

Schedule of Events –NMGS Annual Spring Meeting, April 15, 2005
Registration 7:00 am to Noon, Lower Lobby

**Session 1: Geology and Hydrology of the
Jemez Mountains
Auditorium
Chair: Don Krier**

8:30-8:50 KELLEY, S., KEMPTER, K., LAWRENCE, R.,
and OSBURN, G.R.
RECENT DEVELOPMENTS IN OUR
UNDERSTANDING OF VOLCANISM IN THE JEMEZ
MOUNTAINS, NEW MEXICO

8:50-9:10 GOFF, F., GOFF, C.J., PHILLIPS, E.H.,
KYLE, P., and MCINTOSH, W.C.
MEGABRECCIAS, EARLY LAKES, AND DURATION
OF RESURGENCE RECORDED IN VALLES
CALDERA, NEW MEXICO

9:10-9:30 SMITH, G. A., and LYNCH, S. D.
BEARHEAD BASIN: RIO GRANDE RIFT STRUCTURE
MEETS THE JEMEZ LINEAMENT WITHIN THE
SOUTHERN JEMEZ VOLCANIC FIELD

9:30-9:50 KONING, D. J., BROXTON, D.E., VANIMAN,
D.T., WOLDEGABRIEL, G., and KEMPTER, K.
UPPER MIOCENE CLASTIC DEPOSITS ADJACENT
TO THE NORTHEASTERN AND EASTERN FLANKS
OF THE JEMEZ MOUNTAINS, NORTH-CENTRAL
NEW MEXICO -- PRELIMINARY RESULTS

**9:50-10:20 POSTER VIEWING and
BREAK**

10:20-10:40 LONGMIRE, P., GOFF, F., RYTI, R.,
COUNCE, D., BERGFELD, D., and DALE, M.
HYDROGEOCHEMICAL INVESTIGATION AND
STATISTICAL ANALYSES OF BACKGROUND
SUBSURFACE WATERS NEAR LOS ALAMOS
NATIONAL LABORATORY

10:40-11:00 FAWCETT, P. J., GOFF, F., HEIKOOP, J.,
ALLEN, C.D., DONOHOO-HURLEY, L., GEISSMAN,
J.W., WAWRZYNIEC, T.F., JOHNSON, C., FESSENDEN-
RAHN, J., WOLDEGABRIEL, G. and
SCHNURRENBERGER, D.
DEEP CORING IN THE VALLES CALDERA, NEW
MEXICO TO OBTAIN A LONG-TERM
PALEOCLIMATIC RECORD

11:00-11:20 DONOHOO-HURLEY, L. L., GEISSMAN, J.
W., FAWCETT, P. F., WAWRZYNIEC, T. F., and GOFF, F.
ENVIRONMENTAL MAGNETIC RECORD OF
LACUSTRINE SEDIMENTS OF THE
VALLES CALDERA, NEW MEXICO

**Session 2: Paleontology and Stratigraphy
Galena Room
Chair: Kate Zeigler**

8:30-8:50 KUES, B. S.
A NEW EARLY PENNSYLVANIAN (MORROWAN)
FAUNA FROM THE NACIMIENTO MOUNTAINS,
NORTH-CENTRAL NEW MEXICO

8:50-9:10 LUCAS, S. G., AND KRAINER, K.
HUECO GROUP STRATIGRAPHY IN THE DOÑA ANA
MOUNTAINS, NEW MEXICO, AND THE EARLY
PERMIAN PALEOGEOGRAPHY OF THE ROBLEDOS
SHELF

9:10-9:30 SPIELMANN, J.A., HECKERT, A.B. and
LUCAS, S.G.
THE LATE TRIASSIC RCHOSAUMORPH
TRILOPHOSAURUS AS AN ARBOREAL CLIMBER

9:30-9:50 HECKERT, A.B., LUCAS, S.G., and
BEDNARSKI, S.P.
THE MICROVERTEBRATE FAUNA OF THE UPPER
TRIASSIC *TRILOPHOSAURUS* QUARRY, COLORADO
CITY FORMATION (OTISCHALKIAN: CARNIAN),
WEST TEXAS

**9:50-10:20 POSTER VIEWING and
BREAK**

11:20-12:20

Awards Ceremony and Keynote Presentation in Auditorium

**Bob Parmenter, Chief Scientist, Valles Caldera National Preserve: Past History and
Future Directions for the Valles Caldera National Preserve.**

Lunch 12:20-1:15
NMGS Business Meeting 1:15-1:30

**Session 1 (con't): Geology and Hydrology
of the Jemez Mountains
Auditorium
Chair: Bill McIntosh**

1:30-1:50 COX, C., KELLEY, S., KARLSTROM, K.,
CROSSEY, L., DILLON, M. QUATERNARY INCISION
HISTORY OF THE UPPER REACHES OF THE JEMEZ
RIVER

1:50-2:10 GUAN, H. and WILSON, J.L.
ASSESSING MOUNTAIN-BLOCK RECHARGE IN
JEMEZ MOUNTAINS—VIA HIGH-RESOLUTION
HILLSLOPE HYDROLOGIC MODELING

2:10-2:30 DALE, M., GOFF, F., GRANZOW, K.,
LONGMIRE, P, and COUNCE, D.
ASSESSING GROUND-WATER RECHARGE
THROUGH THE PAJARITO FAULT ZONE, UPPER
PAJARITO CANYON, LOS ALAMOS, NEW MEXICO

2:30-2:50 MCLIN, S.G.
ANALYSIS OF A LONG-TERM AQUIFER TEST
USING MULTIPLE OBSERVATION WELLS

**2:50-3:20 POSTER VIEWING and
BREAK**

**Session 3: Geophysics, Volcanology and
Climate
Chair: Bill McIntosh**

3:20-3:40 REITER, M.
COMPARING THE THERMAL REGIMES AND THE
SEISMOGENIC LAYERS ALONG THE SAN
ANDREAS FAULT NEAR PARKFIELD, CALIFORNIA,
AND ALONG THE COYOTE FAULT NEAR
SOCORRO, NEW MEXICO.

3:40-4:00 WILLIAMS, J.Z., DAVIS, C.W., and
MCMILLAN, N.J.
PARTIAL MELTING, FRACTIONATION,
CONTAMINATION, AND ERUPTION OF THE
CARRIZOZO LAVA FLOW, SOUTH CENTRAL NEW
MEXICO

4:00-4:20 LACEY, H., PHILLIPS, F.M.
INFLUENCE OF ELEPHANT BUTTE RESERVOIR ON
THE PACIFIC DECADAL OSCILLATION SIGNAL
SEEN IN CHLORIDE CONCENTRATION IN THE RIO
GRANDE AT EL PASO, TX

**Session 2 (con't): Paleontology and
Stratigraphy
Galena Room
Chair: Dana Ulmer-Scholle**

1:30-1:50. SMITH, J. A. and WILLIAMSON, T. E.
AN UNUSUAL *PENTACERATOPS* FROM NEW
MEXICO

1:50-2:10 WILLIAMSON, T. E. and CARR, T. D.
NEW PACHYCEPHALOSAUR SPECIMENS FROM
THE LATE CRETACEOUS OF NEW MEXICO

2:10-2:30 WILLIAMS, S.C. and LUCAS, S.G.
THE USE OF THE LATE CRETACEOUS SELACHIANS
PTYCHODUS AND *SQUALICORAX* AS
BIOSTRATIGRAPHIC INDICATORS IN NEW MEXICO

2:30-2:50 MORGAN, G. S. and LUCAS, S. G.
PLIOCENE (BLANCAN) VERTEBRATE FAUNAS
FROM THE PALOMAS FORMATION NEAR
ELEPHANT BUTTE LAKE, SIERRA COUNTY,
SOUTH-CENTRAL NEW MEXICO

**2:50-3:20 POSTER VIEWING and
BREAK**

**Session 4: Geology of Questa Mine
Rock Piles
Chair: Virgil Lueth**

3:20-3:40 WALSH, P., MCLEMORE, V. T., DONAHUE, K.
M., TACHIE-MENSON, S., GUITIERREZ, L. A. F., AND
SHANNON, H. R., JONES, G. E.
MAPPING THE INTERIOR OF A MINE ROCK PILE:
TRENCHES IN GOAT HILL NORTH, MOLYCORP
MINE, QUESTA, NEW MEXICO

3:40-4:00 TACHIE-MENSON, S., WHITE T.,
MCLEMORE V. T., LUETH, V. W., WALKER, B. M.,
VARIATION OF TEMPERATURE AND PORE
OXYGEN AND CARBON DIOXIDE IN ROCK PILES
AT THE MOLYCORP QUESTA MINE, NEW MEXICO

4:00-4:20 PHILLIPS, E.H., LUETH, V., CAMPBELL, A.,
MCLEMORE, V, WALKER, B., AND TACHIE-MENSON,
S. SOIL PETROGRAPHY OF A SAMPLE TRAVERSE
FROM A PORTION OF THE GOATHILL NORTH
ROCK PILE, QUESTA MINE, NEW MEXICO

Poster Titles and Booth numbers

Session 1: Geology and Hydrology of the Jemez Mountains

- 1) **GEOLOGIC MAP OF THE CANADA 7.5' QUADRANGLE, SOUTHERN JEMEZ MOUNTAINS, NEW MEXICO.** LYNCH, S. D., SMITH, G. A., KUHLE, A. J.
- 2) **GEOLOGY OF REDONDO PEAK QUADRANGLE, JEMEZ MOUNTAINS, NEW MEXICO.** GOFF, F., GARDNER, J.N., RENEAU, S.L., and GOFF, C.J.
- 3) **GEOLOGY OF CERRO DEL GRANT QUADRANGLE, JEMEZ MOUNTAINS, NEW MEXICO.** LAWRENCE, J. R., KELLEY, S., RAMPEY, M.
- 4) **VADOSE ZONE CHARACTERIZATION AND MONITORING BENEATH WASTE DISPOSAL PITS USING HORIZONTAL BOREHOLES.** MCLIN, S.G., NEWMAN, B.D., AND BROXTON, D.E
- 5) **AN UPDATE ON THE SURFICIAL WATER RESOURCES IN THE LOS ALAMOS AREA, NEW MEXICO.** DALE, M.R., GRANZOW, K.P., ENGLERT, D.E., YANICAK, S.M., FORD-SCHMID, R.E., LONGMIRE, P.A, and COUNCE, D.A.

Session 2: Environmental Geology and Paleoclimate

- 6) **QUANTIFYING THE INFLUENCE OF CALCIUM CARBONATE ACCUMULATION ON THE HYDRAULIC PROPERTIES OF SEMI ARID SOILS: SEVILLETA NATIONAL WILDLIFE REFUGE AND FITE RANCH, NEW MEXICO.** MCLIN, R.
- 7) **SOURCING ARSENIC IN THE NORTHERN GALLINAS WATERSHED.** DURAN, V, TABE-EBOB, C., JOHNS-KAYSING, J., RUNNING EAGLE, M., and LINDLINE, J.
- 8) **A SYNOPSIS OF SALINE GROUND-WATER RESOURCES IN NEW MEXICO,** HUFF, G.F
- 9) **PROKARYOTIC DIVERSITY AND BIOGEOCHEMICAL CYCLING IN THE MIDDLE RIO GRANDE AQUIFER, NEW MEXICO.** CALDWELL, S., CROSSEY, L., TAKACS-VESBACH, C.
- 10) **EXPERIMENTAL DETERMINATION OF THE BIOGENICITY OF MOONMILK, AND THE CHARACTERIZATION OF MOONMILK AND ITS DEPOSITIONAL ENVIRONMENT IN SPIDER CAVE, CARLSBAD CAVERNS NATIONAL PARK, NEW MEXICO.** PERRONE, M., GILES, K., BOSTON, P.J., NORTHUP, D.E, and SPILDE, M.N
- 11) **CAVE RESPONSE TO SURFACE CLIMATE VARIABILITY: HIGH-RESOLUTION DRIP RATE DATA FROM BAT CAVE PASSAGE, CARLSBAD CAVERN.** RASMUSSEN, J. B. T., POLYAK, V. J., and ASMEROM, Y.
- 12) **USING APATITIC CONODONTS AS A PROXY FOR PALEO-CLIMATE CHANGE.** EMMS, M. AND ELRICK, M.

Session 3: Geology of Questa Mine Rock Piles

- 13) **NEAR SURFACE GEOPHYSICS FOR THE STRUCTURAL ANALYSIS OF A MINE ROCK PILE, NORTHERN NEW MEXICO..** VAN DAM, R.L., GUTIERREZ, L.A., MCLEMORE, V.T., WILSON, G.W., HENDRICKX, J.M.H., and WALKER, B.M.
- 14) **CLAY MINERALOGY OF ALTERATION SCARS AND ROCK PILES, QUESTA AREA, NEW MEXICO.** DONAHUE, K.M., HAUFF, P.L., DUNBAR, N. W., LUETH, V. W., MCLEMORE, V.T., HEIZLER, L.

Session 4: Structural Geology and Stratigraphy

- 15) CONSTRAINTS ON ANCESTRAL ROCKY MOUNTAIN AND LARAMIDE DEXTRAL-OBLIQUE DEFORMATION IN NORTH-CENTRAL NEW MEXICO USING REGIONAL AEROMAGNETIC PATTERNS AND STRUCTURAL BALANCING CONSIDERATIONS. CATHER, S.M. and KARLSTROM, K.E.
- 16) TIMING AND STYLE OF DEFORMATION OF THE SOUTHERN MAZATZAL PROVINCE, SAN ANDRES MOUNTAINS, NEW MEXICO. SERNA, A., and AMATO, J. M
- 17) GEOLOGIC MAP OF EASTERN GRAND CANYON, ARIZONA: DOCUMENTING MULTI-PHASE LATE PROTEROZOIC DEFORMATION AND LARAMIDE REACTIVATION IN THE SOUTHWESTERN UNITED STATES. TIMMONS, J. MICHAEL, KARLSTROM, KARL E., PEDERSON, JOEL and ANDERS, MATT
- 18) CONSTRAINTS ON TIMING OF MAGMATISM AND DEFORMATION IN PROTEROZOIC PLUTONS OF THE BURRO MOUNTAINS, SOUTHWESTERN NEW MEXICO. BOULLION, A., AMATO, J.M., GEHRELS, G., HEIZLER, M. and ESSER, R.
- 19) OPPORTUNITY FOR DIRECT DATING OF ~1.65 GA QUARTZITE-RHYOLITE SUCCESSION: WERE THERE TWO QUARTZITE-RHYOLITE "EVENTS" DURING CRUSTAL ASSEMBLY OF THE SOUTHWESTERN UNITED STATES. LUTHER, A. and KARLSTROM, K.
- 20) STRATIGRAPHIC ASSOCIATION OF UNCOMPAGHRE GROUP AND THE VALLECITO CONGLOMERATE? INSIGHT INTO PALEOPROTEROZOIC INTRA-CRATONIC BASIN FORMATION. ZINSSER, A. and KARLSTROM, K.E.
- 21) TYPE SECTION OF THE PENNSYLVANIAN SANDIA FORMATION, SANDIA MOUNTAINS, NEW MEXICO. KRAINER, K. and LUCAS, S.G
- 22) REFINEMENT OF UPPER TRIASSIC CHINLE GROUP BIOSTRATIGRAPHY AND MAGNETOSTRATIGRAPHY, CHAMA BASIN, NORTH-CENTRAL NEW MEXICO ZEIGLER, K.E., GEISSMAN, J.W. AND LUCAS, S.G.
- 23) THE TO2-TO3 TRANSITION IN THE SAN JUAN BASIN, NEW MEXICO, WILLIAMSON, T. E.

Session 5: Paleontology

- 24) FIRST NEW MEXICO RECORD OF *SPHENOTHALLUS* FROM THE UPPER PENNSYLVANIAN (MISSOURIAN) ATRASADO FORMATION OF SOCCORO COUNTY. LERNER, A. J. AND LUCAS, S. G.
- 25) EARLY PERMIAN (WOLFCAMPAN) MARINE MACROINVERTEBRATE ASSEMBLAGE FROM THE SHALEM COLONY FORMATION (HUECO GROUP), DOÑA ANA MOUNTAINS, NEW MEXICO. SPIELMANN, JUSTIN A., LUCAS, SPENCER G. AND KRAINER, KARL
- 26) THE POSTCRANIAL SKELETON OF THE CRUROTARSAN *REVUELTOSAURUS CALLENDERI*, FROM THE UPPER TRIASSIC BULL CANYON FORMATION, EAST-CENTRAL NEW MEXICO. HUNT, A.P., and LUCAS, S.G.
- 27) A SKULL OF *PSEUDOPALATUS* FROM THE LATE TRIASSIC (LATE CARNIAN) SANTA ROSA FORMATION OF CENTRAL NEW MEXICO. HUNT, A.P., AND LUCAS, S. G.
- 28) THE MICROVERTEBRATE FAUNA OF SHARK TOOTH HILL, REDONDA FORMATION (LATE TRIASSIC: APACHEAN), QUAY COUNTY, NEW MEXICO. HECKERT, A.B., LUCAS, S.G., and HUNT, A.P
- 29) COPROLITES AND COLOLITES FROM THE LATE TRIASSIC THEROPOD DINOSAUR, *COELOPHYSIS BAURI*, WHITAKER QUARRY, RIO ARRIBA COUNTY, NM. RINEHART, L.F., HUNT, A.P., LUCAS, S.G., HECKERT, A.B.

- 30) **LATE JURASSIC TURTLE FROM THE MORRISON FORMATION IN CENTRAL NEW MEXICO.**
LUCAS, S. G., RINEHART, L.F., HECKERT, A. B., PETERSON, R. and PETERSON, R.
- 31) **FIRST RECORD OF *EOCONODON GAUDRIANUS* IN THE LATE PUERCAN OF NEW MEXICO.**
WILLIAMSON, T. E.
- 32) **AN UPDATED ELECTRONIC BIBLIOGRAPHY OF NEW MEXICO FOSSIL VERTEBRATES..**
LEWIS, C., HECKERT, A.B., and LUCAS, S.G.
- 33) **“REDISCOVERY” OF THE ROUSSEAU FLOWER COLLECTION AT THE NEW MEXICO MUSEUM
OF NATURAL HISTORY & SCIENCE.** HECKERT, A.B., MCDONNELL, J., and TRAEGER, R
- 34) **NMFOSSILS.ORG, THE NEWEST PALEONTOLOGICAL RESOURCE AND OUTREACH
INITIATIVE OF THE NEW MEXICO MUSEUM OF NATURAL HISTORY & SCIENCE.**
HECKERT, A.B.