Mr. JJ. McGlasson
Senior Operations Engineer
NADEL & GUSSMAN HEYCO, LLC
PO Box 1936
Roswell, New Mexico 88202

25 April 2012

Mr. Mike Bratcher
OIL CONSERVATION DIVISION
District 2
811 South First Street
Artesia, NM 88210

Re: Rock Island 16 State No. 1H Release Amended *Corrective Action Plan*

(API No.: 30-01538461)
S16 T18S R26E 2260' FNL 1650'FEL, Eddy County, New Mexico

Dear Mr. Bratcher:

On 7 March 2012, at approximately 1430 Hrs., Nadel & Gussman HEYCO, LLC (NGH) experienced a release from the Rock Island 16 State No.1H well at approximately 2,000' during active workover operations.

Incident Cause
The release occurred during the time NGH had opened the backside of the well and finding the well in static condition, nippled down the wellhead in preparation to set the blowout preventer (BOP). The BOP was over the 2-7/8" tubing when the kick hit before it could be properly set due to a pressure increase that prevented it from being tightened down. Subsequently, the BOP did not seal on the flange because the bolts could not be securely fastened which was prevented by the gaseous fluid under high velocity and pressure.

Remedial Action
Remediation was initiated by (1) containment, (2) removal of fluids by vacuum trucks, (3) sampling of affected areas to depth of contamination, (4) removal of contaminated soils (5) verifying integrity of the clay lens in affected areas. Laboratory results are attached.

NGH took immediate action to shutdown the well. CUDD Well Control was contacted on the evening of March 7th for immediate mobilization to the Rock Island location to assess well

conditions. CUDD personnel arrived late evening on March 7th. They began well assessment and simultaneously recommended a fresh water misting system that was set up over the wellhead to reduce fire danger. Berms were pushed up on the north side of the pad to contain all discharged fluids on location. This area subsequently became designated as the "containment area". Vacuum trucks hauled approximately 800 bbls. of released fluids comprised of well discharge and fresh water from CUDD's misting system to an authorized disposal site. Impacts to the surrounding area from the well release were significantly reduced through the dilution effect of CUDD's misting system, which delivered an estimated 3,000 bbls of water. The presence of highly concentrated levels of sodium chloride is not evident due to this dilution effect.

Simultaneously, it is important to consider the gaseous release from the well did not exceed 4 ppm H_2S, as verified by onsite monitoring equipment. Airborne overspray during the event did not exceed 300 feet in any direction. No contact was made with growing crops, farmland, or algae ponds. Therefore, the environmental impact was hugely reduced or non-existent in affected areas. Today, these overspray areas are completely remediated, showing no presence of hydrocarbon staining on plants or soils. Small plants are beginning to sprout in the warming soils and sunshine even though a drought condition still exists.

Stored University equipment misted by the plume was sprayed by NGH with biodegradable soap and hot water. During this event, winds were high and temperatures were cool (less than 50°F). No inversion presented itself which could have had lasting effects in contact zones.

The actual containment area's footprint is not large. The actual dimensions will be provided in the next communication to NMOCD. Subsequently, NGH considered options to remediate the footprint in the way most viable to sustain and re-establish soil and vegetative conditions to their original states. In so doing, NGH considered (1) deep burial onsite in a 20ml liner using CKD to immobilize the contaminants, (2) haul contaminated soils to an authorized disposal facility and (3) land farming the footprint. Deep burial was not an option for maintaining the integrity of the native soil. Construction materials from the pad and the associated road (approximately 80 loads/ 1,600 yds.) were hauled to disposal because they contained caliche and chat, making this soil unsuitable for land farming.

Land farming was given serious consideration because of the relatively low levels of contamination within the footprint. If the native soil were removed, it would need to be replaced with a foreign soil. There is concern that insufficient native soil in the immediate area is available to backfill the footprint and return the ground to original contours. Regardless of the remediation approach (removal or farming), this small area will remain different from the original native soil. However, keeping the native soil in place and using land farming techniques will convert the hydrocarbons to soil nutrients and carbon dioxide which will benefit the reclamation process. (Laboratory analyticals attached)

Land farming will involve soil aeration, application of fertilizers and water, and routine soil sampling to reach conductivity and SAR levels conducive to plant growth. Once this is achieved and approved by the NMSU, Agricultural Science Center at Artesia, NGH will no longer have control over this area and will relinquish all liability associated with that footprint back to the NMSU, Agricultural Science Center at Artesia for their future use. All reports will be sent to NMOCD and NMSU, Agricultural Science Center at Artesia.

Seeding of most areas, which were not impacted by well discharges but which would benefit from seeding applications to enhance return to their previous vegetative conditions, will be seeded by the NMSU, Agricultural Science Center at Artesia when the monsoon season is present in this area. The Agricultural Science Center at Artesia has the equipment and the ability to handle this aspect of the reclamation project. The seed mix requested by the Agricultural Science Center at Artesia has been provided by NGH. This mix is composed of Weeping Love Grass (*Eragrostis curvula*), Sideoats Grama (*Poutelova curtipendula*), Sand Dropseed (*Sporobolus cryptandrus*), and Rye Grass (*Secale cereale L.).*

NGH estimates completion of the Rock Island 16 State No. 1H reclamation project to be completed by December 1, 2012. NGH will pull samples from the land farm area on a monthly basis and provide a progress report to NMOCD and NMSU Agricultural Science Center at Artesia.

Thank you for your assistance. Please call Cheryl Winkler (432-425-7386) should you have questions.

Sincerely,

J.J. McGlasson
Senior Operations Engineer

Enclosures: Artesia ASC Weather Chart, laboratory analyticals, water well data, photos

Cc: NMSU, Agricultural Science Center at Artesia

Summary Report

Keith Cannon
Nadel & Gussman Heyco, LLC

P.O. Box 1936
Roswell, NM 88202

Report Date: April 5, 2012

Work Order: 12032322

Project Location: Eddy Co., NM
Project Name: Rock Island 16 State 1H
Project Number: Containment Area & Pad

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
292198	North Mix @ 1'	soil	2012-03-23	00:00	2012-03-23
292199	Central of N @ 1'	soil	2012-03-23	00:00	2012-03-23
292200	NE end of N @ 1'	soil	2012-03-23	00:00	2012-03-23
292201	NW end of N @ 1'	soil	2012-03-23	00:00	2012-03-23
292202	Powerline (L) @ 6 in.	soil	2012-03-23	00:00	2012-03-23
292203	Powerline (R) @ 6 in.	soil	2012-03-23	00:00	2012-03-23
292204	Pad NE @ 6 in.	soil	2012-03-23	00:00	2012-03-23
292363	Composite North & Central	soil	2012-03-23	00:00	2012-03-23

	BTEX				TPH DRO - NEW	TPH GRO
Sample - Field Code	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
292198 - North Mix @ 1'	**0.329**	**2.59**	**4.63**	**9.97**	**1270** Qs	**1170**
292199 - Central of N @ 1'	<0.100	**0.404**	**0.514**	**1.24**	**129** Qs	**76.5**
292200 - NE end of N @ 1'	**0.486**	**3.78**	**12.1**	**20.9**	**1390** Qs	**3020**
292201 - NW end of N @ 1'	**0.0903**	**0.123**	**0.142**	**0.326**	<50.0 Qs	**3.15**
292202 - Powerline (L) @ 6 in.	<0.0200	<0.0200	<0.0200	<0.0200	**67.0** Qs	<2.00
292203 - Powerline (R) @ 6 in.	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	<2.00
292204 - Pad NE @ 6 in.	<0.0200	<0.0200	<0.0200	<0.0200	<50.0 Qs	**3.20**

Sample: 292198 - North Mix @ 1'

Param	Flag	Result	Units	RL
Chloride		**3760**	mg/Kg	4
Total Silver		<0.500	mg/Kg	0.5
Total Arsenic		**5.05**	mg/Kg	2
Total Barium		**89.2**	mg/Kg	1

continued ...

sample 292198 continued ...

Param	Flag	Result	Units	RL
Total Cadmium		**0.686**	mg/Kg	0.5
Total Chromium		**15.9**	mg/Kg	0.5
Total Mercury		<0.0250	mg/Kg	0.025
Total Lead		**4.77**	mg/Kg	1
Total Selenium		<2.00	mg/Kg	2

Sample: 292199 - Central of N @ 1'

Param	Flag	Result	Units	RL
Chloride		**497**	mg/Kg	4
Total Silver		<0.500	mg/Kg	0.5
Total Arsenic		**5.50**	mg/Kg	2
Total Barium		**110**	mg/Kg	1
Total Cadmium		**0.769**	mg/Kg	0.5
Total Chromium		**19.2**	mg/Kg	0.5
Total Mercury		<0.0250	mg/Kg	0.025
Total Lead		**4.86**	mg/Kg	1
Total Selenium		<2.00	mg/Kg	2

Sample: 292200 - NE end of N @ 1'

Param	Flag	Result	Units	RL
Chloride		**4460**	mg/Kg	4

Sample: 292201 - NW end of N @ 1'

Param	Flag	Result	Units	RL
Chloride		**1900**	mg/Kg	4

Sample: 292202 - Powerline (L) @ 6 in.

Param	Flag	Result	Units	RL
Chloride		**513**	mg/Kg	4

Sample: 292203 - Powerline (R) @ 6 in.

Param	Flag	Result	Units	RL
Chloride		<200	mg/Kg	4

Summary Report

Keith Cannon
Nadel & Gussman Heyco, LLC

P.O. Box 1936
Roswell, NM 88202

Report Date: April 4, 2012

Work Order: 12040206

Project Location: Well Discharge
Project Name: Well Discharge
Project Number: Rock Island 16 State No. 1H

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
293244	Pad @ NE 1'	soil	2012-03-30	17:01	2012-04-02
293245	Powerline (L) @ 1'	soil	2012-03-30	17:12	2012-04-02
293246	Cont. NE of N Area @ 3'	soil	2012-03-30	13:33	2012-04-02
293247	Cont. NW of N Area @ 3'	soil	2012-03-30	13:41	2012-04-02
293248	Cont. Central of N Area @ 3'	soil	2012-03-30	13:20	2012-04-02
293249	Cont. N Mix @ 3'	soil	2012-03-30	13:10	2012-04-02

	BTEX				MTBE	TPH DRO - NEW	TPH GRO
	Benzene	Toluene	Ethylbenzene	Xylene	MTBE	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
293244 - Pad @ NE 1'	<0.0200	<0.0200	<0.0200	<0.0200		<50.0	<2.00 Qc
293245 - Powerline (L) @ 1'	<0.0200	<0.0200	<0.0200	<0.0200		<50.0	<2.00 Qc
293246 - Cont. NE of N Area @ 3'	<0.0200	<0.0200	<0.0200	<0.0200		<50.0	<2.00 Qc
293247 - Cont. NW of N Area @ 3'	<0.0200	<0.0200	<0.0200	<0.0200		<50.0	<2.00 Qc
293248 - Cont. Central of N Area @ 3'	<0.0200	<0.0200	<0.0200	<0.0200		<50.0	<2.00 Qc
293249 - Cont. N Mix @ 3'	<0.0200	<0.0200	<0.0200	<0.0200		<50.0	<2.00 Qc

Sample: 293244 - Pad @ NE 1'

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5

Sample: 293245 - Powerline (L) @ 1'

continued ...

sample 293245 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5

Sample: 293246 - Cont. NE of N Area @ 3'

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5

Sample: 293247 - Cont. NW of N Area @ 3'

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5

Sample: 293248 - Cont. Central of N Area @ 3'

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5

Sample: 293249 - Cont. N Mix @ 3'

Param	Flag	Result	Units	RL
Chloride		<50.0	mg/Kg	5

Summary Report

Keith Cannon
Nadel & Gussman Heyco, LLC

P.O. Box 1936
Roswell, NM 88202

Report Date: April 11, 2012

Work Order: 12041113

Project Name: Rock Island 16 State 1H Pad

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
294025	Pad @ SE Area Comp.	soil	2012-04-10	07:00	2012-04-11
294026	Pad @ NW Area Comp.	soil	2012-04-10	07:21	2012-04-11
294027	Pad @ SW Area Comp.	soil	2012-04-10	08:30	2012-04-11

Sample: 294025 - Pad @ SE Area Comp.

Param	Flag	Result	Units	RL
Chloride	Qs	<50.0	mg/Kg	5

Sample: 294026 - Pad @ NW Area Comp.

Param	Flag	Result	Units	RL
Chloride	Qs	<50.0	mg/Kg	5

Sample: 294027 - Pad @ SW Area Comp.

Param	Flag	Result	Units	RL
Chloride	Qs	<50.0	mg/Kg	5

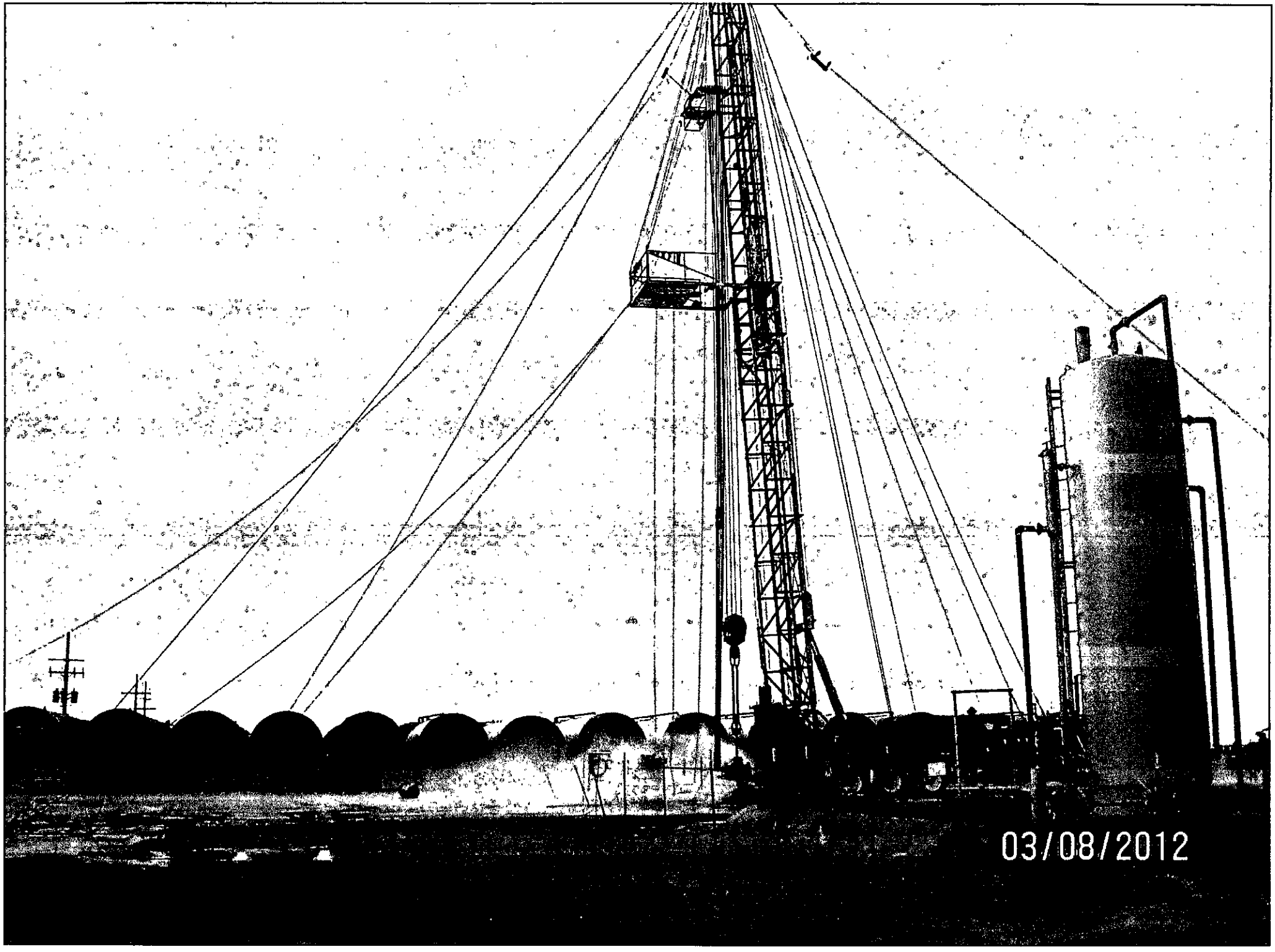
Artesia ASC Weather

Parameter	March 2012	March 2011
Temp, Maximum	91	90
Date (earliest)	25-Mar-11	3/18/2011
Temp, Minimum	20	23
Date (latest)	10-Mar-11	3/6/2011
Temp, Max Ave	77.0	78.5
Temp, Min Ave	33.7	34.8
Temp, Average	55.4	56.7
Total Rain for Month	0.06	0.0
Rain since Jan 1	0.23	0.00
Total Wind (miles)	6096.1	5055
Total Evap	10.87	11
Soil Temp, Max	61	59
Date (earliest)	30-Mar-11	3/27/2011
Soil Temp, Min	40	40
Date (latest)	12-Mar-11	3/3/2011
GDD Corn	224	224
GDD Chile	128	119
GDD Cotton	724	765
GDD Alfalfa	119	110
GDD Canola (U.S.)	448	504
GDD Canola (AU)	641	705
GDD Chile UofA		

	Current Month	Year Total
Days >=90	6	6
Days >=95	0	0
Days >=100	0	0

2159

	AIR TEMPERATURE MAXIMUM	AIR TEMPERATURE MINIMUM	RAINFALL INCHES	24hr WIND MOVEMENT	GAGE READING	FILLING	ICE	PAN EVAP	SOIL 4" DEPTH MAX	SOIL 4" DEPTH MIN	10d-ave soil temp
1	77	27		194.5	1.77			0.82	48	42	43.55
2	77	32		455.3	1.11	2.71		0.66	50	43	44.15
3	72	20		236.9			ICE		50	45	44.85
4	63	25		74.7	2.18			0.53	49	42	45.15
5	73	29		64.6	1.97			0.21	50	42	45.25
6	81	30		152.4	1.65			0.32	50	43	45.55
7	85	32		251.4	1.25	2.53		0.40	52	44	46.05
8	82	39		409.6	1.96			0.57	52	46	46.60
9	48	35		257.1	1.82			0.14	50	45	46.80
10	43	33	0.02	186.4	1.79			0.05	47	43	46.65
11	47	25		71.4			ICE		46	42	46.55
12	73	31		243.3	1.21			0.58	47	40	46.25
13	79	33		83.1	1.15	3.03		0.06	49	42	46.05
14	84	34		115.4	2.71			0.32	51	44	46.25
15	86	32		138.5	2.34			0.37	52	47	46.60
16	84	32		95.2	2.07			0.27	52	46	46.85
17	88	36		165.8	1.70			0.37	54	47	47.10
18	86	37		262.6	1.26	2.99		0.44	55	49	47.40
19	80	45		542.9	2.38			0.61	54	51	47.90
20	58	30	0.03	339.5	2.19			0.22	53	46	48.35
21	55	31	0.01	297.5	1.99			0.21	50	46	48.75
22	71	30		197.8	1.69			0.30	52	45	49.25
23	79	30		132.0	1.36			0.33	54	46	49.70
24	85	35		88.6	1.08	3.10		0.28	55	48	50.10
25	91	41		127.4	2.69			0.41	57	50	50.50
26	91	47		246.2	2.21			0.48	58	51	51.05
27	90	38		186.7	1.79			0.42	59	53	51.60
28	90	38		145.9	1.49			0.30	59	52	51.95
29	89	38		112.5	1.05	3.19		0.44	60	53	52.35
30	90	40		114.6	2.78			0.41	61	55	53.20
31	90	40		106.3	2.43			0.35	61	53	54.10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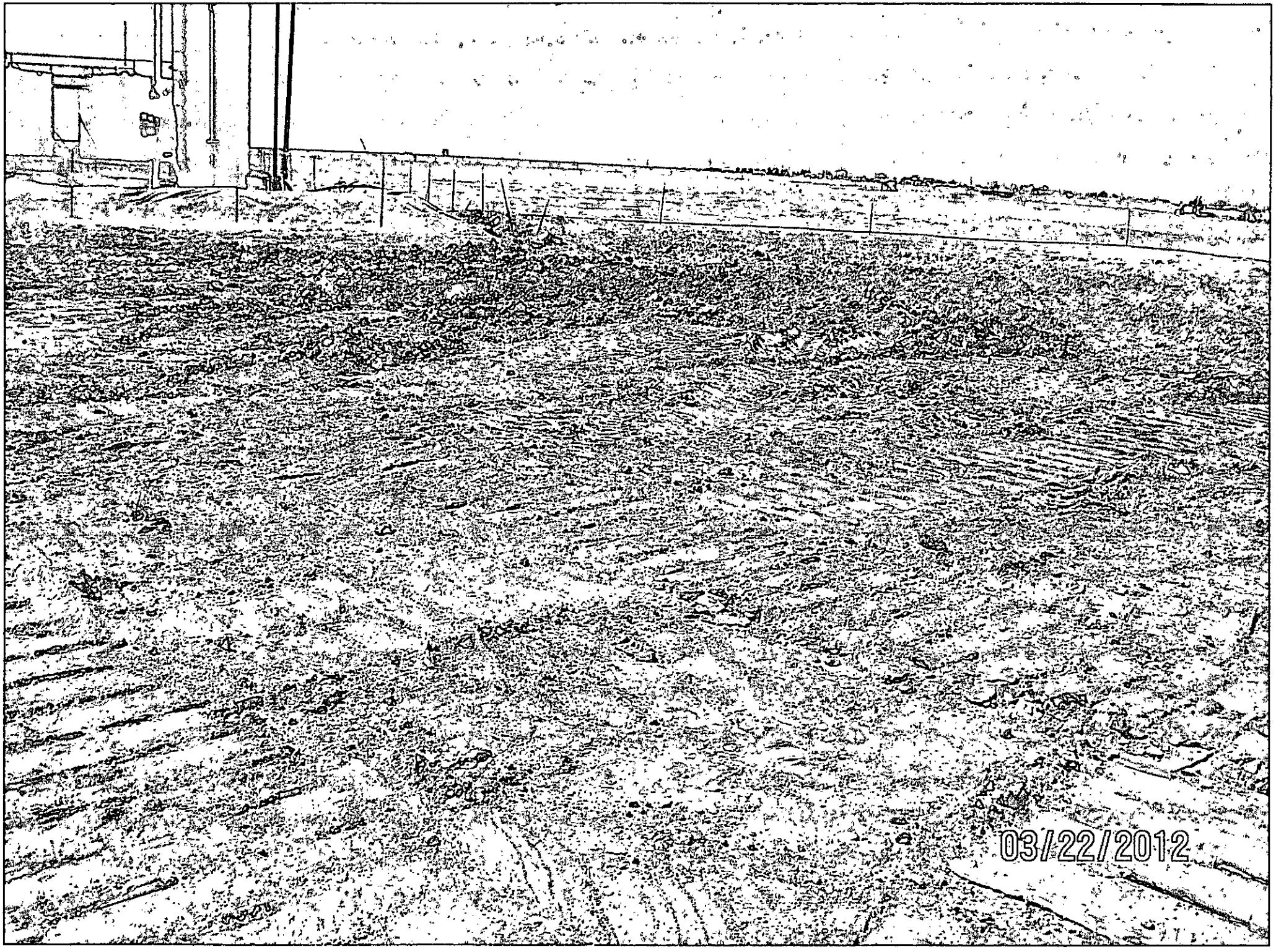
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