



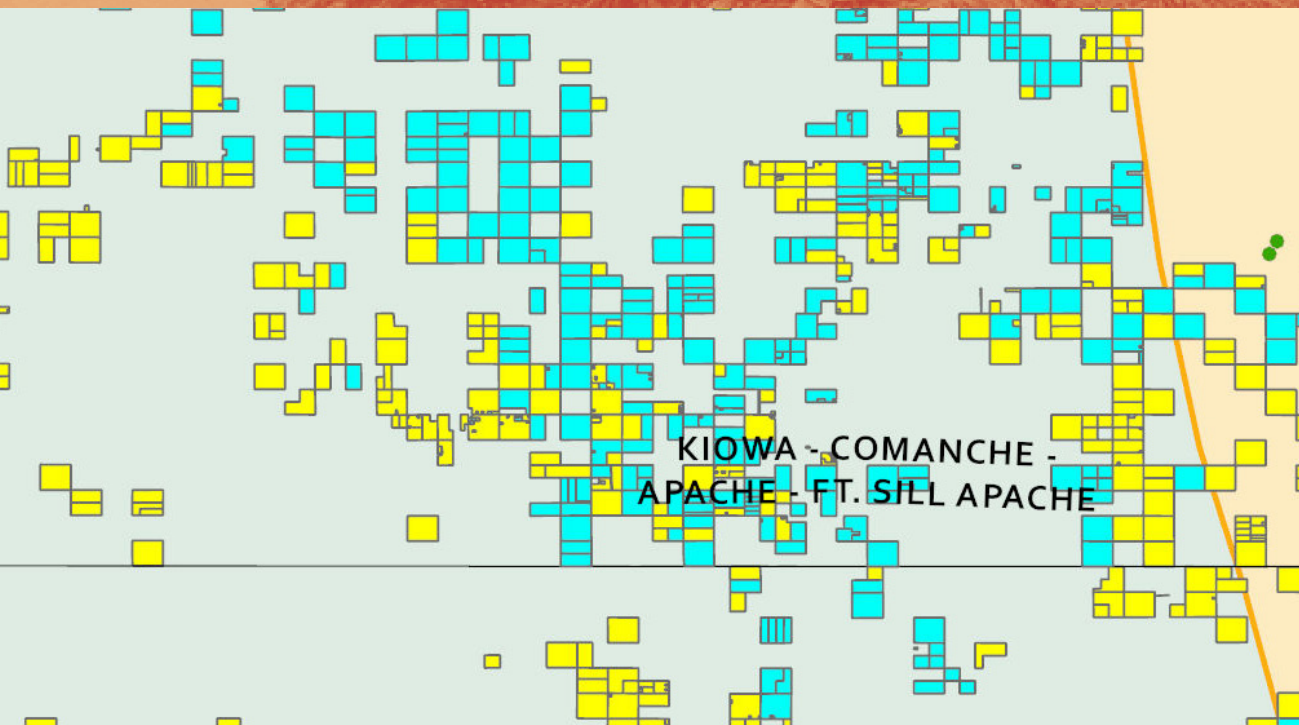
ANADARKO AGENCY ALLOTTED LANDS

Kiowa Tribe, Apache Tribe of Oklahoma, Wichita and Affiliated Tribes,
Caddo Nation, Delaware Nation, and the Fort Sill Apache Tribe
Oklahoma

SUMMER NAPE 2020

Oil and Gas Leasing Potential

Allotted Trust lands in Kiowa, Caddo,
Comanche, Tillman, and Cotton Counties



WICHITA INDIAN, GRASS HOUSE. NEAR



IN REPLY REFER TO:
Superintendent

United States Department of the Interior
Bureau of Indian Affairs
Anadarko Agency
P.O. Box 309
Anadarko, Oklahoma 73005

July 24, 2020

Stephen Manydeeds, Chief
Division of Energy and Mineral Development
US-DOI, Assistant Secretary-Indian Affairs
13922 Denver West Parkway, Suite 200
Lakewood, Colorado 80401

Dear Mr. Manydeeds:

On behalf of Superintendent Rose Roberson and the Anadarko Agency, I am pleased to introduce you to the Kiowa Tribe, Apache Tribe of Oklahoma, Wichita and Affiliated Tribes, Caddo Nation, Delaware Nation, and the Fort Sill Apache Tribe of southwestern Oklahoma and present development opportunities on their allotted and tribal lands. On the following pages, you learn about the tribal people, the history of the jurisdiction, and their oil and gas resources.

We look forward to showing you oil and gas prospects on the allotted and tribal lands, and facilitating development in a business-friendly manner. Should you feel that the resources and allotments match with your plans, we would welcome the opportunity to assist you in exploring the possibilities of a long-term partnership.

Sincerely,

George Beatty, Deputy Superintendent
Anadarko Agency
Southern Plains Region

ANADARKO AGENCY OVERVIEW

Culture and History

The Allotted Trust lands in the Anadarko Agency are displayed in Figure 1. The land is held in Trust by the United States government for the benefit of the Indian Allottee. These Trust lands cover Kiowa, Caddo, Comanche, Tillman, and Cotton counties, with some located in Jefferson, Stephens, Grady, Canadian, and Blaine counties. Tribes within this area are the Kiowa Tribe, Apache Tribe, Wichita and Affiliated Tribes, Caddo Nation, Delaware Nation, and the Fort Sill Apache Tribe. General tribal background of each tribe is described below.

Kiowa Tribe

The Kiowa Tribe of Oklahoma originated in present day Montana, under the Medicine Lodge Treaty of 1867 they were assigned a reservation in Southwestern Oklahoma.

The Kiowas were nomadic buffalo hunters who roamed the plains collecting and maintaining huge horse herds.

Apache Tribe of Oklahoma

The Apache Tribe of Oklahoma were a nomadic tribe who followed the buffalo herds across western Texas, Oklahoma, and eastern New Mexico. The buffalo was the center piece for Apache life and provided clothing, weapons, tools, and shelter. The Apache Tribe of Oklahoma have been in the region since the fifteenth century.

Wichita and Affiliated Tribes

Members of the Wichita and Affiliated Tribes belong to the Wichita, Keechi, Tawakoni, Waco, and Taovaya tribes. The Wichitas are the oldest living Indian community in Oklahoma, in 1540 the Spanish conquistadores found the Tribe living in Western

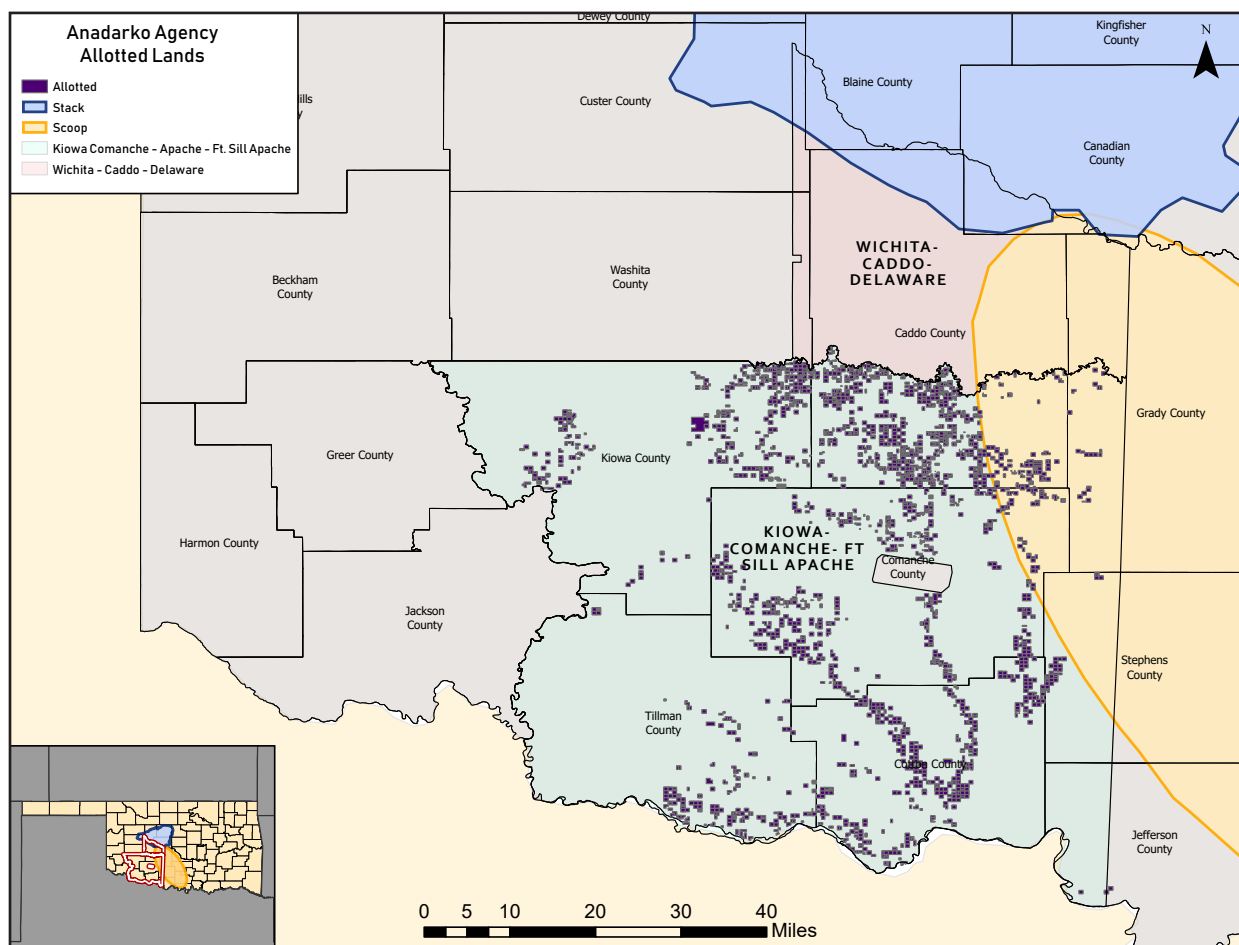


Figure 1. Anadarko Agency allotted lands in proximity to SCOOP/STACK areas and recent oil and gas activity.

Oklahoma. In 1961, the five tribes organized as the Wichita and Affiliated Tribes.

Caddo Nation

The Caddo Nation originated in the Lower Red River Valley, in 1541 Spanish explorers made contact with the Caddos. In the seventeenth century the French ventured into Caddo territory and began trading furs for European goods.

Delaware Nation

The Delaware Tribe of Oklahoma descends from the Eastern Delaware Indians of the Delaware and Hudson River valleys of present day New York and northern New Jersey. They call themselves the original people most likely because of their longtime existence prior to

European contact and their reputation as peacekeepers. In 1859, several Delaware families settled at the Wichita agency in Oklahoma.

Fort Sill Apache Tribe

Members of the Fort Sill Apache Tribe are descendants of four bands of Apache Tribes. The ancestral lands of the four bands encompassed regions of southeastern Arizona, southwestern New Mexico, and northern Mexico. Traditional culture, language, and spirituality remain strong among the Fort Sill Apache people.

Learn more about Anadarko Agency:

<https://www.bia.gov/regional-offices/southern-plains/anadarko-agency>



Above: American Indian Society of Washington, D.C. President Terry Rose during the Two-Step Dance that took she and her dance partner throughout the exhibition areas of the 2017 American Indian / Alaskan Native Heritage Month Observance Program at the USDA headquarters, Whitten Patio, in Washington, D.C., on November 15, 2017. Her Kiowa name is "Dancing Girl" wears a Kiowa dress. The shells on her dress represent elk teeth. Cultural exchange activities featured foods, music, dance and more. USDA Photo by Lance Cheung. <https://flic.kr/p/21wheug>

Geologic Overview and Oil and Gas Plays

Anadarko Basin

The Anadarko Basin is an asymmetrical basin that lies mainly within central to western Oklahoma, but also touches into the Texas Panhandle, southeastern Colorado and southwestern Kansas covering an area of around 60,000 sq. mi. The basin is bounded by the Wichita-Amarillo Uplift to the south, the Nemaha Uplift to the east, and the Cimarron Arch to the west (see Figure 2).

Igneous activity led to the emplacement of Early and Middle Cambrian rocks forming the Wichita Uplift and deep Anadarko Basin. During the Late Cambrian through the Mississippian about 15,000 ft of shallow-marine carbonates and fine-grained clastic sediments were deposited into the basin. Later during the Pennsylvanian orogenic episode, downwarping of the crust beneath the basin allowed nearly 18,000 ft of marine sediments to deposit within the basin. The basin was then filled with around 7,000 ft of red beds and evaporites covering the Permian through Holocene time. The Triassic through Quaternary strata are largely represented by erosional remnants.

These depositional events resulted in the stratigraphy of the basin hosting of many prolific oil and gas-producing horizons. The first oil and gas discovery occurred in 1917 from the Cement anticline, but production is still occurring throughout the basin to this day.

SCOOP/STACK Play

The South Central Oklahoma Oil Province (SCOOP) play and the Sooner Trend (oil field) Anadarko (basin) Canadian and Kingfisher (counties) (STACK) play cover the southeastern part of the Anadarko Basin in central and south central Oklahoma. The allotted lands represented by the Anadarko Agency overlies the western edge of the SCOOP play within the deep Anadarko Basin and extend out of the core play area.

The SCOOP play has multiple proven stacked horizontal targets in the Anadarko Basin. Recent activity suggests that the main targets within the SCOOP play within the

reservation boundaries include the Hoxbar/Marchand, Mississippian and the Woodford Shale (see Figure 3). The majority of the recent activity lies within Caddo, southwestern Blaine and western Grady counties.

Oil and Gas Activity

The oil and gas prone region within the Anadarko jurisdiction area covers Kiowa, Caddo, Comanche, Tillman, and Cotton counties, with some jurisdiction in Jefferson, Stephens, Grady, Canadian, and Blaine counties. Figure 4 shows allotment in relation to the major South Central Oklahoma Oil Province (SCOOP) and Sooner Trend Anadarko Basin Canadian and Kingfisher (STACK) plays. These plays have been very active and promising and are in close proximity to Anadarko jurisdiction tribal lands. Within this region, 33,937 wells have been drilled. There are 5,072 wells that are producing gas wells and 8,897 are active oil wells. Production from the active wells are from the Cottage Grove, Fortuna, Granite Wash, Hunton, Marchand, Mississippian, Morrow, Pontotoc, Red Fork, Skinner, and Woodford Formations, with some production from other formations.

Figure 4 shows recent oil and gas activity within this region in relation to the allotted lands both leased and unleased. Figure 5 displays a close-up of the active area of the region. A large portion of acreage is located within the SCOOP region where most of current drilling activity is centered. While most of that acreage is leased, however there are still allotted lands open to leasing (see Figure 5). The maps show 1,556 wells that have been completed since January 1, 2015 within the region, with 1,303 that are completed horizontal wells. The majority of those wells are producing from the Mississippian and Woodford Formations, with some production from the Meramec and Hoxbar Formations. Records show that permits have been approved for new wells as late as September 30, 2019, showing that this region is still very active and taking into account the date the brochure was written (December 27, 2019). The last few permits approved target the Mississippian and Oswego Formations, showing that opportunity exists beyond just the Mississippian and Woodford Formations.

Leasing Procedure

The mineral rights described in this pamphlet are held in Trust by the Federal Government for the benefit of the Indian Allottee. Allotted Trust Minerals are leased through a lease auction held by the BIA Agency. Contact Anadarko Agency to nominate acreage and learn when the next lease sale is taking place. The rental/royalty rate/lease term are all set by the Agency for the lease sale.

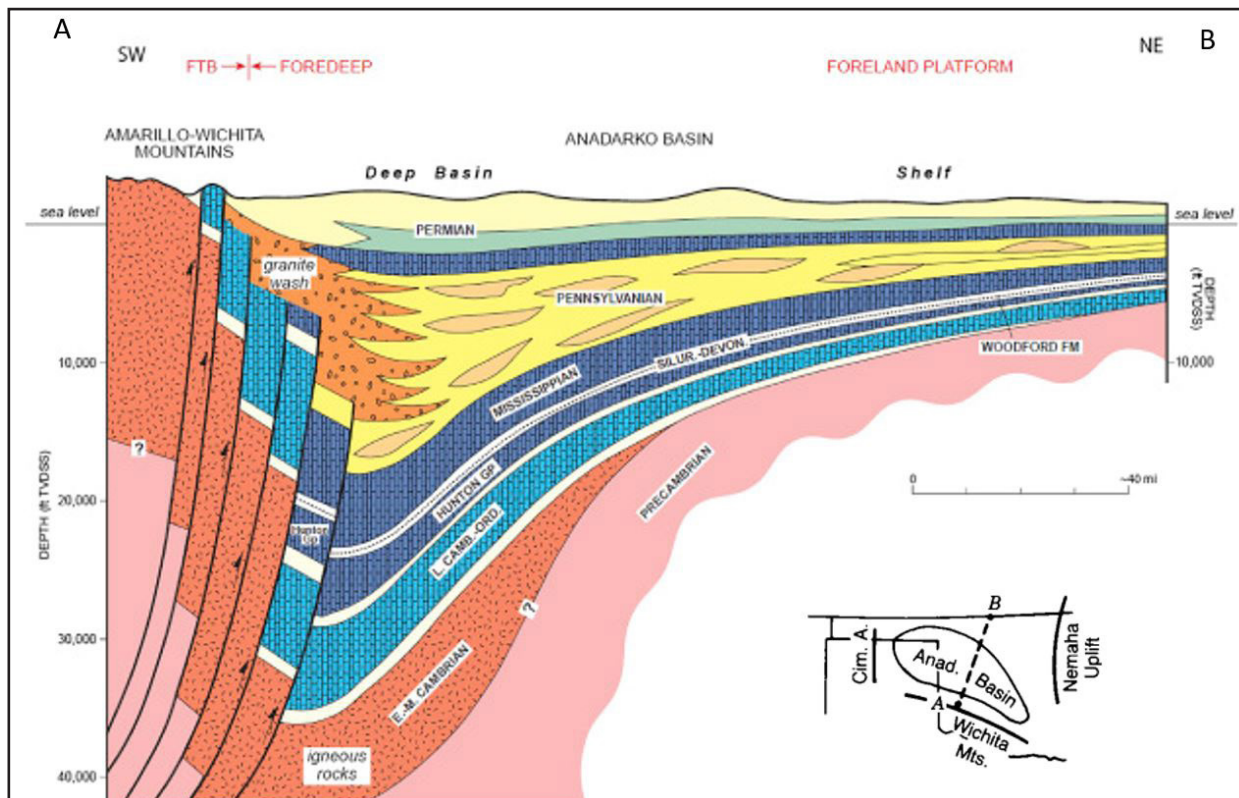


Figure 2. Generalized cross section from southwest to northeast of the Anadarko Basin. (Johnson et al., 1989).


























Anadarko Basin		
System	Series / Epoch	Generalized Stratigraphic Column
Lower Permian	Wolfcampian	 Hugoton / Pontotoc (Brown Dolomite)
		Chase / Council Grove
		Admire
Pennsylvanian	Virgilian	Wabaunsee
		  Shawnee
		  Douglas Tonkawa
	Missourian	  Cottage Grove
		  Hoxbar / Hogshooter
		  Checkerboard
		  Cleveland
	Desmoinesian	 Marmaton Group (Glover / Big Lime / Oswego)
		 Cherokee (Skinner / Pink Lime / Red Fork)
	Atokan	 Atoka Lime
		 13 Finger Lime
	Morrowan	 Morrow Shale / Dornick Hills Shale
Mississippian	Chesterian - Meramecian - Osagean - Kinderhookian	 Springer
		  Meramec Lime / St. Louis
		  Osage Lime / Osage Chert
		Kinderhook / Sycamore Lime
Devonian	Upper Devonian	 Woodford
		 Hunton

Figure 3. Stratigraphic column of the Anadarko basin from Devonian to Lower Permian time focused within the SCOOP Play (LoCricchio, 2014).

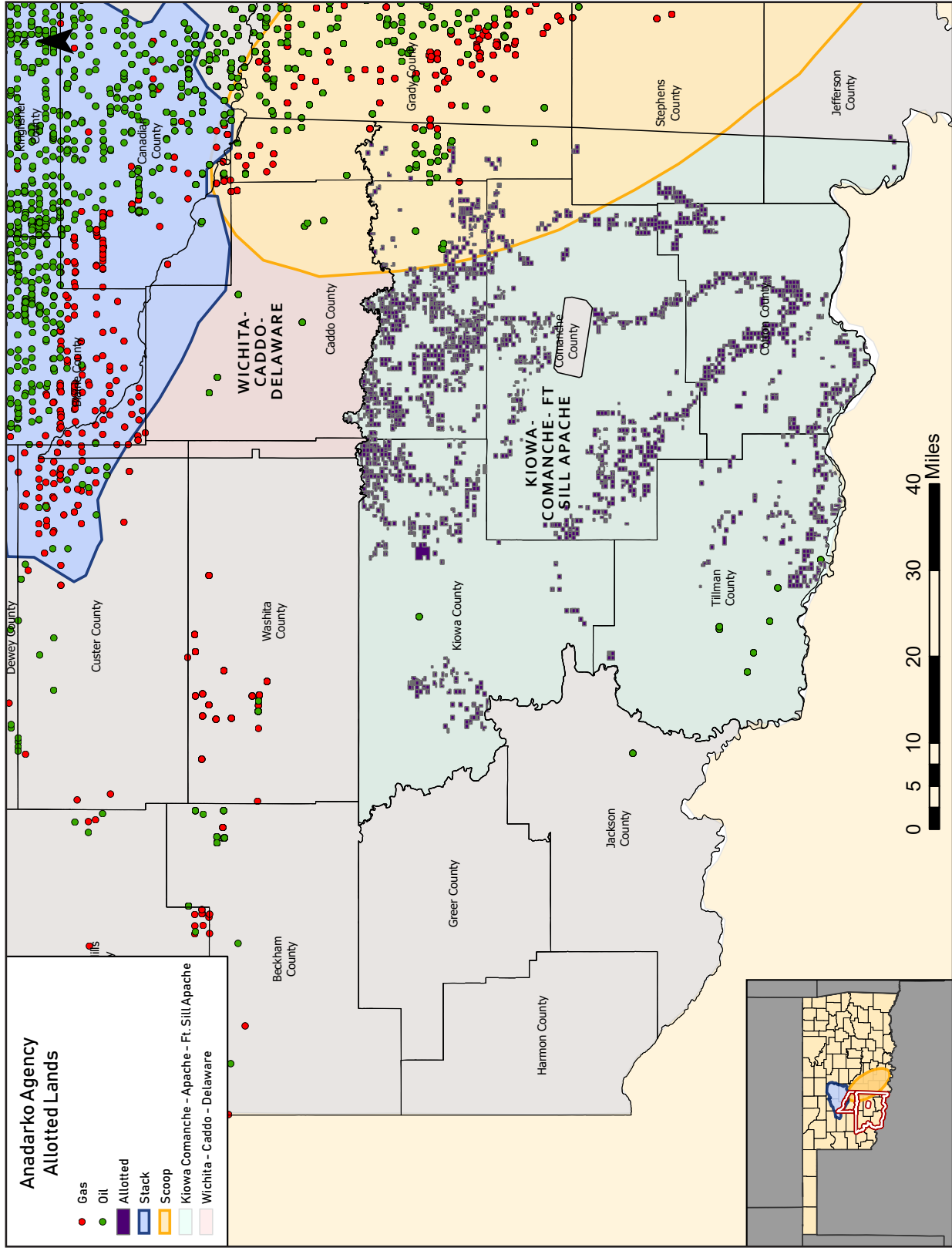


Figure 4. Anadarko Agency jurisdiction leased and open acreage in proximity to SCOOP/STACK regions and recent oil and gas activity.

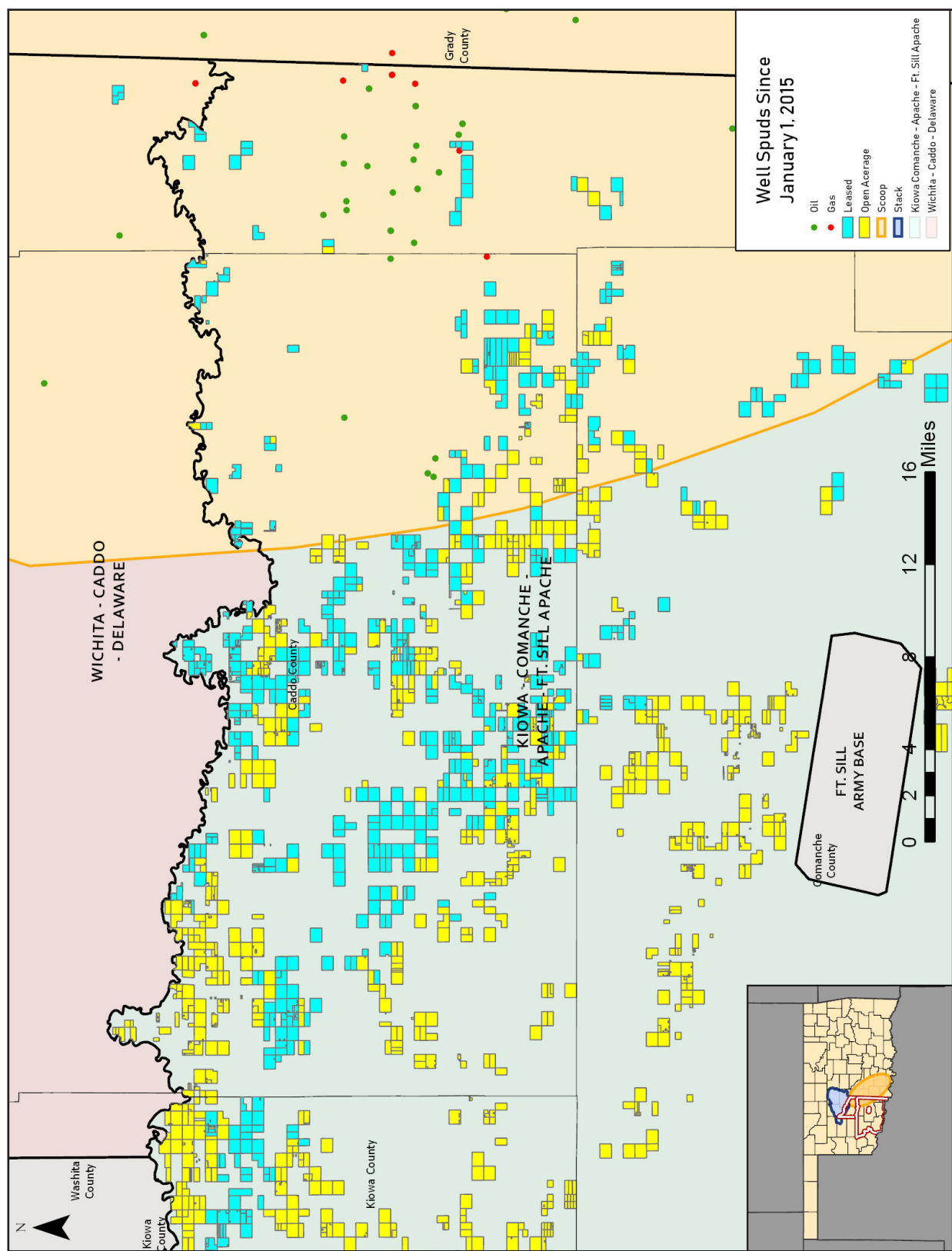


Figure 5. Leased and open acreage in north-eastern portion of Anadarko Agency near STACK region and recent oil and gas activity.

References

Johnson, K.S. et al., 1989, Anadarko Basin symposium, 1988: OGS Circular 90.

LoCricchio, Ed., 2014, Granite Wash Play Overview, Anadarko Basin Stratigraphic Framework and Controls on Pennsylvanian Granite Wash Production, Anadarko Basin, Texas and Oklahoma: Search and Discovery Article #80420.



CONTACT INFORMATION

For more information about the Anadarko Agency and access to geologic data, please contact:

Anadarko Agency

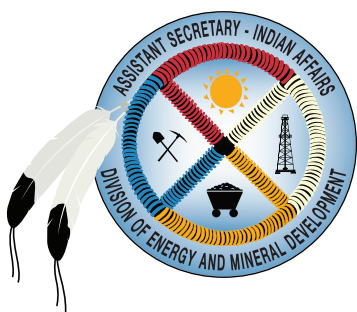
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