

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage  
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: Mesquite SWD, Inc  
ADDRESS: P.O. Box 1478 Carlsbad, NM 88220  
CONTACT PARTY: Kay Havenor PHONE: 575-626-4518
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes X No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Kay Havenor TITLE: Agent  
SIGNATURE: Kay C Havenor DATE: 12/6/2014  
E-MAIL ADDRESS: Kay@georesources.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, show the date and circumstances of the earlier submittal: \_\_\_\_\_

### III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

**NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.**

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**NOTICE:** Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

## INJECTION WELL DATA SHEET

OPERATOR: Mesquite SWD, Inc. (OGRID 161968)WELL NAME & NUMBER: Johnny East SWD #1 30-025-NA (New Drill)WELL LOCATION: 340' FSL & 2340' FWL N 11 25S 36E  
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATIC

See attached diagram

PROPOSED WELL CONSTRUCTION DATASurface CasingHole Size: 20" Casing Size: 16" ConductorCemented with:                      sx. or 144 ft<sup>3</sup>Top of Cement: Surface Method Determined: OprIntermediate CasingHole Size: 12-1/4" Casing Size: 9-5/8" 40# K-55Cemented with: 500 sx. or                      ft<sup>3</sup>Top of Cement: Surface Method Determined: OprProduction CasingHole Size: 8-5/8" Casing Size: 7" 26# L-80Cemented with: 2100 sx. or                      ft<sup>3</sup>Top of Cement: Surface Method Determined: OprTotal Depth: Approx 3,490'Injection IntervalApproximately 3,378' To Approximately 3,388'(Perforated or Open Hole; indicate which) Perforated ✓

INJECTION WELL DATA SHEET

Sales: 1550-2830  
Rat: 3800+

## INJECTION WELL DATA SHEET

Tubing Size: 4-1/2" 12.75# L/N-80 Lining Material: Fiberglass coated

Type of Packer: Lok-Set or equivalent

Packer Setting Depth: Approx 3,328 ft

Other Type of Tubing/Casing Seal (if applicable): \_\_\_\_\_

### Additional Data

1. Is this a new well drilled for injection? X Yes \_\_\_\_\_ No

If no, for what purpose was the well originally drilled? \_\_\_\_\_

2. Name of the Injection Formation: Basal Yates and upper Seven Rivers

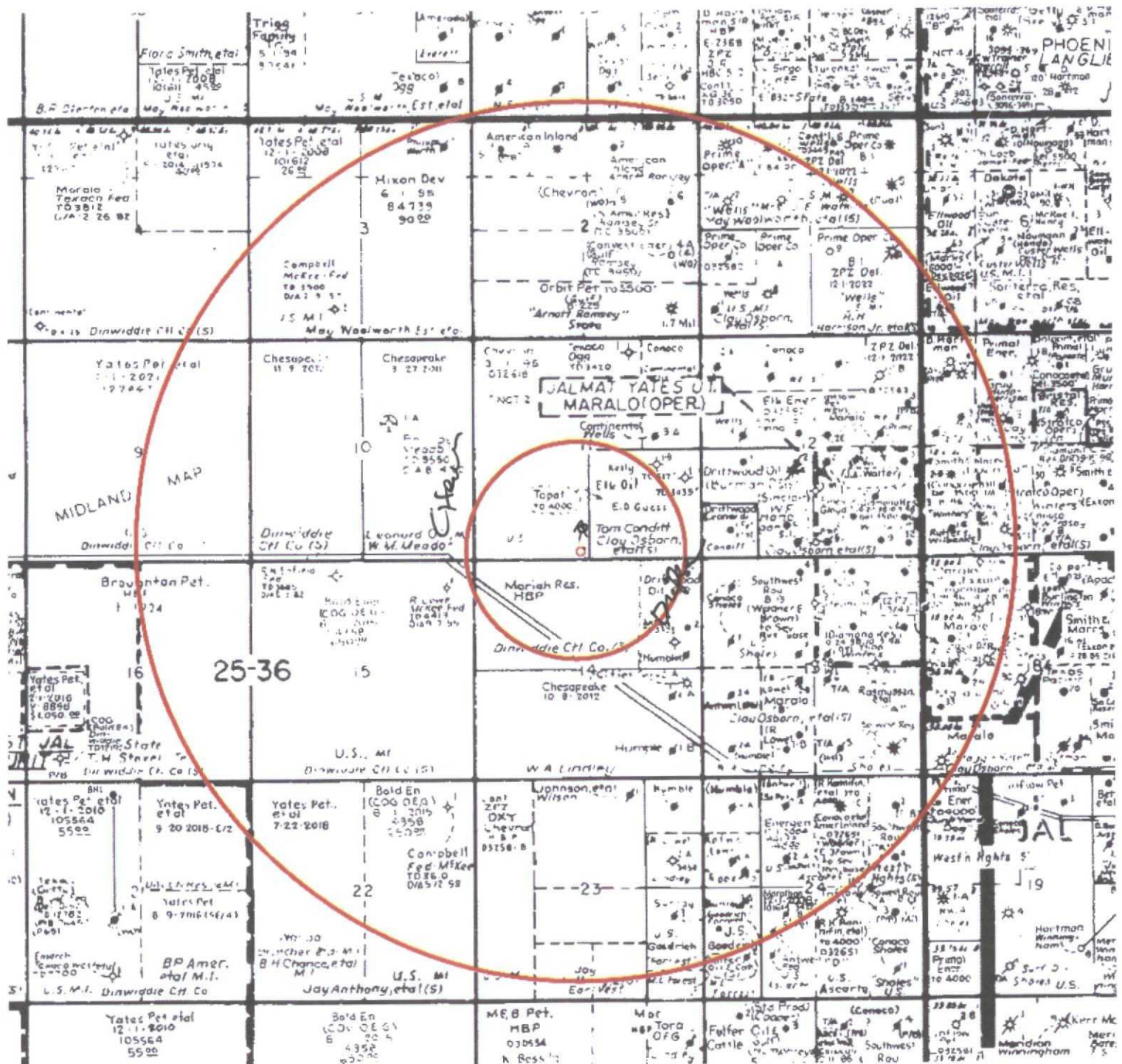
3. Name of Field or Pool (if applicable): \_\_\_\_\_

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. New drill

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Down west structural dip of Jalmat Yates field. No known pay zones.

API 30-025-NA

Area of Review  
½ Mile AOR and 2 Mile Radius

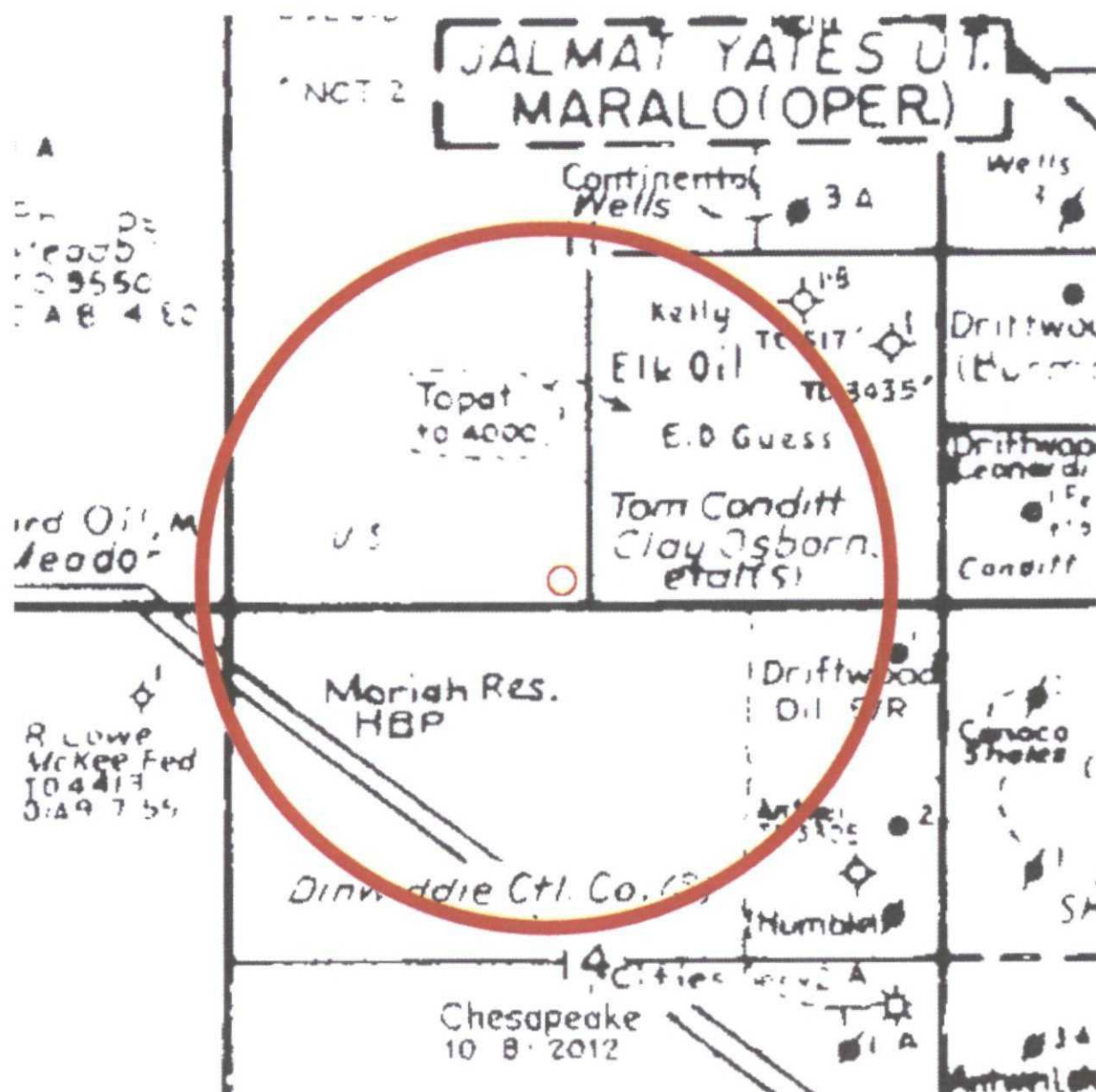


Mesquite SWD, Inc.  
Johnny East SWD #1  
300' FSL & 2340' FWL  
Sec. 11, T25S-R36E Lea County, NM

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Item V (a):

AOR Half - Mile





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**Item VI: Data on wells in AOR:**

There are no known wells presently existing within the Half-mile AOR.

Note: One active well is located immediately outside the AOR. That well information is provided for basic information:

3002528127 Driftwood Oil, LLC J.A.Kontz #1 Unit A Sec. 14, T25S-R36E Lea Co. Elev 3180 GL. Spud 1/15/1983. 12¼" hole set 8⅝" 8.9# @400' w/250 sx cmt circulated. 7⅞" hole reported set 3,400' 4½" @3,400' w/1250 sx cmt. TD corrected to 3,300' (survey). PBDT 3,250'. T/Yates 2998', Seven Rivers 3220', Perf 3218'-3228' w/6 shots. Last production reported: March 2013 21 BO, 1 MCFG, 248 BW 31 days. May 2013 produced 122 BW 31 days.

**Item VII:**

1. The maximum injected volume anticipated is 10,000 BWPD. Average anticipated is 8,000 BWPD.
2. Injection will be through a closed system.
3. Maximum injection pressure is expected to be 706 psi, or as controlled by depth.
4. Sources will be produced water that is compatible with known waters in the disposal zones.
5. Water sample analyses from the Sundown Ballard (SWD-354) D- Sec. 27, T20S-R34E Lea Co.

**CHEMLINK  
 WATER ANALYSIS REPORT**

Lab ID No. : 060188B				Analysis Date: June 1, 1988			
=====							
Company : Hondo Oil & Gas				Sampled By : Don Bamert			
Field :				Sample Date: *			
Lease/Unit : Ballard "05"				Salesperson: Don Bamert			
Well ID :				Formation :			
Sample Loc.:				Location : Hobbs, New Mexico			
=====							
CATIONS		MG/L	MEQ/L	ANIONS		MG/L	MEQ/L
Calcium as Ca++		555	47.8	Hydroxyl as OH-		0	0.0
Magnesium as Mg++		289	23.7	Carbonate as CO3=		70	2.3
Sodium as Na+ (Calc)		8,648	246.6	Bicarbonate as HCO3-		630	10.3
Barium as Ba++		Not Determined		Sulfate as SO4=		1,075	22.4
Other		0		Chloride as Cl-		9,998	292.0
Total Dissolved Solids, Calculated:				18,665 mg/L.			
=====							
Calculated Resistivity: 0.320 ohm-meters				pH: 8.020			
mg/L. Hydrogen Sulfide: Present				Specific Gravity 60/60 F.: 1.013			
mg/L. Carbon Dioxide: Not Determined				Saturation Index @ 80 F.: +1.488			
mg/L. Dissolved Oxygen: Not Determined				@ 140 F.: +2.328			
Total Hardness:		3,573	mg/L. as CaCO3				
Total Iron:		10	mg/L. as Fe++				
=====							
PROBABLE MINERAL COMPOSITION							
COMPOUND				MG/L	MEQ/L		
Ca(HCO3)2				837	10		
CaSO4				1,624	22		
CaCl2				636	15		
Mg(HCO3)2				0	0		
MgSO4				0	0		
MgCl2				1,130	24		
NaHCO3				0	0		
Na2SO4				0	0		
NaCl				14,219	243		
Analyst				10:11 AM			

Mesquite SWD, Inc.  
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**Item VIII:**

Disposal will be into the basal Yates and upper Seven Rivers formations on the western down-dip flank of the Permian Jalmat Yates pool. Jalmat Yates water sample described above (page 7) is representative of formation waters present in the proposed well. The C-108 location is east of the "Capitan", onto the uplifted western flank of the Central Basin Platform. The proposed location is geologically, structurally, hydrologically and lithologically isolated and separated from the water bearing area of the reef. See Amendment, page 9 below, for geological reference.

There is no known fresh, potable water within a 2-mile radius. Records from the New Mexico Office of the State Engineer on November 29, 2014 shows no known water wells within the 2-mile radius of the proposed Mesquite SWD disposal well.



*New Mexico Office of the State Engineer*  
**Wells with Well Log Information**

Basin/County Search:

Basin: Jc

UTM/NAD83 Radius Search (in meters):

Easting (X): 666330

Northing (Y): 3586340

Radius: 3200

No wells found.

The data is furnished by the NEWMEXICO OSE and is accepted by the recipient with the expressed understanding that the OSE/OSC make no warranties, express or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/29/14 8:28 AM

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WELLS WITH WELL LOG INFORMATION

The surface geology of the greater area, including the 2-mile radius as shown in Item V above, is Quaternary eolian and piedmont deposits of Holocene to middle Pleistocene age. These are underlain by the Permian Rustler Formation and evaporites. Based upon surface geology and available shallow data the depth to potential potable water, if present, is estimated to be less than 150'.



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**Item IX:**

Some acid may be applied. No other formation stimulation is currently planned.

**Item X:**

Logs will be filed with the OCD upon completion of the well.

**Item XI:**

No water wells are reported in the 2-mile radius of the proposed SWD. Please note Item VIII discussion above.

**Item XII:**

There is no geological evidence of open faults or hydrologic connection between the disposal zone and any possible underground sources of protectable water.

**Amendment:**

The Central Basin Platform (CBP) is an uplifted north-south structural block along the southeastern side of New Mexico that has long has been a major oil/gas producer. Rocks of Permian age were deposited upon uplifted and eroded earlier Paleozoic deposits. Geologically, the Capitan Reef physically and hydrologically separates the Delaware Basin on its southern seaward side and from the Permian back-reef deposits on the north, west and east sides. The CBP became the Paleozoic host for prolific oil/gas deposits. In the greater study area the Permian Capitan Reef aquifer is physically west of and lithologically separated from the CBP. The Platform is distinct from the reef environment.

The Permian oil/gas deposits of the CBP were discovered in September 1935 with the Anderson Prichard #1 Langlie in the Yates, Seven Rivers and Queen formations. Oil/gas production was eventually developed on the CBP from T-22S through T-26S and R-36E through R-37E to the New Mexico eastern border. An impressive structure contour map on the top of Yates was published in the Roswell Geological Society (RGS) Symposium, 1956 by Bob Stringer, Phillips Petroleum Company, page 227. That extensive map contains well spots and formation top details for many wells not included in present day OCD records. For the purposes of this application the RGS data fully describes and maps the CBP Yates-Seven Rivers structural and stratigraphic position and is exceptionally consistent with present information for the proposed C-108 SWD. More recently drilled wells in close proximity (Sec 11) to the proposed SWD fit quite well structurally. Please refer to map Item V, page 5 above, illustrating the west-side of Jalmat Yates (and Seven Rivers) field location .

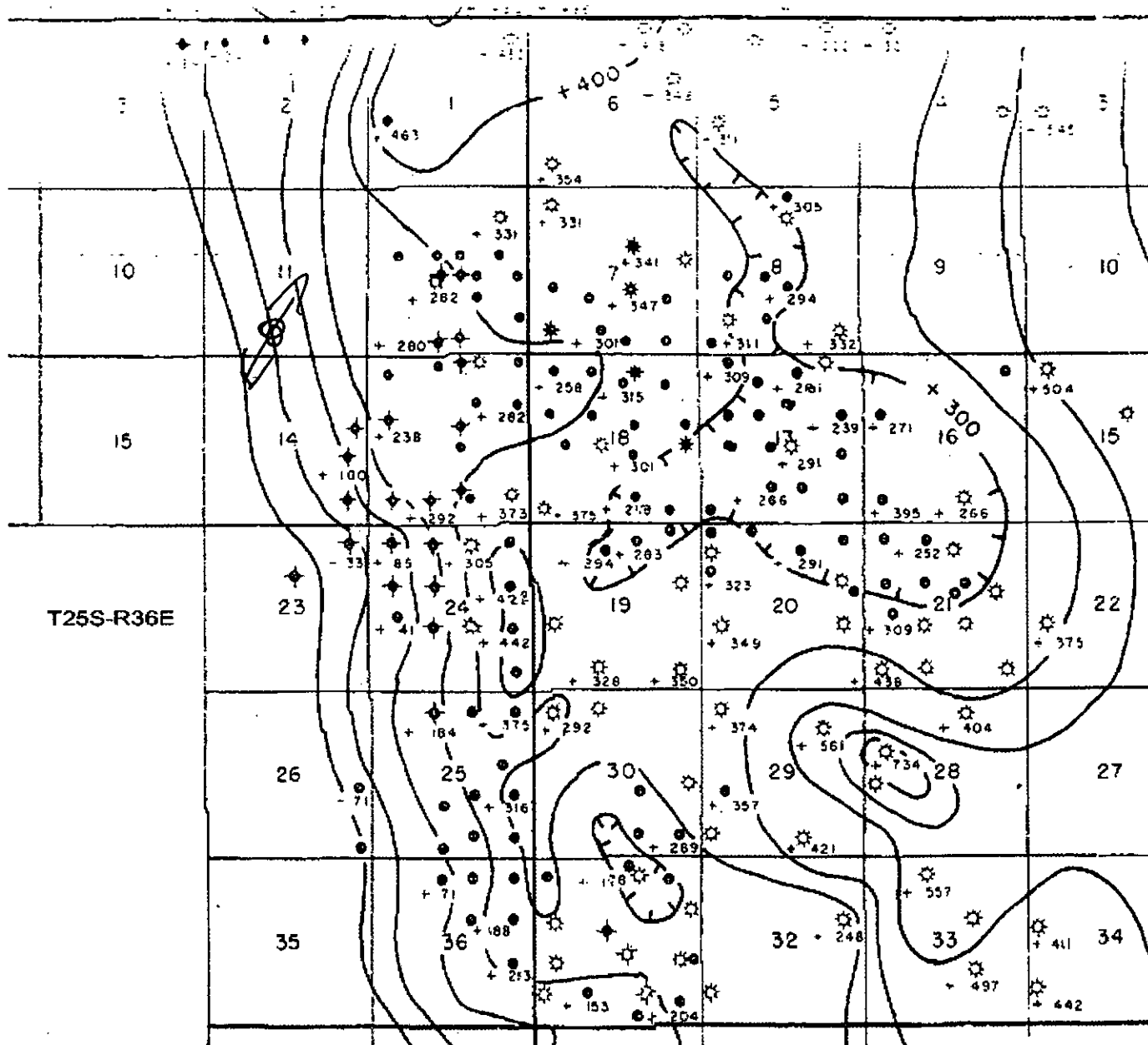
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RGS 1956 Geological map Top Yates Central Basin Platform

Excerpt of southwestern portion of Top Yates map showing the western part of the field as located in the east part of T25S-R36E and western part of T25S-R37E.

CI = 100' Mesquite SWD, Inc well is proposed for Unit N, Sec. 11, T25S-R36E.



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## Proposed Drilling/Completion of Johnny East SWD #1 Well

### Proposed New Well Completion Diagram

API: 30025xxxx  
Operator: Mesquite SWD, Inc.  
Lease: Johnny East SWD Well No: 1 KB: 3158 Est  
Location: Sec 11, T25S-R36E Lea Co., NM GL: 3138 Est  
Footage: 300 FSL & 2340 FWL

#### Proposed Surface Csg

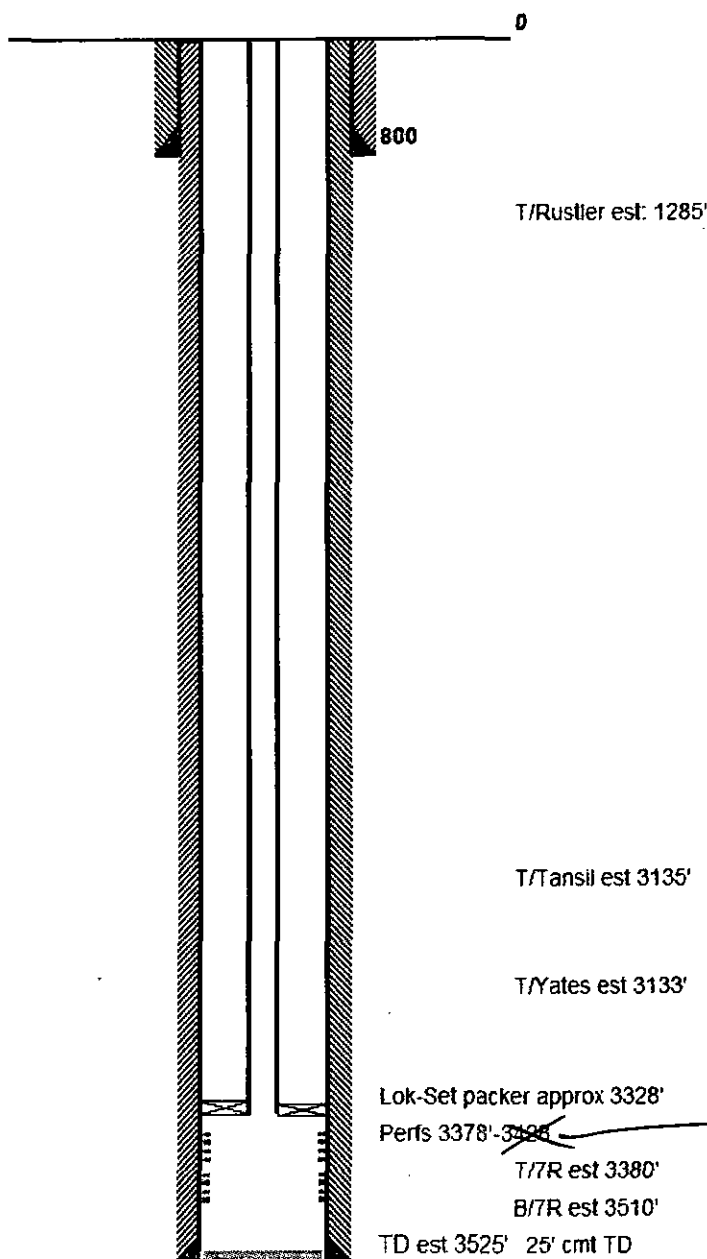
Size: 9-5/8" 36/40# J-55  
Set @: 800  
Sxs cmt: 500  
Circ: Yes  
TOC: Surface  
Hole Size: 12-1/4"

#### Proposed Injection Csg

Size: 7" 23# K-55 STC  
Set @: 3525  
Sxs cmt: 1800  
Circ: Circulate  
TOC: Surface  
Hole Size: 8-3/4"

Tubular requirements (made-up):  
3525' 4-1/2" L/N80 12.75# upset Fiberglass lined  
Lok-Set (or equivalent) Packer set approx 3328'

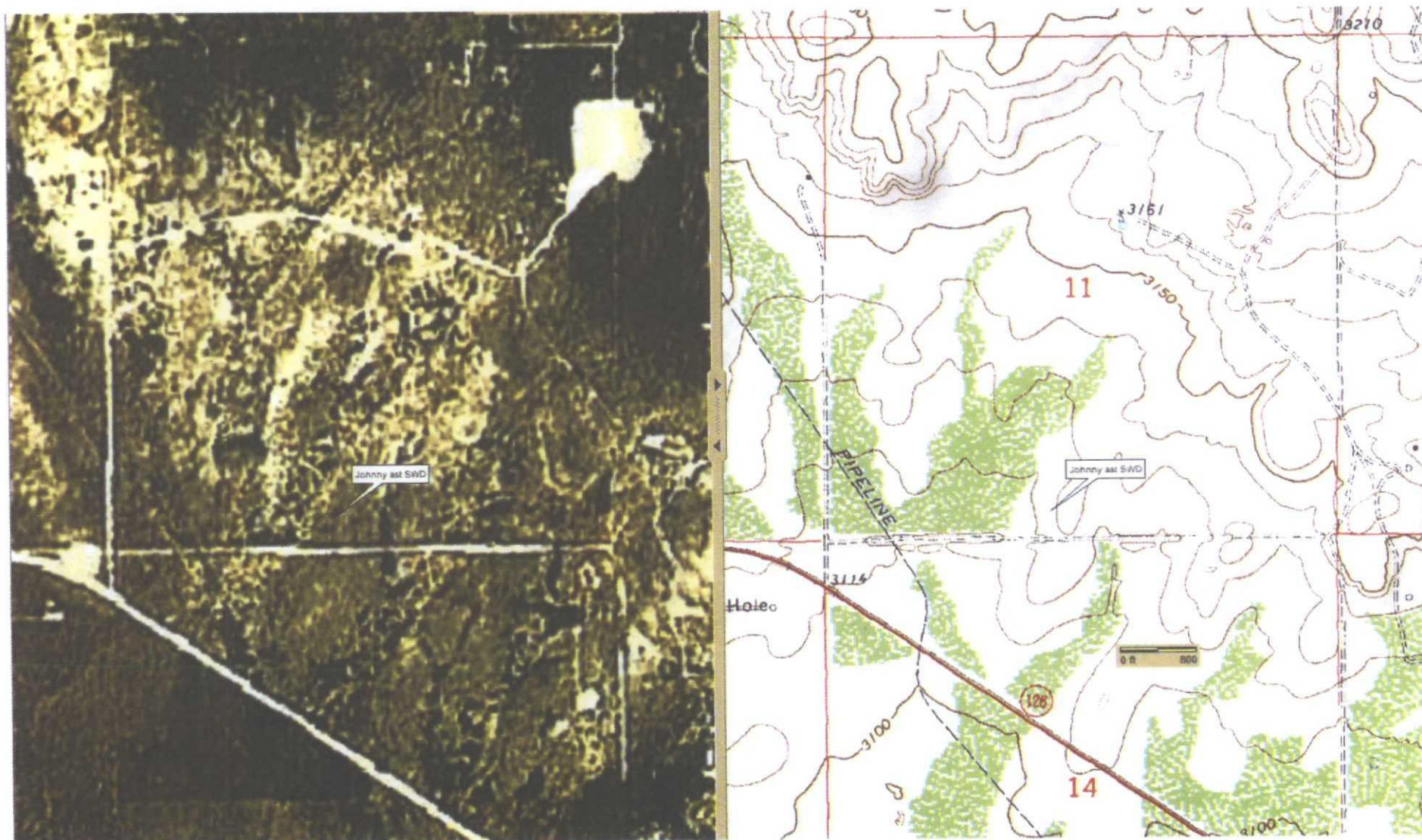
Acidize selectively 3615'-3522'  
Load tubing annulus w/corrosion inhibitor  
Complete surface head for disposal



Not to Scale

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Delorme XMap6  
3-miles NW of Jal, NM, off north side of NM-128 and section line road.

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Johnny East SWD #1  
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**Item XIII: Proof of Notice**

**Minerals Owner:**

Bureau of Land Management  
620 E. Greene St.  
Carlsbad, NM 88220

**Surface BLM Grazing Lessee:**

Gregg H. Fulfer  
also DBA Fulfer Oil & Cattle, LLC  
P.O. Box 1224  
Jal, NM 88252

**Operators:**

Chevron USA, Inc. 100%  
15 Smith Rd  
Midland, TX 79705

Sec. 11 W/2 NE, W/2  
NMLC 0 032618B

Mariah Resources, Inc. 100%  
P.O. Box 695  
Jackson, CA 95642

Sec. 14 NW/4, W/2 NE/4

COG Operating, LLC 50%  
600 W. Illinois Ave  
Midland, TX 79701-4882

Sec. 15 NE/4 NE/4

OXY USA WTP, LP 50%  
P.O. Box 4294  
Houston, TX 77210-4294

Sec. 15 NE/4 NE/4

Topat Oil Corp 100%  
505 N. Big Springs, Suite 405  
Midland, TX 79701-4369

Sec. 11 SE/4 to 4000'

A handwritten signature, possibly 'J. Fulfer', is written over a large checkmark. The signature is in dark ink and is slanted upwards to the right. The checkmark is also slanted and spans across the text for Sections 15 and 11.

API 30-025-NA