dome's Getchell Mine. Social with food and drink at 6:00 pm; talk at 7:00 pm.
- Dec. 15th Wednesday** GSN MEMBERSHIP CHRISTMAS MEETING AND ROCK RAFFLE: Reno Elks Lodge, Reno, NV. Speaker: Representative Jim Gibbons, topic to be announced. Social hour at 6 pm, dinner at 7 pm and talk at 8 pm. This is a popular meeting, so please be sure to make your reservation for dinner ahead of time, the deadline is Tuesday, Dec. 14th at 5 pm. Contact Shannon Fitzpatrick at 775/323-3500 or gsn@mines.unr.edu.
- 2005**
- May 15th-18th** GSN SYMPOSIUM 2005: "Window to the World." John Ascuaga's Nugget, Reno, NV, USA. gsn symp@unr.edu, www.gsn2005.org

GSN Newsletter is published monthly except June and July

Geological Society of Nevada, PO Box 13375, Reno, NV 89507 USA, 775/323-3500, www.gsnv.org

FROM THE PRESIDENT

Dieter Krewedl, GSN President 2004-2005

October was a busy month for the GSN beginning with the Fall Field Trip along the central and southern Battle Mountain-Eureka Trend, which turned out to be both educational and enjoyable. The 76 participants were presented with great talks and visits to the Cortez and Eureka mining districts plus excellent presentations by exploration companies with properties along the trend. The aggressive exploration program at Cortez Hills will almost certainly continue to produce exciting new results and discover more reserves. This will be good for Nevada since it will continue to create excitement and justification for exploring in our State.

Special thanks to Rachel Dolbier and D.D. LaPointe for putting together the GSN's annual Family Picnic on October 10th. It was another great GSN success with plenty of fun and food for everyone.

The first membership meeting of the year went very well with Leroy Schutz confirming to us that geologists have

continued on page 2

NOVEMBER MEETING SPONSORS



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News and Announcements

FROM THE PRESIDENT *continued from page 1*

added value at Newmont's Nevada mines. With the cooperation of engineers, geologists have discovered over 10 million new gold ounces at Newmont's Nevada operations over the last four years. More gold will be discovered this year since Newmont will drill a record 1 million feet throughout Nevada. Great talk, Leroy, and thanks.

The topic for the November meeting will be the Goldstrike property, which was recently described by Alex Davidson, Senior Vice President for Barrick, as their top exploration project in 2004 and will be their top project again next year. Bob Leonardson, Barrick's Carlin Trend Advisor, will present "Back to Basics at Goldstrike." Please remember, due to a scheduling problem with the Elks Lodge, the November meeting will be held on Wednesday, November 10th. Special thanks in advance to **Ruen Drilling** and **WDC Exploration** for hosting the social hour.

Also, do not forget to renew your GSN membership. The GSN is professionally rewarding and a great way to stay connected with your friends in the geologic community.

Have you noticed that the high energy prices have contributed to a resurgence of interest in uranium? Abandoned uranium properties are being re-staked and a number of new uranium exploration companies are being established. Some old uranium guys are even checking their files and going back into the field to try to find drill holes that contained good uranium assays. Just goes to show, you should not throw away old files since exploration for all commodities is cyclical.

TAX DEDUCTION

It is the time for gift giving and cleaning your house. GSN and the Tucson Gem and Mineral Society have given over 10,000 books to universities in Mexico and are looking for people who want a tax deduction and a chance to clean up their offices. Any and all items are welcome and will be greatly appreciated. Contact Clancy if you have anything to donate. 775/852-2513.

**Don't forget to renew
your membership.**

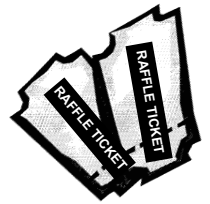
See www.gsnv.org for a membership form.

ROCK RAFFLE ITEMS NEEDED!!

It's time to think about donating items for the Geological Society of Nevada Foundation's fundraiser "Rock Raffle and Silent Auction" to be held at our annual Christmas meeting. We are seeking donation of any items suitable for raffle – gift baskets, attractive rock or mineral samples, gems or gemstones, jewelry, wine or other spirits, logo items, geological equipment or publications, commemorative coins, GOLD, or any geology or mining-related items will be gratefully accepted.

Raffle proceeds will be applied to the GSN Foundation's unrestricted fund to benefit GSN's educational projects which include grants to Nevada K-12 classes for transportation on earth science related field trips, scholarships to UNR and UNLV geology students, grants to the UNR DeLaMare Library, and grants for geologic mapping in Nevada.

Please send donated items to DD LaPointe at the following address to arrive before the December meeting date, or call to arrange pick-up of donated items if you are in the Reno-Sparks-Carson City area.



Thank you!

D.D. LaPointe
GSN Educational Committee Co-Chair and GSN
Foundation Trustee
Nevada Bureau of Mines and Geology/MS178
University of Nevada, Reno
Reno, NV, 89557-0088

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e-mail: dlapointe@unr.edu

UPCOMING EVENTS

Dec 6-10th—NORTHWEST MINING ASSOCIATION: Exploration, Operations & Reclamation-Keys to a Vibrant Mineral Industry. Contact Pat Heywood at theywood@nwma.org.

Dec. 14th—AIPG 15th ANNUAL EXPLORATION ROUND-UP MEETING: Holiday Inn 6th St., Reno, NV. Speakers from 10 companies; Social hour at 6 pm, dinner 7 pm, and program at 8 pm. Please call Kel Buchanan for reservations at 775/786-4515 or email at summitcrk@aol.com.

Thanks to Eklund Drilling Company, Inc. for hosting the October meeting.

GSN November 10, 2004 Membership Meeting

Date: Wednesday, November 10, 2004

Time: Social-6:00, Dinner-7:00, Meeting-8:00

Reservations: 775/323-3500; fax 323-3599,
e-mail gsn@mines.unr.edu

Deadline: Reserve by 5 pm Tuesday, November 9th

Location: Elks Lodge, 597 Kumle Lane, Reno, NV

Directions: Across (W) from the Reno-Sparks Convention Center (S Virginia St), behind the Les Schwab Tire Center

Speaker/topic: Bob Leonardson, Carlin Trend Advisor.
See abstract below.

BACK TO BASICS AT GOLDSTRIKE

R.W. Leonardson, Carlin Trend Advisor, Barrick Gold Corp.

The cluster of gold deposits at Goldstrike is located in the Northern Carlin Trend in northeastern Nevada. The subject of this paper is the block of ground immediately northwest of the large Betze open pit mine. At many mature mining camps like Goldstrike, exploration innovation and success may wane with time. In this regard, sufficient exploration drilling was conducted in the area immediately north of the ultimate pit crest and under the final pit wall to test for a major deposit like Betze. No indications of large deposits were found, however, the majority of holes did contain mineralization. Mining along the northern pit wall exposed significant structurally controlled ore-grade zones that had been missed by exploration drilling. In 2002 and early 2003, the mine geology group added reserves to the pit and improved the definition of underground resources by targeting specific ore-controlling structures within favorable stratigraphy by utilizing relatively inexpensive horizontal RC drilling from the pit wall. The widespread occurrence of mineralization to the north of the pit was re-interpreted to be an indication of continuity of these zones. In January 2003, 70 ft of 0.332 opt (containing 50 ft of 0.500 opt) at a depth of 710 to 780 ft was intersected by a dewatering well. This intercept was significantly thicker and higher-grade than average for the area, which confirmed the existence of high-grade structural continuity, and helped provide management support for additional exploration. A timely and cost effective solution was needed to confirm the potential of the area. Immediate follow-up drilling on tighter grid spacing was rejected in favor of improving the geological model.

Detailed understanding of the structure and stratigraphy combined with consistent mapping and logging are required for a reliable geologic model. Kent Thomson along with other staff geologists worked out the stratigraphy and its physical setting by in the middle to late 1990's. The Popovich Formation (local informal name) was defined as four units occupying a shallow ocean basin on the southwest margin of a northwest trending carbonate reef from the Meikle to the Dee mines. Debris flows shed from the reef to the southwest occur throughout the Popovich but are most abundant within the lower units. Most of the camp's mineralization occurs in the wispy basal unit (WS) but is locally abundant in the planar (PL) and upper mud (UM), second lowest and uppermost units, respectively, of the Popovich Formation. The soft sediment micrite unit (SD) below the upper mud and above the planar units is usually not a host to significant mineralization.

The mine geology group has consistently supplied a truly world-class geology map and model of the pit area. Geotechnical and process concerns have been the key to continued support of the open pit-mapping program. A detailed understanding of ore controls is one of the many additional benefits of the pit map and model.

The main deficiency in geological models produced at Goldstrike is inconsistency of drill hole logging. The units of the Popovich, and other formations generally have transitional contacts. In practice, individual geologists were picking unit contacts at different positions within the transition zones, and miss-interpreting units and formations in highly altered areas. For holes that were logged prior to the mid 1990's, stratigraphic determinations are generally not included in the database. The resulting combination of missing and inconsistent stratigraphic picks made it difficult to accurately project individual faults outside of the pit area.

Exploration across the entire property would benefit from re-logging, but to provide results in a timely manner, a test area approximately one kilometer on a side was chosen on the northwest rim of the ultimate Betze open pit. A geological team (K. Thomson, A. Lander & P. Zohar) under the direction of Charles Weakly began a re-logging campaign in late March 2003 and finished in early July. They logged 270,000 ft of chips and core from holes evenly spaced in the test area with tighter drill hole spacing in more structurally difficult areas. The primary focus of the re-logging was stratigraphy. Lithology, structure and alteration were enhanced if found deficient. What set this campaign apart from previous efforts was the fact that the stratigraphy was known, contact characteristics were precisely defined, and team members reviewed the work of each other to insure consistency of the logging. This greatly improved product was incorporated into the Vulcan modeling effort commencing in early July and completed in early August.

Prior property-wide geology modeling work started distal to the open pit and worked back to incorporate the best open pit data last. This time, Mine Geology's model was used as a base, projecting faults and stratigraphy from the best data out through the re-logged drill hole data. The most recent bench mapping not included in the Mine Geology model was used to adjust existing faults and add new potentially ore-controlling faults. The revised model for targeting purposes consisted of

continued on page 4

ABSTRACT *continued from page 3*

31 ore-controlling faults and the Popovich units (less than 10% of the total Mine Geology model). Existing geochemistry and geophysics were compared to the new geology model but did not provide enough additional resolution so only the model was used to spot drill targets.

Based on data from the open pit and Rodeo underground mine, mineralization in the test area is most closely associated with intersections of structural zones with attitudes of NNW with moderate W dips (J series faults in the open pit model), WNW with low to intermediate N dips (Dillon type faults), NNE with moderate to steep W dips (Weird type faults), and NNW with moderate E dips (Erni series faults). Post mineral offsets are created by ENE structures with moderate to steep dips (Bou type faults). The exploration model contained a number of targets with the best chosen for testing with 18 RC drill holes. These targets occurred where structural intersections occur within the upper mud unit of the Popovich at depths of 600 to 800 ft as well as the planar-wispy Popovich units at depths of 900-1,200 ft. Thirteen of the first 18 holes encountered mineralization in either the upper or lower target zones. Because of the success, additional drilling continued to the end of 2003 with a total of 90 holes yielding nearly 109,000 ft and adding 486,790 ounces of 0.15 opt Au to the open pit reserves. Consequently, the new ultimate pit rim was expanded northward almost 500 ft within the exploration test area.

Drilling has continued in the test area in 2004 and will be near 120,000 ft in 90 holes by the end of phase two at mid-year. The reserve additions are not known at this time, but combined reserve/resource additions of 1.2 million ounces is anticipated. With nearly 200 drill holes completed, the accuracy of the revised model has been very good to excellent in terms of structure (0 – 25 ft further revisions needed), and good to very good in terms of stratigraphy (0 – 100 ft adjustments needed). There is more potential within the test area and both east and west of the current exploration test area. These areas will be drill tested as soon as the available data is incorporated in the model and appropriate re-logging campaigns and subsequent modeling are completed in the peripheral areas. Good, consistent basic geological work has proven to be the ultimate tool at Goldstrike for adding new high quality targets to the pipeline and ounces to the reserves.

ACTIVITY UPDATE

Mike Brady, September 2004
www.activityupdate.com

NEVADA

Quadra Mining Ltd. announced that it reached agreement with various smelter operators (undisclosed) to process roughly 40% of the planned concentrate production from the Robinson Mine. (reserve @ Tripp-Veteran = 238,700,000 tons @ 0.65% Cu, 0.007 opt Au proven+probable; @ Ruth = 203,500,000 tons @ 0.53% Cu, 0.004 opt Au proven+probable) M.J.: August 27

High River Gold Mines Ltd. announced that it purchased the semi-autogenous ball mill, jaw crusher and overland conveyor system from the No. 4 Mill at the Carlin Complex from Newmont Mining Corp. for undisclosed terms. The plant will now be transported to the Berezitovoye Project in Siberia. N.M.: September 3

Barrick Gold Corp. announced that reserves at the Betze-Post Mine aggregate 109,742,000 tons @ 0.143 opt Au proven+probable. (was 107,130,000 tons @ 0.150 opt Au proven+probable) 2003 Annual Report

Barrick Gold Corp.(50%) announced that reserves at the Round Mountain Mine aggregate 179,904,000 tons @ 0.018 opt Au proven+probable. (was 192,114,000 tons @ 0.020 opt Au proven+probable) 2003 Annual Report

Golden Phoenix Minerals Inc. announced that it acquired an option to purchase the processing mill at Millers (north of Lone Mountain) from Esmeralda Extraction Co. for undisclosed terms. Once refurbished, the mill will be used to process ore from the Mineral Ridge Project, 43 miles away. (reserve @ Mineral Ridge = 2,658,000 tons @ 0.079 opt Au proven+probable) P.D.: August 2004

Victoria Resource Ltd.(50%) announced that recent drill results at the Mill Canyon Project include 489.8-495.9 meters @ 0.118 opt Au (36) and 503.5-529.4 meters @ 0.305 opt Au (36). N.M.: August 20

Royal Standard Mines Inc. announced that as of July 6, the ramp decline at the Goldwedge Project was down 135 feet and that approximately 35 feet of additional development work has also been completed. (resource = 211,950 tons @ 0.494 opt Au measured) P.D.: August 2004

Newmont Mining Corp. announced that the production shaft at the Leeville Project is now down 1,095 feet (59% complete) and the ventilation shaft 1,365 feet (94% complete. Capital costs for project completion are now estimated at \$205,000,000 (was \$190,000,000) with the increase due to increased dewatering requirements. (reserve = 7,050,000 tons @ 0.425 opt Au proven+probable) P.D.: August 2004

Placer Dome Inc. announced that it acquired an option to earn a 60% interest in the Keystone Property from Nevada Pacific Gold Ltd. for \$5,000,000 in exploration expenditures over 5 years. M.J.: September 10

Placer Dome Inc. announced that it acquired an option to earn a 60% interest in the Limousine Butte Project from Nevada Pacific Gold Ltd. for \$4,000,000 in exploration expenditures over 5 years. (resource = 38,796,000 tons @ 0.016 opt Au) M.J.: September 10

Quicksilver Ventures Inc. announced that it acquired an option to earn a 55% interest in the Horse Mountain Property from Anaconda Gold Corp. for 125,000 shares and \$1,500,000 in exploration expenditures over 6 years. Press Release: September 20

**VISIT THE GSN WEBSITE AT:
www.gsnv.org**

The Fall Field Trip 2004

Leslie Olmstead, GSN Secretary

It was a glorious weekend! The weather behaved; in fact, it was one of the nicest fall weekends we have had in the field.

Nearly eighty attendees were on the trip and all in good spirits. We all loaded into our vans on Friday and enjoyed refreshments provided by **O'Keefe Drilling**. Bob Hays gave a presentation on the Cortez Hills deposit Friday night in Battle Mountain where the group also had drinks and dinner thanks to **Eklund Drilling, GEOTEMPS, and BSi Inspectorate**.

The evening was a nice way to get together with old friends and make new acquaintances. Saturday morning the group left, en masse, and headed towards the central portion of the Battle Mountain – Eureka Trend. Joe Kizis, Bob Cuffney, Dave Shaddrick, Brian Cellura, and Leslie Olmstead, all gave presentations along the way. The trip stopped at Pipeline and toured Pipeline, South Pipeline, Gold Acres and Cortez pits. Big thanks to Kerry Hart and Steve Koehler, they toured our group through the areas and presented the geology. Also they guided us through the heavy truck traffic in the pits. Thanks for not letting any of us get squished! **Agnico-Eagle Mines Limited** provided the Saturday lunches, which were had at the Cortez (Ada 52) pit. After lunch, the tour left the Cortez area and headed towards Eureka. A few stops and presentations were made along the way. The group arrived in Eureka a little ahead of schedule. This gave everyone time to relax, freshen up, and switch rooms. Everyone met for drinks, dinner and a presentation at the Owl Club. Once again **Eklund Drilling** provided the drinks and then split the dinner with **ALS Chemex**. Karl Marlow gave a presentation on the Archimedes deposit. After which more socializing took place and many tall tales were told. Sunday morning the tour headed out once again. This time we toured the Archimedes pit. Karl provided a nice mile and a half walk down to the bottom of the pit and back through some interesting geology. Again, the weather was beautiful. Lunch was provided by **American Assay Lab** and was had at the old Ruby Hill Mine. After lunch, we all packed up and headed home.



A special thanks needs to go to the following people

for the volunteer work they did for this field trip:

Dieter Krewedl, GSN President, driver and

most excellent leader, Vic Ridgley, interim

Vice President, planner and driver, Greg

French, Membership co-chair and Eureka

guru, Ruth Carraher and Elizabeth

Zbinden, publication and editing goddesses,

Leslie Olmstead, Secretary, driver and megaphone

junkie (not really), all of the drivers, Bob Thomas, Richard Bedell, Eric Struhsacker, Joe Kizis and Clancy Wendt and other volunteers I forgot to mention, thank you.



For those of you who were unable to attend, just know your fellow geo's had a good time in your absence. For those of you who have never attended a field trip, this was my first and it was fantastic. They are really fun! So try to make the next field trip. The more the merrier!

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Hello Friends of Jeffery Borhauer

It is with deep sorrow that I must inform you of the death of our brother and your friend Jeffery Borhauer on September 29th, 2004. Jeff died suddenly in Reno Nevada after going their to help a friend teach students about mine safety. Some of you may have heard this tragic news already; but because he spoke often of you and loved all of you, I felt compelled you write you and THANK YOU for befriending our brother and son.

We will all miss his smile and sense of humor. He had a great life and loved his work in Geology. As a young child, whenever we traveled and were preparing to go home, he was always asking dad, "can I take just one more rock". I know Jeff loved his work with the BLM and greatly enjoyed his time in Alaska.

We will be closing Jeff's email account so future emails will be returned. If you wish, you can contact our family through Jeff's parents (harold.ida.borhauer@attglobal.net). Feel free to write and share your experiences with Jeff I know they will be glad to hear from you.

Again, Thank You for being Jeff's friends. With Love!

Hal Borhauer
halborhauer@attglobal.net

Robert Ward Gloyn

1942-2004

Robert Ward Gloyn died Sept 6, 2004 in Salt Lake City, UT. He was born Nov 19, 1942 in Portland, Oregon to Frances Ryan and Cyril K. Gloyn. He grew up in South Pasadena, California and attended Occidental College and Princeton University. After graduating, Bob worked for Getty Oil Company for many years, after which he held a consulting job, and presently worked for the Utah Geological Survey for over 16 years. He married Ellen Marie Iwasaki on June 10, 1966. He is survived by his wife, Ellen; children, Sarah (Rahn) Miralles, Jason Gloyn, Elizabeth Gloyn, and Meredith (Zach) Ashton; two grandchildren and a sister, Eleanor Gloyn Siegel. He will be dearly missed. Services will be held Saturday Sept 11th at 12:00 noon at Larkin Sunset Gardens Chapel, 1950 E. 10600 S., Sandy, where friends may call Friday evening from 6-8 p.m. and one hour prior to services Saturday.

The GSN Foundation wishes to thank the following donors:

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Rich Lorson

*Friends of Johnny Welch,
Eklund Drilling*

The GSN sends its condolences to Johnny Welch, a long time Eklund driller. His wife, Tina and son, Cody were killed in an automobile accident on Oct 12th, 2004. Services were held in Winnemucca. A memorial fund has been established at the Great Basin Bank of Nevada, PO Box 849, Winnemucca, Nevada 89466. Please make checks payable to the Welch Memorial, account number 3052941.



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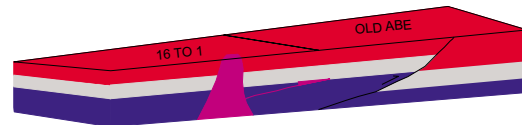
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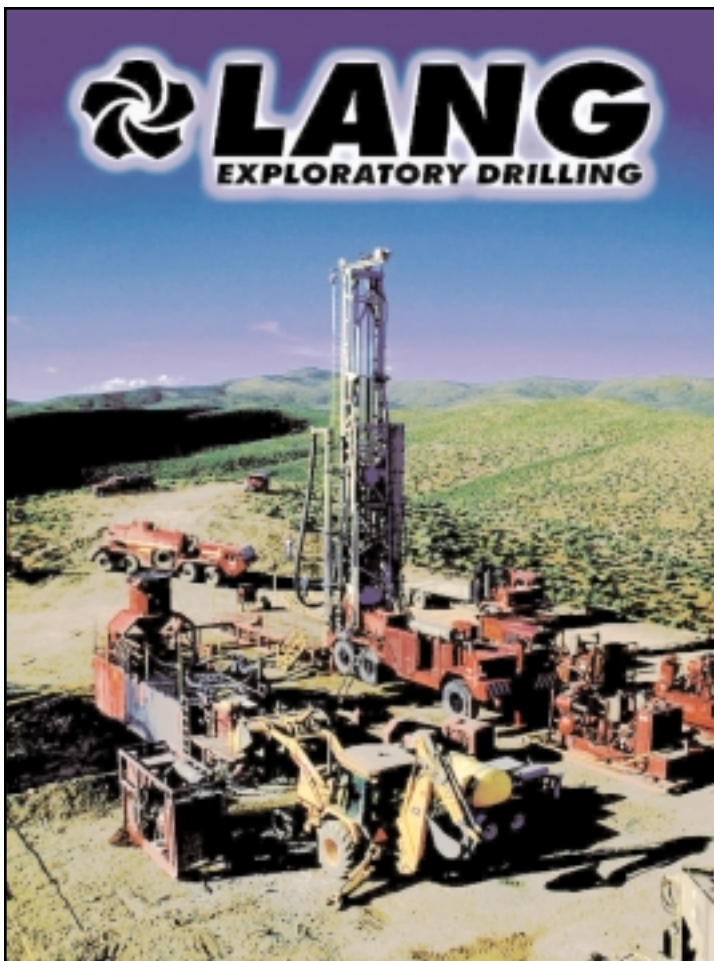
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- Large Diameter Water Wells
- Environmental Monitoring Wells
- High Capacity Pump Tests
- Pump Installation and Removal
- Downhole Video Survey
- Horizontal Drain Installation
- Wireline Core Drilling
- Well Rehabilitation & Repair

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