AP - 062

GENERAL CORRESPONDENCE

YEAR(S):

2005 - 2007

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266-5004 ▲ Fax: 505.266-0745

August 2, 2007

Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Via E-mail

RE: Samson Livestock "30" Reserve Pit, T21S, R35E, Section 30, Unit P;
NMOCD Case # Unassigned

Dear Mr. Von Gonten,

The purpose of this letter is to:

1. Update NMOCD regarding recent site work,
2. Update NMOCD regarding forthcoming work scheduled to begin August 7,
3. Note that we submitted a proposed Public Notice for this site on December 18, 2006.

Activities, Findings and Conclusions April-June, 2007

A. Two newly-installed monitor well clusters suggest that the extent of the ground water impact at the site extends beyond the boundaries of the former reserve pit to the southeast, which is the regional and local direction of ground water flow (See attached Plate 1 and Table 1). The lower salinity of the ground water at MW-2s and MW-2d permit a conclusion that the lateral extent of impact is limited. We hypothesize that the down gradient (southeast) extent of impact is also limited.

B. The difference in water densities at MW-1, MW-2 and MW-3 causes the hydraulic gradient from on-site wells as calculated using depth to water measurements to show a ground water flow direction slightly south of and greater than the regional ground water flow direction. We conclude that accurate measurement of the on-site hydraulic gradient requires the use of transducers.

C. The lower portion of the local aquifer is dominated by fine-grained, flowing sands. Maximum pumping rates at MW-1d and MW-3d are less than 3 gallons per minute whereas the pumping rates of the wells completed in the shallow portion of the aquifer can produce a higher discharge. We conclude that either the lower portion of the local aquifer has a relatively low hydraulic conductivity or the deeper wells are not developed sufficiently.

All Findings and Conclusions from January-April, 2007 Remain Valid

In our May report, we presented the following findings/conclusions. These conclusions remain valid and are updated based upon the new data.

D. We continue to pump and dispose high TDS water from the lower screen of MW-1. Table 1 provides the water quality and quantity monitoring data associated with this source-removal pumping effort.

E. The monitoring data shows that TDS concentrations have not declined in response to pumping. We conclude that the mass of chloride in ground water is too large for the 1-2 GPM pumping program to materially restore ground water quality to WQCC Standards within a reasonable time.

F. The potentiometric surface in the region is relatively flat and data from nearby wells confirm the flat hydraulic gradient (Table 1 and Plate 1).

Drilling Program for August, 2007

We propose to:

I. Drill two additional monitoring well clusters. Plate 1 shows the proposed locations for these two well clusters.
   a. MW-4 should be sufficient to define the down gradient extent of ground water impairment without interfering with the heavy truck traffic which enters the site south of MW-3
   b. MW-5 should be sufficiently cross-gradient to lie outside impaired ground water and define the lateral extent of the impact
   c. We are prepared to re-locate these wells if field analyses of ground water (from the hollow stem) suggest that the extent of impact cannot be defined by these proposed locations.

II. We will use a transducer to measure potentiometric levels in all on-site wells

III. Accurately survey the top of casing for the newly-installed wells.

IV. Spend sufficient time and effort in well development of any recovery wells to try to avoid water production problems that could be associated with well inefficiency.

We would also appreciate NMOCD comments on the proposed public notice associated with the Stage 1&2 Abatement Plan.

If you should have any questions regarding this communication, please contact, Scott Rose of Samson, Dale Littlejohn or me.

Sincerely,
R.T. Hicks Consultants, Ltd.

Randall Hicks
Principal

Attachments: Plate 1, Table 1

Copy: Hobbs NMOCD office;
Scott Rose, Samson Resources
Merchants Livestock Company

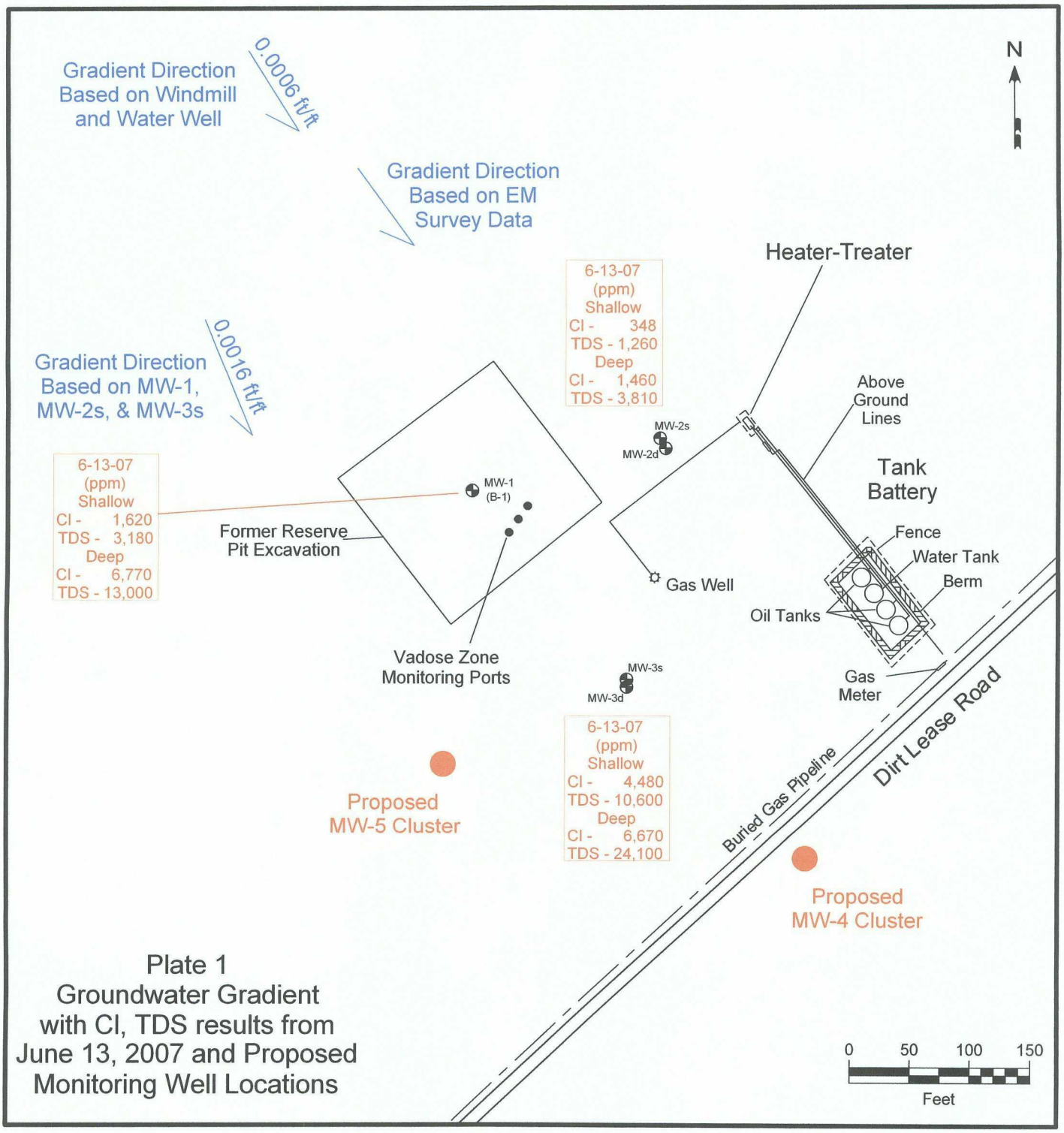


Plate 1
Groundwater Gradient with Cl, TDS results from June 13, 2007 and Proposed Monitoring Well Locations

Table 1
Laboratory Results Summary - Groundwater Samples

Sample Date / Location	DTW (csg)	Groundwater Elevation	Cum. Recv. Vol (gal)	Field Cond.	Sample Depth	Chloride (mg/L)	TDS (mg/L)
TMW-1 Casing Elevation=		**3607.11**					
9/19/05	No Data	--	--	--	Shallow	**3,999**	--
3/30/06	31.65	3575.46	30	7.49	Shallow	**2,240**	**4,520**
5/10/06	31.74	3575.37	450	7.51	Shallow	**2,580**	**3,900**
6/7/06	31.86	3575.25	830	5.93	Shallow	**2,150**	**4,080**
6/27/06	31.83	3575.28	1,230	7.70	Shallow	**2,520**	**4,160**
8/22/06	31.99	3575.12	6,830	5.52	Shallow	**1,930**	**3,720**
					Deep	**1,880**	**3,570**
MW-1 Casing Elev.=		**3616.08**					
11/6/06	41.28	3574.80	765	11.00	Deep	**5,520**	**9,240**
11/30/06	41.32	3574.76	837	6.03	Shallow	**1,030**	**2,280**
				11.19	Deep	**4,390**	**5,870**
12/12/06	43.03	3573.05	13,209	12.01	Deep	**5,210**	**9,600**
1/9/07	43.02	3573.06	42,609	4.80	Shallow	**1,870**	**2,940**
				12.25	Deep	**5,840**	**8,670**
2/20/07	43.12	3572.96	87,609	5.46	Shallow	**2,130**	**3,120**
				12.92	Deep	**6,690**	**7,680**
3/20/07	43.37	3572.71	121,881	4.94	Shallow	**2,110**	**3,930**
				11.99	Deep	**7,820**	**9,030**
4/17/07	43.44	3572.64	154,137	5.54	Shallow	**2,050**	**3,510**
				13.07	Deep	**6,350**	**11,400**
5/21/07	41.60	3574.48	194,529	3.91	Shallow	**1,400**	**2,490**
				11.88	Deep	**6,360**	**10,400**
6/13/07	41.65	3574.43	218,289	5.68	Shallow	**1,620**	**3,180**
				15.89	Deep	**6,770**	**13,000**
7/18/07	41.64	3574.44	253,929	--	--	--	--
MW-2s Casing Elev.=		**3616.26**					
6/13/07	41.83	3574.43	113	1.27	Shallow	**348**	**1,260**
7/18/07	41.83	3574.43	--	--	--	--	--
MW-2d Casing Elev.=		**3615.92**					
6/13/07	41.44	3574.48	320	4.59	Deep	**1,460**	**3,810**
7/18/07	41.46	3574.46	--	--	--	--	--
MW-3s Casing Elev.=		**3616.80**					
6/13/07	42.57	3574.23	148	8.77	Shallow	**4,480**	**10,600**
7/18/07	42.58	3574.22	--	--	--	--	--
MW-3d Casing Elev.=		**3616.70**					
6/13/07	42.55	3574.15	97	16.65	Deep	**6,670**	**24,100**
7/18/07	42.53	3574.17	--	--	--	--	--
N. Windmill Csg. Elev.=		**3609.13**					
3/30/06	--	--	NA	--	--	**33.6**	**644**
6/27/06	34.25	3574.88	--	--	--	--	--
6/13/07	33.65	3575.48	NA	0.89	Unkn	**62.8**	**500**
Water Well Csg. Elev.=		**3615.58**					
6/27/06	40.40	3575.18	--	--	--	--	--
6/13/07	40.73	3574.85	--	--	--	--	--
NMWQCC Standards						**250**	**1,000**

AP062

R. T. HICKS CONSULTANTS, LTD.

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

May 23, 2007

RECEIVED

MAY 29 2007

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505 .

Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Via E-mail

RE: Samson Livestock "30" Reserve Pit, T21S, R35E, Section 30, Unit P; NMOCD Case # Unassigned

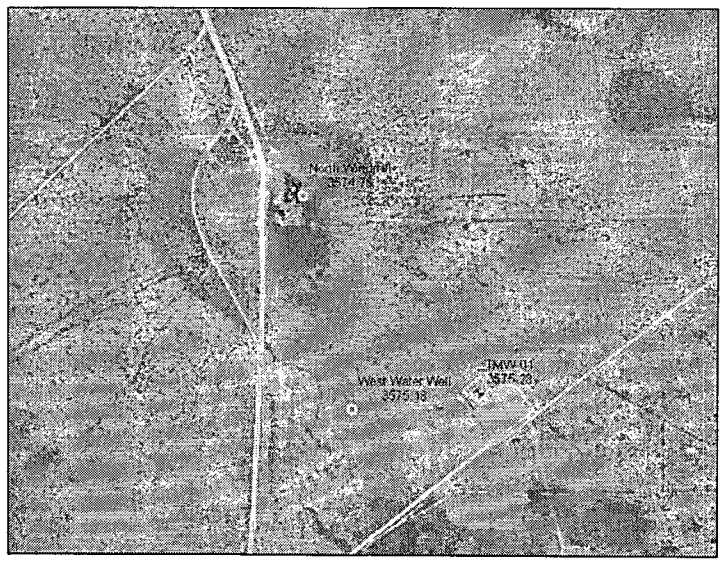
Dear Mr. von Gonten,

The purpose of this letter is to:

1. Update NMOCD regarding recent site work,
2. Update NMOCD regarding forthcoming work,
3. Reiterate our request for NMOCD approval for the discharge to drilling pits of a mixture of:
   a. recovered reserve pit leachate plus ground water (from the recovery well) and
   b. produced water from the Livestock gas well.
4. Note that we submitted a proposed Public Notice for this site on December 18, 2006.

Activities, Findings and Conclusions January-April, 2007

A. We have continued to pump and dispose high TDS water from MW-1. Table 1 provides the water quality and quantity monitoring data associated with this source-removal pumping effort.



B. The monitoring data shows that TDS concentrations have not declined in response to pumping. We conclude that the mass of chloride in ground water is too large for the 1-2 GPM pumping program to materially restore ground water quality to WQCC Standards within a reasonable time.

C. The potentiometric surface in the region is relatively flat (Plate 1) and data from nearby wells confirm the flat hydraulic gradient (Table 1 and Figure 1).

D. As outlined below, we conclude that two additional monitoring wells will provide additional site characterization as well as potential locations for source removal.
E. Plate 2 shows a relationship between field conductance data and laboratory results for TDS and chloride.

Drilling Program for May 30, 2007

Our request (December 18, 2006) for a minor modification to the Stage 1 & 2 Abatement Plan provided a commitment to submit an expanded characterization program. The field activities identified in this letter are a principal component of this expanded characterization program. We propose to:

I. Drill two monitoring/recovery wells. Plate 3 shows the proposed locations for these two wells. The exact locations will depend upon site logistics such as expected truck traffic flow.
II. Conduct the following investigations during the planned field program beginning May 30 at the MW-2 location:
    a. Collect a representative sample and measure specific conductance of ground water in the upper 10 feet of the aquifer through the hollow-stem auger,
    b. Measure the depth to the red bed,
    c. Collect a representative sample of the lower 5-feet of the aquifer (through the auger) and measure specific conductance.
    d. Compare the measured specific conductance with samples drawn from the lower screen of the recovery well, the upper screen of the recovery well, the nearby windmill and a 1,000 mg/L TDS standard from the laboratory.
    e. Follow the well completion protocol outlined in Appendix A.
III. After completion of this first well,
    a. measure water levels in MW-1 and MW-2,
    b. cease recovery pumping, and
    c. measure the hydraulic response to cessation of pumping in both wells.
IV. During the planned field program of May 30 at the MW-3 location, repeat the process outlined above for MW-2.
V. Accurately survey the top of casing for each of the 3 on-site wells and determine the elevation of ground water on site.
VI. If all site data allow the on-site geologist to conclude that a fourth well is necessary as a compliance monitoring point (at the down gradient edge of the lease) drill this compliance monitoring well during the field program.
VII. Spend sufficient time and effort in well development of any recovery wells to try to avoid water production problems that could be associated with well inefficiency.
VIII. If brine is present in the lower aquifer at MW-2, begin pumping slowly and increase pumping rate over several days until specific conductance begins to decrease (possibly due to vertical mixing) then decrease the pumping rate to maximize the removal of the brine mass.

If recovery pumping of MW-2 and/or MW-3 is necessary, we would appreciate working with NMOCD to identify appropriate methods and protocols to permit use of recovered water as drilling fluid make-up water or for dust suppression and road maintenance. We would also appreciate NMOCD comments on the proposed public notice associated with the Stage 1&2 Abatement Plan. If you should have any questions regarding this communication, please contact, Scott Rose of Samson, Dale Littlejohn or me.

Sincerely,
R.T. Hicks Consultants, Ltd.

Randall Hicks
Principal

Copy: Hobbs NMOCD office;
Scott Rose, Samson Resources
Merchants Livestock Company

Appendix A Livestock Well Completion Options

Option 1:

		Upper Aquifer	Lower Aquifer
Field Conductivities:		<4.0	>11.0
Completions:		Upper Aquifer	Lower Aquifer
	Two wells	2" casing (35 to 50 ft)	4" casing (5-foot at aquifer base)

Justification: Need to focus recovery of brine from the deep zone and prevent mixing of water from the upper zone during pumping. A secondary priority is a shallow zone compliance point well that can be sampled without a pump.

Option 2:

		Upper Aquifer	Lower Aquifer
Field Conductivities:		>4.0	<4.0
Completions:		Upper Aquifer	Lower Aquifer
	One well	4" casing (35 to 50 ft)	plugged back to upper zone

Justification: Need to focus monitoring and/or recovery of impaired ground water from the upper zone and prevent mixing of water with the lower zone during pumping.

Option 3:

		Upper Aquifer	Lower Aquifer
Field Conductivities:		>4.0	>4.0 and <11.0
Completions:		Upper Aquifer	Lower Aquifer
	One well like MW-1	4" casing (35 to 50 ft)	4" casing (5-foot at aquifer base)

Justification: Complete a well that can be pumped from either or both zones because zone isolation is not important.

Option 4:

		Upper Aquifer	Lower Aquifer
Field Conductivities:		>4.0	>11.0
Completions:		Upper Aquifer	Lower Aquifer
	Two wells	4" casing (35 to 50 ft)	4" casing (5-foot at aquifer base)

Justification: Focus monitoring/recovery in each zone.

Table 1

Laboratory Results Summary - Groundwater Samples

Sample Date / Location	DTW (csg)	Groundwater Elevation	Cum. Recv. Vol (gal)	Field Cond.	Sample Depth	Chloride (mg/L)	TDS (mg/L)
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9/19/05	No Data	--	--	--	Shallow	**3,999**	--
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					Deep	**1,880**	**3,570**
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				11.19	Deep	**4,390**	**5,870**
12/12/06	43.03	3573.03	13,209	12.01	Deep	**5,210**	**9,600**
1/9/07	43.02	3573.04	42,609	4.80	Shallow	**1,870**	**2,940**
				12.25	Deep	**5,840**	**8,670**
2/20/07	43.12	3572.94	87,609	5.46	Shallow	**2,130**	**3,120**
				12.92	Deep	**6,690**	**7,680**
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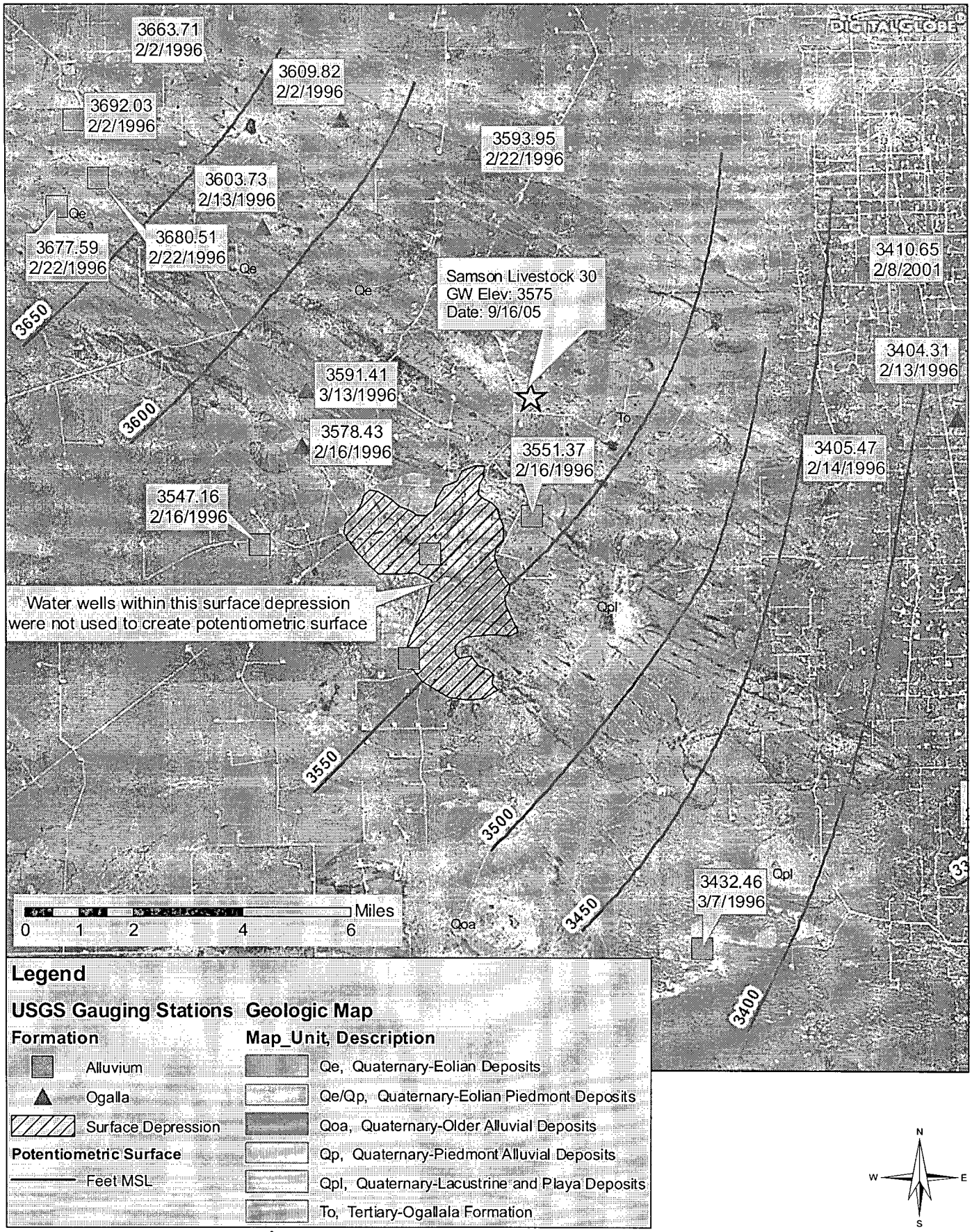
				11.99	Deep	**7,820**	**9,030**
4/17/07	43.44	3572.62	154,137	5.54	Shallow	**2,050**	**3,510**
				13.07	Deep	**6,350**	**11,400**
North Windmill	**Csg Elev.=**	**3609.13**					
3/30/06	--	--	NA	--	--	33.6	644
6/27/06	34.25	3574.88	--	--	--	--	--
Water Well	**Csg Elev.=**	**3615.58**					
6/27/06	40.4	3575.18	--	--	--	--	--
NMWQCC Standards						**250**	**1,000**



R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

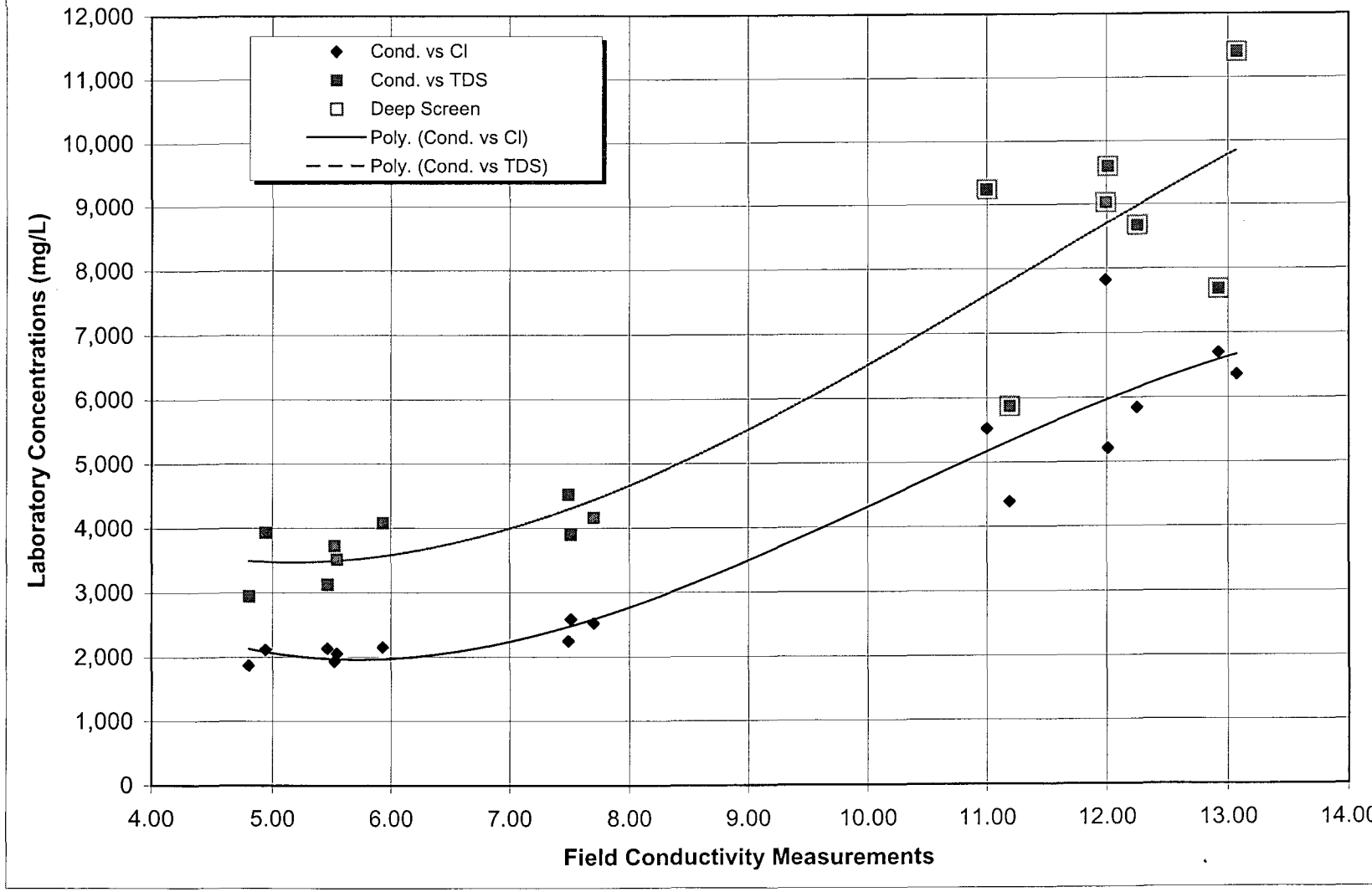
Regional Potentiometric Surface

Plate 1

Samson Livestock "30"
Samson Resources Company

May 2007

Plate 2: Field Measurements vs Lab Data: Livestock Site



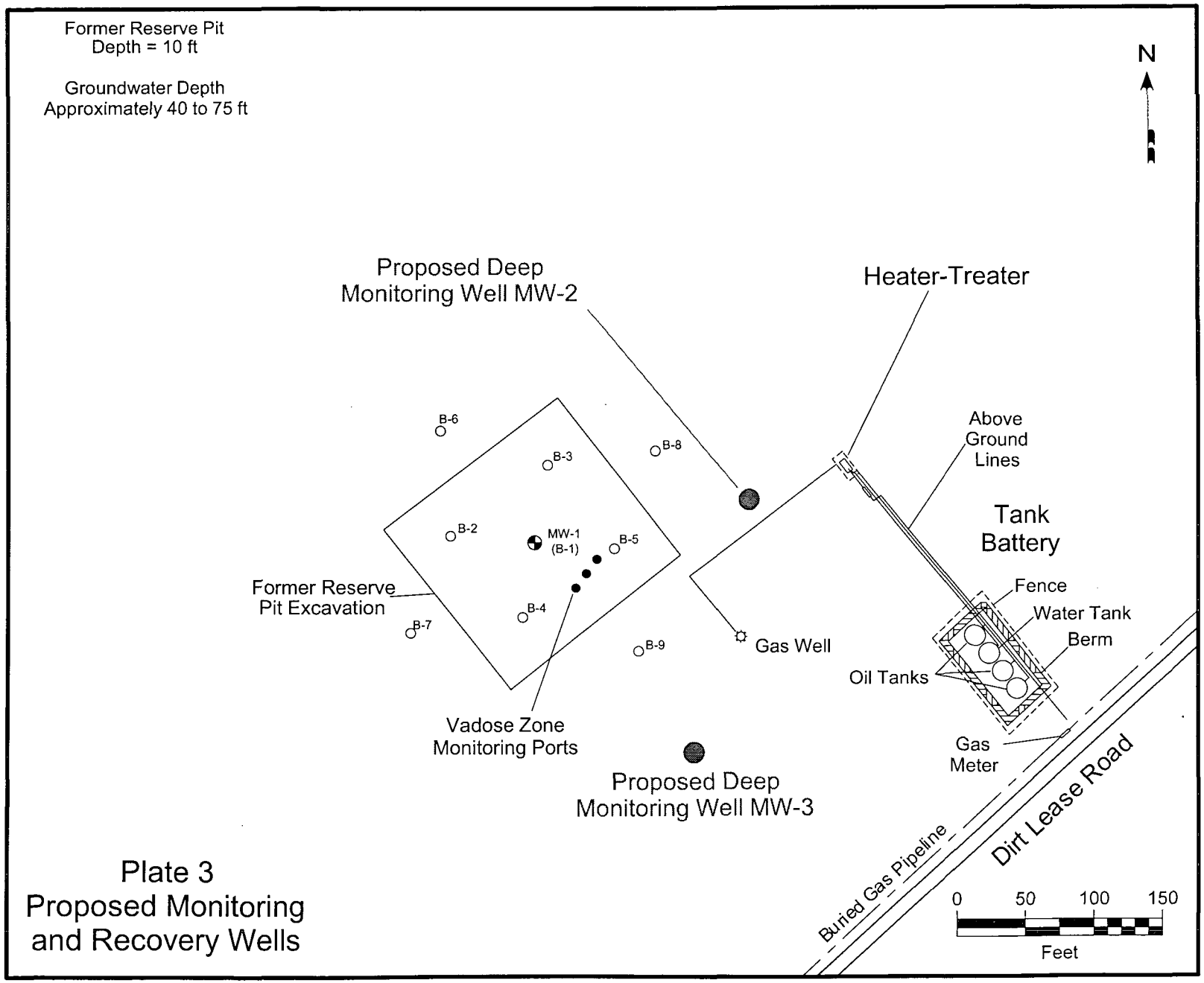


Plate 3
Proposed Monitoring
and Recovery Wells

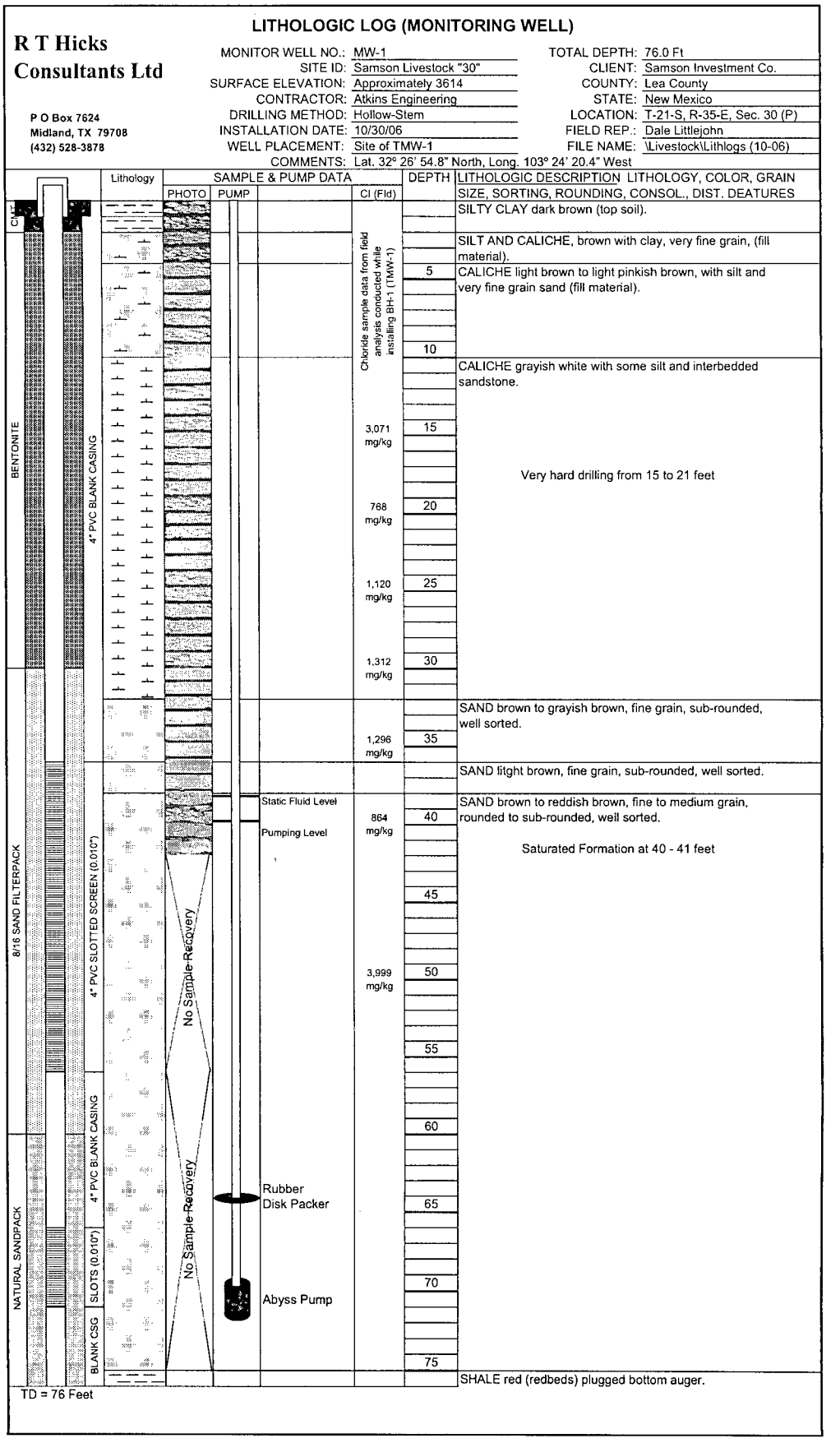


Plate 4: Proposed Monitoring/Recovery Well Design

R. T. HICKS CONSULTANTS, LTD.

PO Box 7624 ▲ Midland, TX 79708 ▲ 432.528.3878 ▲ Fax: 432.689-4578

AP 062

March 1, 2007

2007 MAR 5 PM 12 50

Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Via E-mail with Hard Copy to Follow

RE: Samson Livestock "30" Reserve Pit, T21S, R35E, Section 30, Unit P;
NMOCD Case # Unassigned

Dear Mr. Von Gonten,

The purpose of this letter is to present the plan to delineate the magnitude and extent of chloride-impacted ground water at the above referenced site. The plan includes:

1. Conduct an EM geophysical survey to define the geometry of any high TDS ground water plume beneath and adjacent to the former reserve pit and

2. Drill one monitoring well and sample ground water to correlate the geophysical survey with ground water chemistry.

Earth Measurement Corp. (EMC) of Houston Texas, a subcontractor to R.T. Hicks Consultants, will conduct an EM survey in an area of approximately 6.0 acres, including and surrounding the former reserve pit. We anticipate that a reasonable correlation between the EM Survey and water quality will permit characterization of the site in sufficient detail to permit monitoring of the ongoing ground water restoration program.

Field work is scheduled for second week in March 2007, weather permitting. Data processing and interpretation of results should be complete by the end of March. This work element will be described in our next progress report, which we will submit as soon possible in late March or early April. If weather or other delays prevent meeting this schedule, we will contact NMOCD.

Sincerely,
R.T. Hicks Consultants, Ltd.

Dale T Littlejohn
Senior Hydrogeologist

Copy: Hobbs NMOCD office;
Samson Investment Company

VonGonten, Glenn, EMNRD

From: Dale Littlejohn [dale@rthicksconsult.com]
Sent: Wednesday, February 28, 2007 4:57 PM
To: VonGonten, Glenn, EMNRD
Cc: Johnson, Larry, EMNRD; Randy Hicks (Randy Hicks); 'Scott Rose'; fsteed@samson.com
Subject: Samson Livestock "30" Characterization
Attachments: EM Survey Proposal _3-07_.pdf

Glenn,

Please find the attached plan concerning the further delineation of the groundwater plume at the Samson Livestock "30" reserve pit site. A hard copy of the letter will follow via regular mail. Please call me if you have any questions.

Thanks,

Dale T Littlejohn, PG
RT Hicks Consultants LTD
(432) 528-3878 (office)
(432) 689-4578 (fax)

VonGonten, Glenn, EMNRD

From: randall hicks [r@rthicksconsult.com]
Sent: Friday, September 22, 2006 3:21 PM
To: VonGonten, Glenn, EMNRD
Cc: 'Tom Koscelny'; Prichard, Sharon, EMNRD; dale@rthicksconsult.com
Subject: Samson Livestock Abatement Plan
Attachments: samson Stage 1-2 transmittal letter.pdf

Glenn

We understand that your plate is piled quite high and your complete review of this document may take a while. As we discussed in our meeting, we must move ahead with the work elements discussed at our meeting and described in the forthcoming Abatement Plan (see transmittal letter). We are working closely with the landowner every step of the way.

Next Thursday, we begin work at the site and the landowner will be present in the morning. If NMOCD representatives wish to visit the site, that morning is a good time to do so. Dale Littlejohn will be managing the project in the field – except for Thursday when yours truly is on the scene.

Have a good weekend.

Randall Hicks
Tel: 505-266-5004
Cell 505-238-9515

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Fax: 505.266-0745

September 22, 2006

Glenn Van Goten
NMOCD Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Via E-mail

RE: Samson Livestock "30" Reserve Pit, T21S, R35E, Section 30, Unit P;
NMOCD Case # Unassigned

Dear Mr. Van Goten,

On behalf of Samson Resources Company, R.T. Hicks Consultants, Ltd. is pleased to submit the Stage 1 &2 Abatement Plan for the above-referenced site. By close of business today, the file containing the plan may be downloaded from our ftp site:

ftp://hicks:k6bbuufe@ftp.swcp.com/Samson

The ftp site should be accessed via Microsoft Internet Explorer and you may need to cut and paste or type in the address shown as a link above. Early next week we will submit the Reserve Pit Closure Plan document that is a companion to the Stage 1&2 Abatement Plan. Please expect paper copies and a CD of these documents in next week's mail.

For the Livestock site we have made some changes to the design originally proposed in the CAP. Based upon the site inspection of Gandy Corp, Dale Littlejohn (Hicks Consultants) and the input from the Landowner, the remedy will conform to the following:

1. The landowner wants the site back to the original grade. Therefore we must import material, which was not originally anticipated.
2. Coarse-grained material is about 6-miles away at a State caliche quarry and fine-grained soil is about ½ mile away and will be purchased from the landowner.
3. We will create a capillary barrier, similar to the plan for BD-04 using a layering of coarse and fine material. We may use some of the landowner's fresh water to wash the caliche gravel after we install it into the pit. The controlled application of fresh water to the pit can accelerate the vadose zone remedy.
4. Because of the decision to implement the capillary barrier system, the synthetic liner is no longer required.
5. The work on site begins next Thursday, September 28 and work at the caliche quarry to excavate the coarse-grained material begins next Monday, September 25.

As we discussed in our meeting, the capillary barrier is a more robust design than the modified monolithic barrier originally proposed.

After submission of the Abatement Plan to NMOCD, we will submit notifications to the surrounding property owners and other administrative requirements of Rule 19. We plan to install the ground water recovery well and pumping system next month. We anticipate commencing pumping by mid October.

At BD-04, the contractor cannot secure a dry sieve to segregate the clean spoil pile into gravel, sand and fine-grained fractions until next month. We will keep NMOCD posted on our progress at the BD-04 site.

Please call me if you have any questions or concerns that were not already voiced in our meeting of last month.

Sincerely,
R.T. Hicks Consultants, Ltd.

Randall T. Hicks
Principal

Copy: Hobbs NMOCD office;
Samson Resources Company
Mr. Pearson, Merchant's Livestock Company

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

CERTIFIED MAIL
RETURN RECEIPT NO: 3929 3985

July 21, 2006

Mr. Tom Koscelny
Samson Resources
Two West Second Street
Tulsa, Oklahoma 74103-3103

RE: REQUIREMENT TO SUBMIT ABATEMENT PLAN
LIVESTOCK 30 STATE NO. 1 LEASE
SECTION 30, TOWNSHIP 21 SOUTH, RANGE 35 EAST
LEA COUNTY, NEW MEXICO
1R0461

Dear Mr. Koscelny:

The New Mexico Oil Conservation Division (OCD) has determined after reviewing the *Corrective Action Plan - Samson Livestock "30" Reserve Pit* submitted by R.T. Hicks Consultants, Ltd. on behalf of Samson Resources (Samson), that Samson must submit a Stage 1 Abatement Plan to investigate the ground water contamination at its Livestock 30 State No. 1 Lease located in Section 30, Township 21 South, Range 35 East, Lea County, New Mexico. The OCD will not approve Samson's proposed "corrective action plan" and hereby requires EMGR to submit a Stage 1 Abatement Plan in accordance with OCD's Rule 19 (19.15.1.19 NMAC). The Stage 1 Abatement Plan proposal must be submitted to the OCD Santa Fe Office with a copy provided to the OCD Hobbs District Office and must meet of all the requirements specified in Rule 19 (19.15.1.19 NMAC), including, but not limited to, the public notice and participation requirements specified in Rule 19G. The Stage 1 Abatement Plan is due sixty (60) days from the receipt by Samson of this written notice. OCD is requiring a Stage 1 Abatement Plan rather than the Remediation Plan that was originally discussed with you by OCD staff in December 2005, because Samson cannot practically delineate and remediate the volume of chlorides contamination already detected at its site within one year as specified in Rule 19D.

Samson's Stage 1 Abatement Plan must meet all of the requirements specified in Rule 19E.3, including, but not limited to, a site investigation work plan and monitoring program that will enable it to characterize the chloride release using an appropriate number of isoconcentration maps and cross sections that depict the contamination that has been released from the former pit and to provide the data necessary to select and design an effective abatement option. Sampson may, if it chooses, concurrently submit a Stage 2 Abatement Plan that addresses appropriate proactive abatement options. As OCD staff discussed with you in December 2005, this is relatively small site with a relatively limited amount of soil and ground water contamination; however, Samson will be required to proactively remediate the ground water. OCD will also require that Samson perform additional removal of chloride contaminated soil to ensure that the source of potential ground water contamination has been removed before approving any closure of the former drilling pit.

In addition, Samson must also submit a report on the excavation and dig-and-haul work, including the sampling and analytical data, that was completed by Samson before Ocotillo Environmental was involved. This information was requested by OCD staff in December 2005, but has never been submitted by Samson.

Samson should submit one paper copy and one electronic copy of all future workplans and/or reports. If you have any questions, please contact Glenn von Gonten of my staff at (505) 476-3488.

Sincerely,

Wayne Price
Environmental Bureau Chief

cc: Chris Williams, OCD Hobbs District Supervisor

VonGonten, Glenn, EMNRD

From: Jerry Brian [jbrian@valornet.com]
Sent: Tuesday, January 03, 2006 12:02 PM
To: VonGonten, Glenn, EMNRD
Cc: Tom Koscelny
Subject: Fw: Livestock 30 - BH #1
Attachments: Full page fax print.pdf; Livestock 30-BH#1(b)_page_0001.jpg; Livestock 30-BH#1(b)_page_0002.JPG

Mr. VonGonten,

Please find attached a soil boring log for the Samson Resources-Livestock 30 BH #1.

You had requested some additional logs for the site. I just want to make sure that this is part of what you had in mind.

I have had to get up to speed on this software to draft up this log. I am currently getting up to speed on another program that will allow me to draft cross-sections and fence diagrams.

I just wanted you to know that things are in the works.

Thanks,
JB
----- Original Message -----
From: Jerry Brian
To: Tom Koscelny
Cc: Stephen Callaway ; Sam Callaway ; Casey Strasner
Sent: Tuesday, January 03, 2006 8:38 AM
Subject: Livestock 30 - BH #1

Hi Tom,

Here is the soil boring log that I created on the Livestock 30 - BH#1. If this is okay, I will forward to Von Goten for his purview and to let him know that it is in the works.

Thanks,
JB

Ocotillo ENVIRONMENTAL

414 N. Turner Hobbs, NM 88240

FIELD BOREHOLE LOG

BOREHOLE NO: BH - #1

TOTAL DEPTH: 50' BGS

PROJECT INFORMATION

PROJECT: SAMSON RESOURCES

SITE LOCATION: LIVESTOCK 30

JOB NO: SAM-05-001

LOGGED BY: J BRIAN

PROJECT MANAGER: J BRIAN

DATES DRILLED: 9/19/05

DRILLING INFORMATION

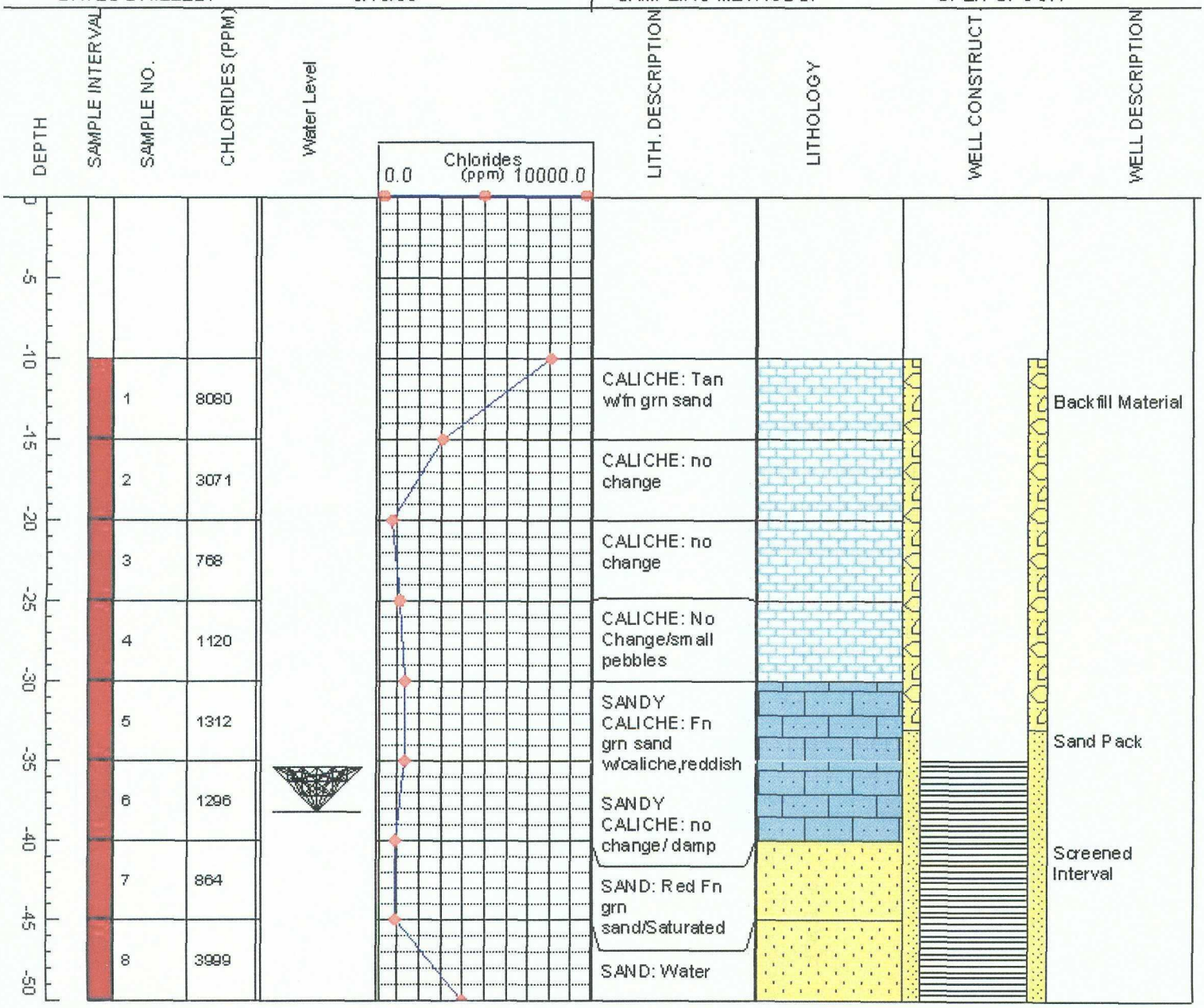
DRILLING CO: ECO/ENVIRO DRILLING

DRILLER: ROY TAYLOR

RIG TYPE: MOBILE 51

METHOD OF DRILLING: HOLLOW STEM AUGER

SAMPLING METHODS: SPLIT SPOON



*** Chloride value at -45' bgs is an arbitrary number,,,,,(No sample was taken)

Total Depth = 50' BGS

Ocotillo ENVIRONMENTAL
414 N. Turner Hobbs, NM 88240

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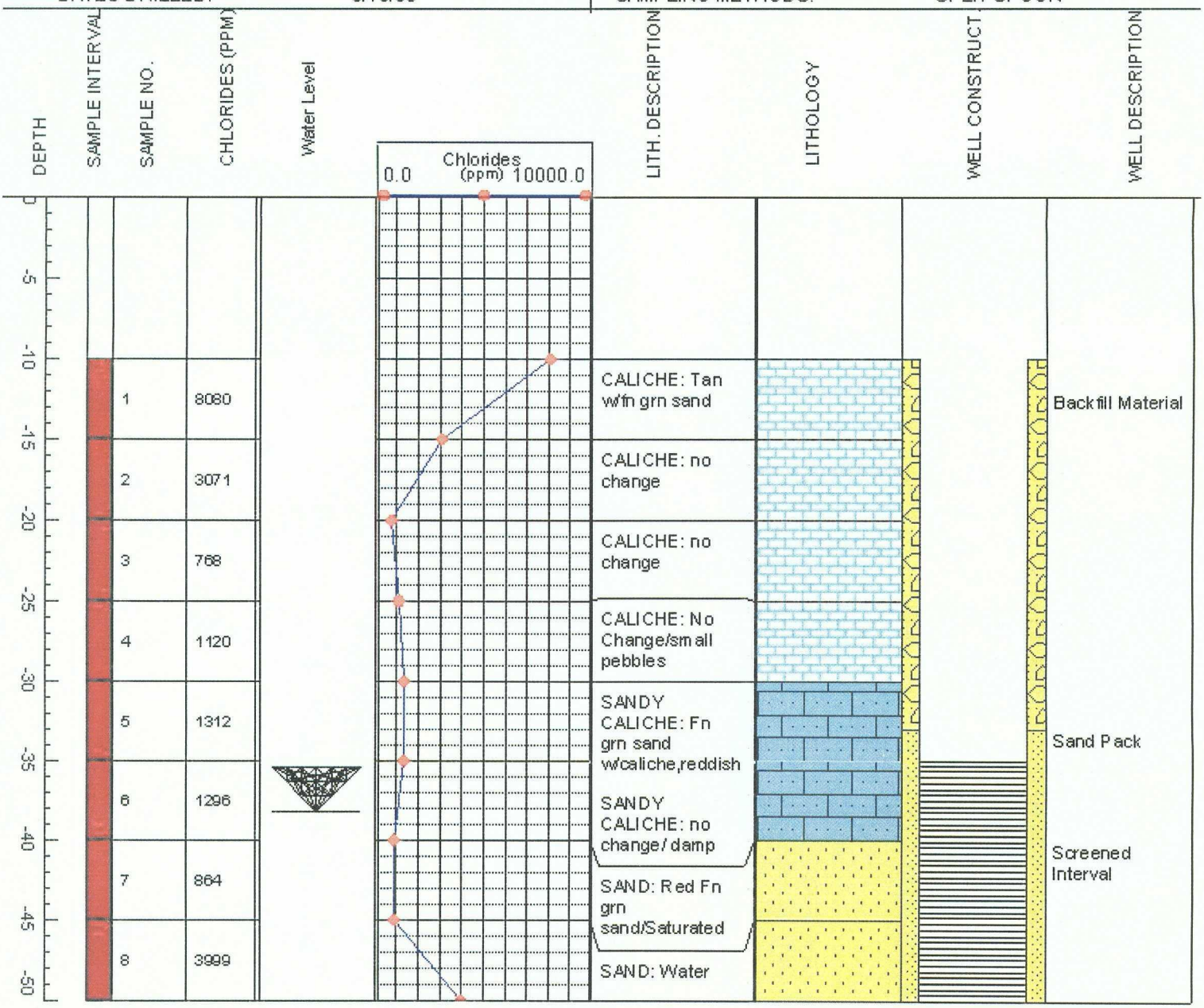

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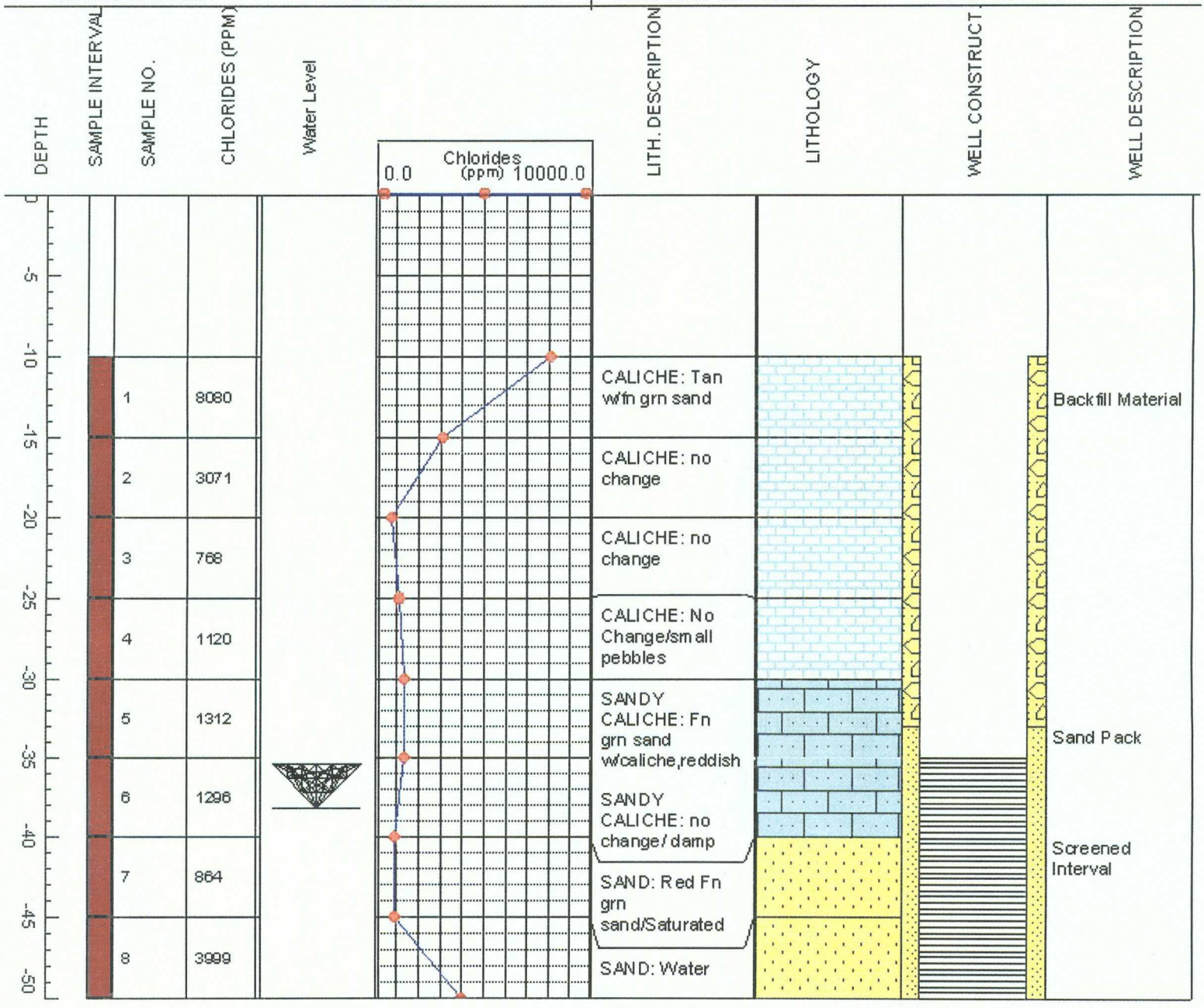

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Total Depth = 50' BGS

VonGonten, Glenn, EMNRD

From: Jerry Brian [jbrian@valornet.com] **Sent:** Sun 10/30/2005 3:48 PM
To: VonGonten, Glenn, EMNRD
Cc: Scott Rose; Tom Koscelny
Subject: Samson Resources Livestock 30 - Groundwater Investigation Report
Attachments:

Mr. VonGonten,

Just an update to inform you that you will be receiving the Groundwater Investigation Report on the Samson Resources-Livestock 30 lease this week.

As discussed with you on the 10/12/05, we intend to implement the following corrective action plan:

1. remove an additional 20 ft of impacted material from the pit to a depth of 30' below ground level (bgl)
2. cap excavated bottom with a 20 ml liner to prevent further leaching into groundwater
3. backfill to grade with clean soil and return to natural conditions
4. drill and complete a monitoring well in the center of the pit area
5. drill two additional monitoring wells (one to the NW and one to the SW of the site) to determine groundwater gradient and begin to establish plume boundaries
6. evaluate data and modify plan accordingly

We are positioned to begin immediately on the remedial action once we receive your official approval.

Sincerely,
Jerry R. Brian, REM
Geologist

MEMORANDUM

TO: MARK FESMIRE, DIRECTOR

THRU: ROGER C. ANDERSON, BUREAU CHIEF RCA

FROM: GLENN VON GONTEN, HYDROLOGIST GVG

SUBJECT: DRILLING PIT RELEASE
SAMSON RESOURCES CO. - LIVESTOCK 30 STATE NO. 1
SECTION 30, 21S, 35E - LEA COUNTY

DATE: OCTOBER 24, 2004

On October 12, 2005, I spoke with Jerry Brian with Ocotillo Environmental about a release from a "drilling pit" that had impacted ground water on September 20, 2005. On October 14, 2005, Mr. Brian submitted a C-141 (see attachment) that states that a drilling pit liner was discovered to have been "compromised" during the pit closure activities. Ocotillo advanced several soil boreholes and one temporary monitor well and determined that soil and ground water had been impacted by chlorides.

V-F Petroleum Co technically spudded the Livestock 30 State No. 1 (30-025-35200) on September 30, 2002, but did not drill any footage. Samson Resources took over the well on August 15, 2003, and completed it on December 25, 2003. The Livestock 30 State No. 1 is a Morrow gas well (TD = 13066').

More than 18 months passed between the time that the well was completed to when the pit was closed by the operator. Samson has indicated that it is currently preparing a ground water investigation work plan.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

X ☐ Initial Report ☐ Final Report

Name of Company – Samson Resources Co.	Contact – Scott Rose
Address- TWO WEST SECOND ST., TULSA, OK 74103-3103	Telephone No.-918-591-1370
Facility Name- LIVESTOCK 30 STATE #1	Facility Type-PRODUCING WELL

Surface Owner- CLABE PEARSON	Mineral Owner STATE OF NEW MEXICO	Lease No. API# 30-025-35200

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	Lea County
	30	21S	35E	660 ft	South	990 ft	East	

Latitude 32.444 **Longitude** 103.40093

NATURE OF RELEASE

Type of Release-Drilling Pit Closure	Volume of Release	Volume Recovered
Source of Release-Drilling Pit	Date and Hour of Occurrence	Date and Hour of Discovery –9/20/05
Was Immediate Notice Given? X☐ Yes ☐ No ☐ Not Required	If YES, To Whom? Roger Anderson-NMOCD	
By Whom? Jerry Brian/Ocotillo Environmental	Date and Hour-10/4/05	
Was a Watercourse Reached? X ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse. Unknown	

If a Watercourse was Impacted, Describe Fully. *

Groundwater was impacted at 40' bgs

Describe Cause of Problem and Remedial Action Taken. *

A compromised pit liner caused the problem. Impacted soil was excavated to a depth of 10' bgs. The soil was hauled off and disposed of at a disposal facility. The excavated bottom was sampled and samples were sent to Cardinal Laboratories. Analytical results indicated chloride impact exceeded the accepted MCL. Additional delineation utilizing soil borings was conducted and a temporary monitor well was completed in the original brine section of the drilling pit. The temporary monitor well was developed and sampled. The sample was sent to Cardinal Laboratory for analysis. Analytical results indicated that a groundwater impact had occurred which exceeds the accepted MCL.

Describe Area Affected and Cleanup Action Taken. *

A Groundwater Investigation Work Plan is being prepared.

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: J Brian - Acting Agent for Samson Resources	OIL CONSERVATION DIVISION
Printed Name: Jerry Brian – acting agent for Samson Resources	Approved by District Supervisor:
Title: Environmental Manager/Ocotillo Environmental	Approval Date: / Expiration Date:
E-mail Address: jbrian@valornet.com	Conditions of Approval: / Attached ☐
Date: 10/14/05 Phone:505.393.6371	

* Attach Additional Sheets If Necessary

P.01

TRANSACTION REPORT

OCT-14-2005 FRI 02:06 PM

FOR:

RECEIVE

DATE	START	SENDER	RX TIME	PAGES	TYPE	NOTE	M#	DP
OCT-14	02:05 PM		33″	2	RECEIVE	OK		

Ocotillo Environmental, LLC.

414 N. Turner Street
Hobbs, New Mexico 88240

Telephone # (505) 393-6371
Facsimile # (505) 393-6374

Fax Cover

Date: 10/14/05

Time:

From: J Boim

To: Glenn VonGonten - NMOCD

Company: NMOCD

Fax #: 505-476-3462

Comments:

Total Number of pages (including cover): 2

If you do not receive all the pages, call as soon as possible at (505) 393-6371 and ask for sender of message.