# OIL AND GAS FIELDS MAP OF UTAH


**Thomas C. Chidsey, Jr. and Sharon Wakefield**
**Utah Geological Survey**
**and**
**Bradley G. Hill and Michael Hebertson**
**Utah Division of Oil, Gas and Mining**



MAP 203 DM
UTAH GEOLOGICAL SURVEY
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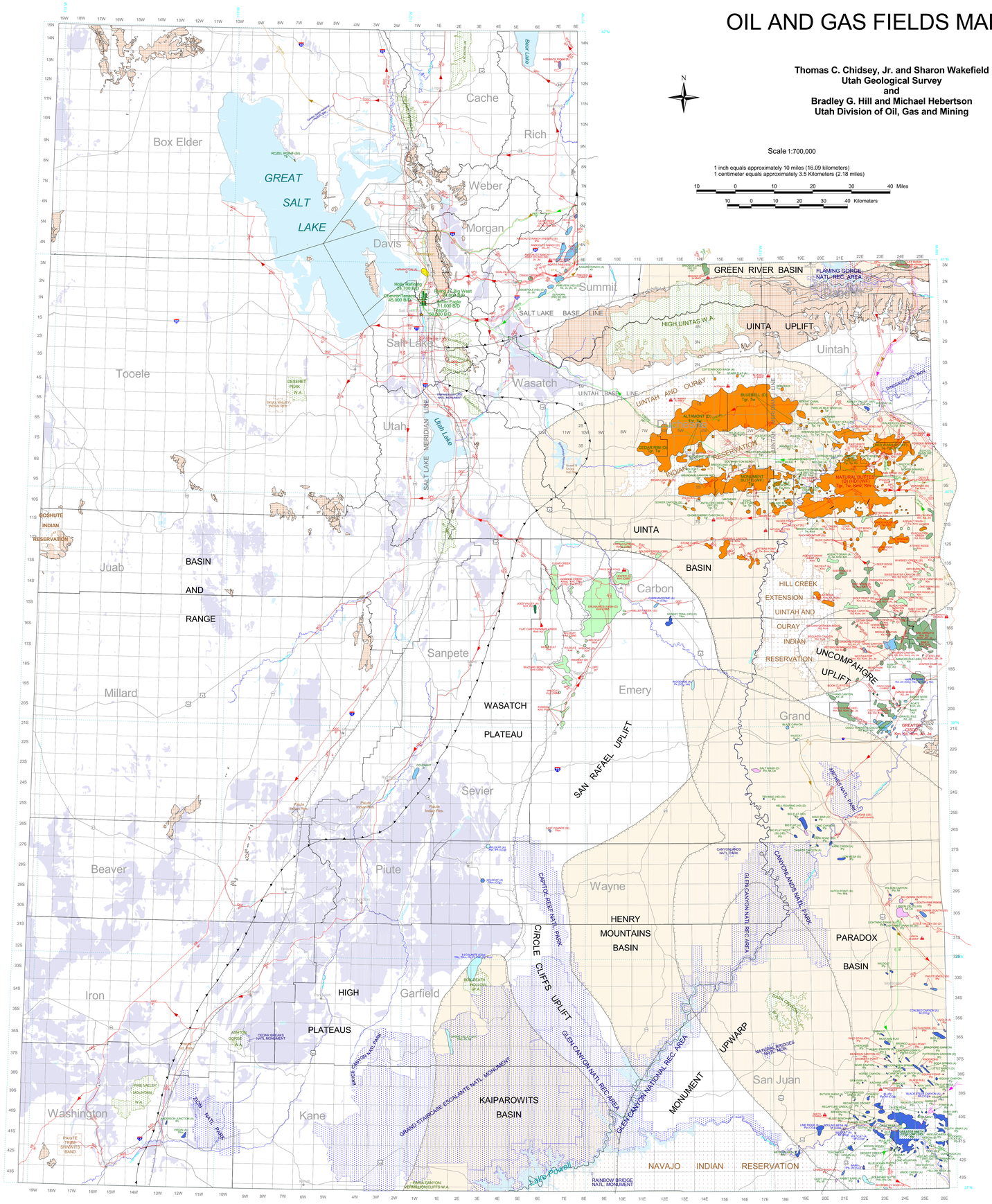
Scale 1:700,000

1 inch equals approximately 10 miles (16.09 kilometers)
1 centimeter equals approximately 3.5 Kilometers (2.18 miles)

10 0 10 20 30 40 Miles

10 0 10 20 30 40 Kilometers




## EXPLANATION

### RESERVOIR ROCKS

- Quaternary (Q)
- Tertiary (T)
- Upper Cretaceous (K)
- Upper-Lower Cretaceous (K)
- Jurassic (J)
- Triassic (TR)
- Permian (P)
- Pennsylvanian (IPp)
- Mississippian (M)
- Devonian (D)

QUATERNARY
Q Undivided sediments

TERTIARY
Tb Basalt
Tu Uinta Formation
Tgr Green River Formation
Tw Wasatch Formation

UPPER CRETACEOUS
Kmv Mesaverde Group
Kcg Castlegate Sandstone
Kmvb Mesaverde Group, Blackhawk Formation
Km Mancos Shale
Kmbg Mancos Shale, Blue Gate Shale Member
Kmf Mancos Shale, Ferron Sandstone Member
Kf Frontier Formation

UPPER-LOWER CRETACEOUS
Kd Dakota Sandstone
Kcm Cedar Mountain Formation
Kk Kelvin Formation

JURASSIC
Jm Morrison Formation
Js Stump Formation
Jc Curtis Formation
Je Entrada Sandstone
Jtc Twin Creek Limestone
Jn Nugget/Navajo Sandstone
Jk Kayenta Formation
Jw Wingate Sandstone

TRIASSIC
TRc Chinle Formation
TRm Moenkopi Formation
TRd Dinwoody Formation

PERMIAN
Pp Phosphoria Formation
Ppc Park City Formation
Pk Kaibab Limestone
Pbb Black Box Dolomite
Pwr White Rim Sandstone
Po Organ Rock Formation
Pcm Cedar Mesa Sandstone
Pdc DeChelly Sandstone
Pt Toroweap Formation

PENNSYLVANIAN
IPw Weber Sandstone
IPh Hermosa Formation
IPht Honaker Trail Formation
IPp Paradox Formation
IPm Molas Formation
IPc Callville Limestone

MISSISSIPPIAN
Ml Leadville Limestone
Mm Madison Group
Mr Redwall Limestone

DEVONIAN
De Elbert Formation
Do Ouray Formation

### SURFICIAL GEOLOGIC FEATURES

- Leading edge of Sevier thrust belt
- Basin and uplift boundary (hash marks toward basin and away from uplift)
- Major sedimentary basin
- Undifferentiated Precambrian rocks exposed on the surface
- Tertiary/Quaternary volcanic rocks

### OTHER SYMBOLS AND DESIGNATIONS

- State Capitol
- County Seat
- Road
- Longitude/Latitude
- Township/Range
- Lake, reservoir & intermittent water
- Major river
- National Park, Monument, Recreation Area
- Indian Reservation
- Wilderness Area

### FIELDS

Fields are spotted through January 2005. Field boundaries are approximate and do not distinguish between different producing horizons. Dry holes may exist within fields. Field color indicates predominant age of reservoir rocks. Both abandoned and currently producing formations are shown for each field.

ROCK HOUSE (M) Mr Pp

Names in red denote fields that primarily produce(d) natural gas. These fields may produce significant condensate along with the natural gas in the primary reservoir or oil from secondary reservoirs

LISBON ML Do

Names in green denote fields that primarily produce(d) oil. These fields may produce significant associated natural gas along with the oil in the primary reservoir or nonassociated natural gas from secondary reservoirs.

FARNHAM DOME (A) Jn (CO2)

Names in blue denote fields that primarily produce(d) carbon dioxide. These fields may produce significant natural gas (methane) and oil in the primary and secondary reservoirs.

### FIELD DESIGNATIONS

(A) – Abandoned field
(CBM) – Coalbed methane
(CO2 ) – Carbon dioxide reservoir
(CO2 F) – CO2 flood project
(D) – Produced water disposal project
(GI) – Gas injection
(GS) – Gas storage
(He) – Helium reservoir
(HD) – Horizontal drilling project
(HS) – Hydrogen sulfide
(NI) – Nitrogen injection
(SI) – Shut-in field
(WF) – Waterflood project

Note: These designations appear after field name, reservoir name, or reservoir.

### PIPELINES

Notation includes operator (see Pipeline Operators below), pipe diameter in inches, and direction of flow. Adjacent diameter numbers indicate more than one pipeline of the same type. Pipeline routes are plotted as accurately as possible and are only accurate within the scale of this map. Most infield gathering and utility distribution systems are not shown.

- PPC 8 → Crude oil
- QGC 16 → Natural gas
- CHEVPL 10 → Carbon dioxide
- ARME 10 → Hydrogen sulfide-bearing gas
- RMPC 8 → Natural gas processing plant or refinery products

### PIPELINE OPERATORS

ARME – Anadarko Rocky Mountain Energy
BBC – Bill Barrett Corp.
CHEVPL – Chevron Pipeline Company
CIG – Colorado Interstate Gas Company
CPC – ConocoPhillips Co.
EOC – Evergreen Operating Corp.
EP – Enterprise Products Partners LP
EM – ExxonMobil
FCPC – Four Corners Pipeline Company
IR – Inland Resources, Inc.
KR – Kern River Gas Transmission Company
MESA – MESA, Inc.
NNOG – Navajo Nation Oil and Gas
PEP – Pacific Energy Partners LP
PPC – Pioneer Pipeline Company
QGC – Questar Gas Company
QPC – Questar Pipeline Company
RMPS – Rocky Mountain Pipeline Systems LLC
TBI – Tom Brown, Inc.
TCP – TransColorado Pipeline Gathering Company
UGS – Utah Gas Services Company
UTNJNR – Ute Tribe/New Jersey Natural Resources
WGPLNW – Williams Gas Pipeline – Northwest
WGR – Western Gas Resources, Inc.

### REFINERIES AND PLANTS

Tesoro 58,000 B/D — Oil refinery. Notation includes operator and capacity in barrels of oil per day (B/D). Locations are approximate.

Red Wash 50 MMCF — Natural gas processing plant. Notation includes operator and capacity (where data are available) in millions of cubic feet (MMCF) per day. Locations are approximate.

### BASE MAP COVERAGES AND SOURCE DATA

County boundaries, city locations, federal boundaries,
Public Land Survey System (PLSS), highways and roads,
landownership from Utah Automated Geographic Reference Center

COORDINATE SYSTEM:
Transverse Mercator
False Easting: 500000.000000
False Northing: 0.000000
Central Meridian: -111.000000
Scale Factor: 0.999600
Latitude Of Origin: 0.000000
Geographic Coordinate Systems North American 1983
Datum: D North American 1983
Prime Meridian: 0

### REFERENCES


Bon, R.L., 1999, Petroleum geology of the Harley Dome field, Grand County, Utah: Utah Geological Survey Oil and Gas Field Studies 21, 2 plates.

Chidsey, T.C., Jr., and Anderson, P.B., 1994, Oil and gas pipeline map of Utah: Utah Geological Survey Public Information Series 22, scale 1:1,000,000.

DeBruin, R.H., 2002, Oil and gas map of Wyoming: Wyoming State Geological Survey Map Series 55, scale 1:500,000.

Fassett, J.E., editor, 1978, Oil and gas fields of the Four Corners area: Four Corners Geological Society, v. 2, p. 169-724.

---1983, Oil and gas fields of the Four Corners area: Four Corners Geological Society, v. 3, p. 1061-1140.

Gurgel, K.D., 1983, Energy resources map of Utah: Utah Geological and Mineral Survey Map 68, scale 1:500,000.

Hill, B.G., and Bereskin, S.R., editors, 1993, Oil and gas fields of Utah: Utah Geological Association Publication 22, non-paginated.

---1996, Oil and gas fields of Utah: Utah Geological Association Publication 22 (Addendum), non-paginated.

Hintze, L.F., Willis, G.C., Laes, D.Y.M., Sprinkel, D.A., and Brown, K.D., 2000, Digital geologic map of Utah: Utah Geological Survey Map 179DM, CD-ROM.

Hjellming, C.A., editor, 1993, Atlas of major Rocky Mountain gas reservoirs: New Mexico Bureau of Mines and Mineral Resources, 206 p., 10 plates.

Morgan, C.D., 1999, Petroleum geology of the Cisco Dome area, Grand County, Utah: Utah Geological Survey Oil and Gas Field Studies 19, 4 plates.

---1999, Gas fields of the PR Springs area, Grand County, Utah: Utah Geological Survey Oil and Gas Field Studies 20, 2 plates.

---1999, Petroleum geology of the Cisco Townsite and Cisco Wash areas, Grand County, Utah: Utah Geological Survey Oil and Gas Field Studies 22, 2 plates.

---2001, Petroleum geology of the Agate, Danish Wash, Sage, and Sieber Nose reservoirs in the Greater Cisco field, Grand County, Utah: Utah Geological Survey Oil and Gas Field Studies 23, 2 plates.

Sprinkel, D.A., 1999, Digital geologic resources atlas of Utah: Utah Geological Survey Bulletin 129DF, CD-ROM.

Stewart, W.W., 1979, Clay Basin, Daggett County, Utah: Wyoming Geological Association, Oil and Gas Fields Symposium, Greater Green River Basin, p. 100-101.

Utah Division of Oil, Gas and Mining, 2003, Oil and gas production report, October 2003: non-paginated.

---2004, Well completion and field records: Utah Division of Oil, Gas and Mining files.

Utah Geological Survey, 2001, Utah! 100 years of exploration…and still the place to find oil and gas: Utah Geological Survey Public Information Series 71, 20 p.

Westerdale, B., 1979, Bridger Lake, Summit County, Utah: Wyoming Geological Association, Oil and Gas Fields Symposium, Greater Green River Basin, p. 72-73.

Wray, L.L., Allison, A.D., Hemborg, H.T., and Brchan, C., 2002, Oil and gas fields map of Colorado: Colorado Geological Survey Map Series 33, scale 1:500,000.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