IN THE MATTER OF THE APPLICATION FOR AUTHORIZATION TO INJECT, C-108, FOR THE EXXON STATE NO. 8 WELL OPERATED BY MESQUITE SWD, INC.

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION CONCERNING THE AREA OF REVIEW

THE MESQUITE EXXON STATE NO. 8 SALTWATER DISPOSAL WELL, OTHER WELLS AND CONDITIONS

in and around Section 15, Township 21 South, Range 27 East
Eddy County, New Mexico

September 11, 2008

GeoScience Technologies
Kay Havenor, Ph.D.

200 West 1st Street, Suite 747
Roswell, NM, 88203
(575) 622-0283 geo@georesources.com

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION CONCERNING THE AREA OF REVIEW

I. Executive Summary

A. Details of Notice

BEPCO, with properties in Section 15, and Section 22, T15S-R27E, has been notified and has not protested. Ray Westall has no properties within the Area of Review.

B. Injection Waters

Mesquite is unable to determine the Pool source of waters being disposed. There is no reasonable means of obtaining water analyses on the waters in those pools.

C. Location from Reef

The "reef" is often grossly misunderstood. The subject disposal well is in the back-reef facies deposits, predominately dolomite, which south of the cross-section eventually transitions into the back-reef deposits of predominately dense limestones, then into the organically built (real) reef. The Exxon State #8 TD is approximately 108' above the Seven Rivers/Capitan formation. The south end of the cross-section is still over one-mile north of the main "reef" body.

D. Isolation from Reef

The "permeability of the Yates Formation below 694 feet" cannot be determined. The question, "what barriers would stop the injection fluid from traveling vertically or horizontally and entering the Reef," required a detailed description of the geological nature of the reef and the nature of the formations involved. The conclusion is that the vast majority of the beds in this back-reef environment have very limited porosity and permeability.

Barriers to vertical movement of water from the disposal well/zone are clearly demonstrated by the examination of Magruder pay production from the four wells that surround the Exxon State #8. The Magurer pay zone is water driven. From a hydraulic view and a hydrogeochemical evaluation of produced water from the surrounding four wells and comparison to a detailed chemical analysis of typical waters disposed into the Exxon State #8, it is clear that no waters in the greater area have moved upward as a result of disposal.

E. Area of Influence

The request for "An areal calculation (showing distances extending from the wellbore) of the waters that have been injected to-date since 1977) is not feasible due to the physical nature of disposal zones. There are no tests or methods, and exceptionally limited data, available for such a calculation. An analysis of volumes disposed since 1977 shows that 610.14 ac-ft of water has been disposed into the Exxon State #8 over the past 31 years.

The best disposal zone in the Exxon State #8 is the zone from 684 - 694', a 10' thick, high porosity-permeability zone. The zone takes water on vacuum. Of the 610.14 ac-ft disposed, 499 ac-ft went into that lower 10' of porosity. If the reservoir was a 320 acres box, the porosity would only be about 16% filled after 31 years.

The area of influence would be much greater if the porosity/permeability were very wide-spread. Several "box" computations, as well as inverted cone-shaped and parabolic spreads, suggest that the 10' porosity zone could have effects such as:

1) An inverted cone (10' high) if filled would only cover 149.7 ac-ft.
2) If the reservoir was only one-foot thick and filled it would cover 499 acres
3) If the area of the AOR, 10' thick, was the size of the reservoir, it would have nine feet of empty porosity after 31 years of disposal input.

The conclusion is that the 610.14 ac-ft of water disposed into the Exxon State #8 has had an insignificant affect on the AOR, and no impact can be seen for adjacent areas for the foreseeable future.

F. AOR Well Construction

As requested, a tabulation of well constructions in the AOR is submitted.

G. P&A Diagrams

As requested, a set of P & A diagrams is included (Appendix B).

Table of Contents

List of Illustrations

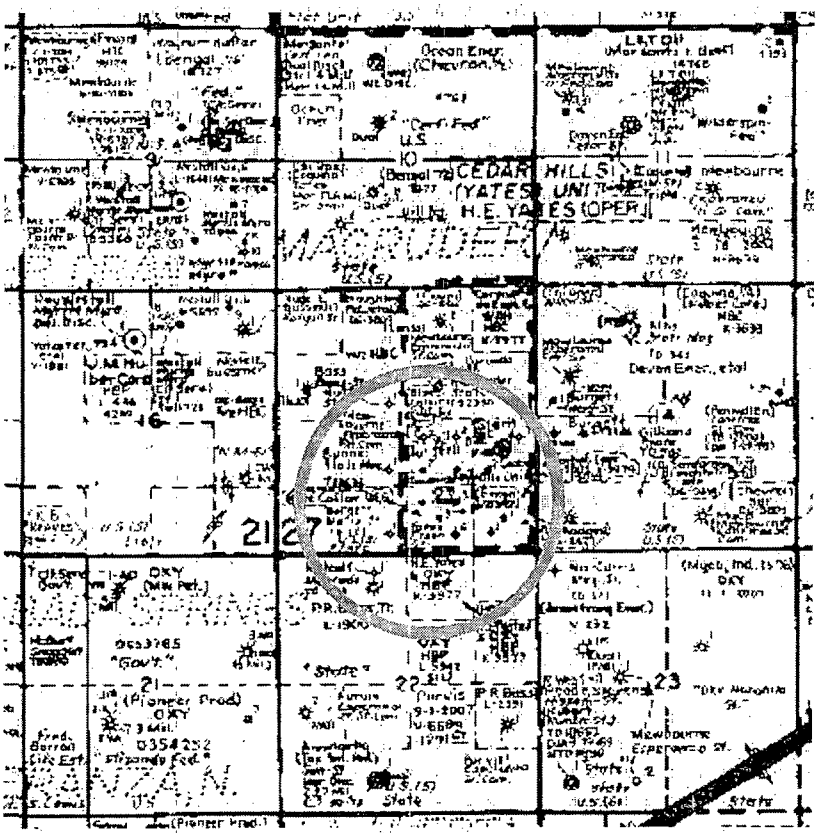
Tables

II. Details of Notice

The Area of Review (AOR) land map with ½ mile radius of Area of Review shown, Figure 1, has previously been submitted with the original C-108 application. A more recent land map with AOR shown is presented here. All parties within the required area have been notified and no protests have been filed.

Mesquite SWD, Inc.

Area of Review Map T21S-R27E, Eddy County, NM



Map from Midland Map Company
Midland, Texas

GeoScience Technologies
Kay Havenor, Ph.D., RPG
Roswell, New Mexico
August 20, 2008

Figure 1 Area of Review for Mesquite Exxon State #8

The BEPCO State 22 Com, located 660' FNL, 1980' FWL, Sec. 22, T21S-R27E, was plugged and abandoned July 28, 2008 with OCD approval August 4, 2008. Additionally, BEPCO properties in Section 15 have been notified and have not protested.

Ray Westall is not reported to have any properties within the Area of Review. The closest properties operated by Mr. Westall are located to the west in Section 16, and to the northwest in Section 9, T21S-R27E, outside the Area of Review.

III. Injection Waters

The waters that will be injected into this commercial disposal well are not known in advance. Commercial hauling services contract with operators and presumably select the closest, quickest, or most economical disposal site. The commercial drivers are required to note operator and lease name, but not the "pool" designation or the lease location.

Obtaining a "recent water analysis from each Pool" is information that is probably not available even from the operators, and is certainly not a regulatory requirement that is or currently can be imposed upon the commercial transporters or the receivers of typical produced waters.

IV. Location from Reef

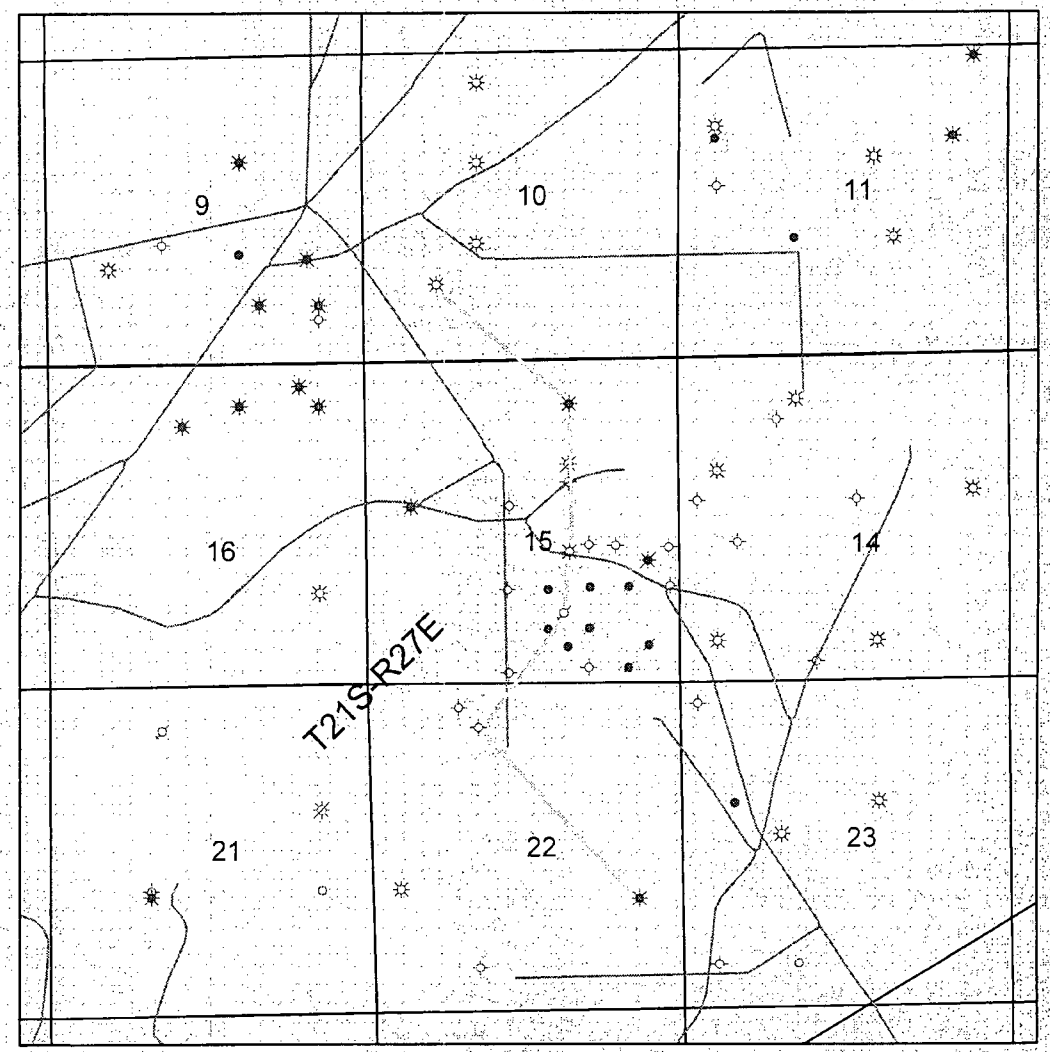
Figure 2, p. 3, illustrates the location of the cross-section requested. Figure 3, p. 4, is the cross-section that illustrates the relationship of the Exxon State #8 disposal well to the back-reef facies of the Capitan reef system.

Discussion of the nature of the reef follows in the next section, but it is important to understand the back-reef environment. While the back-reef is age-wise and stratigraphically contemporaneous with the reef itself, is not a part of the organically constructed reef. Part of the request for information was "so it can be seen how far away the Reef is laterally from the bottom of this well and how far it is vertically below the bottom of this well." The question implies a condition that actually does not technically exist.

The labels on the cross-section indicate the top of the *Seven Rivers/Capitan*. The Seven Rivers Formation is predominately dolomite that laterally transitions into massive limestone. The massive limestones deposits continue south of the cross-section area toward the organically constructed "reef" that appears to be of concern. That transition occurs at least one mile south of the southern limit of the cross-section.

Based upon the depths observed in the cross-section, the base of the Yates in the Exxon State #8 would be encountered at 802'. This is the same straight depth of the Yates encountered in the Mewbourne Oil Esperanza 14 State #2 in the SW/SW of Section 14 (not on the cross-section). The Exxon State #8 TD is 694'. A previous conservative estimate of 765' (Havenor, 2008, p. 23) to the top of the Seven Rivers/Capitan was conservative by about 37'. The base of the disposal zone in the Exxon State #8 should be considered as 107' above the base of the Yates Formation.

Mesquite SWD, Inc.
Cross-Section T21S-R27E, Eddy County, NM



Map source: USGS topo NAD27 base
DeLorme XMap 4.0

- Lease access road
- Water Disposal well
- Oil well
- Gas well
- Gas - Oil well
- Abandoned Gas well
- Abandoned Gas well
- Abandoned Oil/Gas well
- Dry hole

Line of Cross-Section

GeoScience Technologies
Kay Havenor, Ph.D., RPG
Roswell, New Mexico
September 10, 2008

Figure 2 Location of cross-section

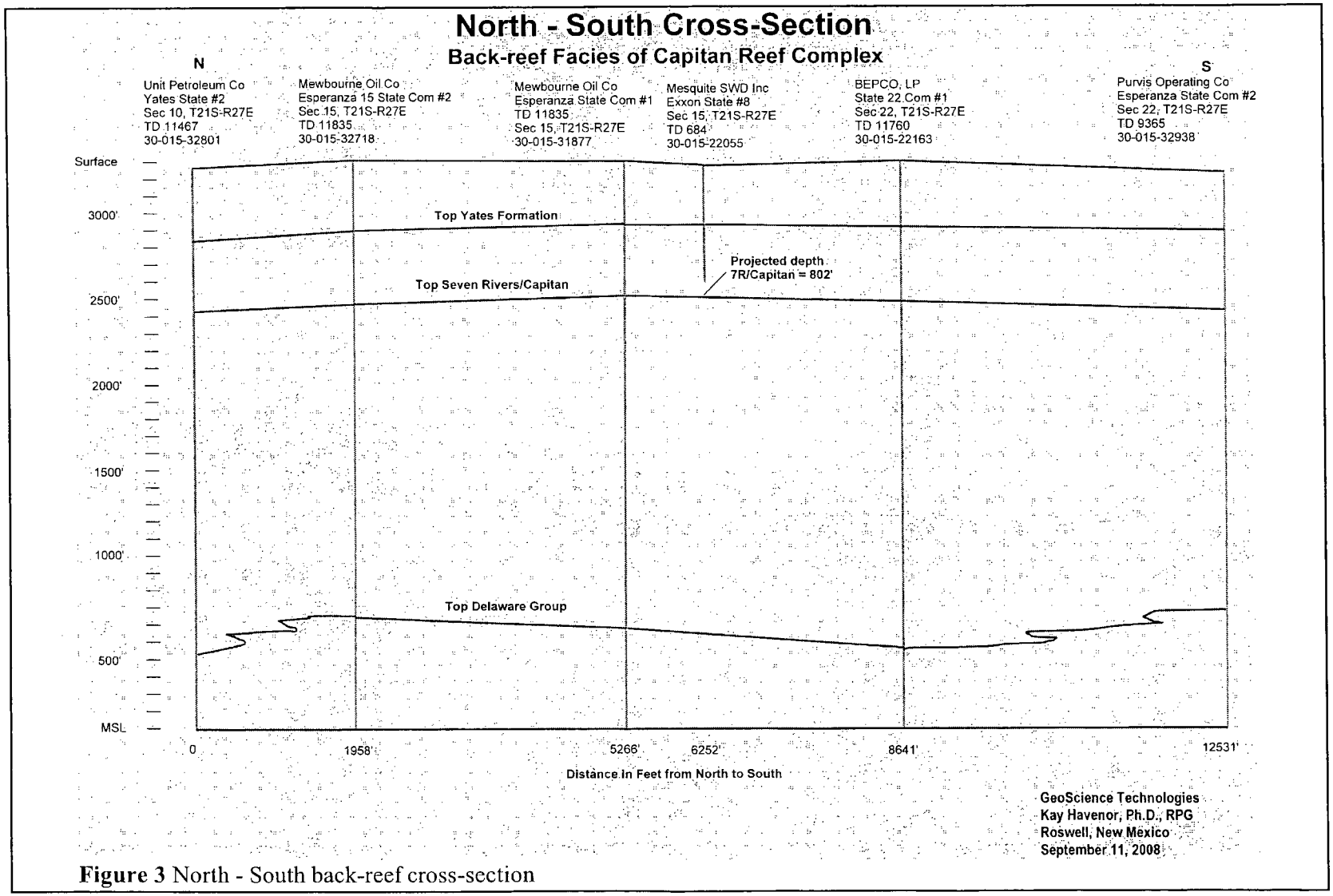


Figure 3 North - South back-reef cross-section

V. Isolation from Reef

This subject was discussed in detail in the Havenor (2008a) report, Discussion of Capitan Reef Aquifer Salinity, dated August 13, 2008, presented to the OCD in Santa Fe. In brief summary, as quoted in that report from Hiss (1973, p. 7),

> The Capitan aquifer is underlain by sandstones, siltstones, and limestones of the Delaware Mountain Group and is overlain by the Artesia Group and the Salado Formation. It is bounded on the basinward side by impermeable anhydrite of the Castile Formation and grades shelfward into the interbedded dolomite, limestone, sandstone, and anhydrite of the Artesia Group and San Andres Limestone. The basinward edge of the Capitan aquifer is abrupt and can be sharply defined, whereas the shelfward edge is gradational and cannot be easily defined (fig. 4). ***The rock units surrounding the Capitan aquifer generally have significantly less permeability than the Capitan and, in most places, act as partial hydrologic barriers to movement of water into or out of the aquifer.*** (Emphasis added)

The "permeability of the Yates Formation below 694 feet" - is the total depth in the Exxon State #8 well, therefore the permeability below that depth is unknown. What we do know is that the permeability of the Yates Formation from 684 to 694 ft is high - because it takes fluid on vacuum without the assistance of additional pump pressure. While Mr. Rains, the original operator and well driller of the Exxon State #8, was permitted to 700 ft he in fact ceased drilling after penetrating ten feet of vuggy dolomite. From experience on many holes drilled with cable tools, it is very probable that at the bottom of the zone of vuggy porosity he encountered a dense dolomite. The porous interval just penetrated took the relatively small amount of fluid needed in the bottom of the hole for drilling, and the hard zone at the bottom would have resisted further penetration because of insufficient water for drilling and none for bailing-out cuttings. Mr. Rains' objective was to have a disposal well, and 684 - 694' was a good zone.

As to discussing "what barriers would stop the injection fluid from traveling vertically or horizontally and entering the Reef," the previous paragraph, and Hiss' description, fully describe the nature of the formations in the back-reef area. The Exxon State #8 is clearly in the back-reef facies. The implication presented by the question is that the waters must be stopped lest they ***will*** enter the reef. Another implication by the question is that the "Reef" is some isotropic, homogeneous body and if pierced will provide unimpeded access to an internal network of vast interconnected saturated porosity. The absolute reverse is the actual case. Probably more than 90% of the commonly described "reef" is a huge, complex geological body composed essentially of dense, interbedded carbonates (mostly limestone), with remarkably low porosity and very low permeability. The real problem would be to demonstrate how back-reef fluids, such as water in/or disposed into zones such as the basal Exxon State #8's 684 - 694' zone, *could* get into the known porous and permeable crestal area on the leading basin-edge portion of the reef. This is especially true because the Exxon State wells are located about three miles, or more, north of the

reef's crestal area, and have at least one intervening dry exploratory water test drilled into Capitan carbonates.

The Capitan Reef is a structure built by a combination of interrelated geological depositional systems that include the fore-reef, the organically constructed relatively narrow reef, and a very large, widespread back-reef depositional environment that grades into the San Andres Formation and Artesia Group. There are no definitive *lines* that separate the *facies* that built the entire system. The back-reef facies is a broad zone of lateral lithologic changes of the bed(s), from north toward the south, from gypsum, anhydrite, dolomite, sandstones, and sandy dolomites into progressively thicker beds of dolomitic limestones which eventually transition into massive limestones near the front of the reef. The massive, dense limestones often incorporate the narrow organically formed reef front. Not all the organically formed portion of the reef retains its good porosity.

As to the "barriers" stopping vertical movement of the water disposed into the Exxon State #8, your attention is respectfully directed to the wells that literally surround the disposal well. The Mesquite Exxon State #1, #2, #3, and #7 were drilled into and completed in the Magruder pay with subsurface MSL TDs of 2704', 2706' 2679' and 2704'. The base of the casing in the Mesquite Exxon State #8 is 587' (e-log MSL 2694').

Table 1, below, shows the stratigraphic thickness separation at the bottom of each well (TD) relative to the top of the highest injection zone (MSL base of the casing) in the Exxon State #8. The four wells have been continuously monitored for fluid accumulation at the bottom of their respective holes over the past two years. There consistently has been only a steady input of water and heavy oil into the holes. The volumes have been considered non-economic for conventional pumping because of high water/oil ratios. Continuous 24-hour pumping removes the water/oil needed for pump lubrication causing conventional down-hole pumps to burn-out. The water input is constant, paced, and predates disposal.

	Exxon State 1	Exxon State 2	Exxon State 3	Exxon State 7
Surface Elevation	3268	3282	3298	3284
Total Depth (TD)	561	576	589	580
MSL Total Depth	+2707	+2706	+2709	+2704
Thickness MSL TD above base casing in Exxon State #8	13	12	15	10

Table 1. Thickness of formation between well TD and top of injection zone in Exxon State #8.

The Magruder zone historically has and does make water. The Magruder pay is water driven. The original pumping initial potential (IP) on the discovery well, the R.S. Magruder #1

State, was 10 BOPD + 200 BWPD. The (IP) on the Exxon State #3 was 50 BOPD plus 177 BSWPD. The IP on the Exxon State #2 was 6 BOPD and 194 BSW. Mesquite's pumping of the Exxon State #1, 2, 3, and 7 yields from 100 to 500 BWPD from each well.

The lower zone in the Exxon State #8, (684' - 694') takes water on vacuum, therefore no significant accumulations of water would be possible in the pay zones of the above wells if there is vertical conductivity. Conversely, because the #8's 10 ft thick lower disposal zone takes fluid on vacuum, it is not hydrodynamically possible for the disposal water to move upward into the overlying formations.

While timed pumping removes accumulated Magruder pay zone formation water, left unpumped for any extended time water will accumulate in the hole. The static water levels in the Exxon State #2 and #7, after extended shut-in, were verbally requested by Mr. Tom Gum, Artesia OCD from Mr. Dale Taylor, the operator. On C-103's filed on November 4, 2005 Mr. Taylor reported that the Exxon State #2 static water level was at a depth of 216' on October 6, 2000, and the Exxon State #7's static water level on September 28, 2000 was 224' beneath the surface. In both wells the water levels were, respectively, 26' and 28' beneath the surface casing. No waters in or adjacent to the field have been reported above the Magruder pay zone.

The static water levels, discussed above, must be considered as significant in regards to basic questions related to this application:

1) The main disposal zone in the Exxon State #8, historically and presently, has been on vacuum. There can be no natural effective vertical hydraulic conductivity with the waters in the overlying Magruder zone of the Yates Formation; otherwise, those overlying waters would drain into the disposal zones by gravity and their own hydraulic head.

2) The question was previously raised by the BLM and the OCD as to the source of waters in the Burgett #1 Magnolia State, Section 14, T15S-R27E. This writer earlier took the position that the cause of heavy crude extruding onto the surface at that location was not caused by disposal into the Exxon State #8. At the time of discussion, the magnitude of water and water drive in the Magruder pay interval, had not been fully recognized. Static water levels in the Exxon #3 and #7 demonstrate that given sufficient non-pumping time the natural formation drive could easily cause oil on top of the water column to extrude from an unplugged well such as the Magnolia State #1.

Based upon extensive personal hydrogeochemical experience in southeast New Mexico, a request was made to Mesquite for produced water samples collected from the Exxon #1, #2, #3, #7, as well as a sample from disposal well #8's incoming storage. The samples were collected September 3, 2008, delivered to Cardinal Laboratories, Hobbs, New Mexico, and chemical analyses were reported on September 8, 2008. Copies of the analyses and their respective chain of custody documents are in Appendix A, p. 17, of this report.

The reader is referred to Havenor's (2008, Fig. 1, p. 2) map showing the locations of the above sampled wells. In that same report, Fig. 2, p. 5, and Fig. 3, p. 6, structure contours maps show the top of Magruder with local structural gradient from the northern-most #1 and #2 southward toward the #7 and #3. The disposal well, #8 is in about the center of the surrounding group of wells. Hydrogeologically the movement of groundwater would be down the structural dip of the formation (southerly) from #1 and #2 over the disposal well (#8) toward #7, then #3.

In section 1), immediately above, we have concluded there is no natural vertical hydraulic conductivity with the overlying Magruder pay zone. The chemistry of the waters in the northern most #2 and northeastern #1 (with directional respect to the disposal well #8), have total dissolved solids (TDS) that are essential the same, about 98,600 mg/L. The down-dip #7 and the #3, respectively southwest and south of #8, reflect TDS's of 114,000 mg/L. Importantly, disposal well #8 has TDS's of only 79,800 mg/L. The waters disposed into #8 are a mixture of produced waters from other fields and include the Mesquite wells.

The increase in TDS from the north (wells #2 and #1) from 98,600 mg/L to 114,000 mg/L to the south can be understood because as the groundwater moves down-dip because it is dissolving additional formation rock including dolomite ($CaMg(CO_3)_2$). The north-to-south reduction in sodium (Na) and increase in calcium (Ca) can be as a result of ion exchange in the bentonitic clays in and above the Magurder pay, one of which was described as a "marker" zone by Havenor (2008).

The alkalinity of the water sampled from the #8 disposal well is 80% greater than the average of the four Mesquite wells. Magnesium (Mg) in #8 waters is only 46.4% of the Magruder zone waters in the four Mesquite wells. This relationship indicates the disposal waters came for formations of predominately limestone composition ($CaCO_3$) rather than dolomite. There is no limestone in the Yates Formation of the Magruder field above the bottom of the #8, and more distant deep wells, both north and south, do not indicate limestones until significantly deeper formations are penetrated.

The specific and overall hydrochemistry of the waters from wells #1, #2, #3, and #7, as compared to those from the disposal well #8, clearly demonstrate there is no vertical hydraulic communication - in either direction. Given the hydraulic as well as the hydrogeochemical evidence, there can be no support for the concept that disposal into #8 is or could communicate with the overlying zones of porosity, especially locally, but more so at a distance such as to the Magnolia #1 well in Section 14 to the northwest.

All factors considered in this discussion as to the isolation of waters disposed into the Mesquite #8 Exxon State lead to the single conclusion that waters put into the disposal well cannot and do not move vertically upward into, or downward from overlying zones. There are effectively non-transmissive layers in the Yates Formation. The lateral movement of disposal waters within the disposal zone are addressed in the following section on Area of Influence.

VI. Area of Influence

The request for "an areal calculation (showing distances extending from the wellbore) of the waters that have been injected to-date since 1977" cannot, under existing conditions, be reasonably presented. The principal condition present in the Exxon State #8 is that the disposal zone (reservoir) takes water under vacuum. That condition existed in 1977 and persists today. Not having a measurable water level from the lower zone (684' - 694') precludes pump testing for transmissivity, specific capacity, or even acting as a monitoring well.

Estimations relative to aquifer nature were performed on the basis of water volumes (percentages) going into the various porosity horizons open below the casing in the Exxon State #8. The relative percentages of disposal waters entering each horizon below the casing, their individual thicknesses, allow an estimations of porosity for each of the zones from the gamma ray - compensated neutron and the injection profile - temperature logs show zones of water acceptance.

If one accepts that the parameters of the zones described prevail over a given area, for example 320 acres, it is possible to calculate the volume of porosity that would be filled in each zone (and would remain unfilled) based upon water injected since 1977. This in turn provides a view as to the nature of the Yates Formation disposal zones in the immediate area and a relationship as to what is actually happening due to disposal.

The zones' thicknesses and porosities were calculated individually for volumes over 320 acres. This calculation presents the space available within the limits of 320 acres. The barrels of water that have been disposed into the Exxon State #8 was converted to acre-feet (610.14) allowing computation of percentage of space filled over the past 31 years. Each zone was computed separately and the sum of those results show:

Reservoir acres	% filled	Total Ac-ft	Ac-ft Empty
320	16.2	3760	3150

The 320 acre box shaped reservoirs that are calculated to be taking water have 83.8% of their original void spaces empty (16.2% full). This suggest several important considerations as to "(showing distances extending from the wellbore)":

1) We deductively know that the reservoirs were not filled with groundwater because no water was reported during cable tool drilling;
2) Water in the hole has been taken on vacuum since original drilling and disposal in 1977;
3) 81.8% of disposal water is presently going into the Yates Formation's "vuggy dolo" from 684 - 694' (original driller's log), and the hole is empty when disposal ceases;
3) Assume, for illustration purposes, the lower "vuggy dolo" was only one (1) foot thick then the water going into that zone would fill 499 acres;

a) in the worst case scenario the water would spread through the permeable zone in a parabolic manner, moving down-dip and spreading quasi-laterally;

b) the parabolic extent might be 0.44 miles laterally (both easterly and westerly from the well site) and 1.1 miles down-dip from the well site.

However, the lower zone is actually ten (10) feet thick. The rapid in-flow of disposed water will immediately fill the porous borehole area of the zone, but gravitational force will spread the water 360° outward and downward. The spreading rate will be dependent upon the permeability of the vuggy dolomite, but it is obviously high. The spread of water will then be wedge-shaped (vertically - full at the borehole, sinking and spreading outward 360°). The up-dip spread distance will be slightly less than the down-dip spread, but the overall shape will be an inverted cone that is 10' high. A 10 ft high cone (the height of the lower reservoir) holding 499 ac-ft of water would have a base of 149.7 acres.

The point of the above exercises is to illustrate that the distribution of disposed water into the Exxon State #8 well would have no practical effect on any property within the Area of Review (502.7 acres). The reality, however, is the geological probability that the porosity zone is spread farther than the contained boxes described above. The extent, of course, is hypothetical, but if the porosity zone covered two sections, the ten-foot thick reservoir would only contain 4.7 inches of filled porosity after 31 years of disposal! With high porosity and permeability the wider the water spread will become, but simultaneously exponentially lessens the thickness of saturation. Similarly, a 3 section by 2 section wide reservoir 10-foot thick would only have about 1.5 inches of water saturated porosity in the bottom of the 10-foot thick reservoir - which would spread only under gravity drive.

VII. Area of Review Well Construction

The following tables present the known construction data on wells within the Area of Review.

API	Well Name	Operator	Status	Section	Township	Range	Footage	N_S	Footage	E_W
3001532415	ESPERANZA 14 STATE 001	MEWBOURNE OIL CO	Active	14	21S	27E	685	FSL	660	FWL

Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx
17-1/2 12-1/4 7-7/8	13-3/8 @ 420	400 circ	8-5/8 @ 2598	1400 circ	5-1/2 @ 11870	900

Top Yates	Top Magruder	Top 7Rivers/Reef	Total Depth	Elevation
360	581	802	11870	3244

API	Well Name	Operator	Status	Section	Township	Range	Footage	N_S	Footage	E_W
3001531877	ESPERANZA 15 STATE COM 001	MEWBOURNE OIL CO	Active	15	21S	27E	2232	S	1980	E

Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx
17-1/2 12-1/4 7-7/8	13-3/8 @ 424	400 circ	8-5/8 @ 2615	1300 circ	5-1/2 @ 11834	650

Top Yates	Top Magruder	Top 7Rivers/Reef	Total Depth	Elevation
367	578	784	11835	3284

API	Well Name	Operator	Status	Section	Township	Range	Footage	N_S	Footage	E_W
3001521167	BASS STATE COM 001	BEPCO, LP	Active	15	21S	27E	1980	N	660	W

Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx
17-1/2 12-1/2 8-3/4	13-3/8 @ 622	650 filled	9-5/8 @ 2931	1425 circ	7" @ 11700	900

Top Yates	Top Magruder	Top 7Rivers/Reef	Total Depth	Elevation
358	585	793	11700	3314

API	Well Name	Operator	Status	Section	Township	Range	Footage	N_S	Footage	E_W
3001501087	Magnolia St. 003	Atha, Robert W.	Plugged	15	21S	27E	2310	S	330	E

Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx
	10-3/4 @ 40	7				

Top Yates	Top Magruder	Top 7Rivers/Reef	Total Depth	Elevation

					560		3252		
API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W	
3001501090	State 002	EVERETT D BURGETT	Plugged	15	21S	27E	330S	990E	
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx		
			0						
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation			
	351	584			586	3282			
API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W	
3001501093	MAGNOLIA ST 001	BUNNEL ROBERT L	Plugged	15	21S	27E	1650S	2310W	
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx		
		7" @ 179'	Mudded						
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation			
	315	530			532	3319			
API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W	
3001501094	MAGNOLIA ST 002	BUNNEL ROBERT L	Plugged	15	21S	27E	1650S	990E	
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx		
	8"	7" @ 228	10						
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation			
		531			533	3256			
API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W	
3001501095	MAGNOLIA ST 003	BUNNEL ROBERT L	Plugged	15	21S	27E	1650S	330E	
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx		
		7" @ 179 - pulled	None						
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation			
	315				532	3251			

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501097	PURE ST 004	BURGETT EVERETT	Plugged	15	21S	27E	2310S	1650E
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
	348				571	3272		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501098	PURE ST 005	BURGETT EVERETT	Plugged	15	21S	27E	990S	1650E
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
		7" @ 145	10					
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
	350	561			566	3281		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501099	PURE ST 006	BURGETT EVERETT	Plugged	15	21S	27E	330S	1650E
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
					586	3290		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501101	CEDAR HILLS COM 001	HARVEY E. YATES	Plugged	15	21S	27E	1980S	660E
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
	17-1/2 12-1/4 8-3/8	13-3/8 @ 573	600 circ	9-5/8 @ 2603	690 circ			
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
	324	566	841		12810	3269		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501102	State 001	BRININSTOOL AM	Plugged	15	21S	27E	660S	660E
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
		8-5/8 @ 38	10					
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
	550				562	3262		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501103	STATE 001	RUTTER A W	Plugged	15	21S	27E	2310N	2310W
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
	610				628	3312		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001521492	CEDAR HILLS COM 002	HARVEY E YATES CO	Plugged	15	21S	27E	1650N	1980E
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
	17-1/2 12-1/4 8-3/4	13-3/8 @ 618	575 filled	9-5/8 @ 294	1100 circ	5-1/2 @ 11750	1125	
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
	428	630	832		11750	3315		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001501054	MAGRUDER 001	METCALF J E	Plugged	22	21S	27E	330N	1650W
	Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx	
	10"							
	Top Yates	Top Magruder	Top 7Rivers/Reef		Total Depth	Elevation		
					603	3299		

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001521263	STATE 22 COM 001	BEPCO, LP	Plugged	23	21S	27E	660N	1980W

Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx
15" 11" 7-7/8"	11-3/4 @ 623	400 Circ	8-5/8 @ 2846	300 shoe 360 top	5-1/2 @ 11723	950 to 9000

Top Yates	Top Magruder	Top 7Rivers/Reef	Total Depth	Elevation
394	565	814	11760	3300

API	Well Name	Operator	Status	Section	Township	Range	Footage N_S	Footage E_W
3001500000	PACIFIC COAST LAND	MAGRUDER	Plugged	15	21S	27E	1980N	1980E

Hole Size	Surf Csg	Cement Sx	Intermed Csg	Cement Sx	Produc Csg	Cement Sx
		2050 Probably pulled				

Top Yates	Top Magruder	Top 7Rivers/Reef	Total Depth	Elevation
		620	2350	3308

References Cited

Havenor, K. C., 2008, Assessment of the geological structure and stratigraphy and hydrogeological setting of the Mesquite Exxon State No. 8 saltwater disposal well and other wells in and around Section 15, Township 21 South, Range 27 East, Eddy County, New Mexico, Expert report presented to NM Oil Conservation Division meeting re: C-108 application Mesquite SWD, Inc., August 5, 2008, Santa Fe, NM, 28 p.

--------, 2008a, Discussion of Capitan Reef Aquifer salinity, Expert report for Mesquite SWD, Inc., Administrative Hearing NM Oil Conservation Division, scheduled September 17, 2008, Santa Fe, NM, xx p.

Hiss, W. L., 1973, Capitan aquifer observation-well network Carlsbad to Jal, New Mexico, New Mexico Office of the State Engineer Technical Report 38, 76 p.

Appendix A

Hydrochemical Analyses

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
MESQUITE SwD, INC.
ATTN: CLAY L. WILSON
P.O. BOX 1479
CARLSBAD, NM 88221
FAX TO: (575) 885-9859

Receiving Date: 09/03/08
Reporting Date: 09/08/08
Project Owner: MESQUITE
Project Name: EXXON
Project Location: EDDY CO.

Sampling Date: 09/03/08
Sample Type: WASTEWATER
Sample Condition: INTACT
Sample Received By: HM
Analyzed By: HM/TR

LAB NUMBER	SAMPLE ID	Na (mg/L)	Ca (mg/L)	Mg (mg/L)	K (mg/L)	Conductivity (u S/cm)	T-Alkalinity ($mgCaCO_3/L$)
ANALYSIS DATE:		09/08/08	09/08/08	09/08/08	09/05/08	09/04/08	09/04/08
H15855-1	EXXON ST #1	27,400	5,450	1,260	1,560	112,000	72
H15855-2	EXXON ST #2	11,800	4,490	972	1,400	110,000	104
H15855-3	EXXON ST #3	9,900	5,450	1,260	1,620	121,000	64
H15855-4	EXXON ST #7	7,940	5,610	1,120	2,000	121,000	64
H15855-5	EXXON ST #8	25,800	3,290	535	2,700	92,000	760
Quality Control		NR	48.1	53.5	2.80	1,407	NR
True Value QC		NR	50.0	50.0	3.00	1,413	NR
% Recovery		NR	96.2	107	93.2	100	NR
Relative Percent Difference		NR	8.0	4.8	2.1	0.1	NR
METHODS:			SM3500-Ca-D	3500-Mg E	8049	120.1	310.1

LAB NUMBER	SAMPLE ID	Cl (mg/L)	SO_4 (mg/L)	CO_3 (mg/L)	HCO_3 (mg/L)	pH (s.u.)	TDS (mg/L)
ANALYSIS DATE:		09/05/08	09/05/08	09/04/08	09/04/08	09/04/08	09/05/08
H15855-1	EXXON ST #1	57,000	73	0	88	6.78	98,700
H15855-2	EXXON ST #2	30,000	243	0	127	6.46	98,500
H15855-3	EXXON ST #3	30,000	77	0	78	6.82	114,000
H15855-4	EXXON ST #7	27,200	85	0	78	6.79	114,000
H15855-5	EXXON ST #8	49,000	162	0	927	7.10	79,800
Quality Control		500	43.5	NR	1000	6.99	NR
True Value QC		500	40.0	NR	1000	7.00	NR
% Recovery		100	109	NR	100	99.9	NR
Relative Percent Difference		< 0.1	3.4	NR	1.2	0.3	NR
METHODS:		SM4500-Cl-B	375.4	310.1	310.1	150.1	160.1

Chemist

Date

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240
(575) 393-2326 Fax (575) 393-2476

Page ____ of ____

Company Name:	MESQUITE SWD INC
Project Manager:	Clay L Wilson
Address:	P.O. Box 1479
City:	CARLSBAD State: NM Zip: 88221
Phone #:	575-706-1841 Fax #: 575-885-9859
Project #:	Project Owner: Mesquite
Project Name:	Exxon
Project Location:	Eddy Co.
Sampler Name:	Clay Wilson

BILL TO

P.O. #:	
Company:	
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

Cl, BTEX / Anions

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING DATE	TIME
H15855-1	Exxon St. #1			✓									9-3-08	
-2	" " #2			✓										
-3	" " #3			✓										
-4	" " #7			✓										
-5	" " #8			✓										

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable subject. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Terms and Conditions: Interest will be charged on all accounts more than 30 days past due at the rate of 24% per annum from the original date of invoice, and all costs of collections, including attorney's fees.

Sampler Relinquished:	Date: 9-3-08	Received By:	
	Time: 1:00pm		
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other:

Temp.

Sample Condition: Cool ☐ Yes ☑ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

Phone Result: ☐ No Add'l Phone #:
Fax Result: ☐ No Add'l Fax #:
REMARKS:

CLayL-WilsonOPCCNM.Com

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476.

Appendix B

Plug and Abandon Well Diagrams

API	WELL_NAME	STATUS	SEC	TNSHIP	RANGE	FOOTAGE N-S	FOOTAGE E-W	OPERATOR	LAND_TYPE	WELL_TYPE	ELEV	TD	LATITUDE	LONGITUDE
3001532415	ESPERANZA	Active	14	21.0S	27E	685 S	660 W	MEWBOUR	State	G	3244	11870	32.47478	104.16696
3001501091	EXXON STATE	Active	15	21.0S	27E	1650 S	1650 E	MESQUITE	State	O	3268	561	32.47738	104.17447
3001501096	EXXON STATE	Active	15	21.0S	27E	660 S	1980 E	MESQUITE	State	O	3298	589	32.47465	104.17556
3001531877	ESPERANZA	Active	15	21.0S	27E	2232 S	1980 E	MEWBOUR	State	G	3284	11835	32.47897	104.17554
3001521167	BASS STATE	Active	15	21.0S	27E	1980 N	660 W	BEPCO, LP	State	G	3296	11700	32.48192	104.18426
3001501087	Magnolia St.	Plugged	15	21.0S	27E	2310 S	330 E	Atha,	State	O	3252	560	32.47923	104.17017
3001501090	State 002	Plugged	15	21.0S	27E	330 S	990 E	EVERETT D	State	O	3282	588	32.47377	104.17234
3001501093	MAGNOLIA	Plugged	15	21.0S	27E	1650 S	2310 W	BUNNEL	State	O	3319	626	32.47735	104.17889
3001501094	MAGNOLIA	Plugged	15	21.0S	27E	1650 S	990 E	BUNNEL	State	O	3256	533	32.47740	104.17232
3001501095	MAGNOLIA	Plugged	15	21.0S	27E	1650 S	330 E	BUNNEL	State	O	3251	531	32.47742	104.17017
3001501097	PURE ST 004	Plugged	15	21.0S	27E	2310 S	1650 E	BURGETT	State	O	3272	571	32.47920	104.17447
3001501098	PURE ST 005	Plugged	15	21.0S	27E	990 S	1650 E	BURGETT	State	O	3281	566	32.47557	104.17448
3001501099	PURE ST 006	Plugged	15	21.0S	27E	330 S	1650 E	BURGETT	State	O	3290	586	32.47375	104.17449
3001501101	CEDAR HILLS	Plugged	15	21.0S	27E	1980 S	660 E	HARVEY E.	State	O	3269	12812	32.47831	104.17125
3001501102	State 001	Plugged	15	21.0S	27E	660 S	660 E	BRININSTO	State	O	3262	561	32.47469	104.17126
3001501103	STATE 001	Plugged	15	21.0S	27E	2310 N	2310 W	RUTTER A W	State	O	3312	628	32.48106	104.17889
3001521492	CEDAR HILLS	Plugged	15	21.0S	27E	1650 N	1980 E	HARVEY E	State	G	3315	11750	32.48290	104.17555
3001501092	EXXON STATE	TA	15	21.0S	27E	1650 S	2310 E	MESQUITE	State	O	3282	576	32.47736	104.17663
3001501100	EXXON STATE	TA	15	21.0S	27E	990 S	2310 E	MESQUITE	State	O	3284	580	32.47555	104.17663
3001501054	MAGRUDER	Plugged	22	21.0S	27E	330 N	1650 W	METCALF J E	State	O	3299	603	32.47189	104.18102

Fig. 11 Wells in Area of Review penetrating the injection horizon of Exxon State #8

~~56~~

570 — 694

574

124

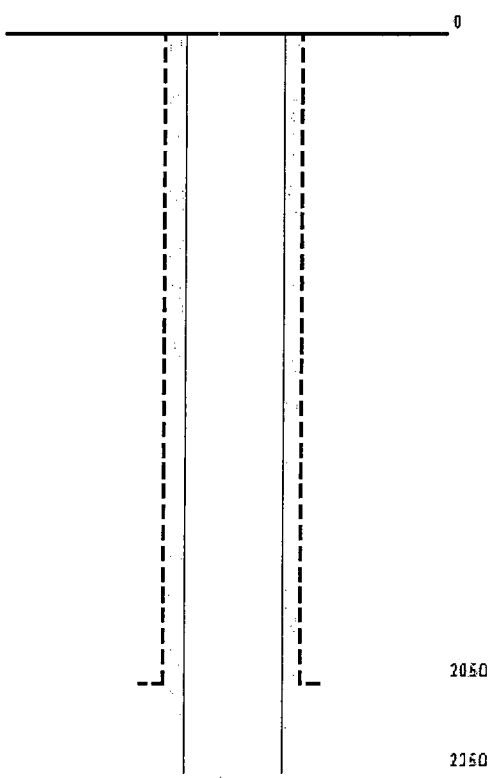
570 — 694

PLUG AND ABANDON WELL DIAGRAM

API: 3001500000
Operator: Magruder
Lease: Pacific Coast Land Well No: 1
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 1980 FNL, 1980 FEL

Orin Opr: A & N Drilling Co

KB:
GL: 3316
Spud date: June 30, 1934
Completion date: August 6, 1945
MSL of TD: 966



No plugging data

Surface Csg
Size: 7"
Set @: 2050
Sxs cmt: mudded
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Orig abn 1/29/1935
WO began 2/19/1945

7" probably pulled

PLUG AND ABANDON WELL DIAGRAM

API: 3001501054
Operator: J E Metcalf
Lease: Magruder Well No: 1
Location: Sec 22, T21S-R27E Eddy Co., NM
Footage: 330 FNL, 1650 FWL

KB:
GL: 3299
Spud date: April 19, 1943
Completion date: May 10, 1943
MSL of TD: 2696

0

Cemented marker ?, Sxs

Surface Csg
Size: None
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

603

10 sk cement plug

PLUG AND ABANDON WELL DIAGRAM

API: 3001501067
Operator: Atha, Robert W.
Lease: Magnolia State Well No: 3
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 2310 FSL, 330 FEL

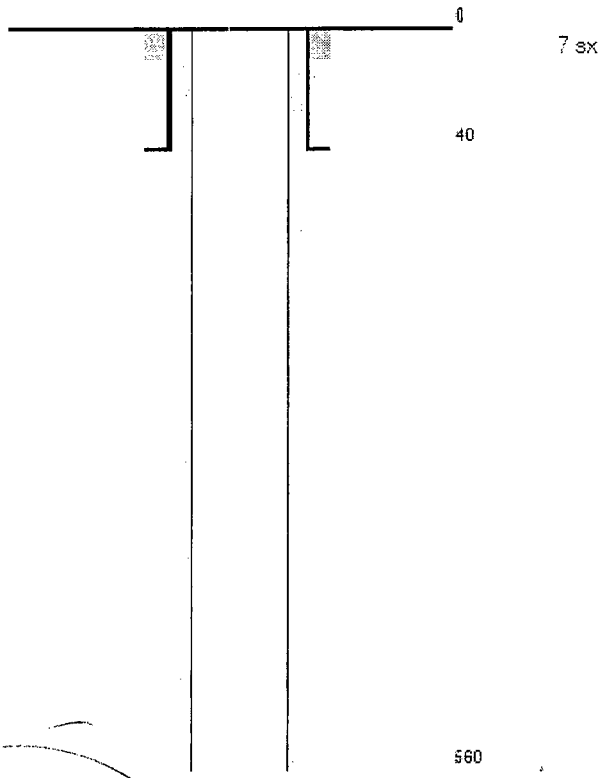
KB:
GL: 3252
Spud date: September 20, 1953
Completion date: September 28, 1953
MSL of TD: 2692

S I P P I S

Surface Csg
Size: 10-3/4"
Set @: 40
Sxs cmt: 7
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



No record of plugging hole

x4

PLUG AND ABANDON WELL DIAGRAM

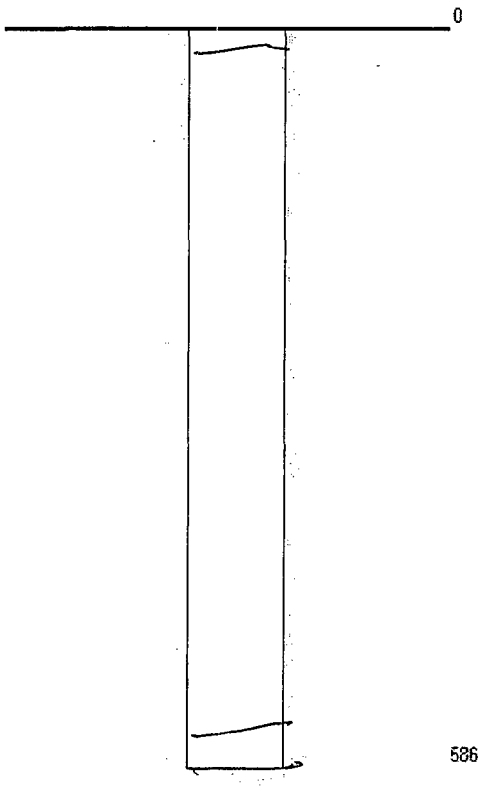
API: 3001501090
Operator: Everett D. Burgett
Lease: State Well No: 2
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 330 FSL, 990 FEL

KB:
GL: 3282
Spud date: March 4, 1956
Completion date: May 29, 1953
MSL of TD: 2696

Surface Csg
Size: None
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



5 sxs cement surface

10 sxs cement @ TD

PLUG AND ABANDON WELL DIAGRAM

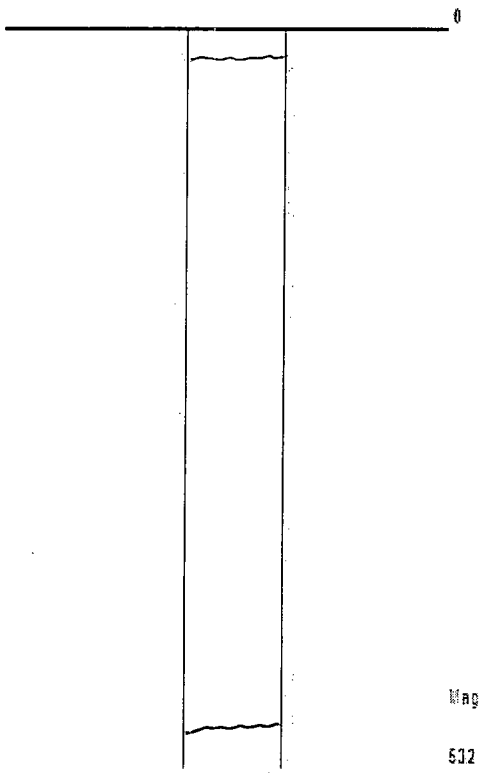
API: 3001501093
Operator: Robert L Bunnel
Lease: Magnolia State Well No: 1
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 330 FSL, 990 FEL

KB:
GL: 3319
Spud date: December 22, 1955
Completion date: February 14, 1956
MSL of TD: 2693

Surface Csg
Size: 7"
Set @: 179
Sxs cmt: mudded
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



4 sxs cement surface

Pulled 179' 7"

9 sxs cement @ PB TD

1 ft lead wool @ TD

PLUG AND ABANDON WELL DIAGRAM

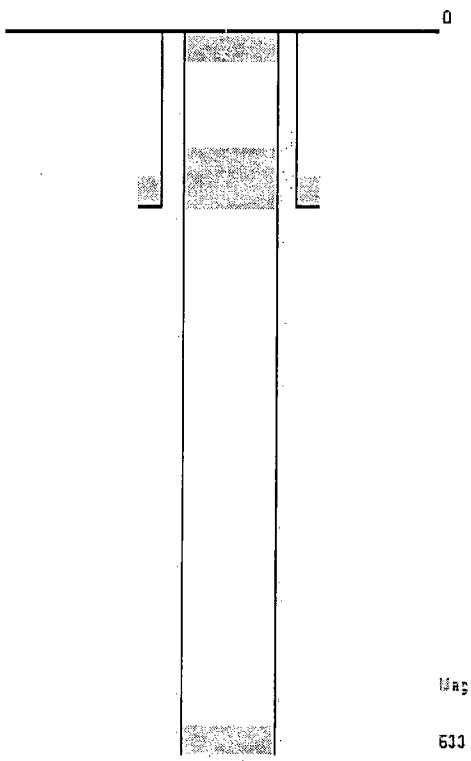
API: 3001501094
Operator: Robert L Bunnel
Lease: Magnolia State Well No: 2
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 330 FSL, 990 FEL

KB:
GL: 3256
Spud date: October 23, 1956
Completion date: November 26, 1956
MSL of TD: 2723

Surface Csg
Size: 7"
Set @: 228
Sxs cmt: 10
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



4 sxs cement surface

Mud filled between cement plugs

22 sx plug inside base 7"

Mud filled between cement plugs

8 sxs cement @ TD

PLUG AND ABANDON WELL DIAGRAM

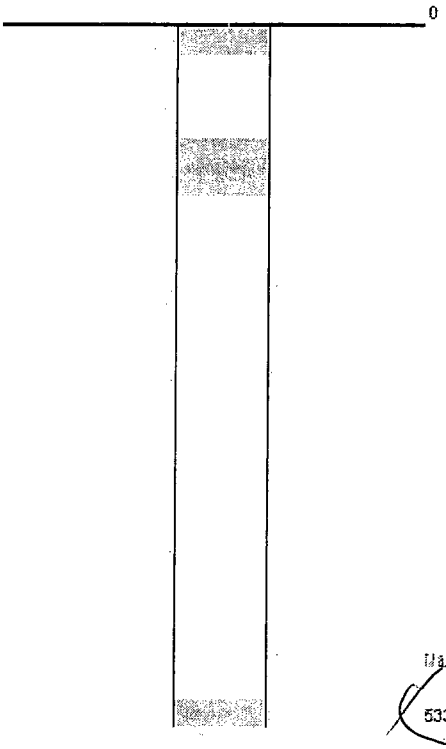
API: 3001501095
Operator: Robert L Bunnel
Lease: Magnolia State Well No: 3
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 1650 FSL, 330 FEL

KB:
GL: 3251
Spud date: December 22, 1955
Completion date: February 14, 1956
MSL of TD: 2723

Surface Csg
Size: 7"
Set @: 179
Sxs cmt: Mudded
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



4 sxs cement surface

Mud filled between cement plugs

22 sx plug @base base 7" (7" pulled)

Mud filled between cement plugs

Approx 530

8 sxs cement @ TD

PLUG AND ABANDON WELL DIAGRAM

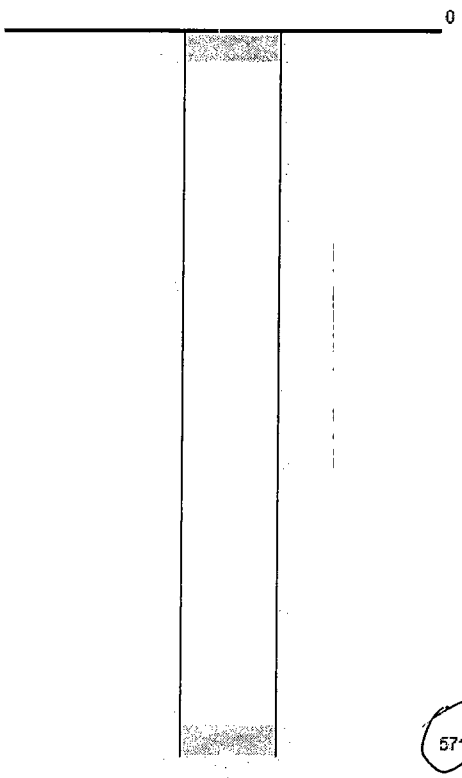
API: 3001501097
Operator: Everett Burgett
Lease: Pure State Well No: 4
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 2310 FSL, 1650 FEL

KB:
GL: 3272
Spud date: January 24, 1956
Completion date: February 6, 1956
MSL of TD: 2701

Surface Csg
Size: None
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



? sxs cement surface
C-103 unreadable

Mud filled between cement plugs

10 (?)sxs cement @ TD

PLUG AND ABANDON WELL DIAGRAM

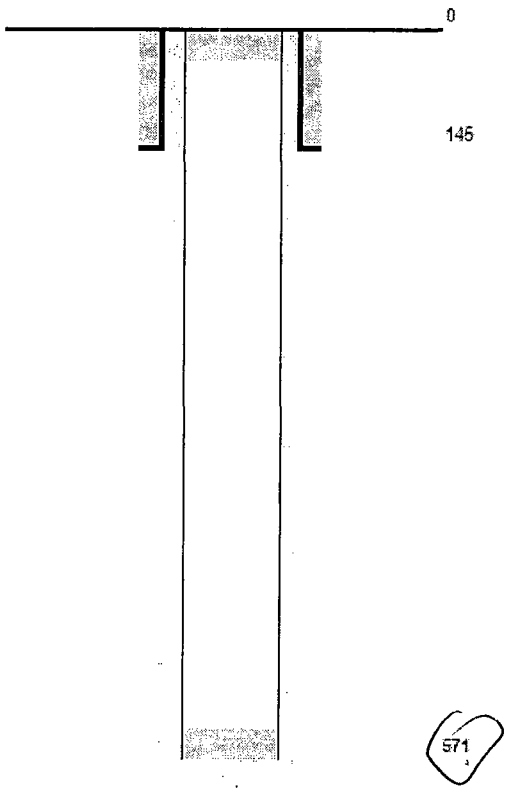
API: 3001501098
Operator: Everett Burgett
Lease: Pure State Well No: 5
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 2310 FSL, 1650 FEL

KB:
GL: 3272
Spud date: January 24, 1956
Completion date: February 8, 1956
MSL of TD: 2701

Surface Csg
Size: 7"
Set @: 145
Sxs cmt: 10
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



? sxs cement surface
C-103 unreadable

Mud filled between cement plugs

10 (?)sxs cement @ TD

PLUG AND ABANDON WELL DIAGRAM

API: 3001501099
Operator: Everett Burgett
Lease: Pure State Well No: 6
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 330 FSL, 1650 FEL

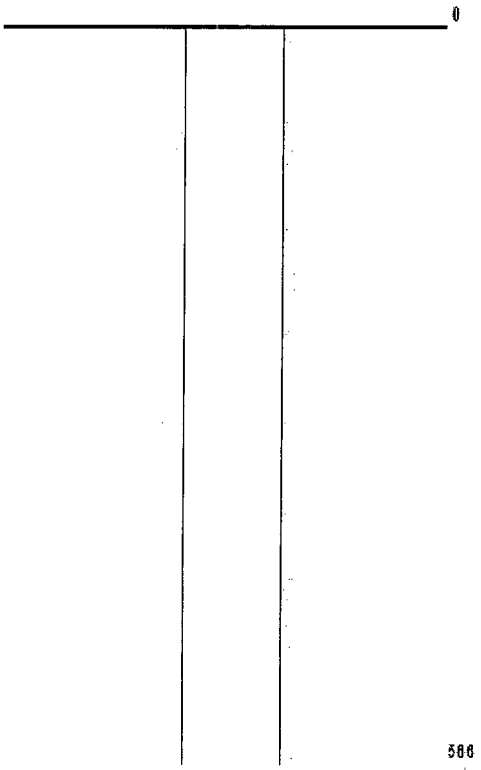
KB:
GL: 3290
Spud date: January 24, 1956
Completion date: February 8, 1956
MSL of TD: 2704

No plugging data

Surface Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



PLUG AND ABANDON WELL DIAGRAM

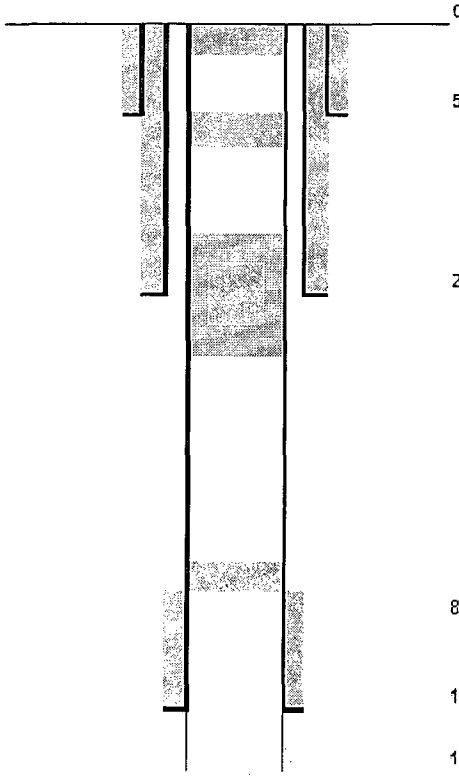
API: 3001501101
Operator: Harvey E. Yates
Lease: Cedar Hills Com Well No: 1
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 1980 FSL, 660 FEL

KB:
GL: 3269
Spud date: October 10, 1962
Plugged date: April 15, 1985
MSL of TD: -9541

Surface Csg
Size: 13-3/8"
Set @: 573
Sxs cmt: 600
Circ: Yes
TOC:
Hole Size:

Intermediate Csg
Size: 9-5/8"
Set @: 2603
Sxs cmt: 690
Circ: Yes
TOC:
Hole Size:

Production Csg
Size: 4-1/2"
Set @: 11781
Sxs cmt: unk 8500' est
Circ: No
TOC:
Hole Size:



0
50' surface plu
573
100' plug @ 650'
2500'-3000' w/175 sxs
after recompletion attempt
2603
2650' 100' plug
2875'-3085' 80 sxs
5301'-5401' 100' plug
7209'-7309' 100' plug
8500 est
8690'-9110' 150' plug
11781
12810

PLUG AND ABANDON WELL DIAGRAM

API: 3001501102
Operator: R.A. Magruder
Lease: State Well No: 1
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 660 FSL, 660 FEL

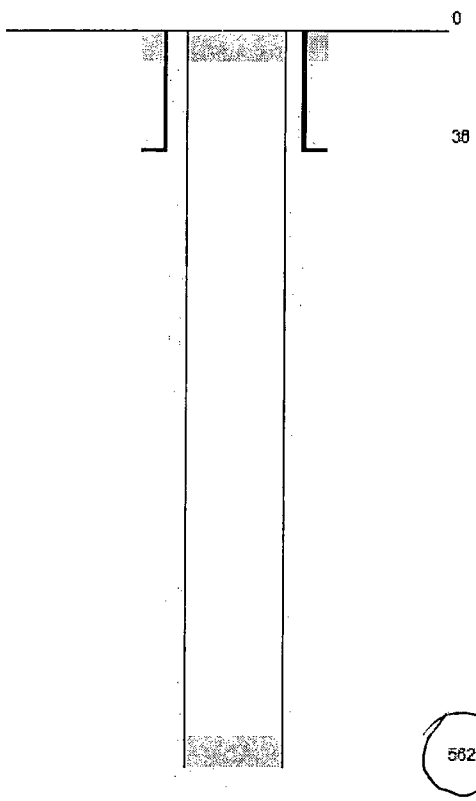
KB:
GL: 3252
Spud date: approx 7/23/1952
Completion date: February 10, 1953
MSL of TD: 2690

S I P P I S

Surface Csg
Size: 8-5/8"
Set @: 38
Sxs cmt: 10
Circ:
TOC:
Hole Size:

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



6 sx surface plug

10 sx at TD

PLUG AND ABANDON WELL DIAGRAM

API: 3001501103
Operator: A. W. Rutter
Lease: State Well No: 1
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 2310 FNL, 2310 FWL

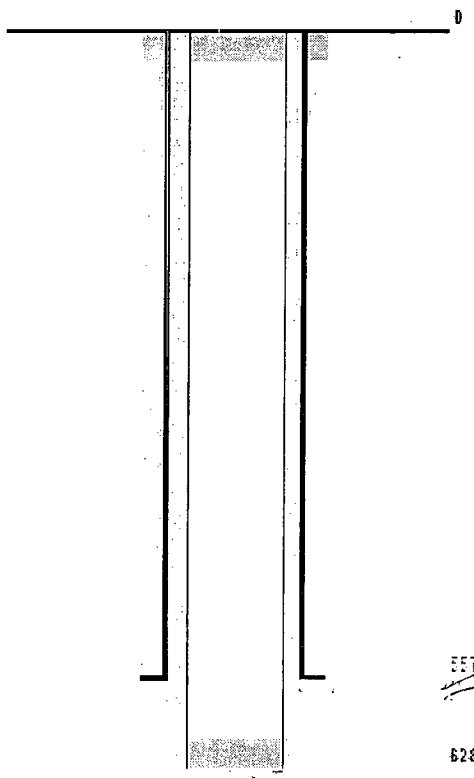
KB:
GL: 3312
Spud date: May 9, 1939
Completion date: May 31, 1939
MSL of TD: 2684

S I P P I S

Surface Csg
Size: 7"
Set @: 557
Sxs cmt: 10
Circ:
TOC:
Hole Size: 9-1/2"

Intermediate Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:

Production Csg
Size:
Set @:
Sxs cmt:
Circ:
TOC:
Hole Size:



3 sx surface plug

Mud

5 sx at TD

PLUG AND ABANDON WELL DIAGRAM

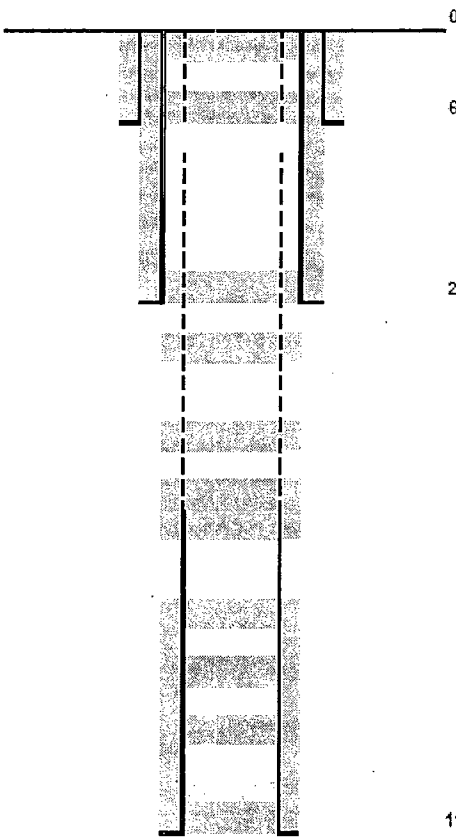
API: 3001521263
Operator: BEPCO LP
Lease: State 22 Com Well No: 1
Location: Sec 22, T21S-R27E Eddy Co., NM
Footage: 660 FNL, 1980 FWL

KB: 3320
GL: 3303
Spud date: November 2, 1974
Plugged date: March 12, 1996
MSL of TD: -8457

Surface Csg
Size: 11-3/4"
Set @: 623
Sxs cmt: 575
Circ: Yes
TOC: 0
Hole Size: 15"

Intermediate Csg
Size: 8-5/8"
Set @: 2846
Sxs cmt: 690
Circ: Yes
TOC: 0
Hole Size: 11"

Production Csg
Size: 5-1/2"
Set @: 11723
Sxs cmt: 950 staged
Circ: No
TOC: 9000
Hole Size: 7-7/8"



0
Surface 10 sx cement plug

623
55 sx 523-723

Tbg parted w/poss cgs part
1780' @ base of "cavern"

2846
60 sxs 2699-2946 (Delaware)

45 sxs 3086-3338 (Cherry Can)

45 sxs 5212-5464 (Bone Spg)

35 sxs in-out 5-1/2" stub
55 sxs 8812-9100 (Wolfcamp)

30 sxs 10119-10390 (Strawn)

30 sxs 10432-10703 (Atoka)

50 sxs 10837-11338 (Morrow)

11760
PB 11723

PLUG AND ABANDON WELL DIAGRAM

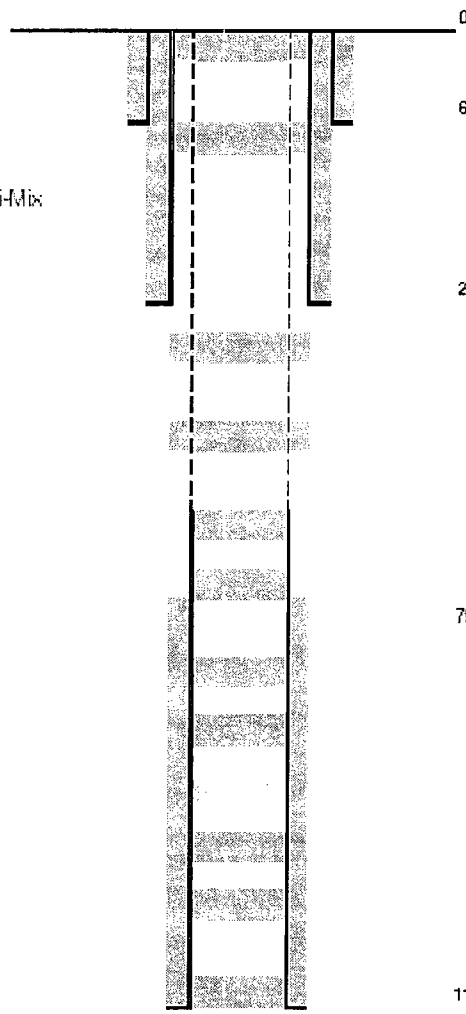
API: 3001521492
Operator: Harvey E. Yates
Lease: Cedar Hills Com Well No: 2
Location: Sec 15, T21S-R27E Eddy Co., NM
Footage: 1980 FSL, 660 FEL

KB:
GL: 3315
Spud date: March 20, 1975
Plugged date: March 12, 1996
MSL of TD: -8435

Surface Csg
Size: 13-3/8"
Set @: 618
Sxs cmt: 575
Circ: Yes filled-Redi-Mix
TOC: 0
Hole Size: 17-1/2"

Intermediate Csg
Size: 9-5/8"
Set @: 2603
Sxs cmt: 690
Circ: Yes
TOC:
Hole Size: 12-1/4"

Production Csg
Size: 5-1/2"
Set @: 11781
Sxs cmt: 1125 staged
Circ: No
TOC: 7940
Hole Size: 8-3/4"



0 Surface 10 sx cement plug
618 667 45 sx cement plug
2603 2993 45 sx cement plug
5260 45 sx cement plug
7260 cuttoff 5-1/2" 100' plug in/ot
7940 8700 30 sx plug
9440 35' plug on CIBP
PB 10315 top 35' plug
PB11290 top 35' plug
11750 PB 11710 top 40' plug