

OIL & GAS CONSERVATION COMMISSION
Meeting: February 18, 1970
Mr. John Bannister, Exec. Sec.



OFFICE OF
Oil and Gas Conservation Commission
STATE OF ARIZONA
ROOM 202
1624 WEST ADAMS
Phoenix, Arizona 85007
PHONE: 271-5161

A G E N D A

Meeting
February 18, 1970
Room 204, Arizona State Office Bldg.

- 10:00 a.m. Call to order
- ✓ 1. Approval of minutes of meeting of January 21, 1970
 - ✓ 2. Executive Secretary report
 - ✓ 3. Geologist report
 - ✓ 4. Old business
 - ✓ 5. New business
 - ✓ 6. Adjourn
- 11:30 a.m. Meet with Senate Appropriation Sub-Committee, Room 202, Senate Building, Senator Kenneth Cardella, Chairman

IF YOU ARE UNABLE TO ATTEND THIS MEETING, PLEASE NOTIFY THIS OFFICE AS SOON AS POSSIBLE.

~~Letter of Thanks by Siler~~

Correct minutes / Limitation on the amount of

Contact John Reynolds - Tax Comm



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February 11, 1970

Memo: Commissioners
From: John Bannister

Re: Report of Activity

On behalf of the entire Commission, I would like to welcome Commissioner Robert A. Bledsoe to his first meeting. We know that he will have much to contribute to our success.

As you will note on the agenda, we are to appear before the Senate Appropriations Sub-Committee on Wednesday, February 18th, at 11:30 a.m. The meeting will be held in Room 202 and Senator Kenneth Car-della will chair the proceedings. It is my feeling that we will have sufficient time during the course of our regular meeting to discuss our method of procedure before this Sub-Committee. I will have certain information prepared in the event we choose to introduce same.

As of this date, we have not been advised by the House Appropriations Committee of an appearance before them. I will notify you immediately if such word is received.

There will be a meeting of the Executive Committee of the Interstate Oil Compact Commission in Dallas on February 16th, which I will attend. This particular meeting has been set to coincide with the 25th anniversary of the founding of the I.O.C.C. The meeting is set in the Adolphus Hotel, where the founding meeting also occurred. Governor Jack Williams has appointed me as his official representative to the I.O.C.C.

A bill to remove the limitation in the amount of acreage that may be held under state oil and gas leases has been introduced in the Senate as its bill No. 186. It has been assigned to Rules, Natural Resources and Commerce and Industry Committees. This bill was introduced as a Natural Resources Committee bill. As you will recall, we had considerable discussion on this. To date, this bill is being favorably received. We have not been requested to appear before any of the Committees at this time.

Page 2
Executive Secretary Report
2-11-70

The position vacated recently by James Lambert has not been filled as yet. I explained some of the problems of filling this position with the Personnel Commission and was encouraged by them to publicize this opening through industry routes. We have received possibly half a dozen encouraging inquiries. It is my intention to attempt to fill this position with the most qualified applicant possible. It now appears we may be able to secure the services of some retired company exploration geologist which, of course, would be of double benefit to the Commission. This would allow us to gain the most for the money available. He would initially be responsible for Mr. Lambert's duties and, in addition, could make a valuable contribution to the over-all Commission. I will keep you advised as to progress made here.

A gas storage project for LPG is being commenced near Holbrook. The permit for the initial well has been let (Permit 530). It is the intention of the operator, Aritex Development Corporation, to create cavities in salt deposits in this area and to store underground LPG for peak demand periods. It is my understanding that the LPG will be transferred from the Ceniza Refinery east of Gallup.

Engineers Testing Lab, Inc., has completed the initial phase of its investigations of the salt project at Glendale Avenue and Dysart Road. A complete report and their recommendations should be in this office at any time. Copies of this will be furnished to the Commissioners.

We have just completed an exhaustive survey of the State's total production. Needless to say, there will be corrections in our cumulative production figures as a result of this study. These corrections will be made in our January production report and carried forward from that point. This will give us a 100% accurate cumulative figure insofar as the Commission records reflect it. A copy of this study will be enclosed in your meeting folder.

New Permits:

- 529 - Union Texas Petroleum #1-17 Navajo (2214), SE/4 SE/4
17-7N-10W, Apache County.
- 530 - Aritex Development Corporation #1 Fee Strat, NE/4 SE/4
6-17N-21E, Navajo County.
- 531 - Union Texas Petroleum #1-1 Navajo (2262), NW/4 NW/4
1-7N-10W, Apache County.



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February 11, 1970

GEOLOGIST'S REPORT

FROM: JAMES SCURLOCK
TO : COMMISSIONERS

APACHE COUNTY

Consolidated Oil & Gas #1-1 Navajo (226)
T41N, R28E, G & SRM East Boundary Butte Field
Sec. 1: SW/4 SW/4 Development Well
Permit #528
Location

Consolidated Oil & Gas #3 Navajo (227)
T41N, R28E, G & SRM
Sec. 11: SW/4 NE/4 East Boundary Butte Field
Permit #524
Location. Contractor: Loffland Brothers.

Union Texas Petroleum #1-17 Navajo
T7N, R10W, G & SRM "TIGHT HOLE"
Sec. 17: SE/4 SE/4
Permit #529

Set 8-5/8" casing at 240' with 175 sacks. No cores taken.
DST #1 2420-2470 (Pennsylvanian) recovered 3' of mud.
DST #2 3050-3132 (Lower Pennsylvanian) test failed.
DST #3 3040-3132 recovered 30' of mud.

Formation tops:

Chinle	Surface
De Chelly	175'
Organ Rock	974'
Hermosa	1557'
Molas	3155'
Mississippian	3226'
Elbert	3418'
McCracken	3630'
Aneth	3792'
Cambrian	3866'
Pre-Cambrian	3944'
Total Depth	3970'

Page 2
Geologist's Report
February 11, 1970

APACHE COUNTY (Cont.)

Union Texas Petroleum #1-17 Navajo (Cont.)
Well abandoned 2-10-70. Well to be turned over to the
Tribe as a water well.

Union Texas Petroleum #1-1 Navajo
T7N, R10W, G & SRM
Sec. 1: NW/4 NW/4
Permit #531

Moving in Loffland rig #20 from the Union Texas Petroleum
#1-17 Navajo well.
Ground elevation (ungraded) 5658'.
Proposed depth 3200' pre-cambrian.

Thoureen #1 Santa Fe
T21N, R26E, G & SRM
Sec. 27: NE/4 SW/4
Permit #504

"TIGHT HOLE"

Total depth 1237' in Coconino.
Well shut down. It has been temporarily abandoned.
Will attempt Shinarump completion.
No rig on location.

Eastern #1 Navajo (2601)
T20N, R28E, G & SRM
Sec. 30: NE/4 SW/4
Permit #523
Location. Well will be drilled with the company rig.

NAVAJO COUNTY

Aritex Development Corporation #1 Fee Strat
T17N, R21W, G & SRM
Sec. 6: NE/4 SE/4
Permit #530

Location
Proposed depth 2300'
Ground elevation 5078'
This is the first in a series of salt wells to be drilled
on this lease for the purpose of storing liquified gas, the
salt going to market in the uranium refineries of Gallup.

Page 3
Geologist's Report
February 11, 1970

MOHAVE COUNTY

Harris #1 Federal 3758A
T38N, R7W, G & SRM
Sec. 29: NW/4 NE/4
Permit #502

Rig has been removed. Operator plans to move rig back on location in the near future.
He will try to get a rotary rig to finish the hole.
Present depth is 1010'.

GILA COUNTY

Kerber #1 Federal (A-2719-A)
T4N, R13E, G & SRM
Sec. 5: SE/4 NW/4
Permit #516

Total depth 480'.
Base of valley fill gravels (top of Dripping Springs quartzite) at 360'.
They will pull casing and plug.
No cores.
Did not run any logs.

SCUTTLEBUTT:

The grapevine says that Mr. Hopkins is still trying to raise money to drill another well in the Sedona area.

Understand that Anadarko is picking up some leases in the Pinta Dome and Navajo Springs area. Maybe we will see some more action in here soon.

Hear tell that Arizona Helium filed for bankruptcy (Chapter 10) which will go into effect February 21. Apparently, a trustee has been appointed. Rumor says that Eastern Petroleum and Industrial Cryogenics are talking about going together to take over Arizona Helium.

Still a little fee leasing going on down in Cochise County. Understand Jim Pickett's bill to eliminate the limit on State leases has an emergency rider which would mean that if this bill passes, it would go into immediate effect.

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AGENCY Oil & Gas Conserv Commission

DIVISION _____

IDENTIFICATION CODE NO. 1-7-10-000-0000

1	2	3	4
CLAIMS PAID YEAR TO DATE	OBJECT CODE NO.	DISTRIBUTION OF EXPENDITURES CLASSIFICATION	CLAIMS PAID MONTH OF 19
25,546.00	110	1 Salaries, wages: employees	1 3,248.00
1,350.00	150	2 Per diem: board members	2 175.00
		3	3 -
122.24	211	4 Postage	4 -
822.75	212	5 Telephone, telegraph	5 124.22
947.72	221	6 Travel -State meals and lodging	6 97.37
706.08	222	7 mileage reimbursed private car	7 78.88
232.00	223	8 fares for planes, trains, etc.	8 -
810.08	224	9 State-owned auto expense	9 55.75
21.35	225	10 telephone, taxi, etc.	10 -
19.00	226	11 registration fees at meetings	11 -
		12	12 -
		13	13 -
551.49	231	14 Travel-out of State meals and lodging	14 -
990.00	233	15 fares for plane, train	15 -
-	234	16 State-owned auto expense	16 -
124.40	235	17 telephone, taxi, etc.	17 -
98.00	236	18 registration - meetings	18 -
		19	19 -
549.00	240	20 Professional services	20 200.00
		21	21 -
-	262	22 Mntns/repairs to office equip., furniture	22 -
290.34	294	23 Legal advt., notary, court, recording fees	23 -
-	295	24 Transportation of things (well samples)	24 -
3,752.07	299	25 Miscellaneous (blueprint service, Ariz Bu	25 1,250.00
		26 Mines, Museum N. Arizona)	26 -
		27	27 -
		28	28 -
360.57	310	29 Office supplies	29 50.78
303.24	360	30 Scientific supplies	30 32.27
35.18	370	31 Mntns supplies (duplicate keys)	31 -
57.55	390	32 Other supplies (film)	32 47.50
		33	33 -
		34	34 -
-	411	35 Rent, office equip: copy machine	35 -
		36	36 -
-	421	37 Bond (notary public)	37 -
44.50	430	38 Subscription/organization dues	38 22.50
		39	39 -
		40	40 -
480.17	611	41 Office equipment/furniture	41 -
		42	42 -
		43	43 -
		44	44 -
		45	45 -
250.00	995	46 To create revolv fund	46 -
		47	47 -
		48	48 -
		49	49 -
		50	50 -
		51	51 -
		52	52 -
		53	53 -
		54	54 -
		55	55 -
38,463.73		TOTAL	5,382.37

MONTHLY FINANCIAL REPORT

1 RECEIPTS MONTH OF	2 CLASSIFICATION	3 APPROPRIATED RECEIPTS	4 UNAPPROPRIATED RECEIPTS	5 TOTAL ALL RECEIPTS YEAR TO DATE
Jan 19 70	1 Permits to drill		50.00	575.00
50.00	2 Permit Refund		(25.00)	(25.00)
(25.00)	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
25.00	TOTAL CURRENT MONTH RECEIPTS		25.00	XXXXXX
	TRANSFERS IN <i>Out</i>		(175.00)	
XXXXXX	BALANCES BROUGHT FORWARD		3,120.25	XXXXXX
	TOTALS - MONTH AND YEAR TO DATE		2,970.25	550.00

6 CLAIMS PAID MONTH OF	7 EXPENDITURES FUND TITLES	8 TOTAL AMOUNT AVAILABLE YEAR TO DATE	9 CLAIMS PAID YEAR TO DATE	10 OUTSTANDING ENCUMBRANCES	11 UNENCUMBERED BALANCE
Jan 19 70	1 Personal Services:				
3,248.00	2 General Fund	34,296.00	25,536.00	-	8,750.00
175.00	3 Conservation Fund	2,250.00	1,350.00	-	900.00
254.77	4 Current Expenditures	4,484.38	2,398.64	719.17	1,366.57
232.10	5 Travel - State	6,090.00	2,631.53	1,477.83	1,980.64
-	6 Travel - Out of State	3,496.00	1,713.89	220.00	1,562.11
22.50	7 Current Fixed Charges	500.00	44.50	-	455.50
200.00	8 Professional Services	1,800.00	549.00	250.00	1,001.00
-	9 Capital Outlay	2,376.87	480.17	1,896.70	-
625.00	10 Museum N. Arizona	1,875.00	1,875.00	-	-
625.00	11 Arizona Bureau Mines	1,875.00	1,875.00	-	-
	12				
	13				
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	29				
	30				
5,382.37	TOTALS	59,043.25	38,463.73	4,563.70	16,015.82

**A PETROLEUM INFORMATION
SPECIAL REPORT**

February 5, 1970

**EAST BOUNDARY BUTTE EXPANSION
MARKS RECENT WORK IN ARIZONA**

The expansion of northeastern Arizona's East Boundary Butte field was the most consequential oil development program in the Four Corners area of the southern Rockies during the past year.

Seven successful development wells were drilled during 1969. These resulted in a fivefold increase in daily production. The field, third largest in the state, produces from Hermosa, Paradox and Akah zones of Pennsylvanian.

Oil production in this Apache County field, discovered in 1954, was averaging 93 bbls per day at the end of 1968...increased to 515 bbls per day by November of 1969, the most recent month for which complete figures are available. During the same period, cumulative production at East Boundary Butte rose from 283,417 bbls of oil to 371,999 bbls. Best field in the state is Dineh bi Keyah with a cumulative production of more than 8.2 million bbls of oil through November. Dry Mesa, in second place, showed a total production of 430,261 bbls of oil. It produces from Mississippian.

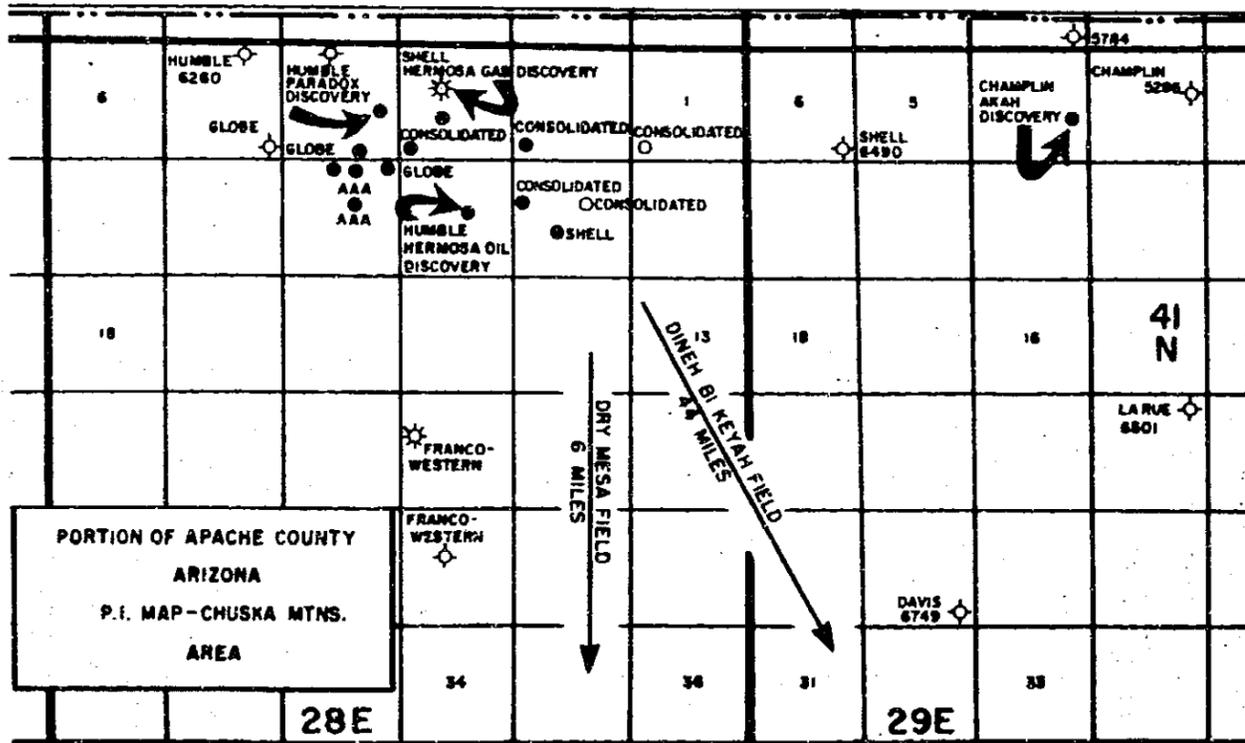
Completion of the seven infield wells brought to 12 the number of oil producers drilled in the field. Three were completed in October or later

in 1969, and were just becoming an effective factor in the above production statistics.

Consolidated Oil & Gas drilled three of the new wells and Consolidated, Petro-Lewis Corp and King Resources, jointly, a fourth. Globe Oil & Gas, Globe Minerals, and AAA Fishing Tool each completed one.

One of the better wells was the Globe Minerals 4 Navajo-E, ne nw 9-4ln-28e, completed for a calculated flow potential of 744 bbls of oil per day. Gauge was based on an 11 hour test through three quarter inch choke. Production is from Desert Creek 4958-62 ft and Akah 5131-35 ft. Globe Oil & Gas completed 3 Navajo-E, ne ne 9-4ln-28e, pumping 576 bbls of oil per day through perforations between 4756 and 5046 ft. Other completion gauges ranged between 16 and 175 bbls of oil per day.

Consolidated Oil & Gas currently has locations for two tests on the east side of the field... 1-1 East Boundary Butte, sw sw 1-4ln-28e, a scheduled 6150 ft test to Desert Creek; and 11-3 Boundary Butte, sw ne 11-4ln-28e, a scheduled 5200 ft test of Hermosa.



Shell Oil discovered East Boundary Butte field in 1954 at 2 E. Boundary Butte, se nw 3-4ln-28e. The Hermosa gas discovery flowed 3.1 million cu ft per day through perforations 4540-4690 ft. Hermosa was topped at 3757 ft. The well went to a total depth of 6339 ft.

A year later Humble Oil & Refining found the field's Paradox oil pool...completed 1 Navajo Tribal, ne se 4-4ln-28e, flowing 47 bbls of oil and 4.1 million cu ft of gas per day through perforations 4806-16 ft. Paradox was topped by log at 4576 ft.

In 1958, Humble completed the East Boundary Butte Hermosa oil pool discovery. That new pay discovery, 1 Navajo-E, sw ne 10-4ln-28e, flowed 562 bbls of oil per day from Hermosa, topped at 4120 ft. Casing was perforated 4594-4644 ft and 4726-72 ft. Two other Hermosa wells were successful, one drilled by Shell Oil and the other by AAA Fishing Tool.

Two and a half miles south of East Boundary Butte field is a shut in gas well drilled in 1956 by Franco Western Oil. That well, 1 Navajo, sw nw 22-4ln-28e, yielded gas at the rate of 7.4 million cu ft per day. Paradox was perforated 5359-67 ft and 5380-92 ft.

About six miles east of the field is an Akah oil discovery drilled in 1968 by Champlin Petroleum. The well, 1 Navajo 335, ne se 4-4ln-29e, flowed eight bbls of oil and eight bbls of water per day through perforations 5360-75 ft. Log tops include Akah at 5196 ft and Mississippian at 5922 ft.

East Boundary Butte field, on the north flank of the Black Mesa Basin, is more than ten miles southeast of Utah's Boundary Butte field and about 44 miles northwest of Dineh bi Keyah field. Dry Mesa field is seven miles south of East Boundary Butte, Twin Falls Creek field 13 miles to the southeast and Bita Peak field 16 miles to the southeast.

ARIZONA
Oil and Gas Conservation Commission

Summary of Yearly Production
of
Oil, Gas and Helium
July 1954 thru December 1970

Oil - total oil produced
Gas - total gas produced - (H) indicates helium gas
Gas Lost - total gas not sold for any reason
(Gas total includes Gas Lost total)

STATE PERMIT NO.	WELL NAME	LOCATION
10	Kerr-McGee Fee #1	SW/4 SE/4 33-20N-26E
18	Shell Navajo #1	SE/4 SE/4 6-41N-29E
22	Consolidated (Shell) Navajo #2	SE/4 NW/4 3-41N-28E
28	Humble Navajo #1	NE/4 SE/4 4-41N-28E
32	Consolidated (Shell) Franco-Wyo Navajo	SW/4 NW/4 22-41N-28E
35	El Paso Navajo #1	SW/4 SW/4 19-41N-31E
36	Kerr-McGee #2 State	NW/4 SE/4 34-20N-26E
37	Kerr-McGee State #3	NW/4 SE/4 4-19N-26E
38	Kerr-McGee State #4	SW/4 NE/4 32-20N-26E
39	Kerr-McGee Fee #2	N/2 NW/4 35-20N-26E
46	Superior Navajo H 14-16	SW/4 SW/4 16-41N-30E
58	Humble Navajo #E-1	SW/4 NE/4 10-41N-28E
69	Consolidated (Shell) Navajo #23-11	NE/4 SW/4 11-41N-28E
77	Monsanto Navajo 138-1	NE/4 NE/4 11-40N-28E
80	Eastern State #1-10	NE/4 NE/4 10-19N-26E
81	Kerr-McGee (Eastern) 1-2 State	NE/4 SW/4 2-19N-26E
88	Kerr-McGee (Eastern) 1-28 State	SE/4 SE/4 28-20N-26E
106	Monsanto Navajo #138-2	SW/4 NW/4 12-40N-28E
113	Texaco Navajo #1-Z	NW/4 SW/4 36-41N-30E
115	Monsanto Navajo #138-3	SW/4 SE/4 2-40N-28E
146	Atlantic Navajo #7	SE/4 SE/4 7-40N-29E
179	Pan American F-1 Navajo	NW/4 SW/4 6-40N-28E
194	Eastern Santa Fe #13	NE/4 SW/4 31-20N-27E
226	Texaco Navajo AG #1	NW/4 SE/4 16-41N-25E
232	Pan American Navajo #0-1	SE/4 SW/4 23-41N-30E
234	Eastern Ancon Santa Fe #21	SE/4 NW/4 31-20N-28E
238	Eastern (Kerr-McGee) Barfoot	NE/4 SW/4 32-20N-27E
263	Eastern Santa Fe #35	NE/4 SW/4 27-20N-27E
349	Kerr-McGee State #3A	NE/4 NE/4 4-19N-26E
377	Kerr-McGee Navajo #1	SE/4 SW/4 32-36N-30E
378	Kerr-McGee State #4A	NE/4 SE/4 32-20N-26E
379	Kerr-McGee Navajo #2	SE/4 NW/4 32-36N-30E
384	Kerr-McGee Navajo #4	SE/4 NE/4 32-36N-30E
386	Kerr-McGee Navajo #3X	SE/4 SE/4 32-36N-30E
388	Humble Navajo #138-1	SE/4 NE/4 6-35N-30E
389	Kerr-McGee Navajo #7	SE/4 SW/4 29-36N-30E
390	Kerr-McGee Navajo #6	SE/4 NE/4 31-36N-30E
396	Kerr-McGee Navajo #9	SE/4 SE/4 30-36N-30E
416	Kerr-McGee Navajo #14	SE/4 NW/4 31-36N-30E
417	Kerr-McGee Navajo #15	SE/4 SW/4 30-36N-30E
419	Kerr-McGee Navajo #16	SE/4 NW/4 30-36N-30E
420	Kerr-McGee Navajo #13	SE/4 SW/4 31-36N-30E
421	Humble Navajo #88-1	SE/4 SE/4 25-36N-29E
427	Kerr-McGee Navajo #F-1	SE/4 SE/4 24-36N-29E
431	Humble Navajo #88-2	SE/4 NE/4 25-36N-29E
434	Champlin Navajo #1-335	NE/4 SE/4 4-41N-29E
443	Humble Navajo #88-3	SE/4 NE/4 36-36N-29E
444	AAA Fishing Tool Navajo #E-2	SW/4 NE/4 9-41N-28E
445	Kerr-McGee Navajo #B-1X	NW/4 NW/4 5-35N-30E
446	Kerr-McGee Navajo #10	SE/4 NE/4 30-36N-30E
471	Crest #1 Santa Fe	SE/4 SE/4 25-20N-27E
481	Consolidated #1 Navajo (2-13)	SW/4 SW/4 2-41N-28E
483	Globe Minerals Navajo #E-3	NE/4 NE/4 9-41N-28E
484	Kerr-McGee Navajo #C-1	NW/4 SW/4 33-36N-30E
490	Consolidated #3 Navajo (226)	NE/4 SW/4 3-41N-28E
506	Kerr-McGee Navajo #11	NW/4 SE/4 32-36N-30E
509	Globe Minerals Navajo #E-4	NE/4 NW/4 9-41N-28E
511	AAA Fishing Tool Navajo #E-1	NW/4 NE/4 9-41N-28E
514	Consolidated #3-3 Navajo	SW/4 SW/4 3-41N-28E
515	Humble Navajo #3	SW/4 SE/4 4-41N-28E
518	Consolidated #2-11 Navajo	SW/4 NW/4 11-41N-28E
NONE	Kerr-McGee #1 State	SW/4 SW/4 34-20N-26E

STATE PERMIT NO.	1954			1955		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10						
18		497	497			
22						
28	0	0	0	749	68,676	68,676
32						
35						
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511						
514						
515						
518						
NONE						
YEARLY TOTAL		497	497	749	68,676	68,676

STATE PERMIT NO.	1 9 5 8			1 9 5 9		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10						
18						
22						
28						
32						
35						
36						
37						
38						
39						
46						
58	11,794	15,277	15,277	1,450	2,954	2,954
69	0	0	0	0	7,020	7,020
77	0	0	0	24,983	0	0
80						
81						
88						
106						
113						
115						
146						
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518						
NONE						
YEARLY TOTAL	11,794	15,277	15,277	26,433	9,974	9,974

STATE PERMIT NO.	1 9 6 0			1 9 6 1		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10	0	0	0	0	(H) 3,763	0
18						
22						
28						
32						
35						
36	0	0	0	0	(H) 8,587	0
37	0	0	0	0	(H) 164	0
38	0	0	0	0	(H) 1,840	0
39	0	0	0	0	(H) 6,833	0
46						
58	2,714	0	0	8,402	0	0
69						
77	39,697	0	0	23,066	0	0
80						
81						
88						
106	16,096	0	0	3,735	0	0
113	348	0	0	142	0	0
115	13,816	0	0	34,523	0	0
146	0	0	0	3,763	4,884	4,884
179						
194						
226						
232						
234						
238						
263						
349						
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515						
518						
NONE		0	0	0	(H) 9,171	0
YEARLY TOTAL	72,671	0	0	73,631	(H) 30,358 4,884	4,884

STATE PERMIT NO.	1962			1963		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10	0	(H) 63,882	0	0	(H) 85,319	0
18						
22	0	20,748	0	0	76,407	0
28	0	0	0	1,144	247,364	1,510
32	0	0	0	77	198,428	488
35	0	83,679	0	0	65,545	0
36	0	(H) 121,401	0	0	(H) 138,743	0
37	0	(H) 2,405	0	0	(H) 1,928	0
38	0	(H) 16,829	0	0	(H) 18,793	0
39	0	(H) 54,491	0	0	(H) 64,361	0
46	0	0	0	28	5,118	210
58	984	0	0	1,973	104,581	1,510
69	1,386	44,548	0	4,576	262,710	0
77	11,709	0	0	7,894	0	0
80	0	(H) 6,620	0	0	(H) 7,254	0
81	0	(H) 22,905	0	0	(H) 24,106	0
88	0	(H) 55,074	0	0	(H) 58,225	0
106						
113						
115	30,685	0	0	28,614	0	0
146	2,410	1,428	1,428	0	0	0
179	2,751	11,023	11,023	2,982	7,435	7,435
194						
226	0	0	0	20,170	0	0
232						
234						
238						
263						
349						
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515						
518						
NONE	0	(H) 28,144	0	0	(H) 38,689	0
YEARLY TOTAL	49,925	(H) 371,751 161,426	12,451	67,458	(H) 437,418 967,588	11,153

STATE PERMIT NO.	1 9 6 4			1 9 6 5		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10	0	(H) 92,987	0	0	(H) 73,524	0
18						
22	0	109,212	0	624	192,996	0
28	1,425	231,766	1,140	2,358	188,647	920
32	180	292,872	0	32	72,776	0
35	0	130,297	0	2,936	488,235	0
36	0	(H) 185,046	0	0	(H) 214,937	0
37	0	(H) 1,133	0	0	(H) 513	0
38	0	(H) 7,329	0	0	(H) 2,731	0
39	0	(H) 76,068	0	0	(H) 99,029	0
46	524	144,389	3,875	47	33,953	963
58	979	78,649	1,590	37,054	30,719	990
69	2,281	169,789	0	3,374	313,916	0
77	6,555	0	0	5,902	0	0
80	0	(H) 7,546	0	0	(H) 9,968	0
81	0	(H) 35,795	0	0	(H) 40,028	0
88	0	(H) 72,601	0	0	(H) 89,074	0
106						
113						
115	27,956	0	0	21,804	0	0
146						
179	1,165	3,218	3,218	0	0	0
194	0	0	0	0	(H) 62,957	0
226	21,008	0	0	19,430	0	0
232	1,005	25,638	0	7,043	158,414	0
234						
238	0	(H) 12,579	0	0	(H) 27,201	0
263						
349						
377						
378						
379						
384						
386						
388						
389						
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506						
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514						
515						
518						
NONE	0	(H) 52,559	0	0	(H) 61,354	0
YEARLY TOTAL	63,078	(H) 543,643 1,185,830	9,823	100,604	(H) 681,316 1,479,656	2,873

STATE PERMIT NO.	1966			1967		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10	0	(H) 44,374	0	0	(H) 65,702	0
18						
22	928	192,447	0	954	181,269	0
28	10,563	131,238	2,567	12,212	126,162	15,755
32	0	60,582	0	0	55,590	0
35	3,433	965,947	0	1,145	508,517	0
36	0	(H) 146,752	0	0	(H) 207,059	0
37	0	(H) 41	0	0	0	0
38	0	(H) 712	0	0	(H) 11	0
39	0	(H) 100,829	0	0	(H) 90,872	0
46	20	15,359	2,828	3	3,144	1,080
58	56,505	25,966	2,610	22,881	7,760	3,153
69	3,076	294,279	0	1,879	148,213	558
77	5,591	0	0	9,915	54	54
80	0	(H) 7,268	0	0	(H) 4,731	0
81	0	(H) 41,221	0	0	(H) 55,683	0
88	0	(H) 84,271	0	0	(H) 94,796	0
106						
113						
115	28,173	0	0	35,939	142	142
146						
179						
194	0	(H) 191,107	0	0	(H) 165,738	0
226	16,724	0	0	11,462	0	0
232	6,238	42,926	0	10,657	40,993	0
234						
238	0	(H) 56,144	0	0	(H) 14,822	0
263						
349	0	(H) 28,064	0	0	(H) 94,420	0
377	0	0	0	221,558	26,050	26,050
378	0	0	0	0	(H) 277	0
379	0	0	0	646,219	32,888	32,888
384	0	0	0	425,178	14,223	14,223
386	0	0	0	556,289	30,875	30,875
388	0	0	0	196,929	15,285	15,285
389	0	0	0	274,767	23,365	23,365
390	0	0	0	24,304	4,616	4,616
396	0	0	0	381,517	29,901	29,901
416	0	0	0	20,574	14,396	14,396
417	0	0	0	14,954	2,340	2,340
419	0	0	0	16,803	2,622	2,622
420	0	0	0	1,378	1,291	1,291
421						
427						
431	0	0	0	34,599	2,318	2,318
434	0	0	0	479	2,107	2,107
443						
444						
445						
446						
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483						
484						
490						
506						
509						
511						
514						
515						
518						
NONE	0	(H) 66,961	0	0	(H) 89,180	0
YEARLY TOTAL	131,251	(H) 767,744 1,728,744	8,005	2,922,595	(H) 883,291 1,274,121	223,019

STATE PERMIT NO.	1 9 6 8			1 9 6 9		
	OIL	GAS	GAS LOST	OIL	GAS	GAS LOST
10	0	0	0	0	(H) 19,334	0
18						
22	967	215,390	7,211	1,107	193,856	9,073
28	13,204	89,007	7,160	250	248,940	4,915
32	0	91,508	3,653	0	80,737	4,179
35	106	49,882	0	0	341	0
36	0	(H) 85,697	0	0	(H) 54,348	0
37						
38						
39						
46						
58	15,999	5,375	5,375	27,415	121,189	29,176
69	5,687	406,596	13,429	8,755	527,542	25,146
77	7,120	493	493	6,363	444	444
80						
81	0	(H) 174,122	0	0	(H) 153,303	0
88	0	(H) 136,091	0	0	(H) 92,914	0
106						
113	0	(H) 174,275	0	0	(H) 211,499	0
115	26,235	1,824	1,824	22,932	1,624	1,624
146						
179						
194	0	(H) 91,021	0	0	(H) 86,576	0
226	6,503	0	0	3,134	0	0
232	13,449	33,707	0	15,488	40,092	40,092
234	0	0	0	0	(H) 5,445	0
238	0	(H) 48,506	0	0	(H) 22,228	0
263	0	0	0	0	(H) 5,752	0
349	0	0	0	0	(H) 29,179	0
377	175,697	13,974	13,974	186,951	15,258	15,258
378						
379	470,103	45,851	45,851	274,394	21,383	21,383
384	678,725	32,208	32,208	438,700	14,649	14,649
386	385,313	54,115	54,115	420,870	66,429	66,429
388	217,814	52,312	52,312	135,034	36,963	36,963
389	196,490	12,118	12,118	67,470	6,623	6,623
390	30,024	5,656	5,656	17,068	4,182	4,182
396	323,904	30,486	30,486	223,523	23,896	23,896
416	46,993	18,209	18,209	26,631	10,851	10,851
417	18,251	3,652	3,652	12,984	2,707	2,707
419	16,553	2,585	2,585	11,053	1,747	1,747
420	698	188	188	0	0	0
421	0	0	0	0	878	878
427	0	0	0	141	1,395	1,395
431	229,497	19,475	19,475	103,207	12,835	12,835
434	84	455	455	0	0	0
443	38,545	68,200	68,200	19,101	25,916	25,916
444	577	4,255	4,255	0	0	0
445	401,603	27,025	27,025	243,252	22,243	22,243
446	49,289	3,876	3,876	15,155	3,439	3,439
471	0	0	0	0	(H) 7,600	0
481	0	0	0	1,182	384	384
483	0	0	0	29,900	36,620	36,620
484	0	0	0	1,114	306	306
490	0	0	0	4,072	1,692	1,692
506	0	0	0	83,803	19,563	19,563
509	0	0	0	11,086	23,452	23,452
511	0	0	0	4,426	0	0
514	0	0	0	10,792	22,717	22,717
515	0	0	0	4,163	8,093	8,093
518	0	0	0	1,850	8,840	8,840
NONE	0	(H) 269,948	0	0	(H) 186,300	0
YEARLY						
TOTAL	3,369,430	(H) 979,660 1,288,422	433,785	2,433,366	(H) 874,478 1,607,826	507,710

STATE PERMIT NO.	TOTAL CUMULATIVE		
	OIL	GAS	GAS LOST
10	0	(H) 448,885	0
18	0	497	497
22	4,580	1,182,325	16,284
28	41,905	1,331,800	102,843
32	289	852,493	8,320
35	7,620	2,292,443	0
36	0	(H) 1,162,570	0
37	0	(H) 6,184	0
38	0	(H) 48,245	0
39	0	(H) 492,483	0
46	622	201,963	8,956
58	188,150	392,470	62,635
69	31,014	2,174,613	46,153
77	148,795	991	991
80	0	(H) 43,387	0
81	0	(H) 547,163	0
88	0	(H) 683,046	0
106	19,831	0	0
113	490	(H) 385,774	0
115	270,677	3,590	3,590
146	6,173	6,312	6,312
179	6,898	21,676	21,676
194	0	(H) 597,399	0
226	98,431	0	0
232	53,880	341,770	40,092
234	0	(H) 5,445	0
238	0	(H) 181,480	0
263	0	(H) 5,752	0
349	0	(H) 151,663	0
377	584,206	55,282	55,282
378	0	(H) 277	0
379	1,390,716	100,122	100,122
384	1,542,603	61,080	61,080
386	1,362,472	151,419	151,419
388	549,777	104,560	104,560
389	538,727	42,106	42,106
390	71,396	14,454	14,454
396	928,944	84,283	84,283
416	94,198	43,456	43,456
417	46,189	8,699	8,699
419	44,409	6,954	6,954
420	2,076	1,479	1,479
421	0	878	878
427	141	1,395	1,395
431	367,303	34,628	34,628
434	563	2,562	2,562
443	57,646	94,116	94,116
444	577	4,255	4,255
445	644,855	49,268	49,268
446	64,444	7,315	7,315
477	0	(H) 7,600	0
481	1,182	384	384
483	29,900	36,620	36,620
484	1,114	306	306
490	4,072	1,692	1,692
506	83,803	19,563	19,563
509	11,086	23,452	23,452
511	4,426	0	0
514	10,792	22,717	22,717
515	4,163	8,093	8,093
518	1,850	8,840	8,840
NONE	0	(H) 802,306	0
ALL TIME CUMULATIVE	9,322,985	(H) 5,569,659 9,792,921	1,308,127