R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

June 18, 2009

US Bureau of Land Management
Randy Rust
620 E. Green St.
Carlsbad, NM 88220-6292

RE: Site restoration at Wadi Federal 22 Com #4

Mr. Rust:

R.T. Hicks Consultants is pleased to submit, on behalf of Wadi Petroleum, this revised plan to restore the surface and seed for re-vegetation of the above-referenced site. The revised restoration plan reflects our re-evaluation of findings and avoids the use of a below-grade tank. The findings of our investigations are presented below.

Investigation Results

- The 2004 drilling pit (the "Rule 50 Pit"; see Plate 1) was closed in accordance with the Sundry notice (addressed to the BLM) dated July 7th, 2003, which states:
  - "The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements".
- Some time after closure of the Rule 50 Pit, a contractor disturbed the surface of the closed pit area. This disturbance may have caused upward migration of salt from the underlying mud and cuttings to the soil horizon, causing the failure of re-vegetation efforts.
- A 1973 drilling pit (the "Legacy Pit") in the same area was properly closed according to the Sundry notice (addressed to the US Dept. of Interior) dated May 18th, 1973 and approved by the District Engineer on May 30th, 1973.
- A portion of the Legacy Pit lies beneath the caliche production pad and equipment and a portion of the lease on the northeast and northwest sides of the production pad are affected by the Legacy Pit.
- The operator has come to understand that BLM considers "those areas of the location not essential to production facilities" (from the 2003 Sundry Notice) to include the 1973 Legacy Pit and the areas northeast and northwest of the production pad affected by the Legacy Pit..
- AMIGO modeling (see Appendix A), using conservative input parameters, predicts that the mass of chloride in the Legacy Pit will not cause ground water to exceed New Mexico's Water Quality Control Commission's (WQCC) ground water standards and that the chloride impacted soils buried on site do not pose a threat to surface water.
- In our opinion, the migration of salt from the buried 1973 cuttings and mud to the soil horizon is not considered a release under Part 29 of NMOCD Rules (see 19.15.29.8.B).
- In our opinion, the migration of salt toward the surface from the Rule 50 Pit is a release under Part 29 of the NMOCD Rules.

Revised Surface Restoration Plan

In March 2009, R.T. Hicks Consultants submitted to the BLM a draft grading plan proposing the removal of chloride mass by capturing surface water run-off impacted with chlorides into a below ground tank for proper disposal. Further analysis determined that the draft plan does not create the greatest environmental benefit.

Rule 50 Pit Surface Restoration

A. Notify NMOCD of the proposed surface reclamation actions described herein after the BLM has approved a final restoration plan.
B. Excavate and remove for off-site disposal surface soils and underlying drilling mud/cuttings that exhibit chloride concentrations in excess of 1,500 mg/kg to a depth of no more than 3-feet. Use field methods to determine chloride concentrations in soils/mud.
C. Transport high chloride material to an NMOCD-approved landfill.
D. Place caliche from the existing well pad over the excavated area.
E. Place imported clean soil over the caliche layer.
F. Mix some imported soil with residual soils where chloride concentration is 1,000-1,500 to reduce remaining chloride concentrations and maintain the natural grade.
G. Mix in two tons of straw to the Rule 50 pit area (area of excavation, area of mixed soil) and seed the surface using a 50/50 mixture of Type 2/Type3 seed (see Appendix B for the BLM seed mixture list).
H. If possible, create small drainage "swales" in the production pad that will direct some runoff from the pad to seeded area.

Legacy Pit Area Surface Restoration

With respect to surface reclamation of the Legacy Pit, we propose partial remediation and re-vegetation as soon as possible followed by long-term natural remediation and re-vegetation. The plan is to achieve the following goals:

A. Reduce sodicity and salinity in the root zone of the exposed Legacy Area (see Plate 1),
B. Introduce patches of vegetation in the area that can be self-sustaining after 1-2 growing seasons,
C. Allow natural processes to reduce sodicity and salinity in the root zone over time outside of the patch seeding/vegetation areas, and
D. Allow natural processes to re-vegetate the site by expanding outward from the patches and inward from the edges of the area.

As shown on Plate 1, the partial remediation zone (treatment zone) lies northwest and northeast of the drilling pad and consists of two 50 ft x 100 ft areas. The treatment zone restoration plan consists of the following work elements:

1. Rip the exposed Legacy Pit area and incorporate two tons of organic matter (such as silo hay) into the treatment area to a depth of 2 ft.
2. Contour the area and construct 6-inch berms (brown rectangles in Figure 1, below) at the locations indicated to minimize run-off of precipitation and erosion.

3. Stake out six areas for "patch re-vegetation" along the drilling pad as shown in Figure 1. These patches (green boxes in Figure 1) will be at least 10 ft x 10 ft in size.
4. Create small drainage "swales" in the production pad that will direct some runoff from the pad to the patch vegetation area (blue arrows in Figure 1)
5. Distribute 20 bags of Ca^{++}Nhance over the treatment area outside of the patches and till into the top 6 inches.
6. Excavate the top 1-1½ feet of soil from the patches and replace with clean topsoil.

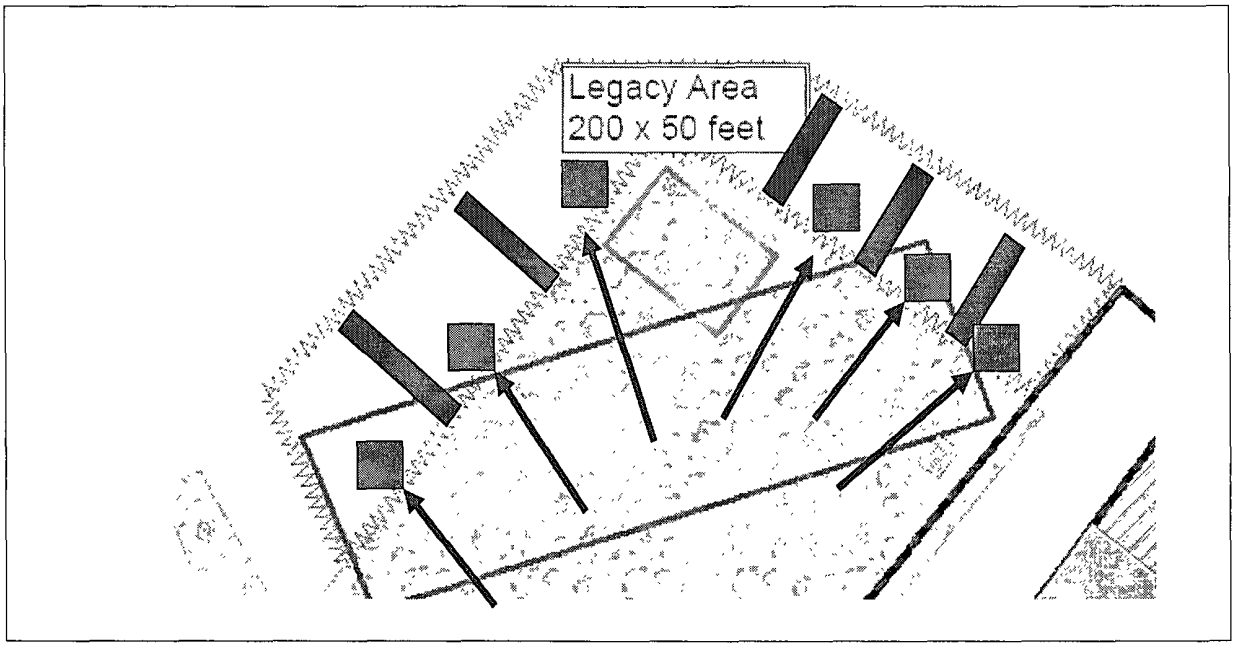


Figure 1: Treatment zone showing swales to direct surface water run-off from production pad (blue arrows) to treatment zone, berms to prevent surface water run-off (brown polygons), and re-vegetation patches (green squares).

7. Using a tractor with a disc, incorporate one bag of RestorNhance, 80 g of P_2O_5, and 40 g of nitrogen into the top 6 inches of the clean topsoil in each patch.
8. Firm up the soil with foot traffic and ensure that the soil in the patch area is level with the surrounding soil or slightly higher.
9. Generously broadcast the 50/50 seed mixture over the patches.
10. From the surrounding area, and as permitted by the BLM, transplant 1-2 Fourwing Salt Bushes (1-2 ft tall) and other native grasses into each patch. Establishing a shade canopy of local plants will greatly increase the chances of success in reseeding.
11. After transplanting/seeding apply another bag of RestorNhance to the surface of each patch. Reseeded areas shall be raked into the soil to provide good contact between the seeds, soil, and RestorNhance.
12. Apply ten bags of InfiltratioNhance to the surface of the treatment areas (including the patches).
13. Apply a top dressing of silo straw to the entire site, 2-3 inches outside the patches and < ½ inch on the patches.
14. Install Jute netting over the treatment zone to hold the straw in place.

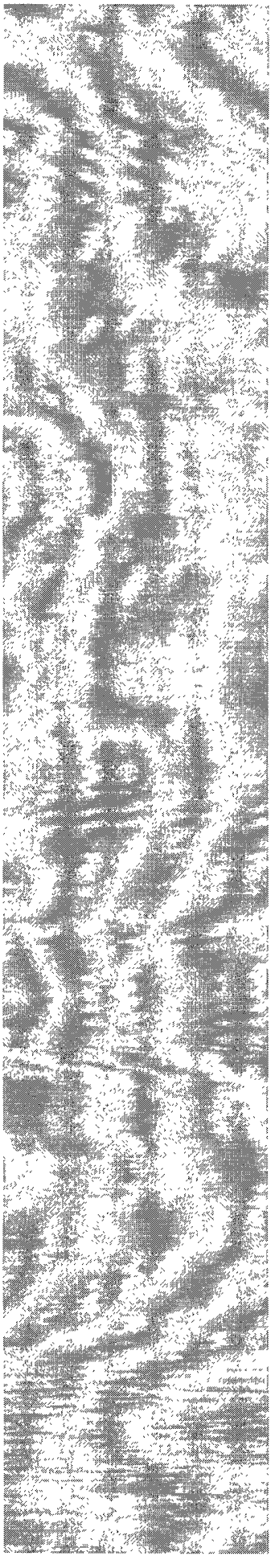
15. Protect re-vegetation patches with rabbit-proof fencing.
16. During the first year after seeding, a local contractor will visit the site and apply water to the patches as frequently as necessary to encourage germination and root development.

At the time of final plugging and abandonment of the existing gas well, the operator shall decommission the site and the portion of the legacy pit currently underlying the production pad according to requirements in effect at that time. We believe the treatment zone restoration program outlined above may serve as a template for final restoration of the site.

If you have any questions or comments please call me at 505-266-5004.

Sincerely,
R.T. Hicks Consultants, Ltd.

Andrew Parker
Project Scientist



Plates

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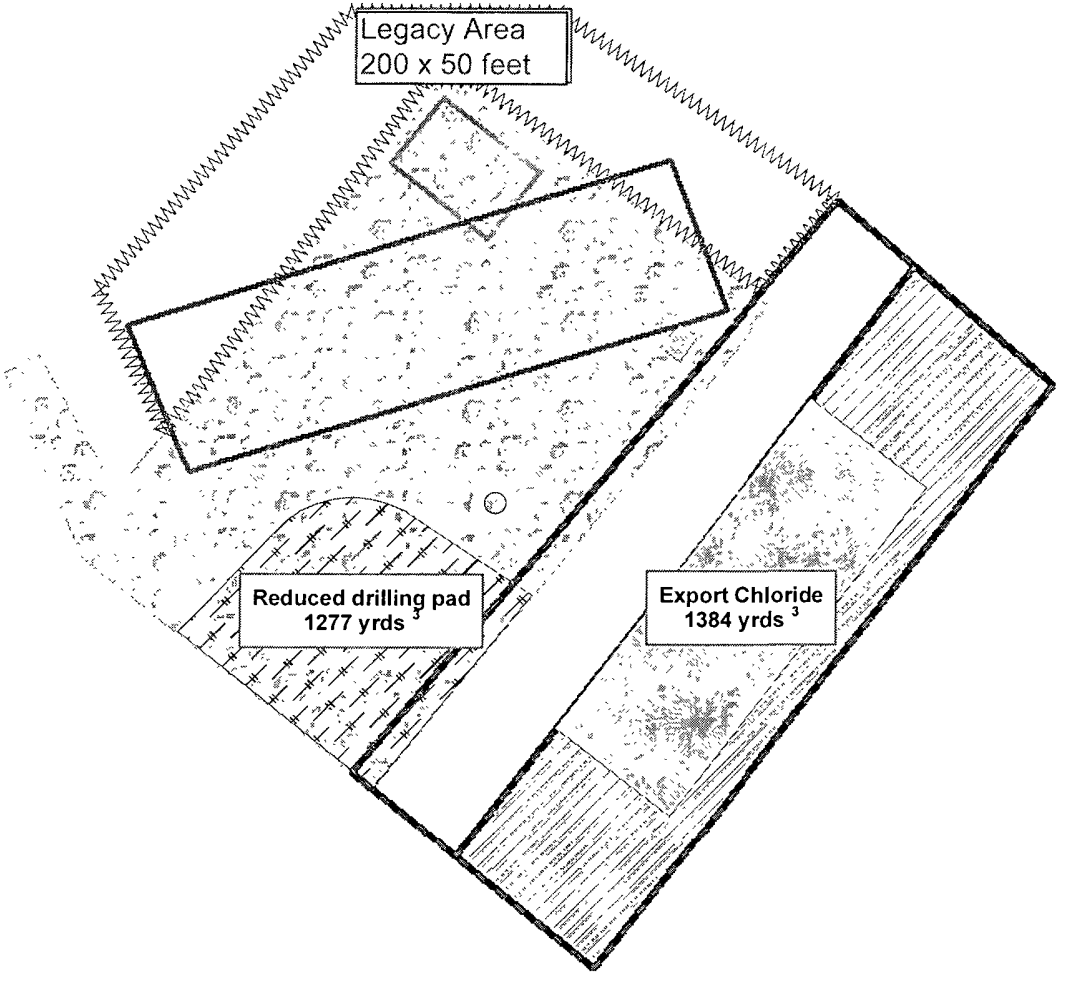

Explanation

Site features

- Drill pad
- Tank battery
- Compressor
- Wellhead
  Federal 22 Com #4
- Partial Restoration Area
- Remove Impaired Soil
- Reduce Drill Pad

Drilling Pits

- 1973 Legacy Pit, approximate location
- 2004 Rule 50 Pit
- 2004 Rule 50 Pit, raked with backhoe

N
W E
S

0 40 80
Feet

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Revised Restoration Plan	Plate 1
Wadi Petroleum: Federal 22 Com #4	April 2009

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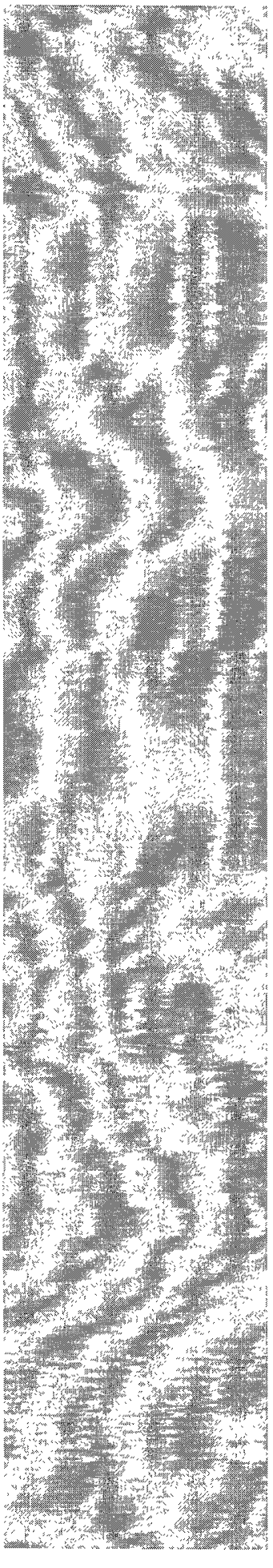
4/10/2009



Appendix A

AMIGO Decision Tool

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Appendix A - AMIGO Decision Tool

We used the AMIGO Decision Tool (available at www.rthicksconsult.com), to simulate and predict the Legacy Pit's potential chloride impact to ground water. We used vadose zone chloride data obtained from our site investigation[1] and published data as input parameters. The specific parameters used in the simulation for the Legacy Pit at the Federal 22 Com #4 site are presented below.

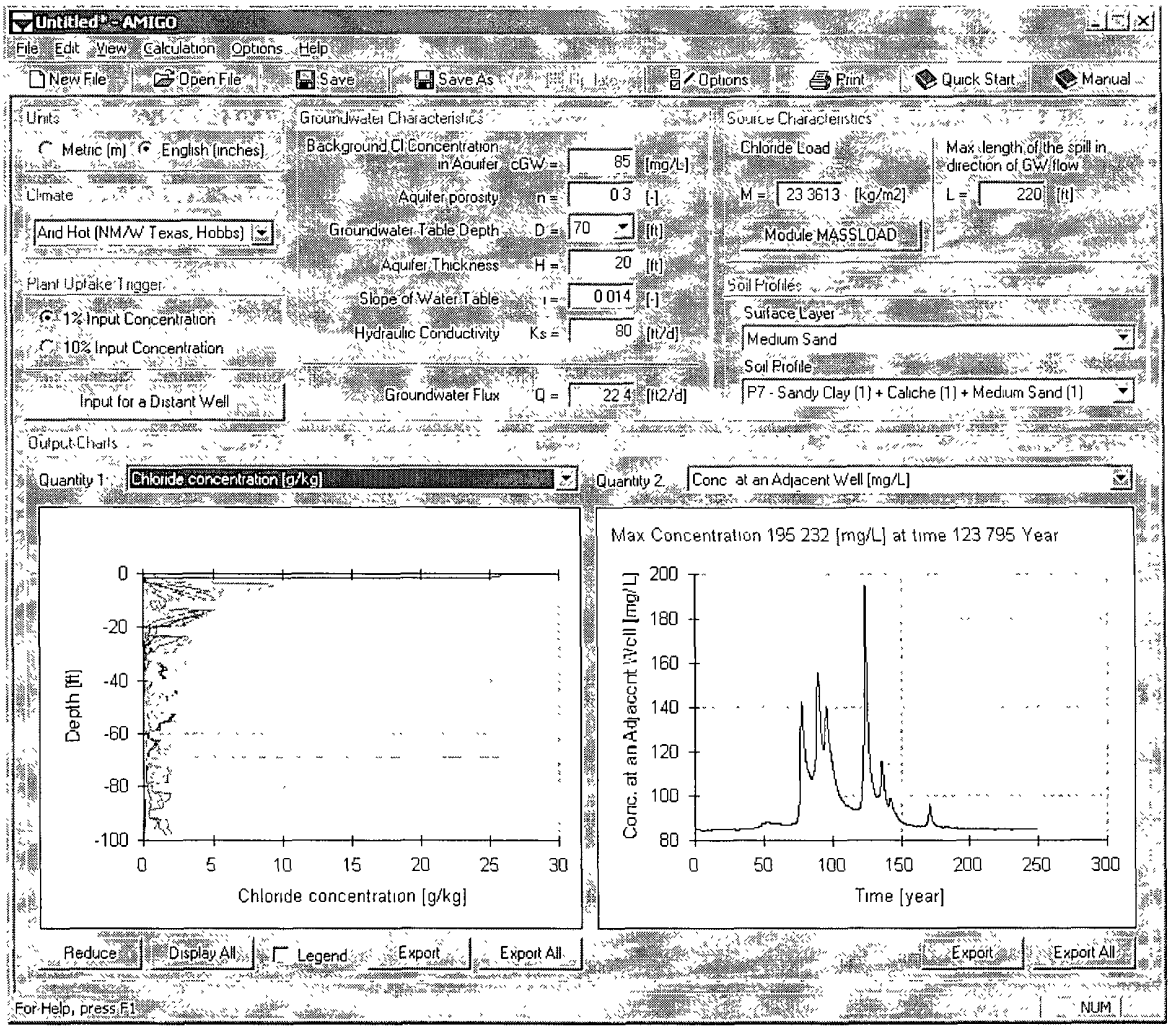
Table 1 - Parameters Employed in AMIGO tool for Federal 22 Com #4

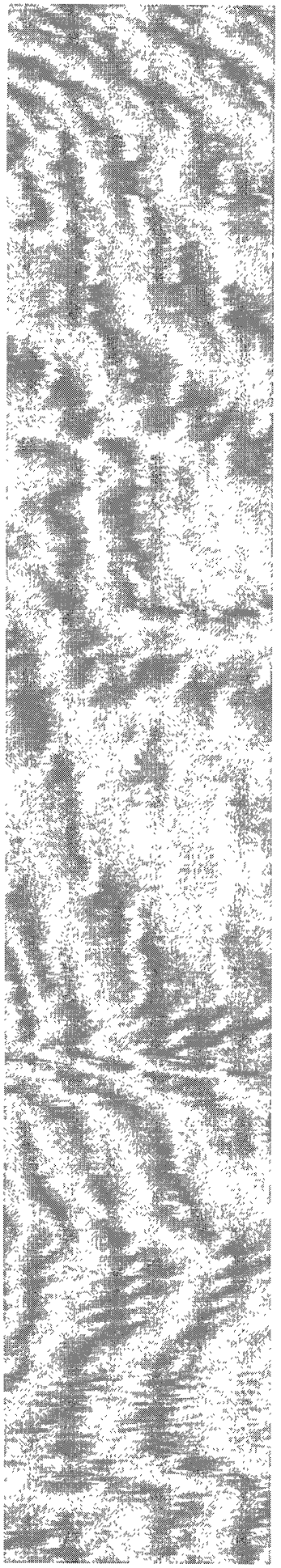
Model Parameter	Value	Source of Value
Climate (non-smoothed)	1946 - 1992	Pearl, NM Station
Input for distant or hypothetical well (ft)	NA	Not Required
Background Chloride in Aquifer (mg/L)	85	NM WAIDS, PTTC
Aquifer Porosity (unitless)	0.3	Sample Description
Groundwater Table Depth (ft)	70	OSE Water Level Database
Aquifer Thickness (ft)	20	Professional Judgment Conservative Assumption
Slope of Water Table	0.014	Conservative assumption based on surface topography
Hydraulic Conductivity (ft/d)	80	Musharrafieh 1999
Average Chloride Load (kg/m^2)	23.3613	Calculation from Site Data using Mass-load
Max length of spill in dir. of GW flow (ft)	220	Site Data
Plant Uptake Trigger (%)	1.0	Prof. Judgment Conservative Assumption
Surface Layer	Medium Sand	Site Data, restoration plan including tilling straw into the surface
Soil Profile - Sandy Clay + Caliche + Medium Sand Ratio	1:1:1	Boring Log

Figure C-1 shows predicted chloride concentrations at a hypothetical down-gradient well adjacent to the Legacy Pit in a screen shot from the AMIGO output. Assuming a background chloride concentration in ground water of 85 mg/L, which is typical throughout southeastern New Mexico, the model predicts that the maximum chloride concentration in ground water will be 195 mg/L about 123 years from the present day. The spikes in the graph represent higher influx of chloride during greater precipitation years expected in El Niño events. New Mexico Water Quality Control Commission (WQCC) standard for chloride in ground water is 250 mg/L. The prediction assumes higher permeability at the surface due to the introduction of straw and other organic matter during site restoration and re-vegetation.

[1] R.T. Hicks Consultants, January 2009. Site characterization at Wadi Petroleum Federal 22 Com #4.

Figure C- 1 Predicted chloride concentration in ground water





Appendix B

Seed Mixture List

R.T. Hicks Consultants, Ltd.
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Albuquerque, NM 87104

Seed Mixture #1
For Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

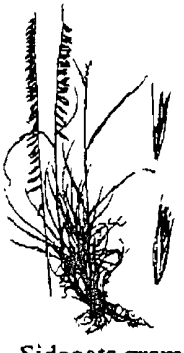
Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:
Pounds of seed x percent purity x percent germination = pounds pure live seed

Plains lovegrass

Sand dropseed



Sideoats grama

BLM SERIAL NO.
COMPANY REFERENCE
WELL NO. & NAME

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

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Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

Seed Mixture #3
For Shallow Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

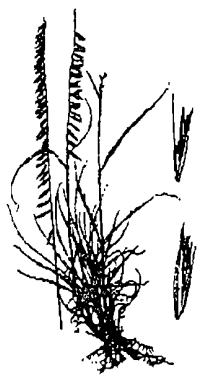
Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	1.0
Sideoats grama (Bouteloua curtipendula)	7.0

*Pounds of pure live seed:
Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

Plains lovegrass



Sideoats grama

Seed Mixture 4
For Gypsum Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

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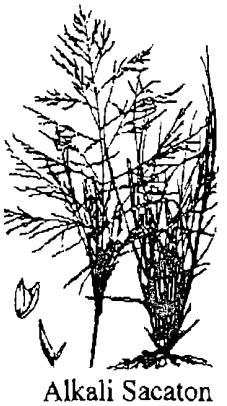
Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Alkali Sacaton (Sporobolus airoides)	1.0
DWS□ Four-wing saltbush (Atriplex canescens)	5.0

□DWS: DeWinged Seed

*Pounds of pure live seed:
Pounds of seed x percent purity x percent germination = pounds pure live seed



Alkali Sacaton

Curtis & Curtis
575-762-4759

LPC Seed Mixture
For Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

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Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

** This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:
Pounds of seed x percent purity x percent germination = pounds pure live seed

Plains bristlegrass Sand bluestem Little bluestem Big bluestem Sand dropseed