Great Salt Plains Reservoir and Salt Flats - and more too!



Arrel Toews



The Great Salt Plains Reservoir near Nash and Jet OK was our beach and seacoast when we were young and growing up on our farm just E of Kremlin in the late 1940s to mid-1960s. In retrospect, including years of now living just 3 or so hours from the real Atlantic Seacoast and its ocean beaches, that seems almost ludicrous, but that's the way we were back then! So I think a somewhat thorough treatment of what the Great Salt Plains was, how it came to be, and in some respects continues to be today, is in order. I enjoyed learning many new things while also remembering some old things about the Great Salt Plains when assembling this document. I hope you too will enjoy reading and maybe learning something from what I have prepared.

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Thanks to my brother Myron Toews and my first cousin Jeanette Regier Ratzlaff for sharing photos and memories - their valuable assistance is greatly appreciated. Jim Zaloudek, Peggy Harris, Dennis Toews, and Dan Zaloudek also supplied helpful information and memories. I am deeply indebted to all of them.

I will always be interested in comments, suggestions for revision and new photos and diagrams to include. Please feel free to contact me. Active weblinks are <u>underlined in purple</u>

Arrel Toews <u>atoews@hotmail.com</u> Carrboro NC 12 March 2025

Introduction

The Great Salt Plains were created millions of years ago by the repeated cycles of flooding and evaporation of the shallow sea that once covered Oklahoma during the Permian Period (~250 million years ago). When the ocean finally receded for good, it left behind a thick crust of salts. Saline-rich groundwater still flows beneath these plains, replenishing the surface deposits.

These salt flats were a busy crossroads for Native American tribes, including the <u>Osage</u>, the <u>Kiowa</u>, and the <u>Wichita</u>. "Osage Indians" by <u>George Catlin</u> is shown at L. Not only did the area provide the salt they needed to preserve meat; it was also an important hunting ground that attracted bison, deer, elk and fowl. In 1811, an Osage named Sans Oreille led an expedition of



explorers to the area – they were the first known "white people" to visit this area. Among the caravan was government agent <u>George C. Sibley</u> (portrait by Chester

Harding, ca 1830, at R) who described the plains "glistening like a brilliant field of snow in the Summer sun" and named it the "Grand Saline." Soon after, settlers pushed into



Kansas and Texas, making regular trips to fill their wagons with this precious salt. Early OK settlers also took advantage of this ready source of this vital mineral.

The US Army Corps of Engineers began work on the Great Salt Plains dam and reservoir in



1938, primarily as a flood control measure, and completed the project a few years later. The reservoir initially had a surface area of about 9,300 acres with a volume of 46,700 acre-feet, although today it contains much accumulated sediment. There was a nice swimming area with sandy beach just NW of the dam in our days and picnic areas under nearby trees. The

lake and dam are now part of the <u>Great Salt Plains State Park</u>. A large <u>wildlife refuge</u> is adjacent, with a selenite sand crystal digging area on the salt flats near Jet and Cherokee. These crystals are found nowhere else on our earth. The refuge is notable for large numbers of migrating waterfowl, including white pelicans, snowy plovers, whooping cranes, and several other endangered species.



Getting to the Salt Plains

The Great Salt Plains Dam and Reservoir on the Salt Fork of the Arkansas River are located about 15 miles NW of Nash OK - the easiest and quickest route from Kremlin involves traveling N on US-81 to the Four Corners intersection, then W on US-64 through Nash and 5 miles later, about 5 miles N to Great Salt Plains State Park. Just before you cross the Salt Fork River on OK-38, you will pass by Kegelman Auxiliary Field, a sub-base of Vance Air Force Base under the control of the <u>71st Flying Training Wing</u>. Vance AFB student and instructor pilots use the airfield to practice touchdown landings in both jets and propeller-driven trainer aircraft, and refer to the field with the callsign "Dogface". I have memories of begging my Dad to drive slowly so we could see some jets touching down and then roaring back up to circle back around.

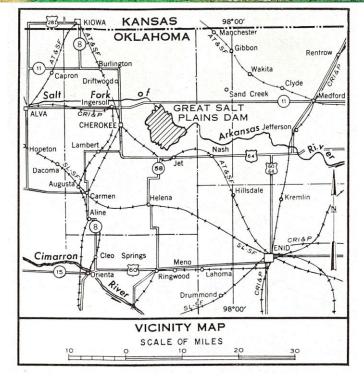
Just after Kegelman Field, the road dips down into the Salt Fork River Valley through red and gray strata of Permian sediments. There was always great anticipation when we reached this

point, knowing when we soon crested the dam, we'd see our destination - the beach and picnic area of the Salt Plains! Right after crossing the Salt Fork, the road curves to the W, and on the N side of that curve was John & Myrt's Bait House, a good place to buy anything you forgot from home. Note the large mural map of the area by the front door, and underneath, some of those delicious sweet and crisp Black Diamond watermelons! And yes, that's Myrt and

John sitting on their porch! After a short drive over the dam on OK-38, the parking area for the beach, bath houses, and picnic area under the trees was on the left.

A nice map of the area is shown at R. Can you find Kremlin?





Arrel Toews

Gripey Joe's Ranchhouse Café, home to some of the best chicken-fried steak on the planet, was located along Main Street (US-64) in Nash (but not in our childhood days - plus we would have never stopped anyway!). Chicken-fried steak with creamy gravy, mashed potatoes, corn/beans, roll, and homemade dessert delivered to your table at Joe's discretion, plus iced tea you picked up on the way in, all for \$6.00! The kitchen and counter were in a converted railroad dining car. I believe Joe and wife still do catering, but mostly all we have are fond culinary memories. Other nearby towns include Jet and Cherokee to the W.









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Unlike Gripey Joes, Four Corners Café was booming in our childhood days, although sadly, all that now remains are the skeletons of buildings with abundant trash and weeds. It was located just before the intersection where US-81 and 60 turn E to Pond Creek and US-64 turns W to Nash and Jet. The extreme angular design and futuristic appearance made it a real eye-catcher for folks driving by. Four Corners Café menu is below. Chicken-fried steak was \$0.90 and a T-bone steak \$2.50. Photos from Pond Creek History Facebook group.





	FRUIT JUICES		
Tomato Juice	Orange Juice	Grapefruit Juice Grape Juice	
Prune Juice			
Large	25c Smal	1 15c	
BR	EAKFAST SUGGEST	TIONS	
Assorted Cold Cer	25c		
Two Wheat Cakes	25c		
Two Wheat Cakes	ausage 60c		
Two Eggs (any sty			
	n		
Order of Toast wit	h Jelly	15c	
	SANDWICHES		
	On toast 5c extra		
Father's Favorite-	-Warm, Juicy Beef on	Rye	
Charcoal Broiled H			
GAOTATOG			
Cheeseburger	40c		
Charcoal Broiled		00-	
	45c		
Egg	25c		

450

350

250

35c

Bacon and Egg

Chicken Salad

Cheese

Bacon and Tomato

FROM OUR CHARCOAL BROILER

Club Steak	1.50 - 2.50
T-Bone Steak	1.50 - 2.50
Hamburger Steak	.90
Above orders served with Shoestring or Combination Salad, Tea o	Hash Brown Potatoes or Coffee
ENTREES	

One-half Fried Spring Chicken (disjointed) \$1.25 Chicken Fried Steak .90 Roast Beef .90 Baked Ham .90 French Fried Shrimp 1.25 Above orders served with Shoestring or Hash Brown Potatoes Combination Salad, Tea or Coffee

	SAL	ADS	
Combination Salad	35c	Head Lettuce	25c
Potato Salad	25c	Sliced Tomatoes	25c
Fruit Plate, Cottage	Cheese		
Assorted Sou	ps	25c	
	DESS	ERTS	
Pie	15c	Dish Ice Cream	10c
		Chocolate Sundae	
Cake	15c	Malts	30c
Milk	shakes		
	DRI	NKS	
Coffee	5c	Iced Coffee	10c
Hot Tea	10c	Butter Milk	10c
		Sweet Milk	
A	ll Bottled	Drinks 10c	
Popular Beer	250	Premium Beer	20.0

Construction of Great Salt Plains Dam and Reservoir

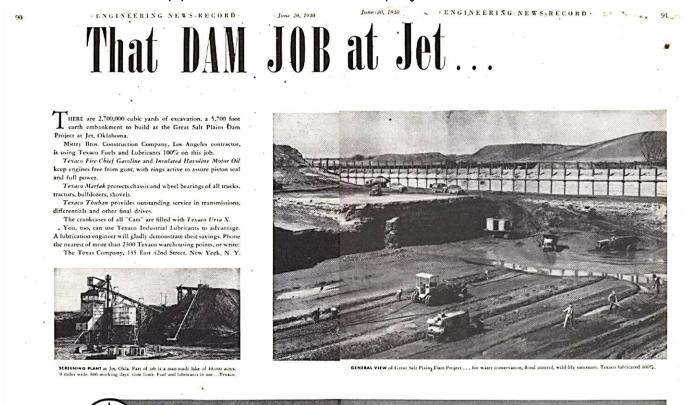
A study made in 1931 for the <u>US Army Corps of Engineers</u> proposed building a flood control dam on the Salt Fork of the Arkansas River in the Great Salt Plains area of NW OK. Congress authorized its construction in 1936 (Flood Control Act of 1936), and design studies began in 1937. The Corps broke ground for construction in September 1938, and in July 1941, the dam

was completed at a cost of some \$4.6 million (\$98 million in 2024 dollars). Mittry Brothers Construction Co, Los Angeles, was the contractor. The lake sits in a basin with salt flats to the W and red Permian bluffs to the E. It covered 9,300 acres (14.5 sq miles), with a water capacity of 31,420 acre-feet and 91 miles of shore-line. The current average depth is only 4 feet, and in fact, during a recent severe drouth, its average depth was only 2 feet! The future of this lake is in



serious jeopardy today due to sedimentation and agricultural runoff - see 21 July 2012 Oklahoman - <u>Can the Great Salt plains Lake Be Saved?</u> A photo (ca 1939) taken by my father David A Toews of the spillway area under construction is shown above.

The Texaco "That Dam Job at Jet" ad below is from the 20 June 1940 Engineering-News Record - it shows the only photos of the construction project I have found.





Aerial photo of Great Salt Plains Dam and Reservoir: The lake outlet and approach channel/spillways are at lower R and the sand beach, bath houses, and picnic area are at upper L. Access to the beach/picnic area is via a road over the dam shown at top C. Looking N



Below L: dam and reservoir (looking W); R: spillways and Salt Fork River (looking NE)



The dam is a rolled earth-fill structure approximately 5,700' in length, rising 72' above streambed level and having a top width of 25'. The upstream slope is protected from wave action by 16" of stone riprap. The cascade-type spillway egress consists of a riprap-lined

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approach channel approximately 1,700' in length and a concrete spill-way channel 800' long and 310' wide. Within the spillway channel, there are 3 weirs arranged in stair-step fashion about 325' apart, and water levels drop in approximately equal measures to reach the Salt Fork River below them. Spillway catchment basins are great fishing spots, although mostly for <u>carp</u>!





General Geography of the Great Salt Plains Area

The Great Salt Plains dam and reservoir are on the Salt Fork of the Arkansas River just downstream from where the river emerges from the Great Salt Plains salt flats. The Great Salt Plains are formed by a basin about 40 miles square, consisting primarily of alluvial sand saturated with salt water, with surface salt incrustation formed by evaporation. With the exception of the salt flats themselves, the area is verdant and fertile.

The Salt Fork River comes out of S-Central KS (Commanche County) into OK, where it flows through Woods, Alfalfa, Grant, Noble and Kay Counties, eventually merging with the Arkansas River 7 miles S of Ponca City. It flows near Pond Creek, Lamont, and Tonkawa, and is part of the MI River watershed. Its total length is about 239 miles, of which 107 miles are above the dam. Total drainage area of the Salt Fork River is 6,764 sq miles, of which 3,200 are controlled by the dam/reservoir project. Average annual rainfall over the drainage area is about 25"/year (average annual rainfall in OK ranges from 17" in the far western Panhandle to 56" in the SW corner of the state).

Human History of the Great Salt Plains Area

Humans have lived in what is now OK since at least the Last Ice Age (>11,700 years ago). Archaeologists refer to these earliest cultures as <u>Paleo-Indians</u>, denoting them as the first peoples who entered and then inhabited the Americas between ~16,500 - 11,000 years ago. They are presumed to have been big-animal hunters that initially crossed the Bering Strait from North Asia (current E Siberia) into the Americas (current Alaska) over a land bridge between the continents of Asia and N America denoted as Beringia that existed due to drastically lower sea levels associated with the last ice age.

The area of OK near the Great Salt Plains is rich in paleo-history. The Burnham site, near Freedom in Woods County OK (~55 miles W of the salt flats) is a pre-Clovis site, that is, an archaeological site dating before 11,000 years ago. The earliest known painted object in North America, the <u>Cooper Bison Skull</u>, which dates between 10,900 and 10,200 radiocarbon years ago, was found at a Folsom tradition site in what is now Harper County OK (75 miles W of the salt flats).

Early European exploration of that general area included the Expedition of Spaniard <u>Francisco</u> <u>Vázquez de Coronado</u>, who traveled through the W part of the state in 1541, searching for that elusive Cibola (Seven Cities of Gold). In 1601, Juan de Oñate led an expedition near the Antelope Hills in western Oklahoma. Neither likely ventured as far E as the Great Salt Plains.

For centuries, these salt flats were a busy crossroads for Native American tribes, including the <u>Osage</u>, the <u>Kiowa</u>, and the <u>Wichita</u>. In 1811, Sans Oreille, an Osage Indian, with others of his tribe, guided Major George C. Sibley, Indian Agent from Fort Osage MO, and his party to Salt Plains. They are thought to have been the first white men to see the Salt Plains, which Major Sibley called the Grand Saline. The Salt Fork of the Arkansas River, flowing around the plain, was known to the Osages as Nescatunga (big salt water). Another early explorer to see the Plains was Capt. Nathan Boone, who headed a Government expedition from Fort Gibson into what is now central Kansas in 1843. The <u>Nathan Boone Trail</u> is a nice quiet and scenic 5.3 mile hike.

The Great Salt Plains have been the scene of many Indian Councils, both of war and peace. In drafting the treaty which defined the territory to become the so called permanent home of the Cherokees in 1828, the United States Government withheld the Salt Plains area with the provision that, "The right is reserved to the United States to allow other tribes of red men to get salt on the Great Salt Plains in common with the Cherokee Tribe." The value of the Plains lay not in its salt alone, but in the rich hunting afforded by the animals migrating there for the salt supply, and possession of this area is said to have been the muse of many Indian battles. In the earliest of the settlement of the Indian Territory, Western Kansas and Texas cattlemen sent wagons to these Plains to haul away great loads of salt, just as Native Americans had done centuries earlier. I remember my Dad, David A Toews, telling about taking horses and wagons to the salt flats to scrape up salt for their horses and cattle when he was a young lad.

A local legend of interest concerns a cache of gold that was reportedly buried in the vicinity of the dam. In 1850, five men were returning to Missouri from California with fourteen bars of

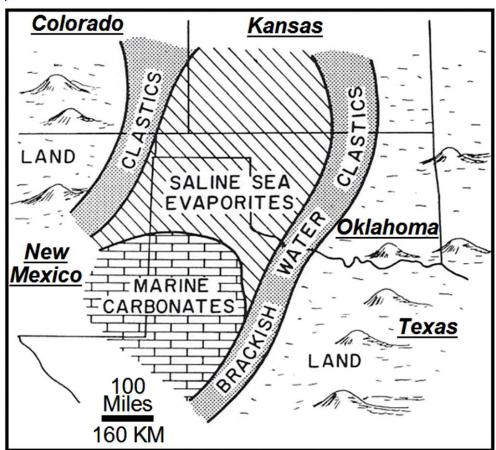


gold in their wagon. In the vicinity of the present dam, they were attacked by Cheyenne-Arapaho Indians, three of the men being killed. The two remaining men wrapped the gold in a buffalo calfskin and buried it, marking the spot with an end-gate rod from their wagon. At least one of the men survived, since in 1901 Carl Sheldon arrived in the area with a map showing the location of the buried gold. Mr. Sheldon continued to search for the gold until

1940 when he was forced to leave because of the dam construction. In 1904, Sheldon had samples of the material from the drill bit assayed and traces of gold and the hide reportedly were found. Due to shaft cave-ins and movement by underlying quicksand, this was the closest Sheldon came to finding the gold. Presumably it is still buried there somewhere - or not!

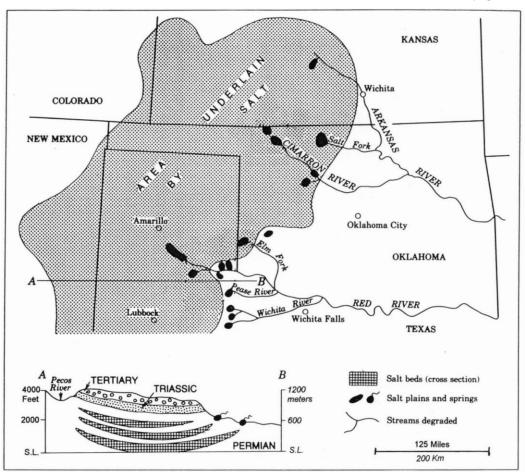
Overview of Geology of Great Salt Plains

The Great Salt Plains were created millions of years ago during the Permian Period (300-250 million years ago). The Permian is the sixth and last period of the <u>Paleozoic</u> Era; and the following Triassic Period begins the <u>Mesozoic</u> Era. At that time, what is now central US was a large shallow sea. Repeated cycles of flooding and evaporation left thick layers of sediments. When the ocean receded for good, it left behind a thick crust of salt. Saline-rich groundwater still flows beneath the plains, replenishing the surface during floods and by evaporation. The figure below shows the paleogeography and principal facies of rocks deposited in the greater Permian Basin of the SW US during deposition of Cimarron evaporites (Johnson, 1981). Note the Saline Sea evaporites in the Salt Plains area. Marine carbonates are limestones.

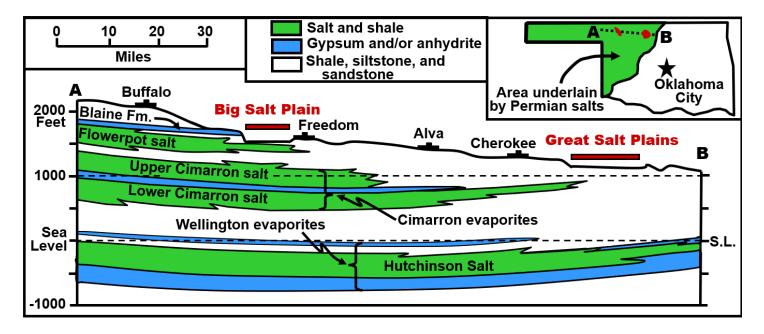


The map and schematic cross-section on the next page shows the distribution of Permian salts and salt plains in the Arkansas River and Red River watersheds of western OK and adjacent areas (Johnson, 1981). Salts include both halite (NaCl; table salt) as well as gypsum (calcium sulfate; $CaSO_4 \cdot 2H_2O$), the latter as hourglass-selenite crystals (see following section).

With respect to the geologic cross-section at lower L in the figure below, the Tertiary Period began about 66 million years ago with a mass extinction that terminated the dinosaurs and ended when the ice ages of the Quaternary Period began, about 2.6 million years ago. The Triassic Period spans 50 million years from the end of the Permian Period 250 million years ago, to the beginning of the Jurassic Period (yes, think Jurassic Park!) 200 million years ago.



The salt plains themselves consist of loose Quaternary deposits saturated with high-salinity natural brine that is seeping up from underlying Permian rocks. A generalized structural cross-section of Permian strata in NW OK showing subsurface salt units and principal salt plains is below (Jordan and Vosburg, 1963). Note the surface proximity of salt strata near Freedom (Big Salt Plain) and Great Salt Plains E of Cherokee. The lower Hutchinson Salt strata gives rise to the 650'-deep salt mine near Hutchinson KS (now <u>Strataca Underground Salt Museum</u>).

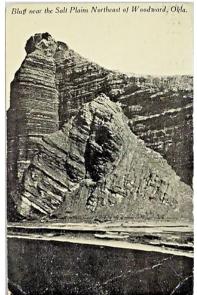


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To the east of the Great Salt Plains salt flats, reservoir and dam, there are cliffs of Permian redbeds. These layered outcropping bedrock formations are readily visible as you descend to the Salt Fork River Valley just past Kegelman Field. They consist chiefly of interbedded reddish-brown shales and siltstones, but also contain some layers of fine-grained sandstone and greenish-gray siltstone and shale. The 1918 postcard of a bluff near the Salt Plains is a nice depiction of these strata 20 years before construction of the dam and reservoir began. They are also visible below the spillway in the photo at L below and on the S shore of the reservoir (R below).





Formation of Unique Hour-Glass Selenite Sand Crystals

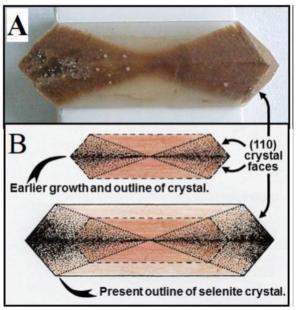
First a bit of background underlying formation of these crystals. Brine entering the Great Salt Plains is fully saturated with respect to both sodium chloride (halite) and calcium sulfate (gypsum). Once the brine enters the Quaternary overburden, it is further concentrated by evaporation at the land surface. Brine rises to the water table, several inches or more below the surface, and capillary action draws it up to the land surface where it is evaporated. Halite is precipitated as a hard crust (locally up to two inches thick, after long hot and dry spells) on the surface of the salt flats, and gypsum is precipitated as hour-glass selenite sand crystals just below the surface, where the brine is saturated with respect to calcium sulfate. The evaporation rate here is extremely high: the average annual precipitation is only about 26 inches, and the average rate of fresh-water evaporation is about 80 inches (Davis, 1968).

Hour-glass selenite sand crystals are unique to the Great Salt Plains (nowhere else on earth!), and they were designated as the "official Oklahoma State Crystal" in 2005. The interior of each crystal contains a ghostlike, hour-glass form consisting of sand, silt, and/or clay particles

incorporated within the crystal as it grows. The reddish-brown color is due to the presence of iron oxides (rust) that coat the particles enclosed in the crystal. As the crystal grows, the loose particles are enveloped or enclosed only at the ends (the crystal faces), whereas particles

adjacent to the sides of the crystal are merely pushed aside.

The exact underlying reason for this hourglass pattern is not completely clear, but it appears that the bond between molecules forming the smooth faces on the sides of the crustal is so strong that each new layer of molecules that is added forces foreign particles away from the crystal side. On the other hand, the bond between molecules forming the dodecahedron faces at the ends is not strong enough to push foreign matter aside, and therefore new layers at the ends envelop the reddish-brown particles. In other words, the sides of the growing crystal can exclude sand while the



growing ends cannot, so the sand inclusions become increasingly larger on the ends as the crystal grows, leading to the distinctive hour-glass appearance.

Crystals form just below the surface, seldom more than 2' deep. Selenite occurs as individual crystals up to seven inches long, and clusters of intergrown crystals have weighed as much as 38 pounds. Crystals can enclose sticks, rocks, bones, and cockleburs that are part of the host sediment. To dig crystals, you will need a spade for digging down to the water table, a bucket for rinsing crystals and smaller bucket for dipping water, a trowel, a good sun hat, and plenty of cold drinking water. If you have not already done so, be sure to make an excursion (free and open sunrise to sunset April 1 - October 15). You get there by going W, then N of Jet. Photo below R shows the author and a rather young Henry *G* Toews, grandson of *G*alen and *A*nita Toews, after digging crystals. Kathy Toews in background with our Honda CRV taking a photo. ca 2014



Assorted selenite crystals from the author's extensive collection are shown below. Note complex crystals in R photo.



Photos below show the Great Salt Plains salt flats: L "Barrens at the Salt Plains" Carolyn Foreman, 1955, OK Photo Collection; R, OK Tourism



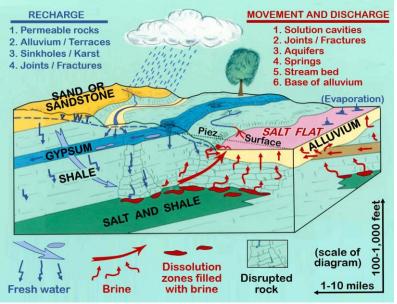
Congress designated the salt flats and surrounding territory a national wildlife refuge in 1930. The <u>Salt Plains National Wildlife Refuge</u> has 32,197 acres made up of a variety of habitats including wetlands, marsh, prairie, and forest, plus about 12,000 acres of salt flats. In addition to the flats themselves, the refuge includes a mishmash of habitats that make the area ideal for a <u>staggering variety of species</u>. Today, nearly half a million birds arrive during spring and fall migrations, including the critically endangered <u>whooping crane</u>. Ralston Island, which rises from the center of the refuge's Great Salt Plains Lake, is the largest <u>heron</u> rookery in Oklahoma, hosting some 30,000 birds a year. Spectacularly large flocks of <u>white pelicans</u> can be seen feeding during spring and fall migrations. Many species of wildlife nest directly on the salt flats, making it difficult to see their eggs from a distance. While vegetation on the flats is sparse, the birds feed on the salt brine flies that hatch when water is available. During World War II, bombs drowned out birdsong. The United Army Air Corps used the area as a bombing and gunnery range from 1942 to 1946. Bombers arrived from surrounding states for target practice while soldiers on the ground learned, among other things, to sniff out potential chemical agents. A non-fatal amount of each chemical was packaged in a vial, which were distributed in <u>Chemical Agent Identification Sets</u> (CAIS).

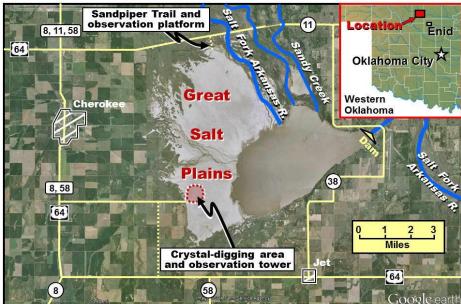
In 2007, the refuge was closed after a Boy Scout dug up a CAIS vial filled with decades-old mustard gas. The Army Corps of Engineers spent two years inspecting the area, turning up another 170 vials before sounding the all-clear. Tests are still conducted every five years.

Dennis Toews (KHS Class of 1965) recalls flying over the salt flats with Steve Burdick (KHS Class of 1967) when they were both in college at NW OK University in Alva OK in the late 1960s. Steve was taking flying lessons at the time. Dennis says the circular bombing targets on the salt flats were still visible then, although he doubts they still exist today. Dennis went on to a distinguished flying career, with many years flying as a pilot for UPS.

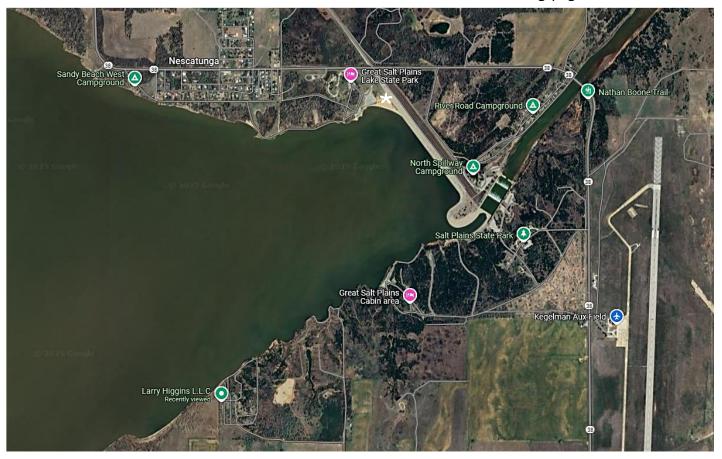
Schematic diagram at R shows circulation of fresh water and brine in areas of salt dissolution in NW OK (modified from Johnson, 1981).

Google Earth map of Great Salt Plains area below (9/2010) may be helpful to some readers.





A couple of current Google Earth map captures are shown below: In the upper photo, note the unincorporated village of Nescatunga (Osage for Big Salt Water). There are a number of houses here, just W of the Sandy Beach area (white asterisk) on OK-38. Also note the smaller development on the S shore W of the cabin area (Larry Higgins LLC pin), a potential marina/boat ramp location. I have not visited this location. I believe the Zaloudek Marina was located in the Great Salt Plains Cabin area on the S shore (see following pages).



Bottom photo shows Nescatunga at higher resolution. Perhaps there is/was a marina/boat ramp somewhere at this location. Dam and Sandy Beach area are at extreme R.

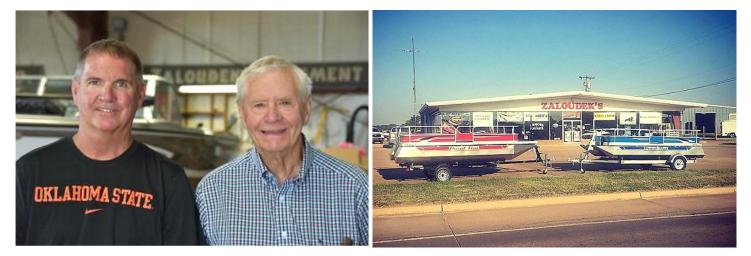


The following description of the **Zaloudek Marina** on the S shore of the Great Salt Plains Reservoir is from Jim Zaloudek, whose father Gene owned and operated the West Side Feed Store/Zaloudek's Implement Company at <u>223 W Randolph</u> for many years, then Zaloudek's Marine with his son Jim on N VanBuren.

The 223 W Randolph link above is from the <u>Downtown Enid History website</u> - it is a great site for Enid history buffs with vintage photos and historical information through the years of many buildings/locations in downtown Enid. You will enjoy exploring Enid in days of yore!

Below: Jim and his father Gene Zaloudek (L) and Zaloudek's Marine (R), from <u>Enid Buzz</u> article in 2019 noting their closing after 98 years of business in Enid OK. A 1956 West Side Feed Store calendar, also from EnidBuzz, and Zaloudek Implement Company matchbook cover (eBay image) are shown at R for some nostalgia of days past.





"A small community named Nescatunga developed on the N side of the Lake, and it still exists today. In the early 1940s, my father, <u>Gene Zaloudek</u>, was granted a 100-year lease for the concession rights to the Lake. He selected a site on the S side of the lake approximately 1/2 mile W of the dam for his plan. Although he had a business in Enid OK approximately 50 miles SE of the lake, he spent many hours after work developing the area for recreational purposes. The first order of business was to build a lift for launching boats with a nearby dock and fueling station. He then purchased a fairly long barracks building and had it hauled in to the prepared site. The barracks had 3 separate sections. The northern portion provided a café,

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the middle section was a supply room, and the southern third was living quarters for the live-in manager and his wife. After opening the Café, he had a visit from a General in the Army Corps of Engineers Tulsa District wanting to inspect the progress being made. During that visit, my Dad said "General, would you want your wife going to the restroom in that?", pointing to a 2-holer outhouse. Within 45 days, the Corp of Engineers had built a very nice concrete facility across the road from the Cafe that would nicely accommodate both men and women. Gene then had five small cabins built above and behind the cafe and a 6th larger cabin across the road from the original five. For many years all six cabins were rented most every weekend to families that came from up to 100 miles away to enjoy the lake. Due to the salt water, the fishing was great.

Waterskiing was very popular back then and my father was also into boat racing. There were several sanctioned boat races over several years and those races generally drew 30-40,000 spectators. There was also a water-skiing club formed which generated the funds for a slalom course and ski-jump. These events also drew thousands of spectators.

My father only had a contract for all concessions at the lake. The Café was about midway between the cabins and the shoreline below. The dock and fuel pump were in a cove at the bottom of the hill from the cafe. The boat loading/unloading ramp was directly N of the dock on the lake side. The ski jump was almost straight north of the boat ramp, out about 400' from the bluffs in the middle of the channel. The ramp was anchored by 55 gallon barrels welded end to end - three for the front and three for the back. The center barrel on both sets was filled with concrete, floated to the appropriate location and then the outer barrels on each set were filled with water until they sank. Cables were attached to the barrels and then to the front and back of the jump. To my knowledge the jump remained there for about 20 years. I learned to water ski at the lake when I was 5 years old, behind an aluminum boat with a 10 hp outboard engine. The sandy beach and other facilities around the shoreline were controlled and maintained by the Federal Government" [US Army Corps of Engineers; all now part of Great Salt Plains OK State Park].

Sometime around the middle 1960s, the State of Oklahoma purchased the balance of Gene's lease. Once they tore down the Café and built one on top of a bluff that could only be accessed by cars, the popularity of the lake diminished. The six Cabins are still there and are being maintained by the State." [I believe all six cabins are still available for rental through <u>Great</u> <u>Salt Plains State Park</u>]

Peggy Smith Harris, daughter of Tuck (Floyd) and Alice Zaloudek Smith, fondly remembers going often to the area of the Zaloudek Marina at the Great Salt Plains Reservoir during the summers while in school at Kremlin. She recalls a restaurant, maybe 3-4 cabins, and a boathouse and mechanic down at the boat dock. It was where she learned to water ski, peel potatoes and crack eggs for breakfast, and even do some "mechanicing" working on the cantankerous outboard motor of the Ed Zaloudek family boat. "Varina Zaloudek and sons Jack and Tom [her first cousins] had a tiny camper trailer parked at the top of the hill, and I was lucky to get to go with them most every Saturday evening after work during the summers until the boys graduated from high school. We'd come home Sunday evening salted, fried, and tired."

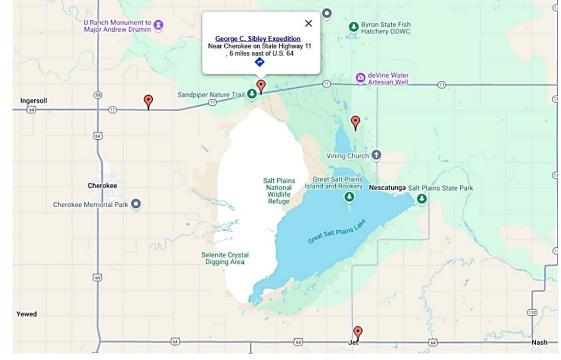
She notes that Gene Zaloudek was really instrumental to the beginnings of interest in boating and water skiing in NW OK. The Lou Zaloudek family also had a boat, and son Dan recalls seldom using it at locations other than the Salt Plains lake. FW Zaloudek's sons, Billy Mack and Bob, as well as Leonard Chelf's sons Don and Dick, had boats that frequented Salt Plains lake as well.

Some bird photos from Great Salt Plains National Wildlife Refuge are below: white pelicans on a spillway, flock of great blue herons, whooping crane in flight.





Northwest of the village of Nescatunga on OK-11, about 6 miles E of US-64 near Cherokee, there is a <u>historical marker</u> for the George C Sibley Expedition (see Historical Marker Database map below). Just after reaching OK-11, you will pass the deVine Water Artesian Well - stop for a sip!

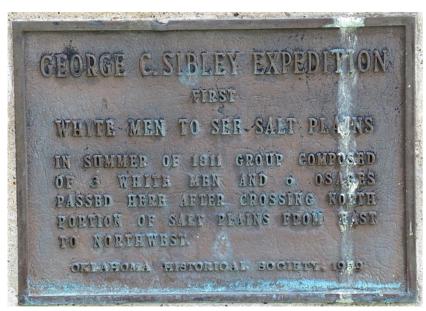


The marker reads:

"George C. Sibley Expedition"

"First white men to see Salt Plains. In summer of 1811 group composed of 3 white men and 6 Osages passed here after crossing north portion of Salt Plains from east to northwest." George C. Sibley, the leader of the expedition, described the geological phenomenon as a "perfect level plain covered in dry hot weather from 2 to 6 inches deep with a beautiful clean white salt."

Photos from <u>HMdb.org</u>





Great Salt Plains Reservoir & Salt Flats

Arrel Toews

Interestingly, at <u>Cowboy Cemetery</u> near Freedom OK, there is a memorial to two cowboys/salt haulers, <u>Rueben Bristow</u> and <u>Fred Clark</u>, who on 12 September 1878 were killed by Northern Cheyenne Indians led by <u>Chief Dull Knife</u> (see photos with markers below). The crude handcarved stone marker at L reads: "Cow Boys And Salt Hall Killed By Indias" The 13 January 1997 Oklahoman article <u>"Ambush Victims' Lonely Grave Gets a Headstone"</u> is an interesting read full of information. Freedom is approximately 50 miles W of Cherokee. Not exactly Great Salt Plains territory, but close enough and interesting to me anyway, so I have included it!

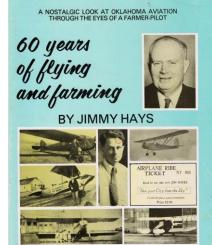




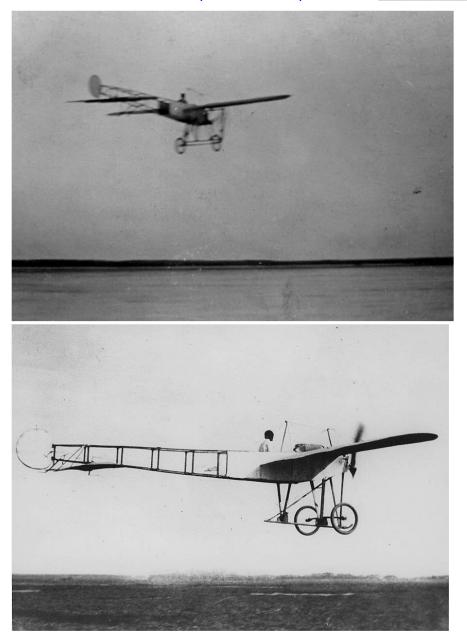
You may not know this, but early aviation pioneer <u>Clyde Cessna</u> began his aircraft ventures in <u>Enid OK</u>, building his first aircraft there with help from his brother Roy, then testing it on the

Great Salt Plains Salt Flats. His eventual success flying his 1911 Silverwing monoplane led to his nickname "Birdman of Enid." Photos of the Silverwing above the salt flats are below, from <u>Rootsweb.com</u>. Clyde Cessna soon moved his operation to Wichita KS, where <u>Cessna planes</u> are still manufactured - it is today the world's largest general aviation manufacturer. Perhaps some readers have flown Cessnas?

Kremlin's own <u>Jimmy Hays</u> was another early local aviation pioneer and he knew Clyde Cessna well. His 1977 autobiography <u>"60 Years</u> <u>of Flying and Farming"</u> is well worth owning. Jimmy was the father of Kremlin School alums Janet, Robert, Patsy and Carl Hays.



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U.S. DEPARTMENT OF THE INTERIO FISH AND WILDLIFE SERVICE

Today the dam and reservoir and surrounding territory are administered as the <u>Great Salt</u> <u>Plains State Park</u>. Park headquarters are opposite Kegelman Field, and there are nice cabins

that can be rented for overnight stays. The entrance to the Great Salt Plains National Wildlife Refuge is shown in the 1955 photo at R (Grant Foreman Collection, OHS). The refuge is home to uncounted waterfowl, including white pelicans during their seasonal migrations.



WELCOME

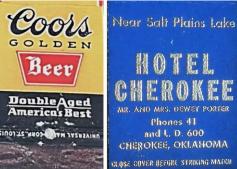
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SA

STATE PARK OFFICE

ABINS AND INFORMATION

AINS



<u>Boy Scout Camp Saline</u>, renamed Camp Williams in 1970, is just N of the wildlife refuge. Perhaps some readers will have been on Scout outings at this camp?



A nice aerial view of the Great Salt Plains area at L below is from the US Army Corps of Engineers - note Kegelman Field with runway at bottom, and dam and Salt Fork River above it, as well as salt flats at top (looking W). R photo below is the S shore, from <u>TripAdvisor</u>.





Selenite sand crystals embedded in salt (NaCl) crystals. From <u>AmusingPlanet.com</u>

References

<u>Johnson KS, 2019</u> Geologic studies, natural-brine emissions, and hourglass-selenite crystals at Great Salt Plains on Salt Fork Arkansas River, Northwest Oklahoma. OK Geological Society Open-File Report 3-2019

<u>Jordan L and Vosburg DL, 1963</u>, Permian Salt and Associated Evaporites in the Anadarko Basin of the Western Oklahoma-Texas Panhandle Region, OK Geological Bulletin # 102

Army Corps of Engineers <u>History of Great Salt Plains</u> is full of useful information.

The <u>Encyclopedia of Oklahoma History & Culture</u> has a detailed yet interesting history of European exploration of what is now OK.

The Encyclopedia of OK History & Culture also has good information on the Great Salt Plains

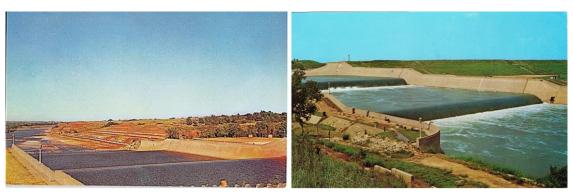
Wikipedia article on History of Oklahoma

- <u>Dig in!</u> This nature reserve wants you to make a mess National Geographic 15 September 2020 article and Great Salt Plains and selenite crystals by Ashley Stimpson
- From prehistoric sea to WWII bombing to wildlife refuge, dig into Oklahoma's salt plains A nice 13 August 2023 Oklahoman article by Anusha Fathepure
- <u>Can the Great Salt plains Lake Be Saved?</u> a timely 21 July 2012 Oklahoman article by Ryan Shelton, well worth reading
- <u>Dig for Crystals at Oklahoma's Great Salt Plains</u> AMUSINGPLANET.com website nice 2015 article with photos
- US Army Corps of Engineers maps and brochures I have purchased online

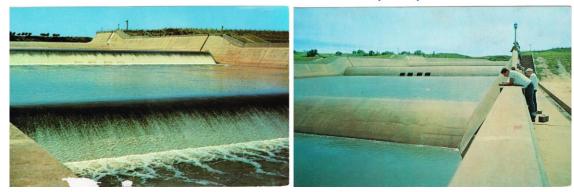
I am including the Salt Plains postcards from my vintage postcard collection below. The full collection, including Enid and Kremlin in addition to the Salt Plains and others, can be viewed on our <u>Toews Brothers Kremlin History</u> website. Lots of other local history information at this site as well.





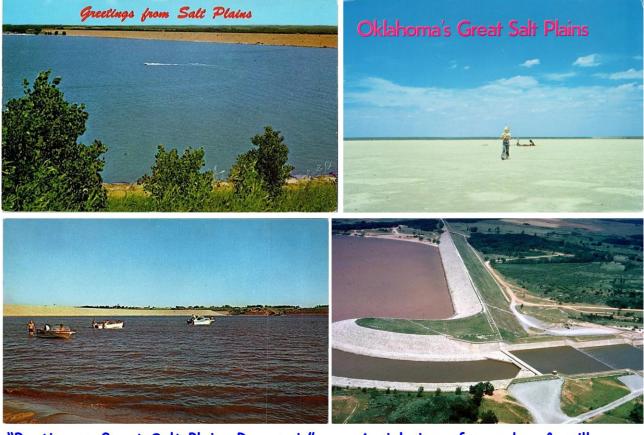


Views of Salt Plains Reservoir Spillways



Great Salt Plains Reservoir & Salt Flats

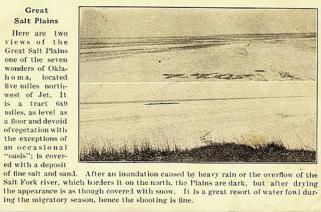
Arrel Toews



"Boating on Great Salt Plains Reservoir"

Aerial view of new dam & spillways

Great Salt Plains Salt Plains Here are two views of the Great Salt Plains one of the seven wonders of Okla-h o ma, located five miles north-west of Jet. It is a tract 6x9 miles, as level as a floor and devoid a floor and devoid







Cottonwood Point



Note salt flats in background of both cards below

Arrel's Personal Childhood/Teenage Salt Plains Memories

Even with the passage of 70 or so years, I still have vivid and very pleasant memories of family outings to the Great Salt Plains Lake and its sandy beach. A few family photographs are on the following pages. Sometimes just the David A & Rosa Voth Toews family would make the trip, but almost always it was with part or all of our Grandparents Jake and Elizabeth Schmidt Voth extended family. We went fairly often with the Jake Regier family – Jake and Anna and daughters (our first-cousins) Kathy and Jeanette. Sometimes with the Ruben & Sophie Thesman family and/or Bill & Helena Toews family as well. And occasionally, considerably larger groups – perhaps the entire Sunday School classes from the N Enid Mennonite Brethren Church on at least one occasion (but of course never on a Sunday!).

I remember once when everyone was at Grandma and Grandpa Voth's home, I saw my Aunt Anna Voth Regier saying something quietly to Grandma Voth - Anna saw me notice her conversation and so came over grinning widely and whispered in my ear - in Low German (Plautdietsch) - "Wie wella schwame foahre" - "We want to go swimming!" Of course this secret generated great excitement in me, akin to when Mom would say to her three sons, "We MIGHT go to Gold Spot for malts after church this Sunday - but only if you will all behave perfectly until then."

So sometime in the next few days, the Jake Voth family loaded up picnic goodies and thermos jugs and swimsuits and towels and off we'd go. North on US-81 and past Four Corners Café, where we'd turn W on US-64 to Nash and beyond. Along the way before Nash was a yellowish-tan brick house S of the highway with a small high-fence corral W of it, and inside the corral, deer! We were always on the alert when approaching that attraction, hoping we'd see some deer outside. On one of the dirt roads W of Nash, leading N to the Salt Plains, there was a pronounced road cut to get down and cross the railroad tracks, and we were always impressed with this "canyon."

As already noted, there was great anticipation after we'd passed Kegelman Field with its Vance AFB trainer jets practicing touchdown landings-takeoffs and crossed the Salt Fork River on the concrete bridge, then turned W to go over the dam - and our first sight of our cherished "ocean!" Quite an impressive panorama for a young OK farm boy! We'd hurriedly put on our swimsuits in the dark brown wooden concrete-floored bath houses maybe 100 yards from the beach - no air conditioning in them of course - just screening all around for the top third or so, and so always humid and musty and very hot inside. Not waiting for anyone else, we'd then run across the parking lot and down the sand cliffs onto the sandy beach to jump into the reddishbrown muddy yet inviting water. The sandy beach, with sand cliffs below the S edge of the parking lot, was actually quite nice for sunning and the water shallow a good ways out.

There was a steel cable suspended by pairs of attached 55-gallon drums strung along its length, defining the outer limits of the swimming area, with a floating diving/sunning platform attached.

Arrel Toews

It was a pretty big deal to swim out and balance on the cable with cousins and other friends (watch out for metal spurs on that rusty cable!), away from everyone else on the beach, and an even bigger deal to make it out to the platform (sort of reserved for big kids and adults!).

Sometimes we would climb to the top of the dam, over big "rip-rap" rocks that lined the water side and walk along the crest of dam. Great views of the lake and distant salt flats from up there. It was always fun to stop at the spillways below the dam and watch fishermen catching mostly carp, but sometimes nice channel catfish. I even caught some myself! There was a nice picnic area beside the Salt Fork River below the spillways as well, and we often utilized it as well - less crowded and good fireplaces beside the picnic tables.

Picnics were most often in the shaded picnic area W of the sandy beach parking lot. Always a real picnic - plenty of fried chicken, deviled eggs, potato salad, swiebachs, sandwiches, chips, pies, cookies, cake, iced tea, and of course Grandpa Voth's icy-cold, sweet, crisp and juicy Black Diamond watermelons. On special picnics, we'd roast wieners or grill burgers, but usually not for big family picnics. We were always on the lookout for sandburs, which loved the sandy soil as well as the bottoms of our bare feet!

After playing and visiting and packing up as the day wound down, we'd head back home to do the evening chores, drowsy and warmed by too much sun and by our memories of a great time swimming, sunning, playing, and eating.

I also remember going on an overnight camping trip in August 1964 in my Dad's faded green 1957 Chevy pickup with high-school friends Ellis Toews (KHS Class of 1966) and <u>Richard</u> <u>Christiansen</u> (KHS Class of 1964) A regular double mattress fit the pickup bed exactly, and we had an old decrepit one in our machine shed to use, so that was our motel bed. Do NOT ask about our comfort station/bathroom! An ice chest, containing Falstaff and Coors longnecks in addition to more traditional victuals like bacon, eggs, bread, bologna, cheese, ice-cold Pepsi-Cola, and more. A Coleman camp stove, Coleman lantern, thermos jug, and some old blankets, plus a transistor radio for music. We "camped" in the pickup bed under the stars on the S side of the spillway intake and had a delightful night, disturbing the peace and all-night fishermen nearby.

This was when the **oilwell blowout fire** was roaring uncontrolled near **Canton OK** (it blew on 14 August 1964), so we made our way to see that up close and personal, "on the way home." It was actually well out of our way, but a remarkable experience so I'm glad we did that. You could hear the natural gas roaring out of the crater and the heat was really intense. But we still got as close as we could - no barricades or guards to stop us - only our poorly-developed teenage common sense managed to avoid catastrophe. I remember the 90' steel drill-stem sections lying atop triangular support racks drooping between supports due to the intense heat. The <u>Oilystuff</u> web post has great photos and nice narrative as well - <u>Red Adair</u> and his Houston oil-well fire company came and then left, unable to help. Three relief wells were drilled, the first

two missing the errant shaft, but the third came close and heavy drilling mud intrusion eventually extinguished the inferno. Somewhere I have some slides!

Personal & Family Photos

Photos below from my brother Myron's 2024 visit: Upper panel: Former beach area, looking E towards dam. Note tall weedy grasses on former sand bluff behind what remains of the beach at middle L. The round concrete anchor at water's edge previously held the cable that stretched across the outer edge of the swimming area - the cable was suspended by a series of twin 55-gallon oil barrels mounted on the cable. The cable also anchored a sunning/diving platform, no small feat to reach when you were a little kid! But I never drowned on my way! The line of barrels with attached platform is visible in the third postcard on page 24.

Lower Panel - Colorful Permian redbed cliffs on E side of Salt Fork River. Note the river bridge and a small flock of white pelicans in lower R photo.



Additional photos from Myron's 2024 visit looking S from beach area (L) and spillway view (R).

Bottom two photos show Toews Brothers Arrel, Galen & Myron, 2 July 1997

(bottom photo expanded view from photo above it).





Upper L: David and Rosa Toews family with Jake and Anna Regier family picnic. L/R, Arrel and Galen Toews, Kathy Regier (Kleopfer), Myron Toews, Jeanette Regier (Ratzlaff). That green/white woven wooden picnic basket went with us everywhere!

Upper R: Salt Fork River below spillways with bridge in distance. Note picnic area at river's edge, very high water flow, and banded strata on cliffs Looking N

Lower L and R: Salt Plains picnic area from the water

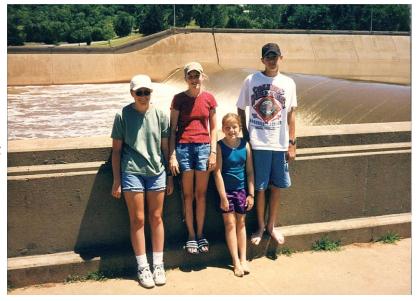
All photos (ca 1961) from Jeanette Regier Ratzlaff, taken by her father Jake Regier.



Top L, David & Rosa Toews Family digging crystals, 1988. Note Dad's pickup and our maroon 1988 Dodge Caravan at back, Annie Toews (Johnson) and Erin Toews (Lemon) in foreground, Arrel in back standing; Top R, Laura Toews (Martin), July 1997; Middle L, Mark and Arrel Toews, July 1997; Middle R, Henry G and Arrel Toews, ca 2014



Right: Annie Toews (Johnson), Erin Toews (Lemon), Laura Toews (Martin), Alex Toews; July 1997



David & Rosa Voth Toews Family picnic (June 1988)











Photos of Jacob A & Elizabeth Schmidt Voth Family enjoying the Great Salt Plains

Upper L: Myron Toews and Jeanette Regier (Ratzlaff) contemplating the blue water. Looking S

Upper R: Jacob and Elizabeth Voth family in the water at Salt Plains sandy beach. Grandmother Elizabeth Schmidt Voth standing. Parking area at top of the sand "cliff" and bathhouses (not shown) several hundred feet back.

Lower L: Jacob and Elizabeth Voth family in the water at Salt Plains sandy beach. Grandmother Elizabeth Schmidt Voth standing. Our light green 1950 Chevrolet coupe is in background under the big trees.

Lower R: Kathy, Jeanette, and Anna Regier on the Great Salt Plains salt flats

All photos (ca 1961) from Jeanette Regier Ratzlaff, taken by her father Jake Regier.



Great Salt Plains Reservoir & Salt Flats

Arrel Toews

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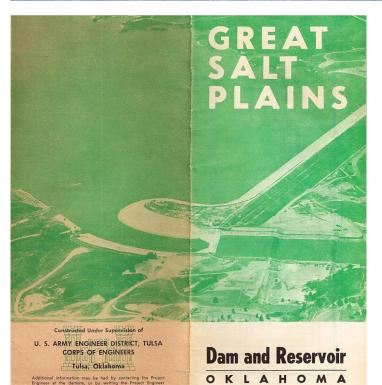
Myron and Arrel cooking burgers Easy on that salt, Myron!

> Photos by David A Toews ca early 1960s





David A Toews family picnic Note metal ice chest, thermos jug, porcelain coffee pot and Mom's Zebco 202 fishing rod & reel; also note Arrel's developing jelly roll!



Great Salt Plains Dam and Reservoir

formation may be had by contacting the Projet he damsite, or by writing the Project Engines 98, Jet, Oklahoma, or by writing the Tulsa Eng P. O. Box 61, Tulsa 2, Oklahoma. Litho in USA Oct., 1962 brochure and map, 1962