1R - 169

REPORTS

DATE:

6/30/1999

GPII Energy, Inc.:

Site Characterization, Documentation, & Proposal

for the

Playa

Located east of the

Langlie Jal Unit Well #82

N.M.P.M.
S8 T25S R37E

Lea County New Mexico

June 30, 1999

Table of Contents

1 Site Characterization and Documentation

The Site Assessment Work Plan (SAWP) was implemented to identify depth to ground water and extent of chloride contamination resulting from the accidental release of chloride contaminated injection water, i.e., ruptured injection flow line on October 17, 1998. The following provides the information derived from the investigation. The Original Laboratory Data Reports are included as Attachment II.

1.1 Ground Water Quality

Due to the sparsity of contemporary water well information for this area, it was determined that an investigatory well be drilled to characterize lithology and identify depth to ground water. If saturated zones were encountered the well would be completed and developed as a monitoring well according to the criteria stipulated in the NMOCD/W. Price letter dated May 12, 1999. Initially, the well location was to be in the playa bottom and cores sampled for Chloride, however, due to possible submerging of the wellhead during inundating storm events, it was decided to locate the well ~200 feet down gradient (SE) on higher ground. On June 18, 1999, with approval from NMOCD, the well was drilled to a depth of 46 feet, completed in accordance with the stipulations, and developed. The saturated zone encountered at 43 feet was sampled on June 22, 1999 and ground water samples transmitted to the laboratory for analyses. The data is summarized in Table A below and the monitor well log and diagram are included in Attachment I.

Table A

GP II Energy, Inc.

Langlie Jal Unit Playa Monitoring Well Data

Installed 6-18-99 Sample Date: 6-22-99

Sample ID# GW99622LJUP

Parameter	Units	Value
TDS	mg/L	368
Chloride	mg/L	36
Benzene	mg/L	<0.002
Toluene	mg/L	<0.002
Ethyl Benzene	mg/L	<0.002
Total Xylenes	mg/L	<0.006

Historical data provided by Nicholson and Clebsch, Ground Water Report 6, Geology and Ground-Water Conditions in Southern Lea County, New Mexico, USGS, 1961, indicate that Chloride levels in 1954, 1955, and 1958 for well #25.37.13.312a, were 51, 64, and 75 mg/L, respectively. This well is ~3 miles due east of the LJU Playa monitor well and had a water level somewhat deeper at 73 feet below the surface. It appears that the ground water down gradient of the playa has not be impacted and is below the New Mexico Water Quality Control Commission (WQCC) ground water standards.

1.2 Soil

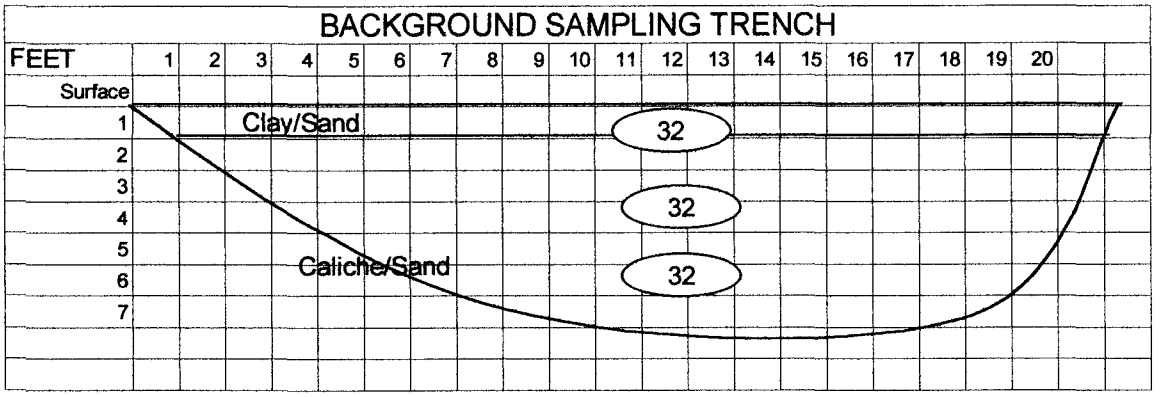
Soil was sampled along the flow path of the release at two points north of the Playa, i.e., at the point of release (~600 feet north) and at an area prior to the flow entering the playa (~150 feet north) and in the uninundated northern portion of the Playa in the runin delta. The "North," "South" , and Background sampling trenches were excavated to ~20 feet L X 6 feet W X 6 feet D with a backhoe and samples taken at the surface, 4 feet, and 6 feet vertical intervals. The Playa trench was excavated to ~20 feet D and sampled at the surface, 4, 6, 10, 16, 18, and 20 feet. The samples were analyzed for Chloride by Cardinal Laboratories in Hobbs, New Mexico. Copies of the original reports are included as Attachment II.

1.2.1 Background Sampling Trench

Below is the data and isopleth for the background sampling trench located 300 feet north northeast of the playa in an unperturbed area.

BACKGROUND SAMPLING TRENCH CHLORIDE DATA			
West Vertical	Middle Vertical	East Vertical	
	32 mg/kg		Surface
	32 mg/kg		4'
	32 mg/kg		6'

This background location is 300'N of the Playa and 300'E of the spill flow path. Trench orientation is East to West.



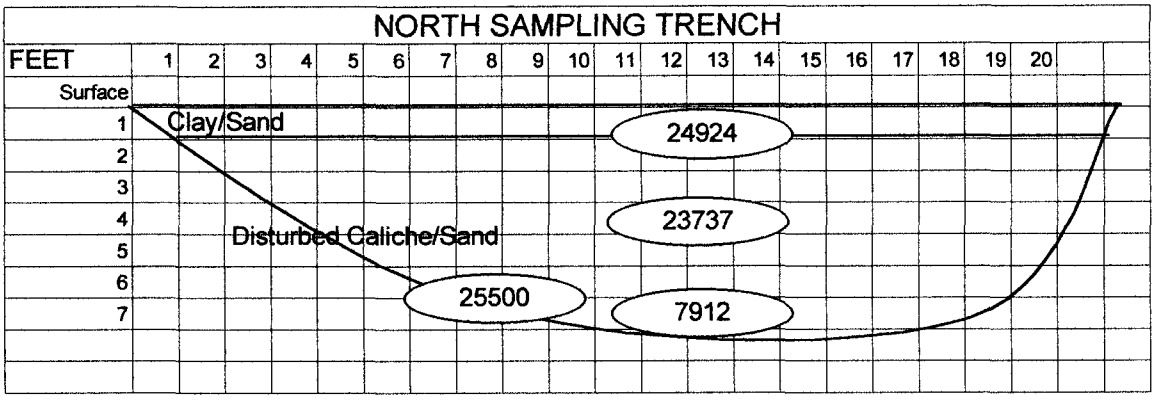
The low values and homogeneous distribution indicate a representative background sample.

1.2.2 North Sampling Trench

Below is the data and isopleth for the North Sampling trench.

NORTH SAMPLING TRENCH CHLORIDE DATA			
West Vertical	Middle Vertical	East Vertical	
	24924 mg/kg		Surface
	23737 mg/kg		4'
25500 mg/kg	7912 mg/kg		6'

This is the location of the spill and is also where two subsurface pipelines cross. This area had been excavated previously.

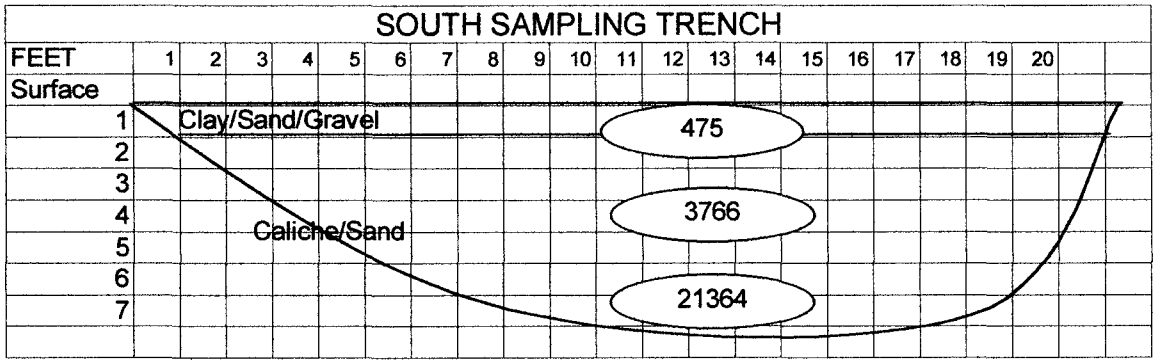


The Center hole data indicates a declining concentration of chloride but at the west 6 foot sample interval chloride persists.

1.2.3 South Sampling Trench

Below is the data summary for the South trench located north of the Playa in the spill flow path.

SOUTH SAMPLING TRENCH CHLORIDE DATA			
West Vertical	Middle Vertical	East Vertical	
	475 mg/kg		Surface
	3766 mg/kg		4'
	21364 mg/kg		6'
This trench was excavated across the defined flow path which the spill would have followed and is approximately 150 feet north of the playa runin delta. The trench was oriented North to South.			



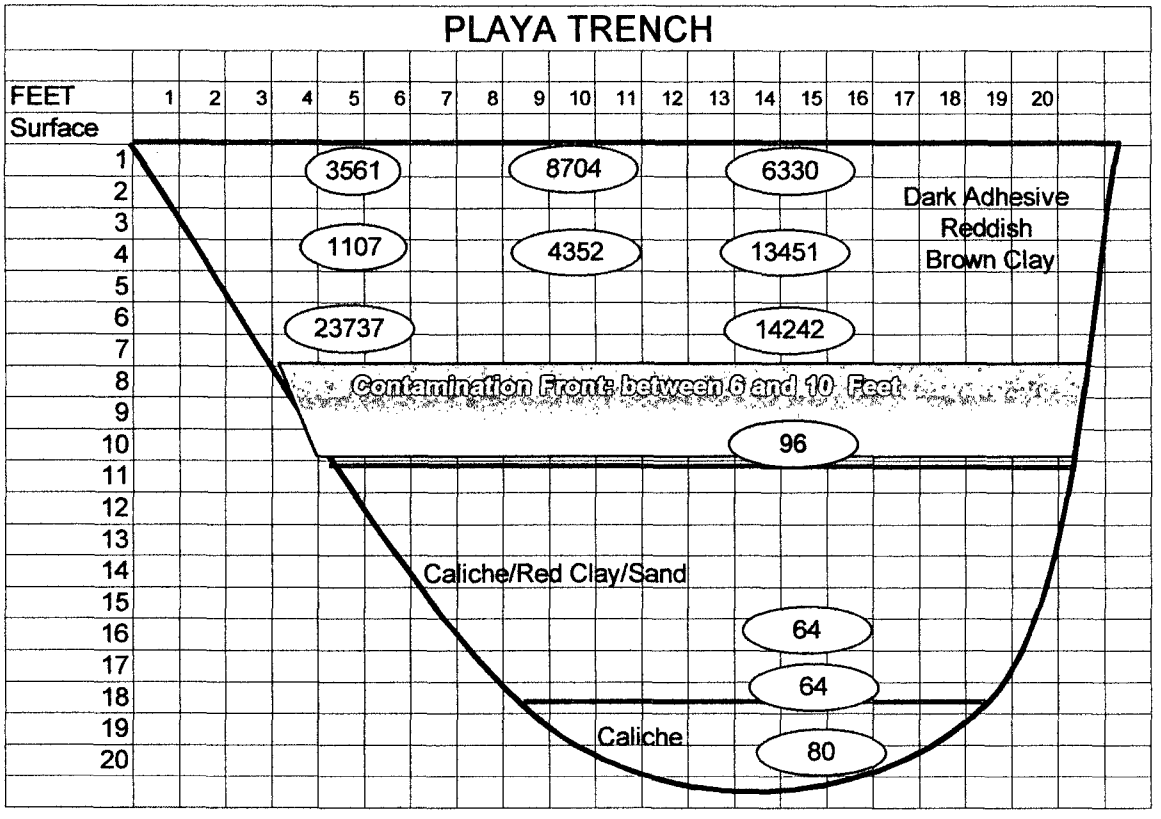
The data indicates the chloride contamination front is below the 6 foot vertical interval.

1.2.4 Playa Sampling Trench

Below is the data summary for the Playa Sampling Trench located on the northern portion of the Playa in the runin delta of the spill flow path.

PLAYA SAMPLING TRENCH CHLORIDE DATA			
West Vertical	Middle Vertical	East Vertical	Interval
3561 mg/kg	8704 mg/kg	6330 mg/kg	Surface
11077 mg/kg	4352 mg/kg	13451 mg/kg	4'
23737 mg/kg		14242 mg/kg	6'
		96 mg/kg	10'
		64mg/kg	16'
		64 mg/kg	18'
		80 mg/kg	20'

This trench was excavated on the northern uninundated part of the playa in the area of the runin delta. The contamination front is identified to be between 6 and 10 feet. The trench was oriented East to West.



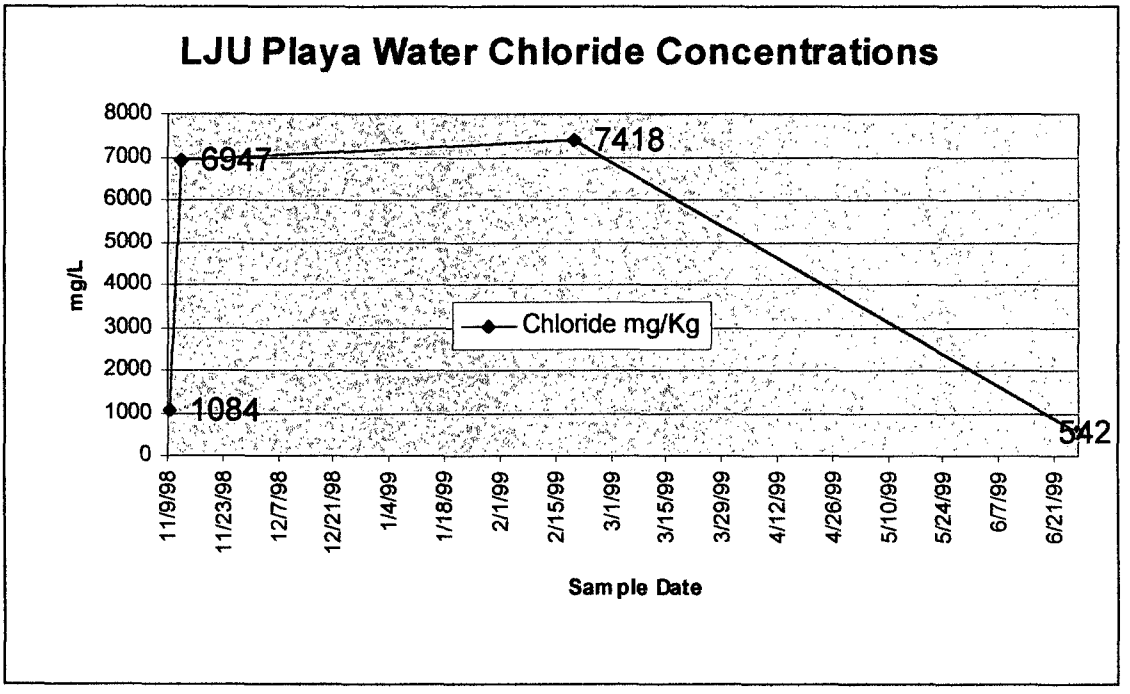
The chloride contamination front is located between 6 and 10 feet below the surface of the Playa.

1.3 Playa Water Quality

Chloride concentration data is presented in Table B and illustrated in the LJU Playa Water Chloride Concentrations Graph. Copies of the original Laboratory reports are included as Attachment II.

Table B
GP II Energy, Inc.
Langlie Jal Unit Playa Surface Water Data

	Sampling Location		Sample		Chloride	TDS
Sample Location Name	Horizontal	Vertical	Sample Date	Sample ID#	mg/Kg	mg/Kg
Pond Water	West Bank	Surface	11/9/98	SW98119LJUP	1084	
Pond Water	West Bank	Surface	11/12/98	SW981112LJUP	6947	
Pond Water	West Bank	Surface	2/19/99	SW21999LP	7418	
Pond Water	West Bank	Surface	6/26/99	SW99626LJUP	542	1314



The presence of water in the Playa depends on the frequency and intensity of storm events. The clay bottom of the playa is ~10 feet thick and has a low permeability. In times of extreme drought the pool will be absent but most generally persists through out the year. Cattle use the vegetation shade along the east perimeter of the Playa for shelter and the water pool for drinking. The impact to the Playa water pool resulting from livestock use, i.e., bovine wastes, is not known but should be considered. Several storm events have occurred during the spring of 1999 and is coincident with a dramatic lowering of the Playa water Chloride concentration. It is reasonable to conclude that the lowering is due to dilution. It must also be observed that the known subsurface chloride source term, existing up gradient from the Playa, is not increasing the chloride levels in the Playa.

1.4 Surface Impact

The impacted surface area can be divided into the leak area, pipeline/road drainage, eastward drainage, and Playa.

1.4.1 Leak Area

The leak overspray has affected plant growth in an area immediately south of the leak covering an area approximately 10 feet by 50 feet. This is the only affected vegetation observed resulting from this release and is associated with a previously disturbed pipeline right-of-way.

1.4.2 Pipeline/Road Drainage

The flow path of the released fluid followed an existing pipeline right-of-way road, south for approximately 500 feet. The pipeline/road was not vegetated and is subgrade forming a natural drainage. There is no visible impact to this area.

1.4.3 Eastward Drainage

The flow path exits the pipeline/road eastward ~ 175 feet north of Playa through an erosional feature created by storm water flow. Again, because there is no vegetation in the eroded drainage, no impact was observed.

1.4.4 Playa

Vegetation does not appear to be impacted in the Playa. The area of the storm water run-in delta is typically void of vegetation due to erosional or depositional effects.

1.5 Discussion

The information presented characterizes the original release and the resultant environmental impacts. The following observations are made;

1. Source Term
   - The original spill fluid did not contain hydrocarbon

2. Ground Water Quality
   - Depth to ground water (from the lower most contamination to the water table) is 21 feet.
   - Analyses are below background levels and indicate a non-impacted resource.
   - The monitor well is in place and will be used to monitor future encroachment of chloride.

3. Soil
   - Subsurface chloride contamination exists at all locations along the flow path of the leak.

4. Land Surface
   - Most areas along the release flow path were void of vegetation before the release with the exception of the overspray area near the release.

5. Playa Water Quality
   - Surface water chloride analyses fluctuate with precipitation and evaporation.
   - Current run-in during storm events does not appear to increase the chloride load of the water pool.

1.6 Conclusions

The data and observations allow for the following conclusions;

A. Ground Water
   - The ground water has not been impacted.

B. Soil
   - The soil along the flow path from the point of release to the Playa is contaminated with varying concentrations of chloride well above background levels.

- During recent storm events the soil chloride source term in the flow path did not contribute to elevated levels in the Playa water pool.

C. Land Surface
- Surface chloride source term contribution to the Playa water pool does not appear to be significant.
- Most surface chloride contamination exists on the unvegetated pipeline/road right-of-way and areas of erosion or deposition. The exception being the 10' X 50' plot immediately south of the point of release.

D. Playa Water
- The Playa water pool chloride concentration has not adversely impacted perimeter or basin vegetation or use by livestock and wildlife.
- Chloride concentration decreases with storm events.
- The impact of livestock wastes has been not be determined but should be noted.

1.7 GPII Energy Proposal

GPII Energy, Inc. acknowledges the need for continued surveillance of the Playa and ground water and proposes the development and implementation of the following

A. GPII Energy, Inc. will develop and implement an "LJU Playa Environmental Monitoring Plan" (PEMP) that will address the following;

- Quarterly Monitor Well Sampling, i.e., sample and analyze during the first month of each quarter and graphically compare data to previous and background levels.
- Quarterly Playa Water Pool Sampling, i.e., sample and analyze during the first month of each quarter and graphically compare data to previous information and correlate to precipitation.
- Record Playa water pool level and photograph.
- Record precipitation.
- Quarterly Report to NMOCD.

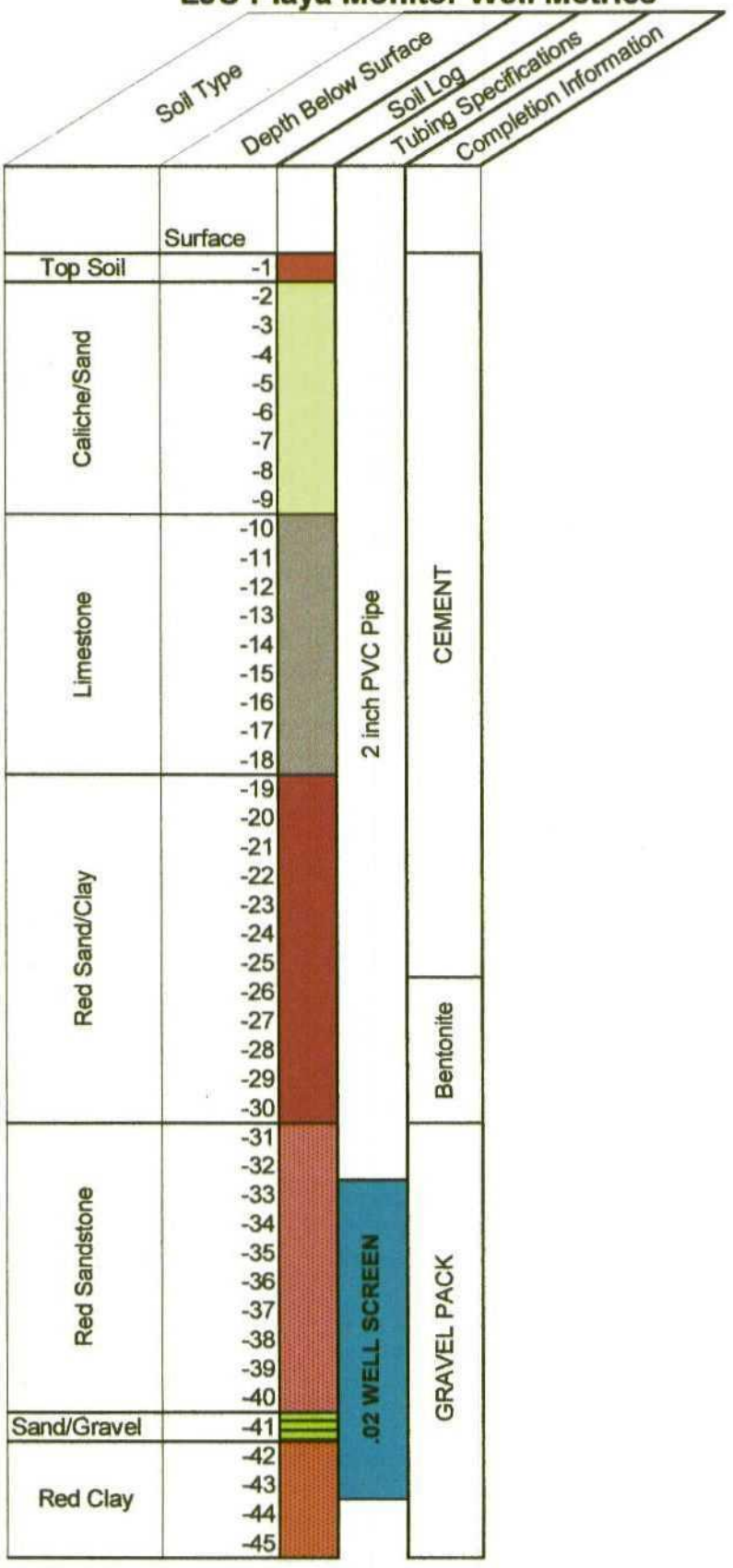
B. GPII Energy, Inc. will perform a computer simulation to provide bounding time frames and predict impact of the soil chloride source term on the ground water. Data gathered by the PEMP will be used to calibrate the model.

C. GPII Energy, Inc. will develop and implement an "LJU Operational Maintenance and Inspection Plan" with the following objectives.

- Prevent unauthorized environmental releases of production fluids.
- Ensure physical integrity of all fluid containing systems.
- Provide orientation and training of lease operators.

Attachment 1: Well Metrics

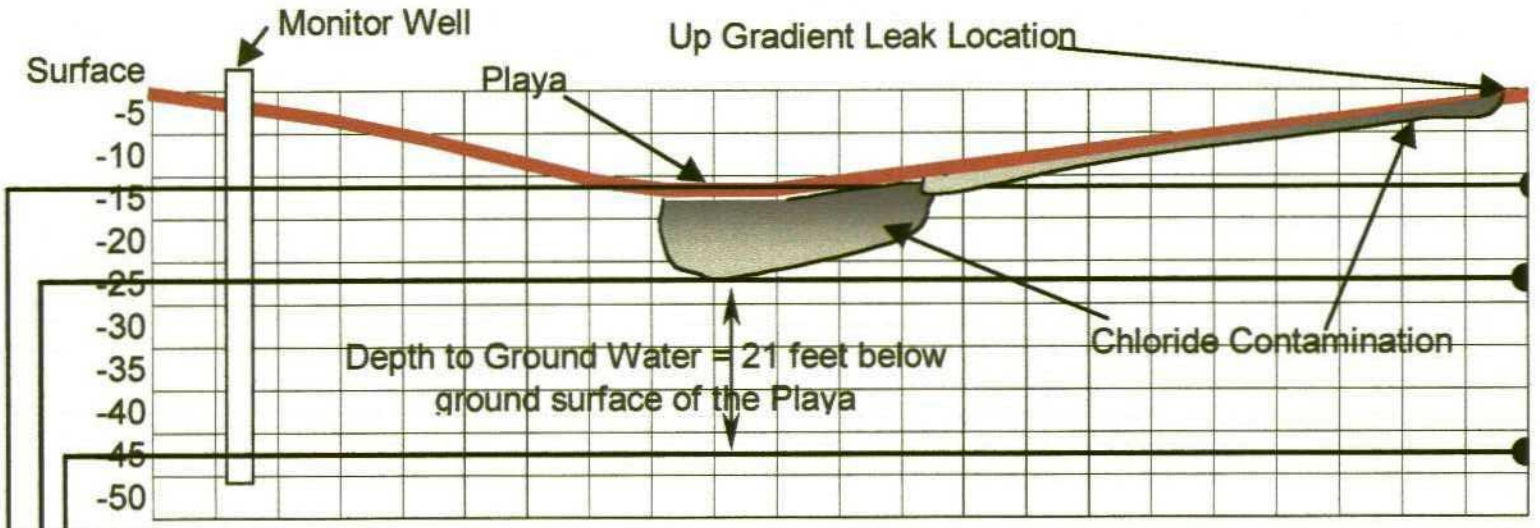
LJU Playa Monitor Well Metrics



Monitor Well Log

LJU Subsurface Isopleth

LJU Playa: Subsurface Isopleth



Subsurface View from East of the Playa

(Horizontal Not to Scale)

Depth to Ground Water = 21 feet below contamination front
Ground Water level in Monitor well located 150 feet down gradient (SE) of the Playa is at 43 feet below the surface

Contamination-22 feet below Monitor well surface elevation and -10 feet below Playa

Playa Surface -12 feet below Monitor well elevation

Attachment II: Laboratory Data Reports

Monitor Well Data

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GPII ENERGY, INC.
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 06/22/99
Reporting Date: 06/24/99
Project Number: NOT GIVEN
Project Name: L.J.U. PLAYA
Project Location: 1.5.MI NE JAL, NM

Sampling Date: 06/22/99
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC/AH

LAB NUMBER	SAMPLE ID	TDS (mg/L)	Cl (mg/L)	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS DATE:		06/23/99	06/23/99	06/22/99	06/22/99	06/22/99	06/22/99
H4198-1	GW99622LJUP	368	36	<0.002	<0.002	<0.002	<0.006
Quality Control		NR	1295	0.086	0.101	0.099	0.294
True Value QC		NR	1319	0.100	0.100	0.100	0.300
% Recovery		NR	98	85.9	101	99.1	97.9
Relative Percent Difference		NR	2.3	0.1	4.0	1.7	2.4

METHODS: TDS-EPA 600/4-79-020 160.1; Cl-Std. Methods 4500-Cl-B; BTEX-EPA SW-846 8260

Monitor well initial sample.

Burgess J. A. Cooke. Ph. D.

6/24/99
Date

H4198.XLS

Soil Data

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CALLAWAY SAFETY
ATTN: PAT McCASLAND
3311 N. GRIMES
HOBBS, NM 88240

Receiving Date: 02/19/99
Reporting Date: 02/22/99
Project Number: 21999
Project Name: JAL LANGLEY UNIT INVESTIGATION
Project Location: 2 MILES NE OF JAL, NM

FAX TO: (505) 392-4547

Analysis Date: 02/22/99
Sampling Date: 02/19/99
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)	
H4034-1	S21999NMS	24924	North Trench
H4034-2	S21999NM48	23737	
H4034-3	S21999NM72	7912	
H4034-4	S21999BGS	32	Background Trench
H4034-5	S21999BG48	32	
H4034-6	S21999BG72	32	
H4034-7	S21999SMS	475	South Trench
H4034-8	S21999SM48	3766	
H4034-9	S21999SM72	21364	
H4034-11	S21999PWS	3561	Playa Trench
H4034-12	S21999PW48	11077	
H4034-13	S21999PW72	23737	
H4034-14	S21999PMS	8704	
H4034-15	S21999PM48	4352	
H4034-16	S21999PES	6330	
H4034-17	S21999PE48	13451	
H4034-18	S21999PE72	14242	
Quality Control		1335	
True Value QC		1315	
% Accuracy		101	
Relative Percent Difference		1.5	
METHOD: Std. Methods		4500-Cl^-B	

Chemist

02/22/99
Date

H4034A.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GPII ENERGY, INC.
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 06/22/99
Reporting Date: 06/23/99
Project Number: NOT GIVEN
Project Name: L.J.U. PLAYA
Project Location: 1.5.MI NE JAL, NM

Analysis Date: 06/23/99
Sampling Date: 02/19/99
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H4198-2	S21999NW48D	25500
Quality Control		1295
True Value QC		1319
% Accuracy		98
Relative Percent Difference		2.3

North Trench West 48"

METHOD: Standard Methods	4500-Cl⁻B

NOTE: Analysis performed on a 1:4 w:v aqueous extract.

Burgess J. A. Cooke
Chemist

6/23/99
Date

cc:

H4198-2.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GPII ENERGY
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 06/26/99
Reporting Date: 06/28/99
Project Number: NOT GIVEN
Project Name: PLAYA LAKE L.J.U.
Project Location: SEC 8 T25S R37E

Analysis Date: 06/28/99
Sampling Date: 06/26/99
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/Kg)
H4210-2	S99626LJUP10	96
H4210-3	S99626LJUP16	64
H4210-4	S99626LJUP18	64
H4210-5	S99626LJUP20	80
Quality Control		1295
True Value QC		1319
% Accuracy		98
Relative Percent Difference		2.3

Playa Sampling Trench

METHOD: Standard Methods	4500-ClB

NOTE: Analyses performed on 1:4 w:v aqueous extracts.

Chemist

6/28/99
Date

H4210B.XLS

Playa Water Data

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GPII ENERGY
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 06/26/99
Reporting Date: 06/28/99
Project Number: NOT GIVEN
Project Name: PLAYA LAKE L.J.U.
Project Location: SEC 8 T25S R37E

Sampling Date: 06/26/99
Sample Type: WATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

LAB NUMBER	SAMPLE ID	TDS (mg/L)	Cl (mg/L)
ANALYSIS DATE:		06/26/99	06/28/99
H4210-1	SW99626LJUP	1314	542
Quality Control		NR	1295
True Value QC		NR	1319
% Recovery		NR	98
Relative Percent Difference		0.4	2.3

Playa Water

METHODS: EPA 600/4-79-02	160.1	4500-Cl B*

*Std. Methods

Chemist

6/28/99
Date

H4210A.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
CALLAWAY SAFETY
ATTN: PAT McCASLAND
3311 N. GRIMES
HOBBS, NM 88240
FAX TO: (505) 392-4547

Receiving Date: 02/19/99
Reporting Date: 02/22/99
Project Number: 21999
Project Name: JAL LANGLEY UNIT INVESTIGATION
Project Location: 2 MILES NE OF JAL, NM

Analysis Date: 02/22/99
Sampling Date: 02/19/99
Sample Type: SURFACE WATER
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/L)	
H4034-10	SW21999LP	7418	Playa Water
Quality Control		1335	
True Value QC		1315	
% Accuracy		101	
Relative Percent Difference		1.5	

METHOD: Std. Methods	4500-Cl^-B

Chemist

2/22/99
Date

H4034-2.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GP II ENERGY, INC.
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 11/13/98
Reporting Date: 11/17/98
Project Number: NOT GIVEN
Project Name: W.S.W. #2 @L.J.U.
Project Location: LEA CO. NM L.J.U.

Analysis Date: 11/13/98
Sampling Date: 11/12/98
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl (mg/L)	
H3925-1		6947	Playa Water
Quality Control		1301	
True Value QC		1319	
% Recovery		98.6	
Relative Percent Difference		0.2	
METHOD: EPA 600/4-79-020,		325.3	

Amy Hill
Chemist

11/17/98
Date

H3925-1.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GP II ENERGY, INC.
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 11/09/98
Reporting Date: 11/10/98
Project Number: NOT GIVEN
Project Name: PLAYA LAKE L.J.U.
Project Location: SEC 8-25S-37E

Analysis Date: 11/10/98
Sampling Date: 11/09/98
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl⁻ (mg/L)
H3919-1	NOT GIVEN	1084
Quality Control		1301
True Value QC		1319
% Recovery		98.6
Relative Percent Difference		0.2
METHOD: EPA 600/4-79-020,		325.3

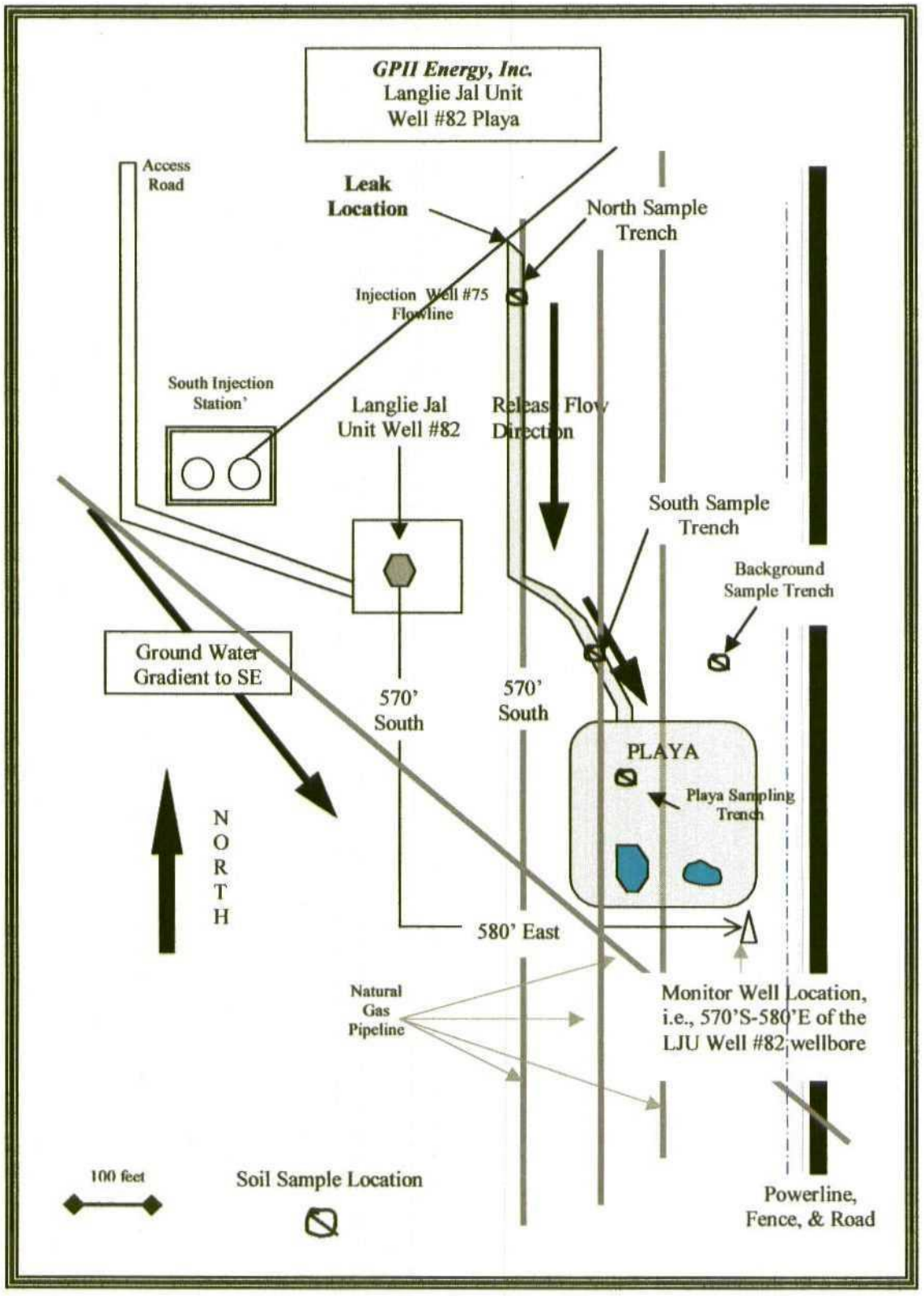
Playa Water

Amy Hill
Chemist

11/10/98
Date

H3919-1.XLS

Attachment III: Site Map


GPII Energy, Inc.
Langlie Jal Unit
Well #82 Playa
Access Road
Leak Location
North Sample Trench
Injection Well #75 Flowline
South Injection Station'
Langlie Jal Unit Well #82
Release Flow Direction
South Sample Trench
Background Sample Trench
Ground Water Gradient to SE
570' South
570' South
PLAYA
Playa Sampling Trench
NORTH
580' East
Natural Gas Pipeline
Monitor Well Location, i.e., 570'S-580'E of the LJU Well #82 wellbore
100 feet
Soil Sample Location
Powerline, Fence, & Road

Send original copy by certified return receipt request[illegible] mail to: TNRCC, MC 177, P.O. Box 13087, Austin, TX 78711-3[illegible]

ATTENTION OWNER: *Confidentiality Privilege Notice on on reverse side of Well Owner's copy (pink)*

State of Texas
WELL REPORT

Texas Water Well Drillers Advisory Council
MC 177
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER GP II ENEGRY INC. (Name) ADDRESS P.O. BOX 50682 (Street or RFD) MIDLAND (City) TX. (State) 79710 (Zip)

2) ADDRESS OF WELL: County LEA 3 MILES N. OF JAL LANG JAL UNIT PYUTE LAKE S. (Street, RFD or other) (City) (State) (Zip) GRID # _____

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [X] Monitor [ ] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC? [ ] Yes [ ] No

5)

6) WELL LOG:
Date Drilling: Started 6-18 19 99 Completed 6-18 19 99

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
4 7/8	Surface	43

7) DRILLING METHOD (Check): [ ] Driven [X] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [ ] Other _____

N

From (ft.)	To (ft.)	Description and color of formation material
0	1	TOP SOIL
1	9	CALICHE
9	18	LIMESTONE
18	30	SAND
30	40	SANDSTONE
40	41	SAND & GRAVEL
41	43	CLAY

(Use reverse side of Well Owner's copy, if necessary)

8) Borehole Completion (Check): [ ] Open Hole [ ] Straight Wall [ ] Underreamed [X] Gravel Packed [ ] Other _____
If Gravel Packed give interval ... from 30 ft. to 43 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen
2	N	PLAIN PVC	0	32	
2	N	SCREEN PVC	32	43	.02

9) CEMENTING DATA (Rule 338.44(1))
Cemented from 0 ft. to 25 ft. No. of sacks used 17
HOLE PLUG 25 ft. to 30 ft. No. of sacks used 1
Method used POURED SLURRY
Cemented by WTWWS
Distance to septic system field lines or other concentrated contamination _____ ft
Method of verification of above distance _____

10) SURFACE COMPLETION
[X] Specified Surface Slab Installed (Rule 338.44(2)(A))
[ ] Specified Steel Sleeve Installed (Rule 338.44(3)(A))
[ ] Pitless Adapter Used (Rule 338.44(3)(D))
[ ] Approved Alternative Procedure Used (Rule 338.71)

11) WATER LEVEL:
Static level _____ ft. below land surface Date _____
Artesian flow _____ gpm. Date _____

12) PACKERS: Type Depth

13) TYPE PUMP:
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder [ ] Other _____
Depth to pump bowls, cylinder, jet, etc., _____ ft.

14) WELL TESTS:
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: _____ gpm with _____ ft. drawdown after _____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [ ] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? _____ Depth of strata _____
Was a chemical analysis made? [ ] Yes [ ] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME WEST TEXAS WATER WELL SERVICE (Type or print) WELL DRILLER'S LICENSE NO. 2497W

ADDRESS 3432 W. UNIVERSITY BLVD. (Street or RFD) ODESSA (City) TX. (State) 79764 (Zip)

(Signed) Bernard Brooks (Licensed Well Driller) (Signed) _____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 05-21-96) White - TNRCC Yellow - DRILLER Pink - WELL OWNER

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

June 12, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z 357 870 135

Mr. George P. Mitchell, II
President
GP II Energy, Inc.
P.O. Box 50682
Midland, Texas 79710

Subject: Langlie Jal Unit Playa Site Assessment; Proposed Site Assessment Plan Amendment, i.e., Monitor Well Installation Metrics

Dear Mr. Mitchell:

The New Mexico Oil Conservation Division (NMOCD) is in receipt of GP II Energy, Inc.'s (GPII) letter dated June 2, 1999 requesting an amendment to the site assessment plan. NMOCD hereby approves of GPII's request subject to the following conditions:

1. GPII shall abide by all of the conditions of approval in NMOCD's letter dated May 12, 1999 and approval dated January 23, 1999. GPII must perform all of the commitments as listed in GPII's original Site Assessment Work Plan dated November 1999.

2. GPII shall submit a report of the investigations to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office by June 22, 1999. The report shall include the following:

   a. A description of all investigations, remediation and monitoring activities which have occurred including conclusions , recommendations, risk assessments and request for implementation of any future work and/or closure.

   b. A geologic/lithologic log and well completion diagram for all exploratory excavations, soil borings and/or monitor well(s).

   c. Vertical and horizontal Isopleth maps for remaining contaminants of concern which were observed during the investigations.

e. Summary tables of all soil and/or ground water quality sampling results and copies of all laboratory analytical data sheets and associated QA/QC data collected.

f. The quantity and disposition of all wastes generated.

Please be advised that NMOCD approval of this plan does not relieve GPII of liability should their investigations and/or operations fail to adequately investigate and/or remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve GPII of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,

Wayne Price

Wayne Price-Pet. Engr. Spec.
Environmental Bureau

cc: OCD Hobbs Office

P.01

TRANSACTION REPORT

JUN-12-99 SAT 01:35 PM

DATE	START	RECEIVER	TX TIME	PAGES	TYPE	NOTE	M#
JUN-12	01:34 PM	919155704748	51″	2	SEND	OK	

GP II ENERGY, INC.

Oil & Gas Exploration & Production

P.O. BOX 50682 • MIDLAND, TEXAS 79710 • PHONE 915-684-4748 • FAX 915-570-4748

June 2, 1999

Mr. Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, NM 87505

Re: Langlie Jal Unit Playa Site Assessment; Proposed Site Assessment Plan Amendment, i.e., Monitor Well Installation Metrics

Dear Mr. Price:

Per our conversation of May 24, 1999, GP II intends to drill the monitor well until we reach water or 150' maximum depth. Mr. Pat McCasland compiled the following:

GP II Energy, Inc. is in receipt of your May 12, 1999 letter granting our 60-day extension. We propose to amend the original site assessment plan to provide for the installation of a monitor well. The amendment also limits the well depth to 150' and is justified considering that perched aquifers typically remain isolated from underlying saturated systems and will reasonably provide ground water information if it does exist locally. The proposed location is a southeast location, down gradient of the "Playa", approximately 570' due South and 580' due East of the Langlie Jal Unit Well #82 wellbore. An updated site map is attached. The location southeast of the "Playa" was selected based on known subsurface ground water flow direction identified by Nicholson and Clebsch, "Ground Water Report #6, 1961". The report also states that near surface ground water occurs intermittently as perched aquifers of varying quality and in this area has been encountered at 63' below the surface.

The monitor well will be installed and the ground water (if present above 150') will be characterized as per your May 12, 1999 letter.

If you need additional information please advise. The project will commence upon your approval and we request you fax said approval to 915/570-4748 at your earliest convenience.

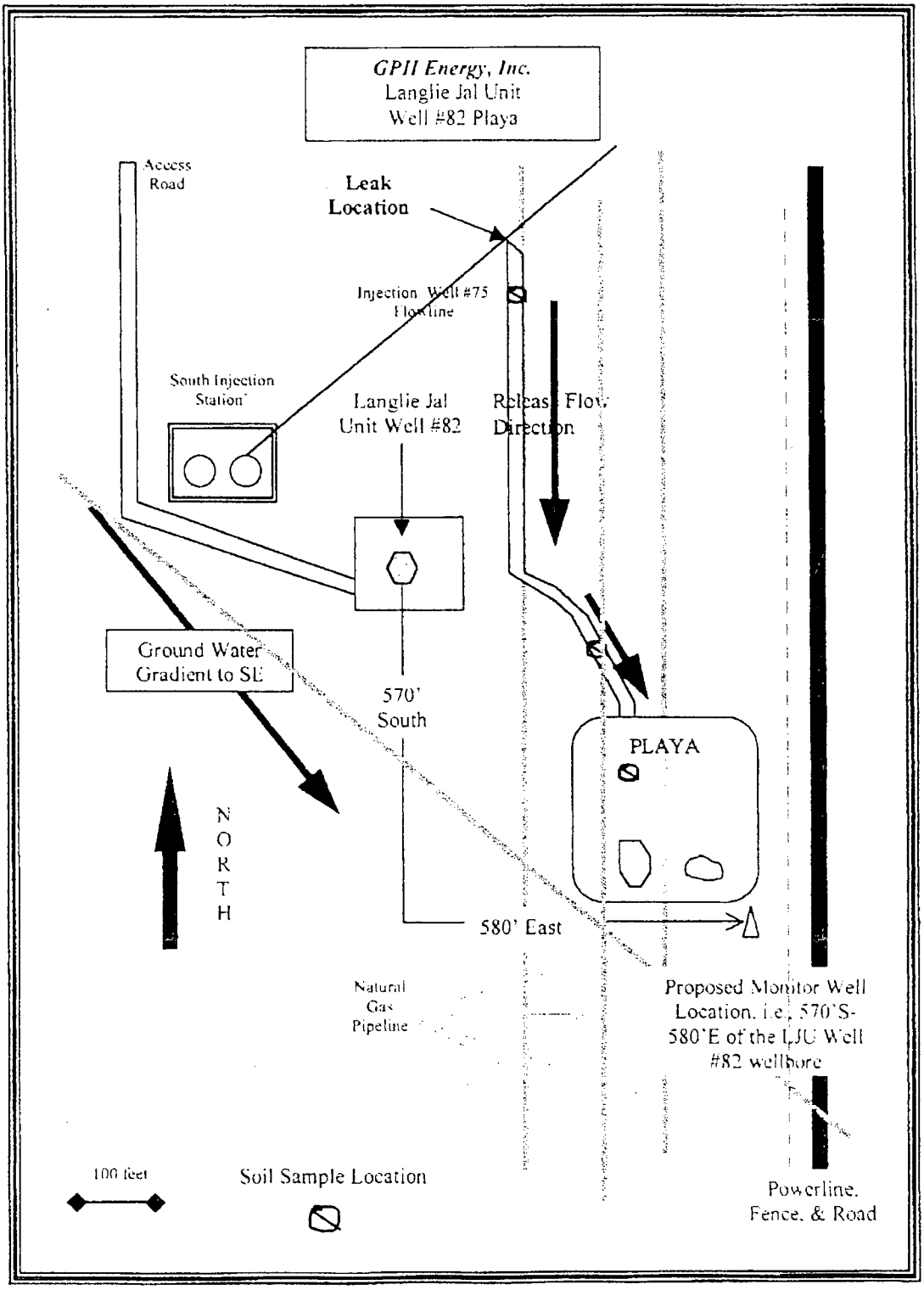
Sincerely,

Chris D. Mitchell
Field Representative

CDM:cn
Attachment

xc: George P. Mitchell
Pat McCasland

5 Site Map


GPII Energy, Inc.
Langlie Jal Unit
Well #82 Playa
Access Road
Leak Location
Injection Well #75 Flowline
South Injection Station
Langlie Jal Unit Well #82
Release Flow Direction
Ground Water Gradient to SE
570' South
PLAYA
NORTH
580' East
Natural Gas Pipeline
Proposed Monitor Well Location, i.e., 570'S-580'E of the LJU Well #82 wellbore
100 feet
Soil Sample Location
Powerline, Fence, & Road

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

May 17, 1999

Reopened Hearing date June 10th, 1999
Wayne Price
See Pg 2.

Campbell, Carr, Berge & Sheridan, P.A.
P.O. Box 2208
Santa Fe, New Mexico 87504-2208

Attention: Mr. William F. Carr

Re: Division Case No. 12112
GP II Energy, Inc.
Square Lake Unit Waterflood Project
Eddy County, New Mexico

Dear Mr. Carr:

The Division is currently in the process of reviewing the evidence presented by GP II Energy, Inc. (GP II) in support of its request to initiate a waterflood project within the Square Lake Grayburg-San Andres Pool in portions of Township 16 South, Ranges 30 and 31 East, NMPM, Eddy County, New Mexico. Initial efforts to review the evidence presented have focused on the Form C-108 (Application to Inject) for one hundred-thirty seven (137) wells proposed to be converted to injection within the Square Lake Unit. Review of the injection well data presented in tabular form (SEC III CON) as well as the well conversion diagrams (SEC III DIAG) has shown at least fifty-eight (58) instances where the tabular well data does not match the data contained on the wellbore conversion diagrams, including data elements such as well locations, perforated or open-hole injection intervals, packer setting depth, etc. In addition, there are numerous instances where necessary data is missing (i.e. cement data on casing liners).

The Division has the responsibility to permit Class II injection wells after a determination has been made that injection into these wells will not pose a threat to underground sources of drinking water and that injected fluid will remain confined to the proposed injection interval. Such a determination cannot be made when conflicting data is presented or when data necessary to make such a determination is not included in the application. In addition, the Division is not staffed so as to permit research of Division records in an attempt to reconcile the data presented. This initial review also raises serious questions regarding the accuracy of the remaining data presented in Form C-108, namely the "area of review" well data.

Based upon initial review of the evidence presented in this case, GP II is requested to file an application to re-open Case No. 12112 at such time as the applicant is prepared to appear and present a revised Form C-108 complete with all corrections and all data elements necessary to process the application.

A preliminary review of the evidence and testimony presented in this case also demonstrates that the Division will likely require the applicant to conduct extensive remedial work on injection, production and plugged and abandoned wells within the Square Lake Unit prior to commencing waterflood operations. It may be in the best interest of GP II to explore the possibility of implementing waterflood operations within the Square Lake Unit in small phases. This approach may expedite approval of the application and allow GP II to begin implementation of waterflood operations without unnecessary delays. In addition to considering the revised C-108 evidence, the Division is amenable to hearing additional evidence and testimony with regards to a phased implementation, if the applicant so desires.

In addition, a check with the Division's Hobbs District Office and Environmental Bureau has also revealed that GP II has some environmental problems associated with its Langlie Jal Unit operations. GP II should be prepared to also address this issue at the hearing of reopened Case No. 12112.

Please advise me at your earliest convenience as to the course of action GP II will take with regards to Case No. 12112.

Sincerely,

David Catanach
Hearing Examiner

Xc: Mr. Ernest Carroll
Losee, Carson, Haas & Carroll, P.A.
P.O. Box 1720
Artesia, New Mexico 88211-1720

Mr. Tim Gum, OCD-Artesia

Ms. Lori Wrotenbery, Director

Case File-12112

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

May 12, 1999

CERTIFIED MAIL
RETURN RECEIPT NO. Z 559 573 591

Mr. George P. Mitchell, II
President
GP II Energy, Inc.
P.O. Box 50682
Midland, Texas 79710

Subject: Langlie Jal Unit Playa Site Assessment; Request 90 day extension

Dear Mr. Mitchell, II:

The New Mexico Oil Conservation Division (NMOCD) is in receipt of your letter dated April 22, 1999 requesting a 90 day extension for the above captioned site. NMOCD has reviewed your file and has discovered that a 30 day extension had already been granted. Therefore your request for the 90 day extension is hereby denied. The NMOCD will grant a 60 day extension from the first extension deadline of April 22, 1999. Therefore your new deadline for the submittal of the Site Assessment Work Plan results and GP II's proposed remediation plan will be on June 22, 1999.

NMOCD acknowledges that GP II wishes to amend the original site assessment plan to include installing one monitor well in the playa lake area. This amendment is hereby approved subject to the following conditions:

1. All monitor well(s) will be constructed and completed as follows:

   a. A minimum of 15 feet of well screen will be installed with 5 feet of well screen placed above the water table and 10 feet of well screen placed below the water table.
   b. An appropriately sized gravel pack will be set in the annulus around the well screen from the bottom of the hole to 2-3 feet above the top of the well screen.
   c. A 2-3 foot bentonite plug will be placed above the gravel pack.
   d. The remainder of the hole will be grouted to the surface with cement containing 3-5% bentonite.
   e. A concrete pad and locking well cover will be placed at the surface.

f. The well will be developed after construction using EPA approved procedures.

2. GPII shall sample and test the groundwater using approved EPA methods and procedures for volatile organics BTEX(8021), Major Cations and Anions, TDS, PH and WQCC Metals.

3. GP II will notify the OCD Santa Fe office and the OCD District office at least 48 hours in advance of all scheduled activities such that the OCD has the opportunity to witness the events and split samples during OCD's normal working hours.

Please be advised that NMOCD approval of this plan does not relieve GP II of liability should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve GP II of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,

Wayne Price-Pet. Engr. Spec.
Environmental Bureau

cc: OCD Hobbs Office

May 12, 1999

To: Rand Carroll

From: Roger Anderson

Re: GPII Energy, Inc.

The OCD issued GPII a Notice of Violation on October 30, 1998 for failure to report spill per NMOCD Rule 116. Since this incident involved a discharge to a playa lake the investigation and remediation is being handled by the OCD Environmental Bureau. As of this date GP II has requested two extensions. The last request was made initially by GPII's consultant via a telephone call indicating GPII could not afford the additional expense of investigating and any remediation at this time. This extension has formally been requested in writing by GPII indicating lack of resources at this time.

After checking with the District Hobbs office it appears they are having the same problem with GPII at other sites. GP II is non-responsive to the district at this time.

Attachments- NOV letter, extension letters

Price, Wayne

From: Carroll, Rand
Sent: Tuesday, May 11, 1999 9:51 AM
To: Anderson, Roger; Price, Wayne
Subject: GP II

Please send me your comments/concerns regarding GP II. We are ready to send them a letter reopening the case and want to list all of our concerns.

GP II ENERGY, INC.

Oil & Gas Exploration & Production

P.O. BOX 50682 • MIDLAND, TEXAS 79710 • PHONE 915-684-4748 • FAX 915-570-4748

April 22, 1999

Mr. Wayne Price
New Mexico Oil Conservation Division
Environmental Bureau
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Subject: Langlie Jal Unit Playa Site Assessment; Request 90 day extension

Dear Mr. Price,

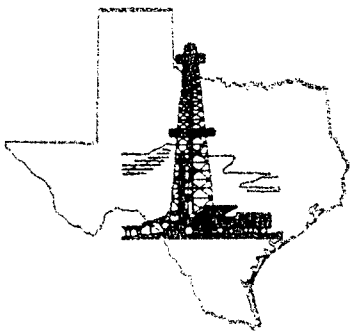
I am writing to request that the April 22, 1999 Site Investigation Report submittal deadline be extended for an additional 90 days, i.e., to July 21, 1999. Preliminary research of existing ground water information and area ground water resources has failed to provide adequate information to establish a credible depth to ground water. GP II Energy plans to drill a monitor well to characterize site geology and extent of contamination. The additional 90 days would provide sufficient time to secure resources, drill the well, and submit the report.

Thank you for your cooperation in this matter and if you need further information, please advise at your earliest convenience.

Sincerely,

George P. Mitchell, II
President

cc: Chris Williams NMOCD Hobbs



GP II ENERGY, INC.

Oil & Gas Exploration & Production

P.O. BOX 50682 • MIDLAND, TEXAS 79710 • PHONE 915-684-4748 • FAX 915-570-4748

March 16, 1999

Wayne Price
Environmental Bureau
State of New Mexico
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, NM 87505

Dear Mr. Price:

I am writing to request an extension of 30 days beyond the March 22, 1999 deadline to submit our proposed remediation plan for the clean up of the Playa Lake in Lea County, NM. We need the additional time in order to obtain ground water information.

Thank you for your cooperation in this matter and if you need further information, please advise at your earliest convenience.

Sincerely yours,

George P. Mitchell, II
President

GPM:em
cc: Chris Williams

EXTENSION GRANTED
WAYNE PRICE
3/22/99
called & left message!

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

January 23, 1999

Elaine B. McCarty
GP II Energy, Inc.
P.O. Box 50682
Midland, Texas 79710

Re: Site Assessment Work Plan
Impact of Playa Lake
Langlie Jal Unit Well #82
UL D SEC 8-Ts25S-R37e

Dear Ms. McCarty:

New Mexico Oil Conservation Division (NMOCD) is in receipt of GP II's Site Assessment Work Plan for the above referenced facility. **The plan is hereby approved**.

Please notify the OCD Hobbs office 48 hours before starting any significate activity.

Please be advised that NMOCD approval of this plan does not relieve GP II of liability should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve GP II of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Please submit results of plan along with a proposed remediation plan no later than March 22, 1999.

If you require any further information or assistance please do not hesitate to write or call me at (505-827-7155).

Sincerely Yours,

Wayne Price

Wayne Price-Environmental Bureau

cc: OCD Hobbs

file: O/envr../word../wa../gpII(1)

GP II ENERGY, INC.

Oil & Gas Exploration & Production

P.O. BOX 50682 • MIDLAND, TEXAS 79710 • PHONE 915-684-4748 • FAX 915-570-4748

November 24, 1998

NOV 25 1998

Roger Anderson
NMOCD Environmental Bureau Chief
2040 South Pacheco
Santa Fe, NM 87505

Dear Mr. Anderson:

Please find enclosed the Site Assessment Work Plan for the clean up of the Playa Lake in Lea County, NM.

If I can be of further assistance or if you require any other information that GP II Energy, Inc. can supply, please advise at your earliest convenience.

Sincerely,

Elaine B. McCarty

Elaine B. McCarty
Production Analyst

Encls.

cc: Chris Williams
District I Supervisor

GPII Energy, Inc.

Site Assessment Work Plan

for the

Playa

Located east of the

Langlie Jal Unit Well #82

N.M.P.M.
S8 T25S R37E

Lea County New Mexico

November 1998

GPII Energy, Inc.:
Site Assessment Work Plan

for the

Playa

Located east of the

Langlie Jal Unit Well #82

N.M.P.M.
S8 T25S R37E

Lea County New Mexico

TABLE OF CONTENTS

Langlie Jal Unit Well #82 Playa Assessment Work Plan

The objective of this plan is to gather sufficient site contamination information to be used in making viable environmental management decisions regarding remediation protocols and risk assessment.

1 Events Description

On October 17, 1998 at about 10:30 AM, an injection flowline ruptured spilling approximately 150 barrels of injection fluid. The injection flowline was operating at ~700 psia and was shut down upon discovery. The leak overspray impacted surface vegetation in the area around the leak southward for 50'. Mesquite in this area were defoliated, however, grasses were not visibly affected. As fluid collected, it began to drain southward down a pipeline right-of-way approximately 400' and then southeastwardly toward the Playa. Personnel of GPII Energy, Inc. constructed dikes to contain the flow and minimized the amount reaching the Playa to <20 gallons. Samples of the Playa water were obtained for chloride analysis.

At 12:55 PM the spill was verbally reported to personnel of the New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division, District I Field Office located in Hobbs, New Mexico. Please refer to the attached form C-141 completed and submitted by Mr. Chris Mitchell on October 21, 1998. The rupture was repaired and the flowline returned to service.

Shortly after the release, a storm event occurred which afforded further subsurface infiltration.

Previously, on February 6, 1998, during a power outage, the South Injection Station released ~200 barrels of injection fluid which reached the Playa. The playa water was disposed of in an NMOCD approved facility and later, after the surface had desiccated, visibly contaminated soil was likewise removed and disposed of. The associated NMOCD form C-141 is attached.

2 Site Description

The legal description of the playa is: N.M.P.M., S 8 T25S R37E, 400' East of the GPII Langlie Jal Unit Well #82, Lea County New Mexico and is approximately 1.5 miles NE of Jal, New Mexico, i.e., 1.1 miles due north of NM128 and .8 miles due east of NM18. Please refer to Map.

Photographs of the point of release, the drainage flow path, injection equipment, and the Playa are provided as an attachment to this plan.

2.1 Land Owner

The Woolworth Estate/Jal Public Library Trust, of Jal, New Mexico is the surface owner.

2.2 Playa Run-in Sources

The well location and bermed tank battery and injection station are located on higher ground to the NW of the surface depression defined as a "Playa." Two natural gas transmission lines traverse the site, one runs north/south through the center of the Playa and the other, also running north/south, is located ~150' west of the Playa edge. The only other line observed within this drainage area occurs 600' north of the Playa and is a secondary oil recovery system injection flowline. This line was the source of the most recent release to affect the Playa. During storm events, this Playa receives area run-off from all radians within a .25 mile radius.

2.3 Primary Usage's

Primary use of the land is for grazing livestock and local access roads to oil and gas production equipment.

2.4 Ecology

The area is host to the desert cottontail rabbit (Sylivagus audiboni), Blacktailed Jackrabbit (Lepus californicus), Coyote (Canas latrans), and many small rodents typical of the upper Chihuahuan Desert. Desert grasses cover the area with interspersions of mesquite. A grove of Soapberry trees and a mature Hackberry tree are located on the eastern edge of the Playa. Typical prairie grasses cover the non-inundated portions of the basin and appear to be vigorous. Run-in from significant storm events accumulates in the south central portion of the Playa forming two small ponds.

2.5 Geo-Hydrology

This area is capped with caliche and will be further defined by field investigation. The Playa surface is composed of a clay-sand which forms a resistive layer capable of holding water. The distance from the surface to the top of the uppermost aquifer or saturated zone will be determined by field investigation and/or data review. Information provided by the New Mexico State Engineers Office indicates that groundwater occurs intermittently 50-80 feet below the surface. The background ground water chloride concentration of the upper most water-bearing zone will be established by sampling area wells if completed in this zone and can be judged to be representative. Analysis of the Playa pond water on 11-9-98 reported the chloride at 1084 mg/L.

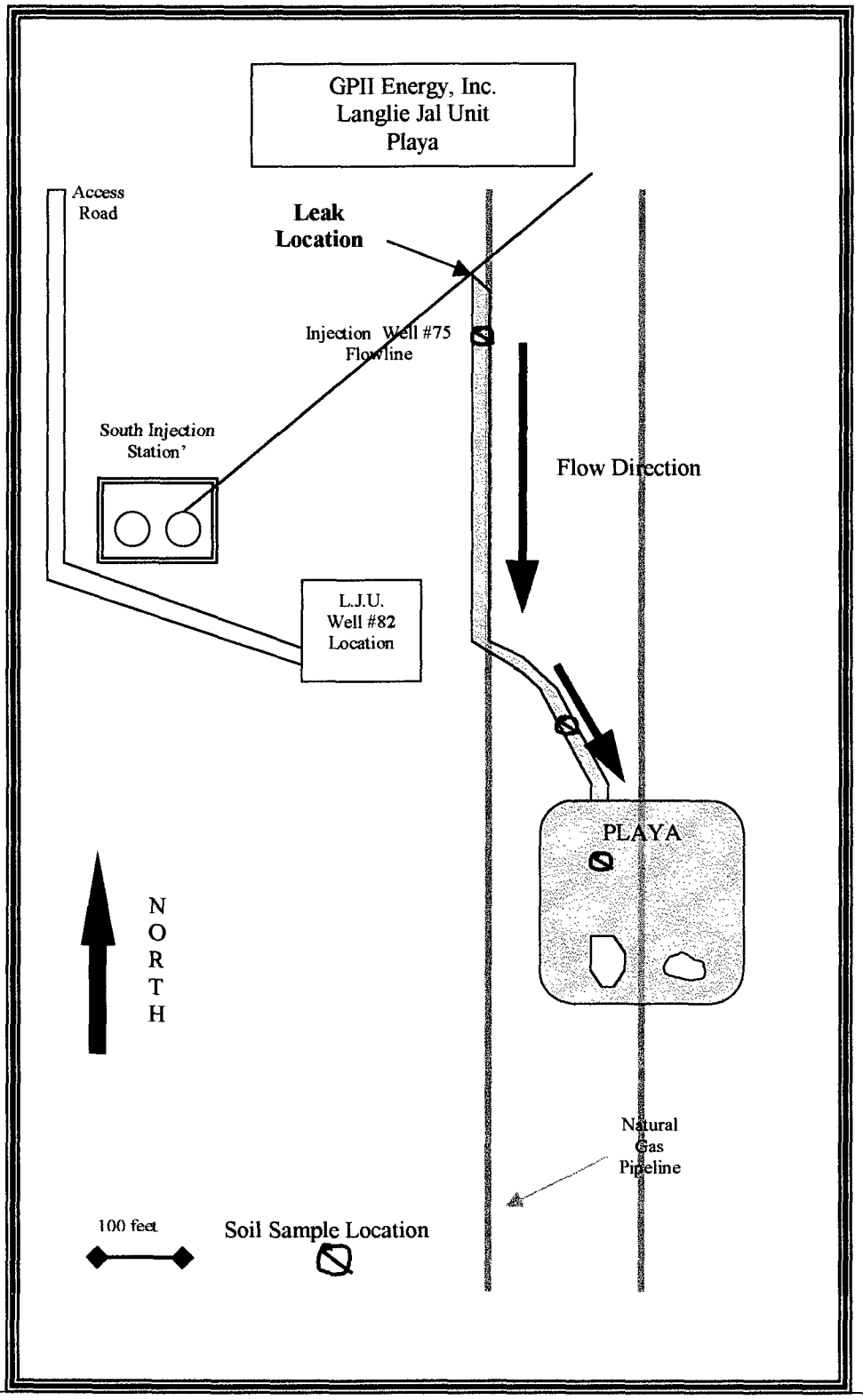
3 Source Term Volume Estimate

Total release volume was ~150 barrels. The Playa pond received <20 gallons.

4 Source Term (Injection Fluid) Chemical Characteristics

Cardinal Laboratories in Hobbs, New Mexico analyzed a sample of the injection fluid on 11-13-98 with the Chloride concentration reported at 6947 mg/L. The report is attached. Process knowledge indicates that this is the only parameter of concern, i.e., the South Injection Station injects water from the W.S.W. #2 L.J.U. source well located to the north and does not co-mingle with produced water.

5 Site Map


GPII Energy, Inc.
Langlie Jal Unit
Playa
Access
Road
Leak
Location
Injection Well #75
Flowline
South Injection
Station'
Flow Direction
L.J.U.
Well #82
Location
PLAYA
NORTH
Natural
Gas
Pipeline
100 feet
Soil Sample Location

6 General Site Characteristics

These parameters will be evaluated and used to determine potential domestic and environmental risks, need for remedial action, and level of cleanup required at the site.

6.1 Depth to Ground Water

This vertical distance begins at the lowermost contaminants and extends to the seasonal high water elevation of the ground water. This parameter will be established based on existing ground water level data **or** by drilling and characterizing a strategically located borehole.

6.2 Well Protection Area

This is the horizontal distance to the nearest water source. Preliminary investigation indicates that a domestic use water well 450 feet deep is located ~1 mile southeast of the Playa. The Playa is down gradient of the domestic well.

6.3 Distance to Nearest Surface Water Body

This characteristic of the site is not applicable.

7 Soil/Waste Characteristics

This will be evaluated to determine vertical extent of chloride contamination. Based on knowledge of process, Benzene, BTEX, and Total Petroleum Hydrocarbon (TPH) are not potential contaminants and will not be considered. Soils at three locations along the spill drainage path will be evaluated at varying depths to determine extent of contamination

8 Ground Water Quality

If the soil exhibits contamination levels that would likely contaminate the ground water (concentration is yet to be determined), it is possible that a series of monitor wells will be developed for ground water characterization purposes, e.g., up gradient (background), spill/playa central, and down gradient.

8.1 Ground Water Thresholds

Ground water requires remediation if it exhibits concentrations of dissolved phase VOC or other dissolved constituents in excess of the natural background water quality. Section 3103 of the New Mexico Water Quality Control Commission (WQCC) ground water standards will apply if the background concentrations are nominal and are as follows.

Parameter	mg/L or ppm
Benzene	0.01
Toluene	0.75
Ethylbenzene	0.75
Xylenes (Total)	0.62
Chloride (Cl^-)	250.0
Total Dissolved Solids (TDS)	1000.0

9 Site Investigation

This Site Assessment Work Plan will determine the depth to ground water and the vertical extent of chloride contamination along the flow path of the release and in the Playa.

9.1 Soil Contamination Sampling and Analysis

Soil samples will be taken at 24" vertical intervals, down to 72", along the mid-line and along the lateral perimeters of the spill flow path at the following points.

- 10 feet from the injection flowline,
- 100 feet north of the Playa
- North section of the Playa at run-in delta

Sampling will utilize a backhoe to excavate trenches the width of the flow path. Mid-line samples will be analyzed first and the data reviewed to determine which of the other samples need to be analyzed.

An area 10 feet wide and 20 feet long, oriented immediately down gradient of the point of release, shows visible precipitate (whitened and slightly crusted) on the soil surface. Refer to the Site Map.

9.2 Depth to Ground Water

An inventory of water wells located in adjacent sections will be obtained. If adequately substantiated, the depth to ground water will be determined based on this information. Conversely, if convincing data is not available, a borehole will be drilled near the playa and logged and strategically sampled.

9.3 Ground Water Monitoring

Ground water remediation is not indicated at this time nor is installation of monitoring wells.

10 Quality Assurance / Quality Control

To ensure that the information used in making the environmental management decisions is reliable, the following protocols will be followed.

10.1 Field Sampling and Sample Handling

All samples will be placed in certifiably clean containers obtained from the contracting analytical laboratory. All samples will be properly labeled with the following information:

- Sample date
- Sample time
- Matrix
- Unique Sample Identification Number
- Sampler
- Parameter
- Preservative added
- Preservation method

10.2 Sample QA/QC

A duplicate sample will be analyzed every ten samples for all field and laboratory tests. Acceptable relative percent difference will be +/- 20%.

10.3 Field Instruments

All analytical instruments used in the field will be calibrated prior to each sampling day activities and verified every two hours of running time.

10.4 Analytical Laboratory QA/QC

Quality control data will be submitted by the laboratory to ensure reliability of the laboratory data.

11 Plan Implementation

This plan will be implemented immediately upon approval by the NMOCD. Results of the Assessment will be provided to the NMOCD to support proposed remediation or risk assessment efforts.

ATTACHMENT

SITE PHOTOGRAPHS

Injection Flowline Point of Release
(South Injection Station in Background)

Injection Flowline Release Point after Repair

Playa (looking north)

Playa and run-in Delta(looking south)

Center: Existing Pipeline Right-of-Way
Foreground Right: Flowpath 15' down gradient from Release Point

ATTACHMENT

ANALYTICAL RESULTS
PRELIMINARY SAMPLING

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
GP II ENERGY, INC.
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 11/13/98
Reporting Date: 11/17/98
Project Number: NOT GIVEN
Project Name: W.S.W. #2 @L.J.U.
Project Location: LEA CO. NM L.J.U.

Analysis Date: 11/13/98
Sampling Date: 11/12/98
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/L)
H3925-1		6947
Quality Control		1301
True Value QC		1319
% Recovery		98.6
Relative Percent Difference		0.2
METHOD: EPA 600/4-79-020,		325.3

Amy Hill
Chemist

11/17/98
Date

H3925-1.XLS

CARDINAL LABORATORIES

PHONE (915) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603
PHONE (505) 393-2326 · 101 E. MARLAND · HOBBS, NM 88240

NOV 16

ANALYTICAL RESULTS FOR
GP II ENERGY, INC.
ATTN: CHRIS MITCHELL
P.O. BOX 50682
MIDLAND, TX 79710
FAX TO: (915) 570-4748

Receiving Date: 11/09/98
Reporting Date: 11/10/98
Project Number: NOT GIVEN
Project Name: PLAYA LAKE L.J.U.
Project Location: SEC 8-25S-37E

Analysis Date: 11/10/98
Sampling Date: 11/09/98
Sample Type: GROUNDWATER
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl^- (mg/L)
H3919-1	NOT GIVEN	1084
Quality Control		1301
True Value QC		1319
% Recovery		98.6
Relative Percent Difference		0.2

METHOD: EPA 600/4-79-020,	325.3

Amy Hill
Chemist

11/10/98
Date

H3919-1.XLS

ATTACHMENT

NMOCD FORMS C-141

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
DISTRICT I Hobbs
PO BOX 1980
Hobbs, NM 88241-1981
(505) 393-6161

Jennifer A. Salisbury
CABINET SECRETARY

October 29, 1998

Chris D. Mitchell
GP II Energy, Inc.
P.O. Box 50682
Midland. Tx 79710

Re: Submitted C-141's for Recent Leaks & Spills at the GPII North and South Injection Stations; Ul G Sec 5-Ts25s-R37e (North Station) and UL I Sec 8-Ts25s-R37e (South).

Subject: NMOCD letter Price-Mitchell dated August 1, 1998. (copy attached)

Dear Mr. Mitchell;

The New Mexico Oil Conservation Division (NMOCD) is in receipt of the waste manifest as requested for the clean-up at North Injection Station. The NMOCD will file the appropriate C-141's as final reports and does not require any further action or information at this time.

NMOCD is in receipt of the letter dated September 22, 1998 which included Chloride analysis of the small playa lake adjacent to the south injection station. Please note the analysis indicates a result of 2000 ppm which exceeds the New Mexico ground water standards of 250 ppm. Therefore the NMOCD District I office hereby orders GPII to notify and submit a work plan to address how GPII will clean-up the contamination found in the playa lake. Please submit your plan to the attention of:

Mr. Roger Anderson
NMOCD Environmental Bureau Chief
2040 South Pacheco
Santa Fe, NM 87505
tele: 505-827-7152

Please submit this plan by November 30, 1998 and copy the OCD District I office on all correspondence.

Sincerely;

CW By Williams

Chris Williams-District I Supervisor

CW/wp: File: CT/wpdocs/gpII

cc: Roger Anderson-Environmental Bureau Chief
Hobbs spill & environmental file

attachments-1

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-14
Originated 2/13/9

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action
OPERATOR

☐ Initial Report ☒ Final Report

Name	Contact
GP II Energy, Inc.	Elaine B. McCarty
Address	**Telephone No.**
P. O. Box 50682, Midland, TX 79710	915/684-4748 EXT 5
Facility Name	**Facility Type**
Langlie Jal Unit Well #75	Water Injection Well

Surface Owner	Mineral Owner	Lease No.
Federal		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	9	25S	37E	660	North	660	West	Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Injection water	Appx. 150 bbls.	Appx. 150 bbls.
Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
Injection flow line	10-17-98/ 10:30 AM	10-17-98/10:30 AM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?**	Karen/OCD Emergency Beeper
By Whom?	**Date and Hour**	
Chris Mitchell	10-17-98/12:55 PM	
Was a Watercourse Reached? ☒ Yes ☐ No	**If YES, Volume Impacting the Watercourse.**	

If a Watercourse was Impacted, Describe Fully. (Attach Additional Sheets If Necessary)

Appx. 10-15 gallons of water ran into the edge of Playa Lake. Chris Mitchell and Billy Wright were on site and caught a sample of water before it soaked into ground. Water is being analyzed.

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)

Hole in flow line. Shut off valves and wells. Had leak repaired.

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)

Water flowed south about 100 yards from flow line. Water soaked into ground.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: C. D. Mitchell

Printed Name: Chris D. Mitchell

Title: Field Representative

Date: 10-21-98 Phone: 915/634-1750

OIL CONSERVATION DIVISION

Approved by District Supervisor:

Approval Date: Expiration Date:

Conditions of Approval: Attached ☐

CT

(505) 393-6161
88241-1980
(505) 748-1283
-0210
- (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name	Contact
GP II Energy, Inc.	Elaine B. McCarty
Address	**Telephone No.**
P. O. Box 50682, Midland, TX. 79710	(915) 684-4748 EXT 5
Facility Name	**Facility Type**
Langlie Jal Unit South Injection Plant	Water Injection Plant

Surface Owner	Mineral Owner	Lease No.
Jal Public Library Trust		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	8	25S	37E					Lea

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Salt Water	Calc. by recovery 200 bbl.	200 bbl.
Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
Water Injection Plant	2-6-98 3:00 AM	2-6-98 9AM
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	**If YES, To Whom?**	
By Whom?	**Date and Hour**	
Was a Watercourse Reached? ☐ Yes ☒ No	**If YES, Volume Impacting the Watercourse.**	

If a Watercourse was Impacted, Describe Fully. (Attach Additional Sheets If Necessary)

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary)

Power outage @ South Injection. Water supply well continued to pump water. Electrical devise installed to cut off Water Supply Well when injection plant goes down.

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)

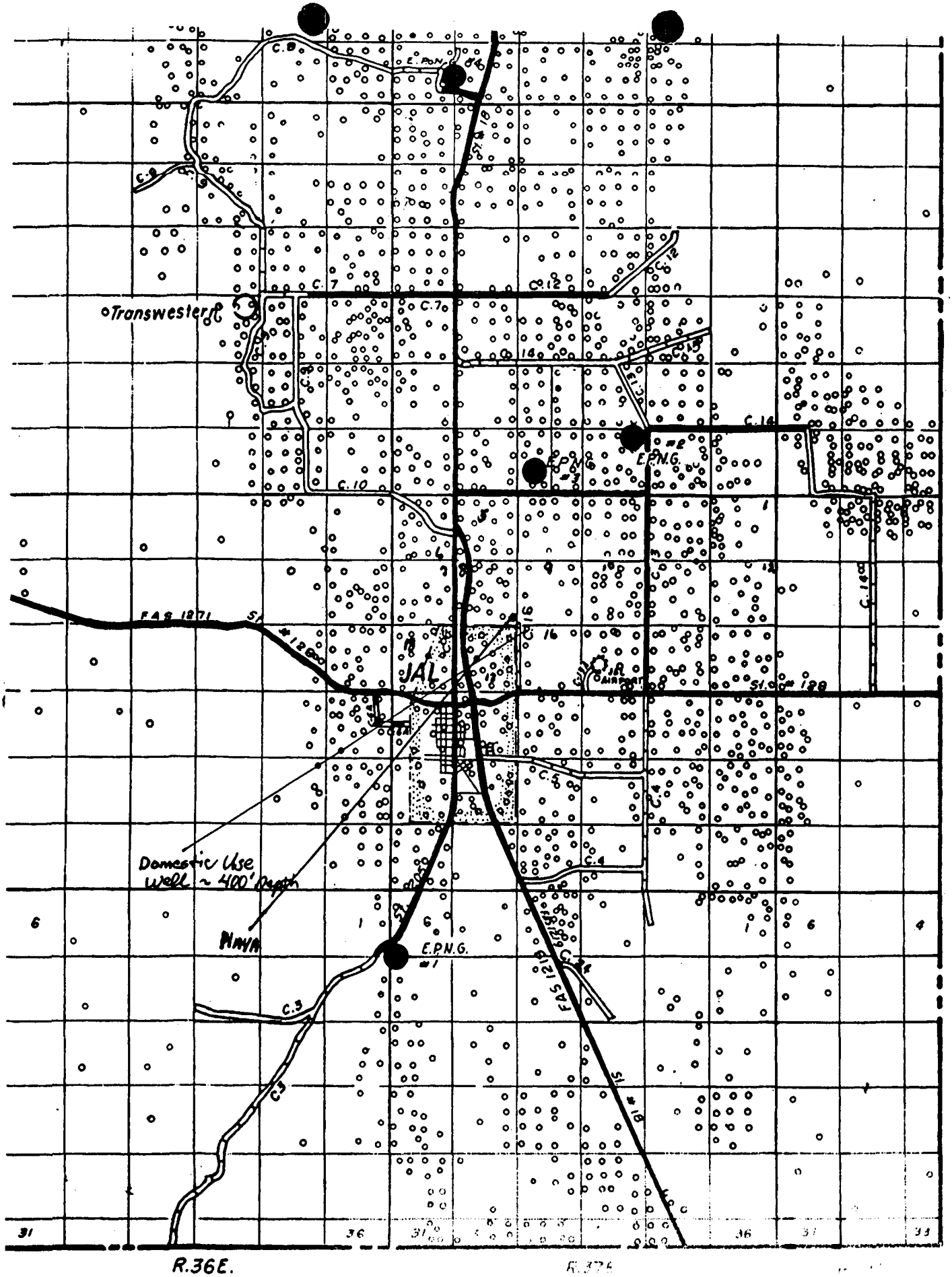
Salt water ran into a Playa Lake. Salt water was removed by vacuum truck.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

X Signature: Chris D. Mitchell	**OIL CONSERVATION DIVISION**
Printed Name: Chris D. Mitchell	Approved by District Supervisor: WAYNE PRICE - ENVIR ENGR
Title: Field Representative	Approval Date: 08/01/98 Expiration Date:
Date: 2-12-98 Phone: (915) 634-1750	Conditions of Approval: LETTER 08/01/98 Attached ☐

ATTACHMENT

Location Map


T. 24 S.
T. 25 S.
T. 26 S.
R. 36 E.
Transwestern
E.P.N.G. #2
E.P.N.G. #3
E.P.N.G. #1
JAL
JR AIRPORT
FAS 1271
St. #128
St. #18
FAS 1219
Domestic Use Well ~ 400' Depth
NAVA
C.3
C.4
C.7
C.10
C.12
C.14
C.16
31
36
6
1
4

GP II ENERGY, INC.

Oil & Gas Exploration & Production

P.O. BOX 50682 • MIDLAND, TEXAS 79710 • PHONE 915-684-4748 • FAX 915-570-4748

November 6, 1998

NOV - 9

Roger Anderson
NMOCD Environmental Bureau
2040 S. Pacheco
Santa Fe, NM 87505

Re: Failure to Report Spill
Langlie Jal Unit Well #75
UL D, Sec. 9, T25S, R37E

Dear Mr. Anderson:

In accordance with NMOCD Rule 116 this is to inform you that the spill at the above referenced location which occurred on October 17, 1998 released approximately 10 to 15 gallons of water into a Playa Lake. This release was witnessed by me and Billy Wright, pumpers for GP II Energy, Inc.. Enclosed is the C-141 submitted for this spill.

Sincerely,

Chris D. Mitchell
Contract Pumper

CDM:em

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-14
Originated 2/13/9

Submit 2 copies t
Appropriate Distric
Office in accordanc
with Rule 116 or
back side of form

Release Notification and Corrective Action
OPERATOR

☐ Initial Report ☒ Final Report

Name	Contact
GP II Energy, Inc.	Elaine B. McCarty
Address	**Telephone No.**
P. O. Box 50682, Midland, TX 79710	915/684-4748 EXT 5
Facility Name	**Facility Type**
Langlie Jal Unit Well #75	Water Injection Well

Surface Owner	Mineral Owner	Lease No.
Federal		

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
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Source of Release	**Date and Hour of Occurrence**	**Date and Hour of Discovery**
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Was Immediate Nouce Given? ☒ Yes ☐ No ☐ Not Required	**If YES, To Whom?** Karen/OCD Emergency Beeper	
By Whom? Chris Mitchell	**Date and Hour** 10-17-98/12:55 PM	
Was a Watercourse Reached? ☒ Yes ☐ No	**If YES, Volume Impacting the Watercourse.**	

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Signature: Chris D. Mitchell	**OIL CONSERVATION DIVISION**
Printed Name: Chris D. Mitchell	Approved by District Supervisor:
Title: Field Representative	Approval Date: / Expiration Date:
Date: 10-21-98 Phone: 915/634-1750	Conditions of Approval: / Attached ☐

CT