

DATE: 6/26/01	SUSPENSE	ENGINEER	LOGGED	TYPE
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
- Engineering Bureau -

**ADMINISTRATIVE APPLICATION COVERSHEET**

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

**Application Acronyms:**

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]  
[DD-Directional Drilling] [SD-Simultaneous Dedication]  
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

**[1] TYPE OF APPLICATION - Check Those Which Apply for [A]**

- [A] Location - Spacing Unit - Directional Drilling  
☒ NSL    ☐ NSP    ☐ DD    ☐ SD

Check One Only for [B] and [C]

- [B] Commingling - Storage - Measurement  
☐ DHC    ☐ CTB    ☐ PLC    ☐ PC    ☐ OLS    ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX    ☐ PMX    ☐ SWD    ☐ IPI    ☐ EOR    ☐ PPR



**[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply**

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

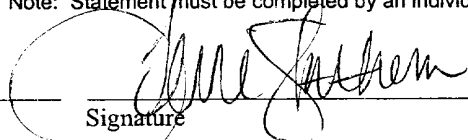
**[3] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding**

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

TERRI STATHEM

Print or Type Name

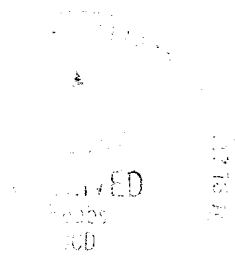
  
Signature

PRODUCTION ANALYST

Title

6-26-01

Date



**LAND SUMMARY  
UNORTHODOX LOCATION APPLICATION**

**SLAMMIN SAMMY #1 WELL  
12,000 FOOT STRAWN TEST  
TOWNSHIP 17 SOUTH, RANGE 37 EAST, N.M.P.M.  
SECTION 24: E/2SW/4  
BOTTOM HOLE LOCATION: 1,810' FSL & 1,713' FWL  
SURFACE LOCATION: 2,404' FSL & 2,451' FWL  
EDDY COUNTY, NEW MEXICO**

The surface and minerals of the entire SW/4 Section 24 described above is owned in fee on an undivided basis, although the surface and minerals have been severed. Fifty-five percent (55%) of the oil and gas rights in and to said SW/4 have been leased to Concho Oil & Gas Corp. and its partners. This 55% is committed to an Operating Agreement dated November 15, 1996 covering the entire SW/4 Section 24, among other lands.

Chesapeake Exploration, L.P. owns the oil and gas rights to the remaining 45% of said SW/4. Chesapeake has approved and executed an AFE proposing the drilling of the captioned well and is currently reviewing the above mentioned Operating Agreement for ratification and adoption as to all the said SW/4 Section 24. A copy of Chesapeake's approved AFE for drilling the Slammin Sammy #1 well is attached hereto.

Also attached hereto is a copy of Form C-102 showing the proposed surface and bottomhole location of the Slammin Sammy #1. The surface location was moved to the outside edge of a circle pivot irrigation system. The 150' standard location window in the NE/4SW/4 Section 24 is also depicted. The proposed bottomhole location is 393 feet east of the west quarter quarter boundary and 490 feet north of the south quarter quarter boundary. The only spacing unit affected by the unorthodox location is the W/2SW/4 of said Section 24, which has the exact same working interest and royalty interest ownership as the E/2SW/4 said Section 24.

In summary, all the working interest owners in the E/2SW/4 spacing unit for the property Slammin Sammy #1 have agreed to join in drilling said well or have elected to non-consent the well pursuant to an effective Operating Agreement. The working interest and royalty interest is common throughout the SW/4. The W/2SW/4 Section 24 is the only unit affected by the unorthodox location and the ownership of the W/2SW/4 and E/2SW/4 Section 24 are identical, as shown on the attached ownership plat. The names and addresses of the working interest owners of the SW/4 of Section 24 are as follows:

Concho Oil & Gas Corp.  
110 W. Louisiana, Suite 410  
Midland, Texas 79701

Robert O. Anderson  
c/o Norwest Investment Management & Trust  
P. O. Box 1000  
Roswell, New Mexico 88202-1000

Atlantic Richfield Company  
P. O. Box 1610  
Midland, Texas 79702

Working Interest Owners (Continued):

Crabtree Oil & Gas Company  
Three Lincoln Center  
5430 LBJ Freeway, Suite 1700  
Dallas, Texas 75240-2697

Frank G. Holtemann  
P. O. Box 703  
Nipomo, California 93444

Larry Hunnicutt  
5616 Amistad Road NE  
Albuquerque, New Mexico 87111

Linder & Shea Oil & Gas  
c/o Delanges, Mitchell & Linder  
300 Montgomery Street, Suite 1050  
San Francisco, California 94104-1912

Larry A. Mizel  
3600 S. Yosemite, Suite 810  
Denver, Colorado 80237

Mizel Resources – a Trust  
5801 E. 41<sup>st</sup> Street, Suite 104  
Tulsa, Oklahoma 74135

O'Neill Properties, Ltd.  
P. O. Box 2840  
Midland, Texas 79702

Tierra Oil Company  
P. O. Box 700968  
San Antonio, Texas 78270-0968

TrinAca Investment Corp.  
P. O. Box 2325  
Corrales, New Mexico 87048-2325

Twodubyah LLC  
P. O. Box 30365  
Albuquerque, New Mexico 87190-0365

Chesapeake Exploration, L.P.  
P. O. Box 18496  
Oklahoma City, Oklahoma 73154-0946

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88241-1980

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised February 10, 1994  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		SOUTH HUMBLE CITY STRAWN
Property Code	Property Name	Well Number
	SLAMMIN SAMMY	1
OGRID No.	Operator Name	Elevation
	CONCHO OIL & GAS CORP.	3713'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	24	17-S	37-E		2404	SOUTH	2451	WEST	LEA

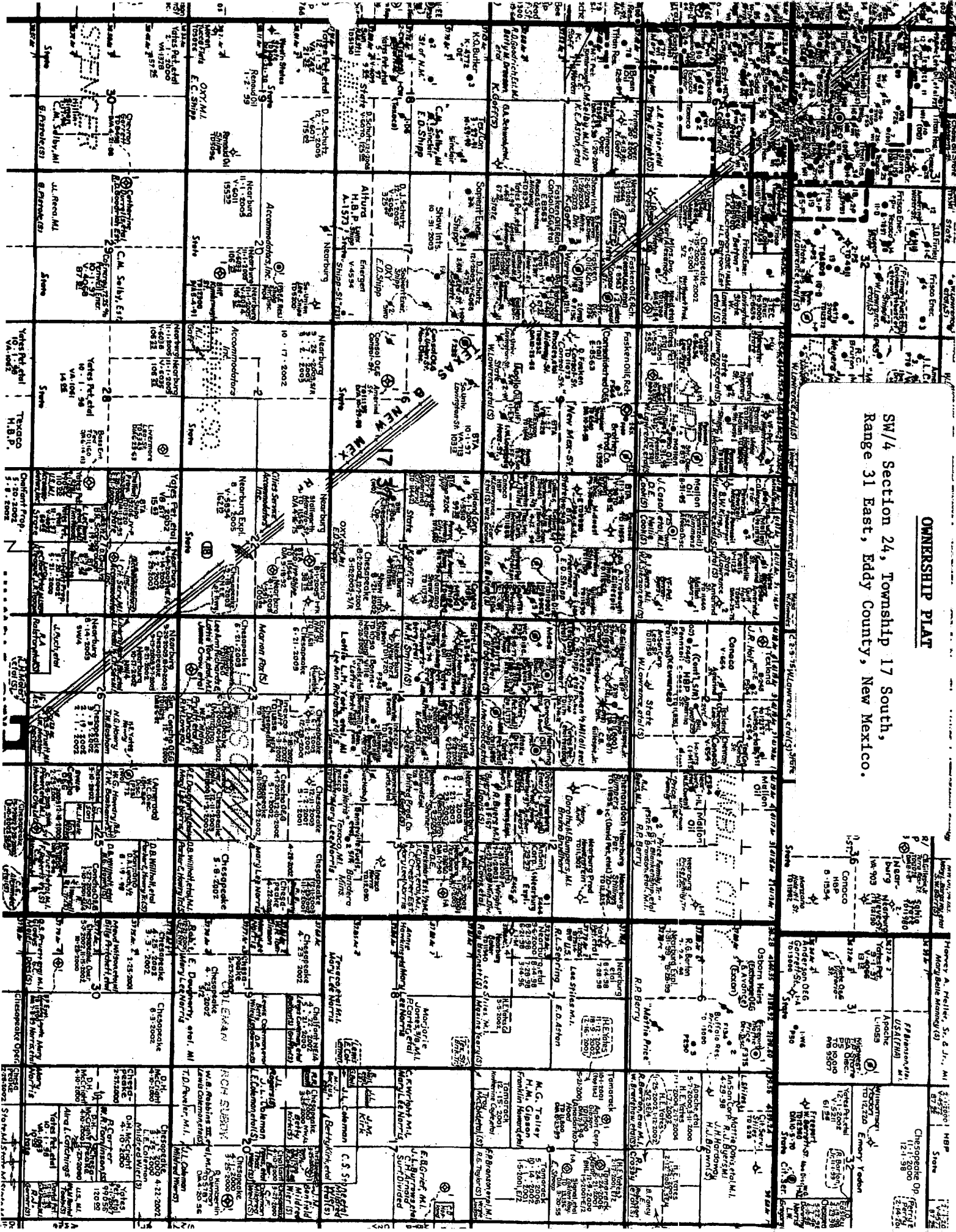
Bottom Hole Location If Different From Surface

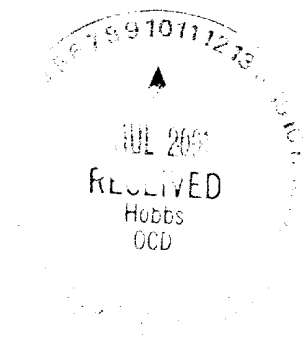
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	24	17-S	37-E		1810	SOUTH	1713	WEST	LEA
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
80									

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature _____</p> <p>Printed Name _____</p> <p>Title _____</p> <p>Date _____</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>APRIL 19, 2001</p> <p>Date Surveyed _____ AWB</p> <p>Signature &amp; Seal of Professional Surveyor _____</p> <p>Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12641</p>
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SW/4 Section 24, Township 17 South,  
Range 31 East, Eddy County, New Mexico.





**CONCHO OIL & GAS CORP.  
AUTHORITY FOR EXPENDITURE**

WELL NAME: Slammin Sammy #1

LOCATION: Unit K, Sec 24, T17S, R37E

Bottom Hole Location : 1810' FSL & 1713' FWL

Surface Location: 2404' FSL & 2451' FWL

PROSPECT NAME: Humble City

COUNTY & STATE: Lea, NM

OBJECTIVE: D&C 11,600' TVD Strawn well

**INTANGIBLE COSTS**

	BCP	12000' MD ACP	TOTAL
TITLE/CURATIVE/PERMIT			
DAMAGES/ROW	1,000		1,000
SURVEY/STAKE LOCATION	25,000		25,000
LOCATION/PITS/ROAD EXPENSE	1,000		1,000
DRILLING/COMPLETION OVERHEAD RATE	20,000	2,000	22,000
TURNKEY CONTRACT	2,000	1,000	3,000
FOOTAGE CONTRACT			0
DAYWORK-CONTRACT			0
FUEL & POWER	350,000	18,000	368,000
WATER	33,000		33,000
BITS & REAMERS	25,000	3,000	28,000
MUD & CHEMICALS	50,000	1,000	51,000
DRILL STEM TEST	30,000		30,000
CORING & ANALYSIS	5,000		5,000
CEMENT SURFACE			0
CEMENT INTERMEDIATE	5,000		5,000
CEMENT PRODUCTION	15,000		15,000
CASING CREWS & EQUIPMENT		15,000	15,000
DIRECTIONAL DRILLING SERVICES	3,000	3,000	6,000
CONTRACT LABOR	75,000		75,000
COMPANY SUPERVISION	5,000	15,000	20,000
CONTRACT SUPERVISION	2,000	2,000	4,000
TESTING CASING/TUBING	22,000	5,000	27,000
MUD LOGGING UNIT	1,000	2,000	3,000
LOGGING/WIRELINE SERVICES	15,000		15,000
PERFORATING	30,000	2,000	32,000
STIMULATION/TREATING		5,000	5,000
COMPLETION UNIT		10,000	10,000
RENTALS		15,000	15,000
TRUCKING/FORKLIFT/RIG MOBILIZATION	20,000	10,000	30,000
WELDING SERVICES	30,000	2,000	32,000
FLOAT EQUIPMENT & CENTRALIZERS	2,000	1,000	3,000
MISCELLANEOUS	2,000	3,000	5,000
CONTINGENCY		1,000	1,000
<b>TOTAL INTANGIBLES</b>	<b>77,000</b>	<b>12,000</b>	<b>89,000</b>
	<b>846,000</b>	<b>128,000</b>	<b>974,000</b>

**TANGIBLE COSTS**

SURFACE CASING			
400' 13 3/8"	7,000		7,000
INTERMEDIATE CASING			
4500' 8 5/8"	51,000		51,000
PRODUCTION CASING / LINER			
12,000' 5 1/2"		87,000	87,000
TUBING 11,800' 2 7/8" N-80			
WELLHEAD EQUIPMENT		41,000	41,000
PUMPING UNIT	6,000	7,000	13,000
RODS		65,000	65,000
PUMPS		20,000	20,000
TANKS		3,000	3,000
FLOWLINES		10,000	10,000
HEATER TREATER/SEPARATOR		5,000	5,000
ELECTRICAL SYSTEM		7,000	7,000
PACKERS/ANCHORS/HANGERS		15,000	15,000
COUPLINGS/FITTINGS/VALVES		1,000	1,000
GAS COMPRESSORS/METERS		8,000	8,000
MISCELLANEOUS		2,000	2,000
CONTINGENCY		5,000	5,000
<b>TOTAL TANGIBLES</b>	<b>6,500</b>	<b>27,500</b>	<b>34,000</b>
<b>TOTAL WELL COSTS</b>	<b>70,500</b>	<b>303,500</b>	<b>374,000</b>
	<b>916,500</b>	<b>431,500</b>	<b>1,348,000</b>

PLUGGING COST

TOTAL DRY HOLE

CONCHO OIL & GAS CORP.

By: Erick W. Nelson

Date Prepared:

4/24/01

We approve:

45.0 % Before Tanks / 45.0 % After Tanks

Company: CHESAPEAKE EXPLORATION, L.P.

By: J. Mark Lester

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

Printed Name: J. Mark Lester

Title: Sr. VP Exploration

Date: 5/1/01



**Concho Oil & Gas, Inc.**  
**Humble City South Field**  
**Lea County, New Mexico**

The Humble City South Field is located in the eastern portion of central Lea County, New Mexico. Production in the field is from the Strawn Formation at approximately 11,450 feet. Strawn production trends northwest-southeast along the Pennsylvanian shoreline. In 1981, Inexco Oil Company drilled the Lottie York #1 well in section 14, T-17-S, R-37-E at a location of 990 FSL and 660 FWL. This well was the discovery well for the Strawn reservoir in the Humble City South Field. The Lottie York #1 has cumulated over 1.2 MMBO with 125 MBW and 1.9 BCF casinghead gas.

The Strawn is a middle Pennsylvanian sequence of limestones and shales which overlies shallow marine clastics of the Atoka Formation. Strawn reservoirs produce from carbonate mud mounds composed of fossiliferous wackestone with thicknesses ranging from 20 to 120 feet. These mounds grew by both branching and encrusting organisms forming isolated structural features along the Strawn shelf. These structural mounds are characterized by rapid lateral changes in thickness with reservoirs consisting of thick sequences of porous limestones in one well while a nearby location will contain a thinner section of shales and non-porous carbonates through the equivalent section.

Porosity development within the Strawn mounds occurred during periods of subaerial exposure. Porosity is confined almost exclusively to the fossiliferous wackestones. The vast majority of the porosity is secondary in origin and was created through leaching of the grains and the micrite matrix. Fossil moldic and intragranular porosity types make up the remaining form of porosity. Because the porosity formed by the channeling of fresh waters through the mounds, the Strawn has excellent horizontal and vertical permeability.

Strawn mud mounds were generally formed by the baffling action of various organisms such as crinoids, bryzoans, or phylloid algae. These organisms acted as a barrier which caused a decrease in current velocity and deposition of micrite. Equally important in the formation of these mounds is the action of the encrusting organisms. They acted by binding the loose mud and skeletal fragments together preventing slumping or erosion caused by currents. This allowed the growth of the mounds above the sea floor without collapsing. The development of these mounds was restricted by two major factors, water depth and wave base. Wave energy restricts the growth of mounds because the mud sized particles, which make up the mounds, need to be deposited in an area of low energy where they can accumulate and become bound with the other sediment and not winnowed away. Water depth restricted growth mainly because many of the organisms are light sensitive which led to growth only within the photic zone. Therefore the deeper water mounds tend to be conical with little aerial extent since they generally grew upward searching for light. The shallow water mounds did not have to search for light, so their growth was more lateral, due to amount of light and the fact they could not grow much vertically without experiencing a zone of wave energy.

In the Humble City South area, Strawn mounds appear to have been deposited in a deeper water environment with low wave energy. This resulted in the development of vertically thick mud mounds with less aerial extent. The presence of vertically thick mud mounds enables the use of 3D seismic technology to better detect the location and size of these Strawn reservoirs. Concho Oil & Gas, Inc. has utilized this technology in their participation in the Humble City 3D Shoot to locate isolated structural features in the Strawn Formation. Due to the depositional position of these mounds, with thick vertical sections and little aerial extent, and the water drive nature of the reservoir, it is imperative to locate exploration targets at their highest structural position.

Concho Oil & Gas, Inc. has proposed the Slammin' Sammy well in section 24, T-17-S, R-37-E, at a surface location of 2404 feet from the south line and 2451 feet from the west line, with a bottom hole location of 1810 feet from the south line and 1713 feet from the west line. This location was based upon interpretations from the Humble City 3D Shoot. The Slammin' Sammy location appears to be the most favorable location both structurally and stratigraphically to effectively drain potential reserves from the Strawn Formation. Exhibit 1 is a structure map on the top of the Strawn Formation representing the Slammin' Sammy location to be situated on the top of a structural ridge oriented north-south. Exhibit 2 is the same Strawn depth map overlaying an upper Strawn velocity inversion map indicating presence of porosity. The map demonstrates a thin porosity zone associated with the structural ridge on which the proposed Slammin' Sammy location exists. Exhibit 3 is a west to east arbitrary line through the proposed location showing the loss of both structure and porosity in either direction. The proposed Slammin' Sammy location is interpreted to be in the highest structural position on the Strawn structure map that appears to have porosity development, therefore being the best location to effectively drain the Strawn mound reservoir.

